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A Delphi Study of the Futuristic Perspectives of Teacher Education

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The study is an effort to forecast through the insights and perceptions of Experts the optimistic, pessimistic and most probable scenarios of Teacher Education. The objectives of the study are 1) To probe into Future Teacher Education through the insights and perceptions of Teacher Educators and 2) To forecast and outline the optimistic, pessimistic and most probable scenarios of Future Teacher Education. The present investigation is heuristic and exploratory in nature. The method of research pursued is Delphi method. A Future Perception Questionnaire has been developed. A field note of panel discussion, interviews, responses and document reviews ensured the critical component of credibility through triangulation. Content analysis of the responses was done. Generalizations were made, based on a consensus of ideas expressed by a majority of the respondents. The grounded theory generated from the theoretical discussions in this Qualitative Research resulted in scenarios of the interface, which has been categorized and reported as optimistic, pessimistic and most probable outlines. Reforms in Teacher Education are suggested, based upon the analysis of what is desirable in future, with due regard to what has served well in the past and what is cherished in the present.

“ Hardly a week goes by without some government official or vice-chancellor demanding drastic changes in the educational system. Yet, the University has remained virtually unchanged for a century.”

Philip G. Altbach, 2012

Context of the Problem

It is a paradox that India, a World-Class Country is without World-Class Higher Education. The recent London Times Higher Education Supplement ranking of the world's top 100 universities included none from India, top 200 universities included 3 in China, 3 in Hong Kong, 3 in South Korea, and 1 in Taiwan, and 1 (an Indian Institute of Technology at number 141) in India. Recent arguments in Indian Higher education have proposed that it should pay more attention to Teacher Education and its reforms.

Teacher Education Institutions play an important role in shaping the future of the Indian society by generating teachers and professionals in all the disciplines as well as by contributing to the development of appropriate competencies, reflective and humane values. During the last years, the MHRD and NCTE have initiated reforms and measures for improving Teacher Education). Teacher Education is concerned essentially with the Future Teachers. If the Next Generation of Teachers finds themselves ill-equipped, it will hold the present generation responsible for their inadequacies. In redesigning Teacher Education, Research and Technology are indispensable tools of the transformation process. Traditionally Teacher Education has been more pre-occupied with the pressures of the present rather than the anticipations of the future. There is a direct need to anticipate the contours of future and act accordingly in a very vital field like Teacher Education. The proposed study is an effort to forecast through the insights and perceptions of Experts the areas in Teacher Education in which reforms are needed along with suggested reforms.

Objectives:

The objectives of the study are

- 1) To probe into Future Teacher Education through the insights and perceptions of Teacher Educators and
- 2) To forecast through the insights and perceptions of Experts the areas in Teacher Education in which reforms are needed along with suggested reforms with specific reference to Humane and Reflective Teacher Education.

Methodology

The present investigation is heuristic and exploratory in nature. No pre-conceived hypotheses were made for this investigation, which was hypothesis-generating and not hypothesis-testing. The method of research pursued is Delphi method, which is a structured, systematic, interactive forecasting communication method which relies on a panel of experts.

The Delphi technique, mainly developed by Dalkey and Helmer (1963) at the Rand Corporation in the 1950s, is a widely used and accepted method for achieving convergence of opinion concerning real-world knowledge solicited from experts within certain topic areas. Predicated on the rationale that two heads are better than one, or...n heads are better than one, the Delphi technique is designed as a group communication process that aims at conducting

detailed examinations and discussions of a specific issue for the purpose of goal setting, policy investigation, or predicting the occurrence of future events (Ulschak, 1983). Common surveys try to identify “what is,” whereas the Delphi technique attempts to address “what could/should be” (Miller, 2006). In the literature, Delphi has been applied in various fields such as program planning, needs assessment, policy determination, and resource utilization. The Delphi technique can be used for achieving the following objectives: 1. To determine or develop a range of possible program alternatives; 2. To explore or expose underlying assumptions or information leading to different judgments; 3. To seek out information which may generate a consensus on the part of the respondent group; 4. To correlate informed judgments on a topic spanning a wide range of disciplines, and; 5. To educate the respondent group as to the diverse and interrelated aspects of the topic. The Delphi technique is well suited as a means and method for consensus-building by using a series of questionnaires to collect data from a panel of selected subjects. Delphi, in contrast to other data gathering and analysis techniques, employs multiple iterations designed to develop a consensus of opinion concerning a specific topic. Electronic technology provides an opportunity for individuals to more easily employ the Delphi process by taking advantages of, “(1) the storage, processing, and speed of transmission capabilities of computers; (2) the maintenance of respondent anonymity, and; (3) the potential for rapid feedback”.

A systematic approach with rigorous selection of appropriate experts and proper design choice ensured the validity. The respondents were chosen from the field of Teacher Education at various levels (local, national and international). A Future Perception Questionnaire has been developed. A field note of panel discussion, interviews, responses and document reviews ensured the critical component of credibility through triangulation. Content analysis of the responses was done. Generalizations were made, based on a consensus of ideas expressed by a majority of the respondents. The grounded theory generated from the theoretical discussions in this Qualitative Research resulted in scenarios of the Grey Areas in which reforms are needed and Reforms in Teacher Education are suggested, especially in the area of Humane and Reflective Teacher Education, based upon the analysis of what is desirable in future, with due regard to what has served well in the past and what is cherished in the present.

The participants included a stratified sample of Teacher Educators from 10 Teacher Education Institutions, 10 Departments of Education and 5 HeadMasters of high schools from the Southern States of Tamilnadu, Kerala, Karnataka, Andhra, Telengana and also 5 International Experts from Singapore (National Institute of Education),Bangladesh (Peoples’ University) and Sri Lanka (Colombo University).

Questions that were investigated included:

1. What should be the dimensions of a Future Teacher in the emerging scenario?
- 2.What will be the topmost Pressing Problems confronted by the Future Teacher Education?
- 3.What specific reforms and resources are needed to create outstanding Teacher Education Institutions to produce Humane and Reflective Teachers?

A feedback report including a comprehensive list of responses was constructed, with similar responses combined and listed only once. The report also included a summarization of the most frequent items from the original response set. In Phase 2, participants were given a survey containing the aggregate list of responses from Phase 1 and the summary of the most frequent items. They were asked to perform three tasks: (a) rate each of the items in

importance (b) select the most important items from the list, and (c) provide a brief explanation for choosing each of the top.

Grounded Theory Generated

Domain analysis was used as the qualitative method to determine the themes and categories from the Delphi query. Responses were grouped into categories and then the categories were grouped into themes. Frequencies were calculated for items, categories, and themes based on the number of separate responses they represented. Items were ranked based on their frequencies. The item frequency was calculated on the number of responses the aggregated items represented. The grounded theory generated from the theoretical discussions in this Qualitative Research is presented in the following sections:

1. What should be the dimensions of a Future Teacher in the emerging scenario?

The task of Teacher Education should be to help the Future Teacher develop his potential to contribute to the growth of Indian culture and by controlling the environment and making use of human and non-human resources, build appropriate structures and institutions for the attainment of a “just and humane society”. The human person is the subject of education; he is a human person learning and being taught. The human person is also the object: the human person is at the center of the curriculum and the entire programme.

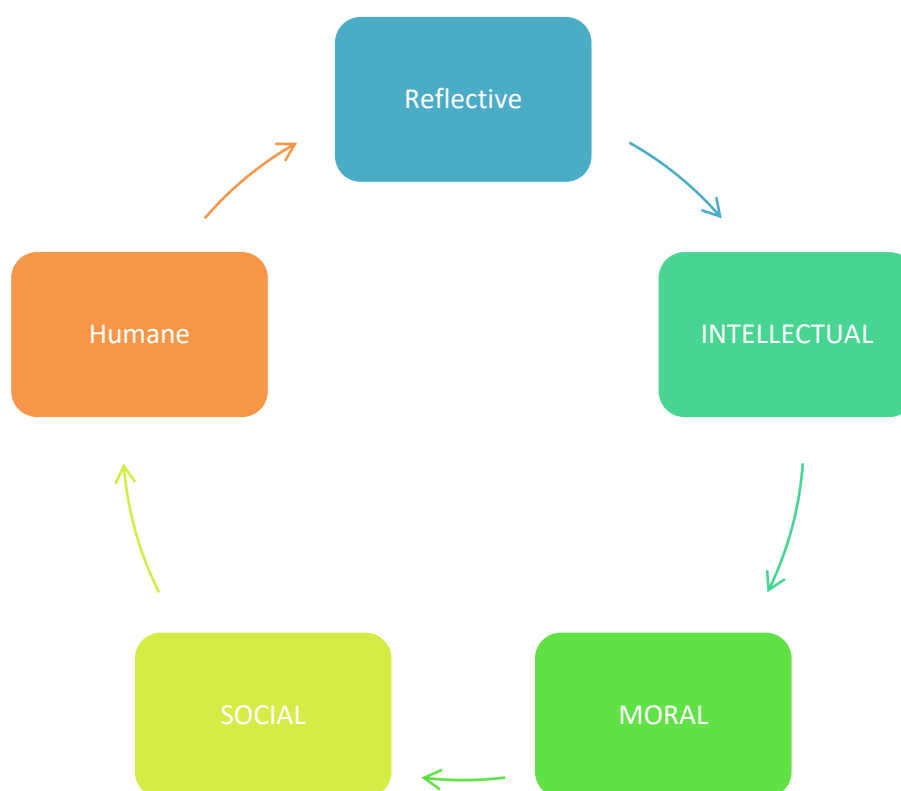


Figure:1 The dimensions of a Future Teacher

The Future Teacher should be multi-dimensional as depicted in Figure.1, with a balanced proportion of Intellectual, Moral, Social, Humane and Reflective Values and Traits.

2.What will be the topmost Pressing Problems confronted by the Future Teacher Education?

- 1) Irrelevance
- 2) obsolescence and
- 3) lack of touch with the latest expertise in science and technology of pedagogical processes

The Emerging Consensus is that Teacher Education should generate the spirit of enquiry, initiative scientific temper, empirical élan, conceptual clarity and linguistic skills for effective speaking and writing. This is a challenge. Teacher education is the Cinderella. Teacher educators are the godfathers to resurrect Cinderella from the malevolent stepmother.

Suggestions and Recommendations

3.What specific reforms and resources are needed to create outstanding Teacher Education Institutions to produce Humane and Reflective Teachers?

The consensus emerged is that Identifying and securing talent is the first desideratum. No problem in teacher education has been perceived as the topmost pressing as luring persons of appropriate intelligence, value-system, interest in children and penchant for teaching. It is also observed that unfortunately, despite the constant salary structure revision the teaching profession remains the last alternative. Although this profession does not expect to draw all the talent, it does not wish to have all “mediocrity” and “average”. It wants its due share. Securing talented persons is not asking for the moon. The principle of selective admission is to be conceded, especially now when creative researchers have evolved scientifically designed tests and tools (if not completely foolproof, valid and reliable to great extent) of ascertaining the traits of teaching ability and competence. The talented person can be attracted if the holding power is enhanced through emoluments and academic Identifying.

The Second Reform which has emerged unanimously is that Teacher Education should inject Professionalism which implies involvements and pride in the profession, specialized systematic technical preparation, perpetual desire to learn more and competence to communicate. The teacher must have praxis, professional ethics, in-built generation of vigorous and continuing feedback and sense of the personal and corporate responsibility. Traditional Values of Culture such as “Truth”, “Depth” (leading to spiritual approach) “Totality” (taking comprehensive view of life), “Tolerance,” “Equanimity” (keeping balance), “Discipline” (Sanyama), “Dharma” (righteous conduct), Humane Values of “Love” “Peace” and “Non-violence”. The values of modernity are rational and scientific temper, egalitarianism, freedom, social justice and secularism. A synthesis of the two is ideal, enabling the Teachers to lead a well-integrated and divinely fulfilled life of human values. The teacher, conversant with these values, will influence the children. Teacher –education must develop a Culture of Achievement underlining the basic tenet that “he who goes further in school will go further in life”. This inherits a performance-based and result-oriented teacher education. This should be augmented by a sense of “accountability” which entails the performance of a teacher to be available for public audit and self-evaluation. The teacher of the twenty-first century must learn the way of “Looking Over his Own Shoulders”.

The Third Reform recommended is that Teacher Education Institutions should conduct humane education programmes through community- or home-based activities in which students can learn humane education content and behaviors through experience and reflection. Programmes may be supplemental or add-on programs such as when a humane educator or the teacher of record will devote a class period to humane education content; in these cases, the lesson is often devoted wholly to teach humane education content (e.g., responsible pet or environmental care, spaying/neutering, respect for others). Programmes may also be infused into the curriculum or add-ins. These infused programmes allow for the most effective form of Humane Pedagogy (a teaching approach inspired by Critical Pedagogy, which attempts to help students activate cognitive, affective, and psychomotor domains of learning and determine personal values.) .

The Fourth Reform suggested is a combination of specific conditions and resources which are needed to create outstanding Teacher Education Institutions as given below:

- Sustained financial support for enhanced Infrastructure, Research and Training of Human Resources with an appropriate mix of accountability and autonomy.
- The development of a continuous comprehensive Academic Audit for Teacher Education Institutions, especially private self-financing institutions.
- Managerial reforms and the introduction of effective administration.
- Truly meritocratic hiring and promotion policies for the academic profession, and similarly rigorous and honest recruitment, selection, and instruction of students.

Zeitgeist Teacher Education in 21st Century: Emerging Optimism

The nature and characteristics of zeitgeist teacher education, suiting the expected genius of the younger generation of Digital Natives demands a different paradigm, because the prospective teachers have to prepare the young, capable of meeting new challenges posed by advances in science and information technology in this Digital Era. Teachers are prepared in hurry, rather than matured. The Optimistic Expectation is that with the new norms of NCTE and the 2 year B.Ed Programme as well as Integrated 4 year Programmes (B.Sc.,B.Ed.,B.A.,B.Ed.), prospective teachers in future will be better placed and sensitized on their Role Perception, Role Performance and Professionalism. Under role perception, he must realize that he is community mobilizer and an enlightened guide and counselor to create rapport of interaction, empathy and understanding between educator and educands. To have creative influence as a teacher, he must espouse 3L's (life long learning). In the words of Tagore, "A teacher can never truly teach unless he is still learning himself". Role performance functions at the optimal level if he creates two conditions, absence of constraints and conduciveness.

Conclusion: Era of Hope and Promise

An element of Pessimism emerge from this Delphi Study skeptically challenge the validity of the Present System of Teacher Education with the following propositions:

(a) whether the picture of humane and reflective teacher represented in the New Education Policy 2016 is sufficiently reflected in the Present Teacher education System? and

(b) whether the Traditional Values and Values of Modernity are inculcated in the Present Teacher Education Institutions?

However, the Picture of Optimism emerged overweighs the line of Pessimism. The findings of this research hopefully predict that Teacher education in the twenty-first century

will be the condition and consequence of renaissance and revolution happening in education now. From a mere linear expansion of the teacher education system, it is optimistically hoped to move to a radical qualitative transformation in structure and content.

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A Martial Arts Training Method in Foreign Language Education

English as a Foreign Language and Malay as a Second Language

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Abstract

With special reference to English as a foreign language in Japan and Malay as a second language in Malaysia, this study shows the effectiveness of drill activities in a classroom setting modeled after those in Japanese martial arts. After reviewing the learning activities employed by individuals who have successfully mastered more than one foreign language and the type of foreign language education encouraged by the Japanese Ministry of Education, it reveals what is critically lacking in English education in Japan as well as in a Malay-as-a-second-language program: practice activities to acquire model patterns in the sense of *kata* in Japanese martial arts. It then reports the results of a 10-year-long study of an experimental English program that was specifically designed to fulfill this lack by actively utilizing traditional *kata* practices. In so doing, it also explains student psychology in learning a foreign language.

1 Introduction

As foreign language teachers, how best can we help beginning students to learn their target language in a classroom setting? I'm sure every teacher can offer a tip or two and recommend his/her favorite activities, but taking into consideration the reality of EFL (English as a foreign language) in Japan and MSL (Malay as a second language) in Malaysia, I would like to suggest that classroom instruction should be designed mainly for developing a new language circuit in students' brains by employing rigorous drill activities modeled after pattern practice known as "*kata* practice" in Japanese martial arts. This for three practical reasons. One, although learning to speak a foreign language requires a lot of active practice, most EFL/MSL students are reluctant to do anything on their own initiative for different reasons (which we will see in sections 2 and 3). In fact, forcing them to engage in spontaneous student-centered activities often results in total waste of class time. Two, learning to pronounce (combinations of) sounds that are missing in students' first language requires repetitive drills, but most students cannot effectively do them unless under expert supervision. Three, pattern practice is easier for students to handle, since unlike free conversation, it doesn't require on-the-spot production of unprepared utterances. In addition, oral pattern practice facilitates development of a new language circuit, which in turn enables students to understand their target language without recourse to translation. Once this circuit is built, students generally find it easier to partake in activities aimed at developing productive skills, such as speaking and writing. After all, the task of establishing the circuit of a new language seems logically prior to that of learning to speak the language, because only if one first understands the language can one start using it meaningfully.

The robustness of this suggestion is empirically supported by the results of my 10-year-long study of a *kata*-based intensive instruction of English for junior high school students in Japan. Although the results mostly reflect improvement of students' passive skills (i.e. listening and reading), they clearly show a concrete merit of *kata*-type practice; indeed, it helps students develop a new language circuit, compared with traditional classroom activities without any repetitive pattern practice, including those employed in CLT (communicative language teaching), which seem to have virtually no significant impact on Japanese students' acquisition of English.

In what follows, I will explain why this is by describing what it takes to learn the basics of a foreign language and what is actually happening in EFL and MSL classrooms.

2 Reality

There are quite a few foreign language lovers in the world, and many of them go on to successfully master one or more foreign languages. These people are special in that they are inherently motivated to learn foreign languages and don't hesitate to dive into the task of using any new language from day one. This attitude is certainly admirable, but it cannot be expected of ordinary students in Japanese high schools, where English is still taught as an exam subject, not as a hands-on skill to master. Although the Education Ministry of Japan has been emphasizing the importance of teaching practical English, most schools are still teaching the language like mathematics or history, reflecting the fact that English is essentially for entrance examinations and that there is absolutely no need to use the language (or any foreign language, for that matter) in order to live in the country. Therefore, it is understandable that most teachers are content with traditional Japanese-style instruction of English, which only trains students to decipher English passages on exam papers so that they can receive high enough scores that will grant them admission to universities.

The situation is similar in the world of MSL. I have spent six months at a Malaysian university, where I sat in two MSL classes (i.e. beginning Malay and intermediate Malay) simultaneously. These are courses designed for international students in graduate programs,

so all my classmates were adult students. It was obvious from the beginning that their hearts were not in studying the Malay language, since they didn't come to Malaysia for its language. There are quite a few graduate programs in Malaysia that offer courses entirely in English. Hence, international students can study the subject of their choice without having to know any Malay. And yet, the Malay language is compulsory for every international student at the university that I stayed at, so all my classmates had to struggle with the language, whether they liked it or not.

For this reason, the Malay teachers didn't/couldn't expect much effort from the students, and this was amply detectable from the way each class was conducted. Explanation, which was entirely in English, was mostly about important vocabulary, set phrases, and basic word order. There was no systematic explanation of grammar or pronunciation. No planned homework was assigned to solidify students' comprehension of the language. In both courses, the number of words introduced in a semester didn't exceed 150. Nevertheless, two thirds of the students didn't even try to memorize them, so a great deal of class time was spent on re-viewing the same simple words over and over again. Consequently, not much progress was made on the part of the students, some of whom skipped class regularly. All the students in the intermediate class had already been in Malaysia for more than a year; some had been there for as long as three years. And yet, their vocabulary was still very much limited, and their pronunciation was still heavily influenced by the orthographical convention of English. Their command of Malay, even after two semesters of instruction, didn't seem much different from those of tourists who willingly memorize useful expressions from a small phrase book for foreign visitors to Malaysia.

3 Learning tips from polyglots

Let us go over what it takes to master a foreign language. In this respect, it is a good idea to find out what tips successful outliers, namely polyglots who have mastered many languages, can offer to total beginners. Below, only three polyglots are introduced, but they all have given TED talks about language learning, and their videos are easily accessible on the Internet. Therefore, the reader is encouraged to view their original presentations for their tips, including those that are not mentioned below.

Chris Lonsdale: Lonsdale is an entrepreneur from New Zealand, who mastered both Mandarin and Cantonese. Besides his TED talk, he published a book titled *The Third Ear* (Lonsdale 2006), which is also about language learning. The following tips are among the many he offers to language learners, but they are also important to language teachers who wish to conduct effective language classes.

- (1) Get the meaning first. When you understand the message, you will unconsciously acquire the language.
- (2) Focus on the core 1,000 words, which cover 85% of daily conversation. 3,000 words cover 98%.
- (3) Listen a lot (which he calls "brain soaking"). Even if you don't understand, you can still hear rhythm, patterns, and things that stand out in the language.
- (4) Practice until your face hurts. Speaking takes muscle. There are 43 muscles in your face, and if your face hurts, you are doing it right.

Sid Efromovich: A public speaker, facilitator, and social entrepreneur. He speaks seven languages: English, French, German, Italian, Mandarin, Portuguese, and Spanish. The tips from his learning method that seem helpful to language teachers include:

- (5) Make mistakes. Find a stickler who encourages you to make mistakes but is detail-

oriented and won't let you get away with mistakes.

- (6) Have "shower conversations." Just like athletes who visualize what they are supposed to do, have a lot of conversations with yourself, which is something you can do anywhere anytime.

Tim Doner: A senior at Harvard University, studying Near Eastern Languages and Civilizations (as of the fall of 2017). He started learning foreign languages at the age of 13, and at 17, he already spoke as many as 20 languages, including Arabic, Hebrew, French, Mandarin, Russian, and Hindi. The useful tips from his learning method for language teachers are:

- (7) Have a lot of audio input. Try to absorb the language as much as possible.
- (8) Repeat to yourself over and over.
- (9) Watch TV shows and movies, which reveal how the language is actually used.

These sensible tips certainly seem helpful in beginning-level classes. However, they are generally missing in EFL classes in Japan and MSL classes at the university that I stayed at.

4 Student psychology

Besides these practical tips, it is also important for teachers to understand student psychology, since it is just human nature to feel reluctant to do anything that doesn't interest you or may embarrass you. This is especially true in foreign language classes, since learning to speak a new language necessarily requires active learner participation. So in this section, let us examine the psychology of EFL students in Japan as well as that of MSL students in Malaysia.

In Japan, where humility and silence are cardinal cultural virtues, students are typically inhibited from standing out in class, since being noticeable often results in unpleasant consequences in their school lives. Such innocent activities as asking questions and voicing one's opinions are often regarded by their peers as a breach of this unwritten social rule of keeping a low profile, and a blunder like openly making mistakes is prudently avoided by not saying anything at all times. Therefore, Japanese students in English classes "rarely initiate discussion, avoid bringing up new topics, don't challenge the instructor, seldom ask questions for clarification, and don't volunteer answers" (Anderson 1993). This is the fundamental student psychology that we need to take into consideration when designing an English class for Japanese students.

Abbot (1981) coined the term TENOR (Teaching English for No Obvious Reason) to refer to general English courses offered widely at Japanese universities to non-English majors. Unlike secondary school students, who need to study "examination English," most university students don't have any practical reasons to study English anymore, since the ability to use the language isn't crucial in finding a decent job or leading a comfortable life in Japan, an effectively monolingual country. Hence, it is understandable that students in TENOR classes lack any clear extrinsic motivation other than getting a passing grade (Cogan 1995), and this is probably the reason why the TOEFL scores of Japanese examinees have always been among the lowest in Asia, as shown in the table in (10).

(10) Table from *Test and Score Data 2016* by ETS**ASIA**

Afghanistan	14	16	20	18	69
Azerbaijan	19	19	21	20	80
Bangladesh	21	22	21	23	87
Bhutan	18	20	22	22	82
Brunei Darussalam	*	*	*	*	*
Cambodia	15	17	19	19	71
China	20	19	19	20	79
Christmas Island	21	21	21	21	83
Cocos (Keeling) Islands	*	*	*	*	*
Hong Kong	21	22	22	22	87
India	22	23	23	24	93
Indonesia	21	21	21	21	84
Japan	18	17	17	19	71
Kazakhstan	19	21	22	21	82
Korea, Democratic People's Republic of	21	20	20	21	82
Korea, Republic of	22	21	20	21	84
Kyrgyzstan	17	19	20	20	76
Lao, People's Democratic Republic	13	15	19	17	63
Macao	19	19	20	21	79
Malaysia	22	23	22	23	90
Maldives	*	*	*	*	*
Mongolia	17	19	19	19	75
Myanmar	19	20	21	21	81
Nepal	17	18	20	20	74
Pakistan	22	23	24	23	92
Philippines	21	22	23	23	89
Singapore	24	25	24	24	96
Sri Lanka	20	21	21	21	83
Taiwan	21	20	20	20	81
Tajikistan	14	16	19	17	66
Thailand	19	20	19	20	78
Timor-Leste	*	*	*	*	*
Turkmenistan	17	19	20	19	75
Uzbekistan	18	19	21	19	77
Viet Nam	20	20	20	22	82

(The five columns show, from left to right, the scores of the four sections, reading, listening, speaking, and writing, followed by the total score.)

The definition of TENOR also applies to the MSL classes that I participated in. Indeed, for most of my classmates, studying Malay was just an unpleasant academic nuisance in their main endeavor to earn a graduate degree from a Malaysian university. Given this fact, their unwilling attitude toward studying Malay is certainly understandable, and for MSL teachers, it is hence vital to keep this in mind when designing a language program that accommodates the specific needs (or lack thereof) of these MSL students.

5 Karate

Having explained the psychology of EFL/MSL students, I would like to proceed to introduce traditional *kata* practice, which has long been used in training beginning students of Japanese martial arts, such as *karate*. This particular type of practice is full of practical hints for how to train beginning language students, and based on those hints, I designed and carried out an intensive program for EFL students and achieved a notable success, which will be explained in section 7.

Beginning karate students all go through repeated practice of *kata*, a prearranged series of basic techniques designed around an imaginary confrontation with one or several opponents. According to the website titled Academy of Traditional Karate, "[d]uring a *kata* [practice,] the student visualizes the attack and uses the moves of the *kata* to defend themselves with blocks, strikes, throws, and control techniques." The usefulness of this particular type of practice is succinctly explained by Thompson (2008): "*kata* [is] one person's way of memorizing certain fighting sequences without the use of a partner, and to remember techniques that [have] a high rate of success when used in combat. Putting these movements into an organized drill that [can] be practiced regularly [means] that they [can] not only be remembered

more easily, but [can] also be taught to others."

Obviously, there is no creativity required in practicing *kata*; actually, students at this early stage of training are simply expected to follow original *kata* forms, and modifying them in any way is strictly prohibited (Tanaka et al. 2000). Thus, students can concentrate on thoroughly imitating their teachers, fully knowing what to do at any given moment. Moreover, since *kata* practice requires only imitation, it doesn't cause any kind of cognitive strain. Therefore, students can practice without any anxiety — without the fear of making fools of themselves by doing something totally nonsensical and irrelevant. Hence, *kata* drills steadily prepare students for the next stage of training, where they face their opponents in practice karate matches.

There are of course rules in karate, which students can learn from rule books. Students can also benefit from how-to books that explain what they should do to acquire karate techniques. But reading these books all the time without bothering to undergo any physical training can never produce a karate practitioner. This seems self-evident to any sensible individual, but in EFL classrooms in Japan, studying only rules without having actual practice has always been the norm.

Noticing this rather unfortunate state of English education in Japan, the Japanese Ministry of Education has been pushing communicative language teaching (CLT) to English teachers for some time, but nothing significant has changed in English classes to date. However, this was easily expected from the beginning, since engaging in communicative activities from day one works only for people who are somehow already motivated to learn English. For ordinary Japanese students, English is just another school subject and a potential source of social embarrassment. Therefore, students are usually reluctant to utter anything during practice owing to the peer pressure of not standing out in any way, which stems from the humility-oriented culture of Japan.

The same kind of situation holds in MSL classrooms for the specific reason that most MSL students perceive Malay as a seemingly unnecessary academic burden on their shoulders. Hence, going over basic vocabulary and simple Malay passages has to be repeated, because forcing unmotivated students to engage in communicative activities would very often result in total silence or irrelevant conversations in their own language or English.

But basic activities that correspond to *kata* practice of karate, namely those based on the tips in (1) – (9) in section 3, are entirely absent in EFL in Japan and MSL in Malaysia. Carrying out CLT without such activities is like forcing beginning karate students to fight an opponent from day one without first teaching them any basic karate forms. It is my observation that this is where immediate improvement of EFL/MSL instruction can be made by adopting *kata*-type practice, which has been utilized by successful language learners for years, but somehow overlooked/ignored by many language teachers.

6 Effective classroom activities

So let's see what kind of *kata*-type language activities can be introduced. But first, let us classify the practice tips recommended by the polyglots in section 3 in terms of the three functional types, meaning, input, and output. Look at (11).

(11)	Meaning	(1) Get the meaning first.
		(2) Focus on the core 1,000 words.
	Input	(3) Listen a lot. (Brain soaking)
		(7) Have a lot of audio input.
		(9) Watch TV shows and movies.
	Output	(4) Practice until your face hurts.
		(8) Repeat to yourself over and over.
		(5) Make mistakes. Find a stickler.
		(6) Have "shower conversations."

Kata-type activities can be easily conceived from this list, such as those in (12) – (14).

- (12) Meaning
 - a. Understand basic sentences.
 - b. Memorize the core 1,000 words by using flashcards.¹
- (13) Input
 - a. Listen with written scripts.
 - b. Dictation practice.
- (14) Output
 - a. Read aloud.
 - b. "Shadowing" practice.
 - c. Recitation.

These activities may be described in more concrete terms, as the following.

Understanding of basic sentences in (12a) can be readily achieved by providing students with dialogs with full translations. Teachers should explain what each word/sentence in a given dialog means, along with its pronunciation. Then, using flashcards, which may be electronic, teachers can train students to memorize the meanings/functions of basic words/phrases. This flashcard exercise should involve sentences, since rote memorization of single words without any kind of contextual clue is uninteresting and ineffective. It is only after students have mastered these cards, single-word flashcard exercises in (12b) should be carried out, aiming at the total of 1,000 words, which in turn gives students a clear numerical goal to work toward.

For (13a) *Listen with written scripts*, teachers should provide written dialogs and then play their audio versions in class so that students can have both aural and visual stimuli simultaneously. Since most students carry smartphones nowadays, they should be provided with audio files too so that they can listen to them anytime. Once listening practice, coupled with the activities in (14), has sufficiently been done, students should move onto (13b) *dictation practice*, which will enable them to memorize correct spellings as well.

Repetition of (14a) *reading aloud* helps students build phonological confidence, so teachers should do everything to encourage them to read aloud as many times as possible. In so doing, teachers should act as *sticklers* for good-enough pronunciation, as suggested in (9).

One advantage of (14a) is that students can freely adjust the speed of their reading. After listening to the audio recording of a text for model pronunciation and intonation, students can start reading at their own pace. When doing this repeatedly, they should gradually speed up until they can read as fast as the recording. Once achieving this speed, students are then ready to tackle (14b) *shadowing*, which is basically the same activity as reading aloud. The only difference is that students don't see what they are supposed to say, but they hear it instead. The objective of this practice is that students train themselves to be able to say what

they hear immediately after they have heard it, a skill that requires both a good command of listening and that of enunciating. Students can do this practice with their eyes closed, and as long as they have done reading aloud thoroughly, they shouldn't find shadowing too difficult to do.

Incidentally, in order to do shadowing, it is not necessary to memorize the text, since the text is still provided, albeit aurally. And yet, by repeating (14a) and (14b) over and over, students will eventually memorize the text. Then, those who feel confident are encouraged to *recite what they have memorized*, i.e., (14c). Successful execution of this task gives a big sense of accomplishment to and instills significant confidence in students.

7 Intensive program with *kata*-type practice

In the summer of 2007, I designed and taught an intensive five-day EFL program for junior high school students that had them do ample *kata*-type practice. To be more specific, the following activities were conducted each day, and reading aloud and shadowing were assigned as daily homework as well. (See Namai 2010 for more details.)

- (15) a. Pronunciation practice
- b. Vocabulary building by flashcards
- c. Reading aloud practice
- d. Shadowing practice
- f. Recitation
- g. Substitution drill

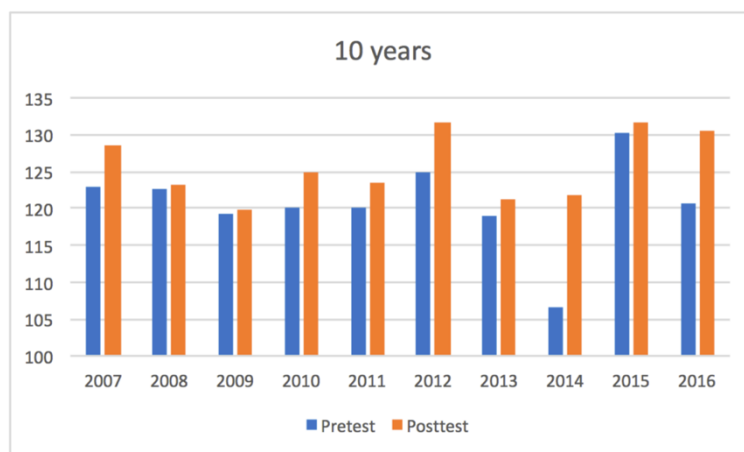
I checked students' performance of shadowing in the form of a one-on-one interview at the end of each class, which motivated students to practice hard even at home. In order to perform well in front of me, they had to repeat reading aloud and shadowing over and over, until their faces literally hurt. In this way, I was able to control how students would use their time outside the classroom. Since none of the activities called for on-the-spot creativity, students were able to earnestly engage in them without fearing any embarrassment, even in class. This enabled their quick progress in grasping the English language, which was measured by pretest and posttest; for that purpose, I used the TOEIC Bridge Test.²

I continued offering this intensive summer program for ten years as a longitudinal study in order to objectively judge its effectiveness. The following table and graph show the results of the pretest and posttest during the ten years:

(16) a.

	Pretest	Posttest
2007	123	128.5
2008	122.5	123.1
2009	119.4	119.8
2010	120.1	125
2011	120	123.5
2012	124.8	131.6
2013	119.1	121.3
2014	106.5	121.7
2015	130.1	131.7
2016	120.8	130.5

b.



Notice that every year, immediate improvement was recorded, but the latest results of 2016 deserve special mention. In this particular year, as many as 48,802 university students took this test (TOEIC Bridge IP) in Japan, and their average score was only 122.4, according to the publication *TOEIC Program: Data and Analysis 2017*. But the average posttest score of my 13 students was 130.5, and they were still in junior high school at the time of the test. This difference seems to be due to the lack of *kata*-type practice in the English education that the university students must have had in their secondary schools — traditional instruction that doesn't do any good to those students who are not really motivated to acquire practical skills of the English language.

8 Conclusion

In 2006, I had a chance to observe ESL (English as a second language) classes at a large university in the state of Indiana in the U.S. for a semester. What I noticed there was a big contrast between very talkative international students from Saudi Arabia and extremely quiet students from countries like Japan and Taiwan. The quiet students didn't say a word even in speaking classes, so when I had a chance to interview the veteran teacher who was teaching those students, I mainly asked about them. "I have given up on shy students," he said. "I tried everything to get shy students to talk for more than 20 years, but nothing worked," he added. His approach to teaching was CLT, which presupposes students' active participation in student-centered activities, but obviously, those activities were totally ineffective in teaching shy students. In contrast, they seemed to fit Saudi students rather nicely, since the Saudis were always very eager to speak up without worrying at all about grammatical mistakes they were constantly making in front of their classmates. When I interviewed them, they even made a remark to the effect of "What we are doing is natural. We think even American students are shy." At any rate, I had always felt that CLT was not for Japanese students, and in Indiana, my feeling was strongly reinforced, leading me to think that we had to take an entirely different approach to teaching Japanese students (or quiet students in general, for that matter). Thus, I designed a program that offers plenty of *kata*-type practice.

Kata-type practice is effective in language learning, since just like simple physical exercises, it can be repeated, without much of a cognitive strain. Students always know what to do, so they can effortlessly engage in it, not fearing making fools of themselves by uttering something totally nonsensical. With plenty of *kata*-type practice, students can steadily develop a new language circuit in their brains and memorize words and phrases as a side effect. As my 10-year-long study shows, this can be objectively measured by a test like the TOEIC Bridge. With a newly-built language circuit, students can start having "shower conversations" (Efromovich's tip (6)), which do not have to be in a shower room, whenever and wherever they like. They can also watch (and enjoy) TV shows and movies in the new language

(Doner's tip (9)), which in turn gives them still more language input and further reinforces their new circuit.

But of course, productive skills cannot be expected to develop very much just by having *kata*-type practice. Those skills necessarily require ample speaking exercises, but those exercises should only be introduced to students who already feel comfortable with their target language (or to extroverted students like those from Saudi Arabia mentioned above). This is especially so in a country like Japan, where people are generally inhibited for cultural reasons from speaking up in public. However, acquisition of passive skills made possible by *ka-ta*-type practice lays the foundation for productive skills, giving students confidence in their target language. That confidence, it is hoped, will then prompt them to participate in activities that develop productive skills. However, moving onto this next step is really up to the student, since it necessarily requires cognitive strain accompanied by the fear of making mistakes in front of other people. Let's face it. You can lead a horse to water, but you can't make him drink. But as far as quiet students are concerned, instruction based on *kata*-type practice is the least good teachers can offer to them, and it is certainly more effective than CLT, which on the whole doesn't seem to produce any good results at all.

The next thing for me to do is to see whether or not *kata*-type instruction works for unmotivated students like those that I met in Malaysia. Although I have started a new MSL project for this particular purpose, it is not ready to be reported. Therefore, I must leave its discussion for another occasion.

Endnotes

¹ The number of 1,000 words is only an ideal number for a one-semester class that meets twice a week. The target number should be adjusted depending on factors like program length and the frequency of class meetings.

² According to the website of TOEIC, the TOEIC Bridge Test is designed for English language learners at the beginner and intermediate levels. It is an objective test administered, using an answer sheet to fill in 100 multiple choice questions in a total of 60 minutes, made up of Listening (50 questions, 25 minutes) and Reading (50 questions, 35 minutes) sections. Results of the TOEIC Bridge Test are shown as a "Score" ranging from 20 to 180 points, rather than as Pass/Fail.

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Cognitive Process Represented in Assessment Tasks in *BSE Bahasa Inggris Kelas X*

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This paper presents content analysis research with aims to obtain cognitive process profile of assessment tasks (ATs) in the only government authorized English textbook for 10th Grader entitled *BSE Bahasa Inggris Kelas X* in reference to 2013 National Curriculum (K-13) in Indonesia. The data consists of 61 assessment tasks in summative test from textbook are codified in reference to six levels of cognitive process and knowledge dimension in Bloom's Revised Taxonomy proposed by Krathwohl (2002). Results indicates that the assessment tasks in the textbook does not cover all cognitive process and does not address critical thinking in content standard of K-13 curriculum (*Permendikbud No. 21 Tahun 2016 tentang Standar Isi*) as regulated by Ministry of Education in Indonesia.

Keywords: *Cognitive process; Bloom's Revised Taxonomy; English textbook analysis; Assessment task analysis; 2013 National Curriculum (K-13)*

1. Introduction

Curriculum 2013 (K-13) is constructed under specific framework of material construction in K-13; one of them is Bloom's Revised Taxonomy as mentioned in Content Standard of Curriculum. BRT is a framework for classifying statements of what teacher expect or intend students to learn as a result of instruction. The framework is associated with the importance of critical thinking in student's learning process as proposed in one of K-13 skills. The framework is then represented in the product of 2013 curriculum, a textbook.

Textbook as an agent of change, serves as a major resource in providing the content of the lesson (Richards, 2001b; Hutchinson, T., Torres, E., 1994; Dat, 2008; Choi & Lee, 2008). Textbook as a ready-made textbook can be a 'support' for less experienced teacher in teaching but also can 'absolve teachers of responsibility' (Cunningsworth, 1995; Hutchinson, T., Torres, E., 1994). Instead of being a support, teachers have a huge tendency to depend on material and assessment decided by the curriculum maker.

Related to this nature, Ministry of Education in Indonesia has set out a policy to allow The Centre for Curriculum and Textbooks (*Puskurbuk*) to centrally publish an 'only textbook' as legal document of K-13, one of them is an electronic-based textbook entitled *Buku Sekolah Elektronik (BSE) Bahasa Inggris Kelas X*. This government-authorized textbook serves as the main source in teaching and learning and teacher's guide book serves as a guide in providing assessment in the lesson (KEMKUMHAM, 2015) or in lesson plan (*Permendikbud* No. 103, 2014, pp. 6-7). In this sense, the textbook is regarded as the only model for 10th grader teacher across Indonesia in teaching learning process.

One of crucial components in the textbook is assessment. Assessment is designed to capture evidence of a knowledge base from student (Glaser, 1990, p.477) in (Gipps, 1994). In order to capture this evidence, assessment task in similar to test items (Anderson, 2003; Airasian, P. W., & Russell, M. K., 2012) is used as an instrument to gather this evidence in learning process. Thus, in reference to material construction of K-13, assessment task in textbook is constructed based on BRT. The assessment task in *BSE Bahasa Inggris Kelas X* is the instrument which teachers use to assess critical thinking skills in the classroom.

Studies in assessment tasks analysis using BRT in English textbook have been conducted by Roohani et al (2013) and Razmjoo et al (2012). This study reported that in Iranian textbook lower-order thinking is found more prevalent in the tasks thus the textbook should be adapted to engage EFL students more in higher order thinking to enhance students' critical thinking. The needs of higher order thinking tasks in *Interchange* textbook also has been addressed in Razmjoo et al (2012) and it similarly portrayed the dominance of lower order thinking. Several studies in assessment items analysis using BRT's cognitive skill has also been reported by international scholars such as Armbruster & Ostertag (1993), Lan & Chern (2010), and Fives & DiDonato-Barnes (2013). The findings indicated the majority of assessment items are constructed based on lower order thinking (LOTS) than the higher one.

In Indonesia, published research focuses on K-13 textbook analysis using BRT are available such as Lukitasari, H (2017) and Juhanda, A (2016) in mathematics, and Djauhari, R.A. (2015) in biology. These studies also reported most of assessment task in the K-13 textbook consist of lower order thinking skills thus it does not address critical thinking. This study intends to investigate lower and higher order thinking based on BRT cognitive dimension which represented in assessment tasks in K-13 for English textbooks, as referred in the research question:

- a. How is the distribution of cognitive process represented in the Assessment Tasks in *BSE Bahasa Inggris Kelas X* described in terms of Lower Order Thinking Skills (LOTS) and Higher Order Thinking Skills (HOTS)?

2. Theoretical background and data collection

2.1 Theoretical and Analytical Framework

Bloom's Taxonomy is used in educational circles as a model for promoting higher order thinking (Shrum, J. and Glisan, E., 2010). This is a framework for classifying statements of what we expect or intend students to learn as a result of instruction. The framework was conceived as a means of facilitating the exchange of test items among faculty at various universities in order to create banks of items, each measuring the same educational objective. One of the most frequent uses of the original Taxonomy has been to classify curricular objectives and test items in order to show the breadth, or lack of breadth, of the objectives and items across the spectrum of categories. It also has repeatedly provided a basis for moving curricula and tests toward objectives that would be classified in the cognitive domain (Krathwohl, 2002).

In K-13, Bloom's revised taxonomy is implemented in textbook as product of curriculum. The textbook as it is referred to Content Standard of K-13, mainly addresses critical thinking which is gained through five activities, observing, asking, trying, demonstrating and creating as it is relevant to BRT.

Cognitive process dimension in BRT is defined as a learning notion which involves the acquisition of knowledge (Krathwohl, 2002). This cognitive process is then categorized into two based on the complexity of thinking. Complexity refers to the thought process that the brain uses to process information (Sousa, 2006, p. 256) in Shrum, J. and Glisan, E., (2010). The lower three levels (remember, understand, apply) describe a convergent thinking or lower order thinking (LOT) process where the focus is on information that the learner has learned. The three levels (analyze, evaluate, create) describe a divergent thinking process or high-order thinking (HOT) because the learner's processing leads to new insights, discoveries, and creations that were not part of the original information learned.

To describe it more, here is the Mayer's description (2002) of 6 levels of cognitive skills:

No.	Cognitive level	Definition
1.	Remember	the ability to retrieve and locate knowledge in long-term memory that is consistent with presented materials
2.	Understand	the abilities to build connections between the knowledge to be gained and their prior knowledge (understand), thus learner is able to convert information from one form of representation to another (interpret).
3.	Apply	Abilities to use procedures to perform exercises or solve problems and is closely linked with Procedural Knowledge
4.	Analyze	Abilities to break material into its constituent parts and determining how the parts are related to each other and to an overall structure
5.	Evaluate	Abilities to make judgments based on criteria and standards
6.	Create	Abilities to put elements together to form a coherent or functional whole; reorganizing elements into a new pattern or structure

The BRT also equipped with knowledge process dimension. The knowledge dimension refers to subject matter content inside the statements of objectives as the result of instruction. It contains four main categories, 1) Factual Knowledge; 2) Conceptual Knowledge; 3) Procedural Knowledge; and 4) Metacognitive Knowledge. Factual Knowledge refers to basic elements that student must know to be acquainted with a discipline or solve problems in it. Conceptual Knowledge refers to the irrelationships among the basic elements within a larger structure that enable them to function together. Procedural Knowledge refers to knowledge on how to do something; methods of inquiry, and criteria for using skills, algorithms, techniques, and methods. The last, metacognitive knowledge deals

with knowledge of cognition in general as well as awareness and knowledge of one's own cognition.

These cognitive and knowledge process dimension is set as the framework to analyze the assessment task in the English textbook of 10th grader of K-13 curriculum. This study is conducted similarly relevant to studies done by Armbruster, B., & Ostertag, J, 1993; Roohani et al (2013), Razmjoo et al (2012); and test items in general by Lan, W., & Chern, C., (2010) and Fives, H., & DiDonato-Barnes, N., (2013).

2.2. Data and Data Sources

The quantitative data used in this study 61 assessment tasks from two summative tests. The first summative test consists of 10 task items in Reading part, 10 task items in Vocabulary Test, 10 task items in Grammar Test, and 2 task items in Writing part. The second summative test consists of 10 task items in Reading part, 10 task items in Vocabulary Test, 8 task items in Grammar Test, and 1 task item in Writing part. It is 61 task items in total. The data is obtained from Teacher's book of BSE Bahasa Inggris Kelas X. The data is got online from bse.mahoni.com., written by Utami Widyawati, Zuliati Rohmah, and Furaidah (2014). The textbook is widely regulated to use by teachers who teach 10 graders in Indonesia.

3. Analysis

The analysis is done by portraying the test items and identifying the cognitive skills and its knowledge dimension. This study conducted the analysis as suggested by Lan, W., & Chern (2010) in investigating cognitive process in English reading comprehension tests of college entrance examinations from 2002 to 2006 in Taiwan. One of analysis examples in their studies is portrayed like this:

Toscanini thought that Marian Anderson_____

- (A) Had a very rare voice
 - (B) Sang occasionally in public
 - (C) Sang only once in many years
 - (D) Was seldom heard by people
- (Q 48 from 2002 SAET)

First, they identified the requested information in the reading passage to determine which cognitive skill is required to answer this question.

...in 1955, Anderson became the first black soloist to sing with the Metropolitan Opera of New York City. The famous conductor Toscanini praised her voice as "heard only once in a hundred years." She was a U.S. delegate to the United Nations in 1958 and won the UN peace prize in 1977....

To answer this question, test takers need to contextualize the meaning of the statement "hear only once in a hundred years" which is the comment, a praise that Toscanini gave to Marian Anderson. Readers need to interpret this sentence based on the context to reach the correct answer, which is option A, "had a very rare voice."

Second, the item will then be categorized as "Understand" because the students required to do is interpreting. Since the meaning of the statement is a fact in the reading passage- Anderson had a very rare voice- it was classified as "Factual Knowledge (Knowledge of specific details and elements). This example is then categorized as Understand Factual Knowledge because it is interpreting specific details and elements. This analysis is inherently conducted as Krathwohl (2002) proposed in classifying subject matter content in Knowledge dimension and a description of what is to be done with or the content as Cognitive dimension.

In the end, this study reported that test items on Remember Factual Knowledge and Understand Factual Knowledge which belongs to lower cognitive levels were the majority in the two test thus they suggest the test items should address more higher-order thinking tests in order to build student's critical thinking in testing.

The analysis of test items inside 10th Grader English textbook is conducted like this:

Reading

Answer the comprehension questions!

My BEST FRIEND

I have a lot of friends in my school, but Dinda has been my best friend since junior high school. We don't study in the same class, but we meet at school every day during recess and after school. I first met her at junior high school orientation and we've been friends ever since. Dinda is good-looking. She's not too tall, with air skin and wavy black hair that she often puts in a ponytail. At school, she wears the uniform. Other than that, she likes to wear jeans, casual t-shirts and sneakers. Her favorite t-shirts are those in bright colours like pink, light green and orange. She is always cheerful. She is also very friendly and likes to make friends with anyone. Like many other girls, she is also talkative. She likes to share her thoughts and feelings to her friends. I think that's why many friends enjoy her company. However, she can be a bit childish sometimes. For example, when she doesn't get what she wants, she acts like a child and stamps her feet.

Dinda loves drawing, especially the manga characters. She always has a sketchbook with her everywhere she goes. She would spend some time to draw the manga characters from her imagination. Her sketches are amazingly great. I'm really glad to have a best friend like Dinda.

Assessment task: 10. What does the writer feel about Dinda?

This assessment task is considered as *Understand, Factual Knowledge* because students are expected to infer what the writer feels about Dinda which explicitly stated in presented material. What the writer feels about Dinda refers to knowledge of specific details in factual knowledge. The cognitive process that student needs to do with the content is to *infer* thus it belongs to Understand level. This finding is similarly reported by Lan, W., & Chern (2010) which analyze identical assessment tasks on Understand, Factual Knowledge level in Reading comprehension task. The findings in analyzing 61 test items reveal:

Knowledge Dimension	Cognitive Process Dimension					
	Lower order thinking skills			Higher order thinking skills		
	1. Remember	2. Understand	3. Apply	4. Analyze	5. Evaluate	6. Create
A.Factual Knowledge	9.84%	54.10%	0.00%	3.28%	0.00%	0.00%
B.Conceptual Knowledge	0.00%	1.64%	27.87%	0.00%	0.00%	0.00%
C.Procedural Knowledge	0.00%	0.00%	0.00%	0.00%	0.00%	3.28%
D.Metacognitive Knowledge	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
TOTAL	9.84%	55.74%	27.87%	3.28%	0.00%	3.28%
	93.44%			6.56%		

Table 3.1. The distribution of LOTs and HOTs in the Assessment Tasks of English Textbook for 10th Grader (BSE Bahasa Inggris Kelas X)

4. Result

As shown in the table 3.1, it can be inferred the prevalence of LOT is dominant than HOT. This frequency indicates that assessment task dominantly focuses on information that the learner has learned in repeated task (Shrum, J. and Glisan, E., 2010; Brookhart, 2010; Lewis, A., & Smith, D., 1993). The very least occurrence 6.56% in Analyze, Evaluate and Create levels indicate that the assessment task does not address higher order thinking which is associated to critical thinking. This means the assessment does not endorse students to have critical thinking abilities such as clarifying issues and terms, identifying components of

arguments, judging the credibility of evidence, using inductive and deductive reasoning, handling argument fallacies, and making value judgments (Quellmalz, 1987, p. 88) in Lewis, A., & Smith, D., (1993).

Similar result happened in Roohani et al (2013) which put emphasis that students only asked to mostly demonstrate their understanding in task of textbook thus the textbook failed to engage EFL students more in advanced task. Razmjoo et al (2012) concluded in their study that textbook which promotes understand factual knowledge does not benefit students in an era in which critical thinking is of such a great importance. This result is a suggestion for textbook developers to devise exercises and activities that include higher order thinking such as reflective thinking which students are required to think about the way they come to a specific answer. This can make students a learner autonomy, better problem solvers and better language learners.

Fives, H., & DiDonato-Barnes, N., (2013) also indicated from their findings that the dominant test items is on low level thinking skills. This indicates that teacher in the classroom should put more consideration on high level thinking skills in test items based on the learning objective and how the content was taught. They suggested that students are not only assessed by multiple choice or short answer items but also create descriptions in their own words, as inherently defined as create in cognitive process under category of higher order thinking skills. This consideration is the best way to get the information or collecting the evidence from student's performance.

5. Conclusion

The result indicates that assessment task inside the government authorized textbook does not address each of six level of cognitive process in cumulative hierarchy of BRT as regulated in Content Standard (*Permendikbud No. 21 Tahun 2016 tentang Standar Isi*) and constructed by Krathwohl (2002). The textbook does not endorse critical thinking as one of graduate standard as K-13 proposed in Exit Competence Standard (*Permendikbud No. 20 Tahun 2016 tentang Standar Kompetensi Lulusan*). It also addresses the absence of assessing higher order thinking inside textbook which serves as a major resource that provides the content of the lesson in learning process, especially in EFL setting such as Southeast Asian countries (Richards, 2001b; Hutchinson, T., Torres, E., 1994; Dat, 2008; Choi & Lee, 2008) and in this particular study, Indonesia.

Based on the result of this research, the researcher suggests recommendation for textbook maker, government and further research who relate to assessment tasks analysis using BRT. To be more specific: 1) for teacher, this study might be a helpful insight for teachers who currently use the book. Teachers should do some adaptations in using the ready-made summative test in textbook for assessing students in the end of the program. Some adaptations might be done by constructing higher order thinking assessment tasks and make it relevant to the needs of critical thinking in the classroom; 2) for textbook maker and publisher, this study addresses higher order thinking in designing assessment tasks in textbook. This relates to the role of textbook as guidance for teacher in assessing students. The need for higher order thinking skills such as Analyze, Evaluate and Create should be a priority in order to enhance student's critical thinking in student's performance; 3) further research, this research suggests further investigation in test item type analysis regarding to BRT's cognitive process as Armbruster, B., & Ostertag, J (1993) investigated in order to identify the broader profile of test item inside textbook of BSE Bahasa Inggris Kelas X of K-13. This might also trigger broad discussion in assessing higher-order thinking of BRT through multiple choice (Brookhart, 2010); (Scully, 2017), responding to the dominant use of test items found inside summative assessment of K-13 are multiple choice. Moreover, this study also encourages further investigation regarding the development of a science of

questioning and test items analysis using Bloom's Revised Taxonomy in textbook as Armbruster, B., & Ostertag, J (1993) used the Bloom's original taxonomy (Krathwohl, 2002).

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Developing Globalization and Entrepreneurship in the English Language Teaching Context in Japan

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Abstract - Japanese universities are in a difficult situation as they struggle to enroll more foreigners, and internationalize the student body and the campus environment. One important aspect of such internationalization is to prepare students for a global workplace with adequate corporate awareness and exposure. This paper discussed the plan outline for developing a series of undergraduate elective courses in computer science English language research center that addresses the issue of “exposure and corporate mindset” from the perspective of both product-based knowledge dissemination, and intercultural and organizational communication. The paper discussed how an undergraduate elective “track” for 4 courses aimed at globalization in a Japanese computer science university have been laid out to teach both business and technical communication, while making students aware of different organizations such as Apple, Tesla, Uber, Airbnb, and the Tokyo start-up ecosystem. The first semester electives have been designed to teach soft communication skills and develop a corporate mindset in a business communication and text-mining environment. Students learnt about the basics of Silicon Valley, and what it means as a Japanese to experience and learn about such a model. The second -semester electives have been developed to teach product design and analysis in a technical writing and usability environment; cultivate how products and ideas take shape in the Silicon Valley companies. Initial student reactions suggest that the Silicon Valley (SV) impresses upon a relatively positive mindset that should be further pursued and nurtured. Students were seen expanding their imagination as to how Silicon Valley works, and what it means to be working in such an international environment.

Keywords: Globalization, Entrepreneurship, Corporate Mindset, Silicon Valley, Business Writing, and Language

1. INTRODUCTION

Globalization has been variously described as a phenomenon, an argument, and a vision. Theories of globalization often emphasize different aspects of the globalizing process (economic, cultural, technological, political) [1]. Education, globalization, and social change are intertwined and could be seen as central to economic competitiveness, the reduction of poverty, revitalization of an economy, and environmental sustainability [2]. Recently, there is a growing literature on rethinking science education research and development from the perspective of globalization [3]. This study is situated in the context of a technical computer science university in Japan, where the drive for globalization is increasingly gaining ground. Importantly, this article discussed globalization and education in the context of language teaching in Japan in this technical university. Kubota [4] highlighted the tension of globalization in language learning and teaching in Japan as constituting three corners of a triangle: (1) ethnic, linguistic, and cultural diversity in the local communities; (2) the prevalence of English; and (3) nationalism endorsed by linguistic and cultural essentialism. The important point to note in the previous sentence is the impact of nationalism and national identity in embracing English as a foreign language. The attempt to open up student minds to foreign culture, and impressing upon the importance of a multinational campus environment and identity are only few of the challenges that the Japanese universities are currently facing.

Besides the drive for globalization in higher education in Japan, another important perspective that drives the need for globalization in Japan is likely to be the large difference in management and human resources styles of operation in Japanese vis-à-vis western corporations. A clear motivation in this article is to argue the importance of allowing Japanese university education to throw some perspective as to the difference in Japanese and western models in terms of training in industry, authority, hierarchy and community, innovation, entrepreneurship and the community model, meritocracy, employment and citizenship etc. [5]. Basic understanding of such issues is extremely important as students prepare to take the plunge in the job sector, and in an increasingly globalized and connected world.

Numerous universities in a worldwide context developed their own internship program to provide students with real-world experience of the products and the workplace environment as a “try before you buy” kind of arrangement [6]. Internships are an increasingly popular element of higher education in business and provide many potential benefits to students. An internship experience can help students make the connection between their academic studies and the world of business. They can also create valuable connections and networking opportunities to improve the employment and career prospects for students [7].

But, as has been experienced in this Japanese context for a prefectural computer science university, student motivation is lacking when it comes to venturing out to a foreign land to explore the unknown. There are only a handful of students taking part in the *Silicon Valley Internship Program* organized by the University of Aizu (UoA), and there is no formal structure at UoA to cast a wider net and identify and nurture interested and talented students who could benefit from such a program. The idea then is to develop a pedagogical structure and plan for instructional design that promotes the culture of corporate exposure on campus for those students who are still not ready with a mindset that will likely take them to headquarters of world famous companies and start-ups such as Facebook, Google, Apple, Tesla etc., among other lesser known entities. Such courses could be practically considered as on-campus pre-internship programs, and is aimed at supporting the formal internship program at UoA. This effort at “corporatization” of the student minds could be better understood in the

context of Japan's educational reform plans to highlight globalization. Primarily, as part of the content in such courses, we wanted to follow a model in *globalization and education* as the background motivation.

The courses discussed in the next section in the context of Silicon Valley would help educators get some preliminary indications as to whether education could expand on the directions shown in Figure 1 and if and how Korten's model of nested economies could work when students are taught the intercultural aspects, the products, ideas on customization, decision-making about working in a different culture, on a different multinational project etc. Such models as shown in Figure 1 would guide and help us understand what is lacking in the existing system in Japanese education, and how we could approach language pedagogy within the scope of the globalization genre. How do we prepare instructional design and language pedagogy in Japan to address concepts related to intercultural communication, organizational communication, products with multinational usability and systems that functions within the scope of Korten's nested economies? Educators in Japan need to develop ideas to explore if such globalization-driven models could potentially answer the question of how the insular nature of students in Japan could change, and how the recent changes as initiated by MEXT could be further supported?

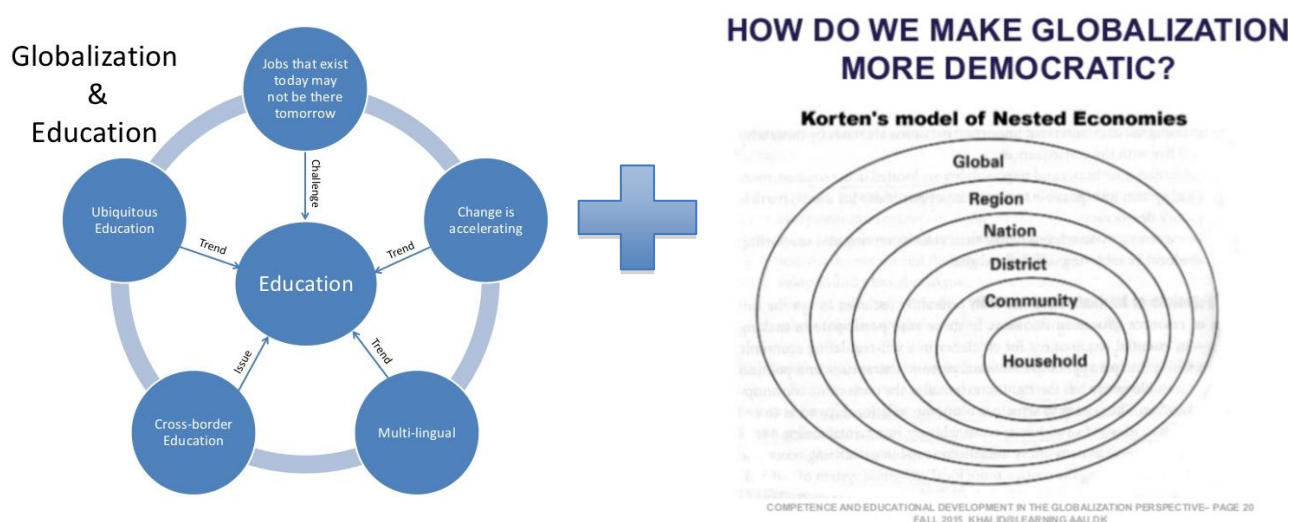


Figure 1. A Model for Globalization and Education

2. BACKGROUND TO THE STUDY

We need a broader understanding of globalization efforts in Japan before situating a case study on how Japanese students in a specific computer science context react to the idea of Silicon Valley.

A. Japan's Effort at Globalization

Japan is currently the world's third largest economy, and even a few years back she was standing in the second position behind the US. But with the dwindling economy and declining population, the education sector has failed to keep pace with the world. Major Japanese universities are going down in the recently published *Times Higher Education*

ranking. Japanese universities are in a difficult situation as they struggle to enroll more foreigners and internationalize the student body and the campus environment [8].

Japan is continuing to struggle to send more students abroad in reputed higher education institutes in US, UK etc.; and not many foreign students choosing to join the Japanese universities for reasons that could include communication in the campus and society, issues pertaining to scholarship and tuition fees, and lack of ability to offer all courses in English. Unfortunately, there is an increasingly prevalent feeling in education circles around Japan that she is losing ground in the globalization of education and research. The Japanese government is currently undertaking a program to improve world rankings, increase international student ratios, and change the mindset of faculty and staff at select universities. But it also needs change at the policy level, as to how the government embraces foreign universities to operate in Japan, and creates competition for local universities when it comes to globalization of education. For example, even Tokyo-based Temple University Japan (TUJ), which is in operation in Japan for 31 years, being the oldest and largest American university branch campus in Japan, does not enjoy the same benefits as accredited Japanese universities, and survives without the educational corporation status. This increases the operating cost drastically, with TUJ having to pay corporate taxes and being ineligible for government subsidies [9].

There are different viewpoints as to how the globalization efforts at Japanese universities should proceed, with some controversy about the competing effectiveness of policies. But such diverse viewpoints demonstrate that the society is willing to entertain alternative viewpoints.

However, even with inherent limitations, this is certainly not a case of policy paralysis when it comes to globalization of higher education in Japan. One such example is the “300000 foreign students plan” announced by MEXT in 2008. This is a plan to increase the number of foreign students in Japan from the 140,000 to 300,000 students by 2020. Another example is the Global 30 project by the ministry, which aims to establish a university network for internationalization by providing financial support to universities expected to be key bases for internationalization, and ones where internationalization ideas will emerge.

The real challenge for policy analysts and educators in Japan is to envision how efforts at globalization would play out with Japanese universities having no central policy as such to increase the number of foreign faculty, with lack of faculty who might be experts in their area, but unable to offer courses in English, lack of adequate courses offered in English, lack of all-English undergraduate/graduate programs in all disciplines etc. To be able to compete with developed non-English speaking countries such as Germany and France in terms of the percentage of foreign students enrolled, Japan will, in future need to diversify its efforts to make the campuses more globalized, with English communication taking the center-stage, and with Japanese students aspiring to join the pool with foreign students and learn more about international communities and corporations [10]. Certainly, individual universities selected for the Global 30 project (e.g., Hiroshima University, Kyoto University, Tokyo University, Tsukuba University, University of Aizu beside others) are making efforts to think proactively and are opening up to different countries to secure international students [11].

B. Corporatization of Education

Getting international students on campus in Japan, inducting foreign faculty at an increased pace, offering scholarships and other tuition-based facilities etc., are policy structures that the

universities are working on towards globalization of education. But, until Japanese education system keep pushing for more globalization outreach, non-major Japanese universities at the prefectural and local levels will continue to churn out students who will probably know some English, but due to lack of adequate exposure, will not be able to join the workforce with enough international exposure and understanding of the market, and intercultural organizational communication aspects. These students will struggle to actively participate in an international project, have innovative ideas, have built-in leadership skills etc. Of-course optimists are likely to argue that many of these parameters could be taught and developed as part of on-job training (OJT), but a globalized campus in a developed nation such as in Europe, UK, US, Australia, would go a long way to train their students on aspects of corporate globalization, including internships, on-campus industry-focused courses, guest lectures from industry, all English environment and collaborative international work teams etc., when students are still on campus.

For this paper, we discussed a teaching context at the University of Aizu (UoA) aimed at globalization, where English as foreign language courses are taught as support to the computer science program. The University of Aizu is a prefectural computer science university with over 40% faculty who are foreigners, and with both Japanese and English as compulsory subjects where students must earn credit. Students must pass 15 credits of English to graduate. Off late, under the Global 30 project, the UoA has started to offer an all-English undergraduate program, and reaching out to foreign students in China, Hong Kong, Vietnam etc.

C. The Silicon Valley-focused Language Coursework

So, the idea for this paper is to discuss the development structure of a coursework with a specific example of Silicon Valley (SV), California. The reason for choosing SV relates to the fact that numerous academics, companies and their management across the world have agreed on the one fact that SV creates a unique corporate culture that many countries and ecosystems around the world have tried to emulate. The *Stanford Silicon Valley-New Japan project* investigates one such example where Japan is making an attempt to learn from the freethinking SV culture (<http://www.stanford-svnj.org/>). This paper discussed a 4-course undergraduate (3rd year) elective track as part of English language education at the UoA. The idea for the track was to include pedagogical aspects to make students aware of the corporate culture in the international context of SV, think about how companies succeed in SV, discussed the SV culture that promotes entrepreneurship and unique ideas, share ideas in a community, and most importantly, understand a globalized workplace and culture that helps develop a ecosystem where individuals could try out new ideas without the fear of failure. It is important to explore this aspect of culture-driven globalization – where the issue is not only about taking courses in English at the university level, but also learning about organizational culture and communication in a foreign ecosystem. That will not only help students gain further and more advanced experience during OJT, but will also prepare the students for the job interviews following graduation. The idea behind the course track is to help students develop their own ideas and opinions, besides gaining experience about how the SV ecosystem works and how the Tokyo ecosystem should work.

Interestingly, this is a new perspective in language education in Japan. The current trend for English language coursework in Japan are focused on attaining the language skills through use of different interfaces that supports computer assisted language learning (CALL). However, recently we have started seeing a shift from task-based language learning (TBLL) to project-based language learning (PBLL) that allows for a new and more sustainable and

context-driven language learning. The Silicon Valley-focused English language coursework is more focused on corporatization of the student minds with intercultural and organizational communication. This language coursework is more about being aware of the industrial ideas, innovations and approaches in the SV, what it means to live in a foreign society such as in California and pursue new ideas, and take decisions independently. The idea with such SV focus is not to directly incorporate the model in a Japanese education context, but learn from the concepts that drive SV and customize such values in a Japanese context.

This paper discussed the plan outline for developing a series of undergraduate elective courses in a computer science English language research center that addresses the issue of “exposure and corporate mindset” from the perspective of both product-based knowledge dissemination, and intercultural and organizational communication perspectives. The paper discussed how the courses has been laid out to teach both business and technical communication while making students aware of different SV-based organizations, and the mindset that leads to the development of an entrepreneurial culture. The first semester electives have been designed to teach soft communication skills and develop corporate mindset in a business communication and text-mining environment. The second semester electives have been developed to teach product design and analysis in a technical writing and usability environment; and cultivate how products and ideas take shape in the Silicon Valley companies.

3. CONTEXT OF THE COURSEWORK

Undergraduate students at UoA are generally expected to take around 2-3 elective courses from a pool of 3rd year elective courses, and not all students will opt for the SV-focused courses. So, only a handful of students will opt for these courses during their 3rd year. Also, it is important to note that being part of the regular coursework, there is no way students could realistically opt for, or get the opportunity to take all of the four courses offered on the “track”, unless motivated to do so. Further, it is important to note that this 4-course elective coursework on SV is not recognized as a track and offered as individual courses. Even within such restrictions, individual courses in the track has the potential to reach out to a number of students who would eventually apply for the 2 semester Silicon Valley Internship program (with 2 weeks in the Silicon Valley in summer) organized by the Centre for Globalization and Office for Super Global University at the University of Aizu. Selected students opting for the SV internship program take the SV internship course (recognized by the university as part of the internship program) during the second and third quarter, while visiting the SV during the summer (between 2nd and 3rd quarter).

The implicit idea behind offering this 4-course track separately as part of the English credit is to get more students to apply for the SV internship program, and gain more international exposure in the process. This 4-course track is expected to prepare students for the internship program with supplementary training resulting in adequate knowledge of SV from the perspective of intercultural, technical and organizational communication and product culture, besides gaining English language proficiency. The actual course for the SV internship program is focused on product design and technology, but not on developing communication skills and general knowledge of the ecosystem. Such supplementary elective courses will thus likely help graduating students for the job interview, and for the actual workplace upon graduation. Since most students are unlikely to take all of the 4 courses in the “track”, each course has been designed to stand-alone with focus on variable language learning issues, and coverage of how Silicon Valley works.

A. Coursework on Business Writing

The title of this third year undergraduate elective course is *Workplace Writing and Silicon Valley Culture*. Although this course is currently being offered in the third quarter, the idea from 2019 is to offer the course in the first quarter before students join the *SV Internship* program. The major objective of the course is to introduce students to the SV culture and how it fosters a unique way of thinking. Students learn about how the SV ecosystem model works, how entrepreneurship happens, how new ideas get supported by industrialists, entrepreneurs, academics, and venture capitalists, how free thinking gets supported by the SV community more on the lines of collaborative thinking rather than competitive thinking, the university-industry collaboration, the fact that entrepreneurs are willing to try out new ideas without the fear of failure, and the government involvement. This course includes watching different video documentaries about the SV culture, reading about how it is like working in companies such as a UBER, Airbnb, Facebook etc., number of case studies on start-up companies in the SV such as Birdi, Hack Reactor etc. Assignments also include analyzing start-up companies in the SV, and reflecting on their type of business model, the technology used, student opinions on whether such business models would be successful or fail, finding out and writing about Japanese companies who are in the same area as investigated SV start-ups, and how they can collaborate. The idea is to nurture corporate thinking through different reflective exercises and case study analysis. Assignments further include company brochure design, concept mapping for business data visualization for companies such as TESLA (analyzing their business model and technology models), writing business emails related to SV ventures, and finally group designing a technical presentation on how a SV-styled start-up culture could be incorporated within the cultural and organizational trends of the Japanese system. This course provides a unique perspective and opens up a whole new world of thinking about the corporate environment, and make them aware of the different issues involved in the decision-making process. Finally, at a later stage in their career, background of this course will likely enable students to reflect on their current industry position, and how different their thinking is to the SV ecosystem.

B. Coursework on Content Design for ELearning

This course is heavily invested in using tools and interfaces in infographics design, text mining, social network analysis and concept mapping to explore SV company business and technology models. The basic purpose of the course is based on big data analysis, and is designed to help students make sense of text information that are haphazardly organized and disintegrated when media is searched. The course started with students using the Mind Mapping and infographics software to design the *LinkedIn* (e-commerce retailer) business model (based on Internet research of text articles), and visually explain how *LinkedIn* makes money. The complexity of the assignment progressed over the following week with the same type of assignment for *Facebook/Whatsapp*, but with the added complexity where students are expected to design a matrix table with data comparing the business models for several companies that could be considered as alternatives to LinkedIn. For the third week, students were asked to investigate the Tokyo ecosystem of start-up companies and provide opinion, with their impression represented as an interactive and operational website. During this week, students were also asked to use a corporate information search website (<https://mattermark.com>), and look for press released articles about companies such as Mitsubishi, 7-11 Holdings, and a few other SV-based start-ups such as Tesla, Google etc. They were then asked to use the AntConc text-mining software to see the frequency of word use, n-gram analysis, concordance statistics etc. to identify how press has used such information for public knowledge. Over the next couple of weeks, assignments included

using the social network visualizer software and infographic design tools to represent the video information about the TESLA electric car technology in a data visualization format. Week 6 had two sections – the first section is where students had to design a sketch board and then a social network graph to chalk out a plan on how to start up a company in the San Francisco area. The decisions and visual representations are made based on readings of statistics about the SV area (e.g., placement statistics of engineers, locations with greater investments, office space expense and proximity to transportation etc.). The course ended with a technical presentation on Tokyo start-up ventures.

C. Coursework on 3D Printing & Design

As part of this writing and design through group communication course, student groups used communication skill projects with Lego and 3D printing to improve communication within the team, create a collaborative manufacturing environment in a creative factory classroom environment, and help write design documents. LEGO helped students learn prototyping in a classroom environment with in-class instant iterations. Students learnt about the use of 3D scanners such as Sense, iSense, and 3D scanning apps based on their iPhone, and use of CAD software such as Tinkercad, Autodesk, etc. for engineering team-based communication design, collaborative product development, planning and design, analysis and execution. For class assignments, students designed and re-designed innovative products using 3D printing processes, learnt about content management with digital manufacturing, write and speak about the design in English, and work towards group analysis and peer-review. As a team, students talked about what happened? What worked well? What didn't work so well? What about the team communication? Could they have used Lego elements / CAD design to learn about another topic? Could they have used a "toy" to learn about history, science, art or math? Could they have designed a futuristic product with CAD-based design or re-engineering products based on 3D scanning? Unlike the previous two courses, the focus in this course is on product design and analysis in a way that is unique. The final two weeks of the course was spent on investigating and writing about start-up companies in the SV and Tokyo ecosystem that specialize in 3D Printing and technologies related to *Internet of Things*. Students learnt about the products designed by these start-ups, how they are unique, and their ideas on start-up businesses based on 3D printing processes and technologies. Inference-based assignments included an investigation if such 3D printing based business model could be sustainable in the Japanese society, and how 3D printing-based businesses could be used for revitalization purposes. The course is interesting because it is designed to teach students to learn and think about product design and the 3D printing processes both as a designer and an entrepreneur.

D. Coursework on Usability

This course has been planned for academic year 2018. A slightly different version has been taught in 2017 that focuses exclusively on usability techniques. Primarily, the course is focused on teaching students the techniques that would help them perform a usability analysis. The proposed version, as reported here will be taught with a balance of content focusing on usability techniques and actual usability analysis of SV products and business and technology models as showcased for potential customers. This course is designed to introduce students to the concepts of usability and user experience design. In the 3D printing course, students learnt about the design of a product using 3D printing processes, but this course teaches them how to investigate and research the "user-friendliness" of the product, both in terms of its visual appeal, its functionality, the social dimensions, and how it aims to engage the user interactively. This course will include several instances where students will

perform usability testing of several product designs, including 3D printed products such as mobile phone jackets, implants, etc. Further, this course will also spend time on website usability for SV start-up and large corporations, to help students focus on content, design and interface organization.. This course will also highlight how mass customization is one of the ways 3D Printing will change the face of consumer products. More work is needed to optimally design the course to highlight both usability and user experience design for a variety of products. Finally, the course will also focus on performing usability analysis of websites for start-up companies in the SV and the Tokyo ecosystem. That would not only help students learn more about website usability, but also about the SV and Tokyo ecosystem start-ups, including their business and technology models.

The following introductory pilot study as reported in the next section, is an attempt to understand students' initial attitude towards globalization, and will help us understand students' motivation levels and possible interest in the above-mentioned course content.

4. STUDY METHOD AND PROCEDURES

This following data are excerpts from the study conducted as part of the course titled *Workplace Writing and Silicon Valley Culture* mentioned in the above section. 20 students participated in the study in a Japanese computer science university in the 3rd year of their undergraduate computer science program. These students had no prior experience with such a course that borders on business communication and intercultural communication and entrepreneurship. This is an elective English language course offered for students majoring in computer science. The course ran on a quarter system (8 weeks), and the results mentioned below are part of the 1st week introduction to the course, highlighting on the overall culture and the vibrancy of the Silicon Valley area. The entire course was hosted in *Schoology* – a learning management system. As part of the first week assignment in the course, that led to the individual forum assignment responses by students in *Schoology*, students had to read and understand the content posted in the course webpage, combined with extensive class lectures in English, highlighting what Silicon Valley brings in, and how Japan has a different model for entrepreneurship. Students had a week to submit their assignment in the course webpage, as a discussion forum (everyone can see each other's response) reflecting on their initial impression about Silicon Valley and if they would be willing to work or emulate such a model. The forum submission was based on input received from the introductory YouTube videos about Silicon Valley, impression of the geographical area, videos showing discussions and interviews with people working in the SV, an infographic explaining how the Silicon Valley model works, including the role of large corporations and venture capitalists, the risk-taking behavior, support from the government, synergy with top educational institutions etc., and explanation of how the different values come together in supporting the SV culture. Students did use Google Drive, YouTube, websites, infographics etc. and Google scholar to read through and understand the overview materials presented in the Schoology. The first two classes were focused on introduction, and while videos were shown extensively to visually impress students of the international environment in the Silicon Valley, oral lectures and discussions supported by the text-visual media (e.g., infographics) were used to explain how things actually work in Silicon Valley, and how it is different from the Tokyo ecosystem. Students were asked to read through the lecture notes, the infographics, and watch the videos times and again using the subtitle. Students did mention having trouble understanding the American and sometimes, other foreign accents for people shown in the video working in the Silicon Valley start-ups. That is why reading the subtitle was important. Also, students were

recommended not to use Google translate extensively when authoring their responses, and for supplementary short lecture notes, and the purpose was to read in English and understand the content.

5. FINDINGS: IMPRESSIONS ABOUT SILICON VALLEY

The following section reported some of the initial impressions about the Silicon Valley as was submitted in *Schoology* as an introductory forum assignment. This section highlighted student thinking as that would reflect how students approach the coursework, if they get interested in the SV internship program, and what it means administratively in the long run, and how far we can work on corporatization of student minds. This section reported on impressions from a few selected students in the course titled *Workplace Writing and Silicon Valley Culture*. The responses below are similar to what most other students wrote while reflecting on their initial responses about the SV culture. The text has been partially corrected/edited so that the meanings are NOT lost with grammatical mistakes.

Student #1: Many companies are working in SV. I know these companies. This is very interesting. My initial impression about SV is very advance region in the world. I am interested to work in SV. I expect SV let me stimulate my imaginations. SV's special point is gathering high-level people from world.

Student #2: I think about SV as 2 things. At first I thought SV's company has many young worker. That I think is very impressive. I guess high-tech worker need latest technology, latest information and latest train of thought, and so latest company's central people are young. Secondly, the view of SV is like central Tokyo, both have many large buildings, large bridges, large river and some green. I think both cities have good balance, beautiful, good cities educate good worker.

Student #3: I felt sad to see the movie on SV. This is because I study IT skills to be system engineer now. But, there are young people with so much confidence and excellent ability in SV now. It makes me think what am I doing. I should study more. I wish having more confidence. I want to go to SV too. Besides, I think there is dream in SV. Even if I have no money, I can go to SV with confidence and ability. I will then start succeeding. It's possible to earn more money and honor. It's such an advantage that there are so many famous companies in SV. Because, I see the latest technology is there in SV, and companies can get it. People from different nationalities are gathering in SV for such reasons. And the young people have large passion. SV environment makes it possible to make each other grow. When I can even speak English, it's also one advantage that I can talk with various people from different nationalities. Even if I can speak English only a little, it will help me understand each other by motion gesture. I think it's also best to be able to hear top-class CEOs talk of the world. That will become very useful, and it may influence a life. Further, I think a life changes with going to SV. So I want to go to SV in the near future. There was an event, where students went to SV from University of Aizu last year, so I thought I'd like to go too. If there is a chance. I'd like to feel like being in the SV.

Student #4: Actually, I have known about Silicon Valley before I watched these videos today because some of my friends went there as intern during this summer vacation. But I had thought it is just a usual city in USA, and also similar to Fukushima prefecture. This was my initial impression about Silicon Valley. I couldn't understand why so many students applied for the internship. But now, I have got to understand how it is large, how it is popular from

students all over the world, and also why it is popular even in the University of Aizu. I'm interested to work and also to study as a student in Silicon Valley, but I know I don't have enough knowledge, skill, language ability to go there for studying or working, and therefore I want to challenge myself after I make plenty of effort in Japan. One of the special reasons why I want to work in Silicon Valley is because I'm sure those who are highly motivated and superior people gather there to make their dream come true, regardless of their age, gender, or national origin. In Japan, generally speaking young employees can seldom have a chance to try new things or businesses except for Tokyo. This is why I had aimed to work in Tokyo after graduating this university. But these movies about Silicon Valley made me have a dream and aim to work in another country, another area. Tokyo is also one of the biggest cities in the world and working there may give me a big chance, but Silicon Valley is much larger and seems difficult to work than Tokyo, and it must give me bigger and greater chance. This is why; I wish to work in Silicon Valley if I could.

Student #5: Silicon Valley has too many big company HQs. I think the reason is computer science was born at Silicon Valley and went to the rest of the world. Therefore, computer science companies worldwide gather to Silicon Valley. I feel that Government of USA attracts IT firms from around the world. Government thinks they want to have huge industrial area in USA. As a result, Silicon Valley has been number one market of IT and industrial place in the world. Silicon Valley has 50% "not local" people. This is wonderful worldwide. However, this leads to religious and ethnic conflicts. The merit of gathering technology and brain from all over the world is even greater. If I could work in Silicon Valley, I will be very happy. This is because; I will be at the forefront of the world's highest market. In the future, I would like to work in the United States, not in Japan. I thought that New York is the world's largest market. But regarding technology, Silicon Valley is more developed than New York. Japanese companies also participate in Silicon Valley, but in recent years there are an increasing number of excellent companies in China. It is a bad influence for Silicon Valley because there are problems of East Asian situation and the president has become Donald Trump. Still Silicon Valley will continue to be the world's best market. If I can get involved, I would like to work in the SV.

Initial data does reflect mostly positive thinking about Silicon Valley. Also, the text responses did demonstrate that students are capable of thinking, and reflecting on what is missing in their own prospective job, education and community context, and what the Silicon Valley type of culture brings in. These courses, at an undergraduate level was more focused on providing sustained exposure to a foreign culture as Silicon Valley is seen from a Japanese educational context, and further, the attempt was to get students to communicate both in English and Japanese.

6. DISCUSSIONS AND CONCLUSION

The course content as reported in the above sections presents a unique perspective towards developing a corporate mindset and promotes a sense of desired intercultural communication. More importantly, such an approach has never been tried in a foreign language-teaching context. In fact, readers should keep in mind that these courses are designed to teach English to computer science undergraduate students who are likely to reap benefits of such coursework in combination with their computer science curriculum. In fact, the idea is for computer science students to develop a SV-based ideology that would help them diversify in their careers, and explore new opportunities for collaboration, work in foreign projects, and

most importantly, develop a mindset that would not allow them to shy away from working on new ideas in their area of specialization. The idea with such courses is not to try and push them to Silicon Valley, or to embrace such a model without consideration of the localized work context. Rather, language instructors with an intercultural communication perspective should help students open up the knowledge domain with good organizational cultural examples to follow, so that a multinational perspective and environment could be created and customized for a Japanese organizational context. The students should know how to use the Silicon Valley model for Tokyo, or Fukuoka or Osaka (the Japanese equivalent of Silicon Valley) start-up scenarios.

Future steps at University of Aizu would include increased lobbying to tie this 4-course track with the Silicon Valley Internship program in a way such that students who are selected to go to San Francisco benefits from increased awareness about the SV culture, more students get inspired to join the internship program, and more courses are taught which are focused on corporatization of student minds, preparing them for the workplace more efficiently and with more exposure. Efforts will be made to have a lecture series held each year on campus where experts from SV would visit the University of Aizu to deliver lectures and motivate students to think globally and like an entrepreneur.

Globalization efforts should NOT be restricted to getting more foreign students in Japanese university campuses only. More foreign students does help, but we should also be able to send more Japanese students abroad so that a culture is created where our students become more globally minded and less insular. Sending more students overseas could mean more examples of Japanese working in foreign countries, which in turn creates motivation for more students to work abroad and make connections with the Japanese homeland. Brain drain and brain gain could ideally work hand in hand, if the right ecosystem is created.

With such courses, we need a very holistic approach involving field trips, many engaging videos, direct immersion in videos highlighting life in a company, how projects are handled, and plenty of open discussion amongst group members communicating ideas. With lower English speaking ability, such group communication and dialogue in English could be difficult, but more out-of-class practice and exposure to formal and information technical presentations are required to sustain this effort to get students involved and develop language proficiency over time. The entire campus environment should serve the purpose for globalization.

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DEVELOPMENT OF A LANGUAGE TRANSLATOR FROM ENGLISH TO WARAY

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Abstract

The Philippines is a home of different languages. Languages are vital weapons of communicating with others and expressing points in the society more importantly in Education. Based from Department of Education there are 12 major languages as part of K+12 Education System. Among these is Waray, language spoken by people from Samar, Northern Samar, Eastern Samar, Biliran, and Leyte. According to the Department of Education, the implementation of K+12 Education System in the country is the used of mother tongue as medium of instructions from Kindergarten to Grade 3. The development of the software is to translate instructional materials written in English to Waray language. The software could accept word, sentence, phrase, and document file with .doc and .docx extensions written in English to be translated in Waray language. In addition, the capabilities to add new words and rules, update of dictionary, and search for word and rule are part of the translator. The development of the translator used Rule-Based Algorithm that includes parsing, searching, and matching of words inside the database. The translator was able to translate document file and words from English to Waray Language. In addition, existing dictionary and rule can be modified and added inside the database. Test and evaluation results validated that the prototype could be an alternative way of translating instructional materials written in English to Waray language.

Keywords: English, Waray, Rule-Based Algorithm, Language Translator

Development of a System that Supports Consideration of the Constitution of Video Teaching Materials for Teachers

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Abstract

With the spread of video distribution infrastructure such as YouTube, everyone can make a video and publish it. Video contents for educational purposes are also increasing.

In the future, it is expected that teachers of the school will make original video contents, and use them in their classes, or use them for self-study of students. However, most teachers have not learned about video production. Therefore, it is difficult to think about the content of good videos.

In this paper, we propose a method to support work for considering the composition of video for teachers who have little experience in video production. We analyzed the composition of video teaching materials published on the Internet and others. As a result, I found a feature of the composition of the video teaching materials.

Furthermore, we held a lesson which teaches video production method for teachers. In the lesson, when teachers considered their composition of videos, difficulty factor was found.

Based on this finding, we developed the supporting system for considering Video composition. By using the system, teachers can consider the composition of the video teaching materials.

In the future, we are going to evaluate this system. We actually use a system for a teacher and have the composition of video teaching materials considered by Evaluation.

Keywords

video produce, video teaching material, video composition pattern, video composition support system

1.Introduction

In recent years, teachers have uploaded videos containing teaching materials on video-sharing websites such as YouTube. However, we have realized that the contents of these videos made by teachers are not easily understood.

In order to produce easy-to-understand video teaching content, it is necessary that the teachers acquire production know-how and experience. However, most teachers do not have that much free time at their disposal.

Our group is studying different means to aid program composition based on patternizing the videos of novice video producers [1,2]. In this paper, we propose methods to support teachers with little experience of recording videos and enable them to understand the basic components of easy-to-understand video content.

As a concrete approach, we patternized the composition of existing easy-to-understand video teaching materials. We analyzed the presentation methods and content development of these videos to create a configuration pattern of video teaching materials. In addition to observation and analysis of the work, we will explain the differences between easily understood methods and not-so-easily understood methods to the teachers.

We developed a composition supporting system for video teaching materials based on this knowledge.

2.Analysis of existing video teaching materials

To clarify the composition of an easy-to-understand video containing teaching materials, we analyzed existing video teaching materials as follows.

We analyzed 37 videos having teaching content currently available on a video-sharing website. The video teaching materials existing video teaching materials were those uploaded on YouTube by schools such as preparatory schools and cram schools. In addition, we also analyzed 17 videos with teaching materials that the teachers of an elementary school, a junior high school, and a high school produced when attending a short course held at our university.

Analysis of these videos elucidated that the common points of the easy-to-understand video teaching materials are the “introduction, development, and conclusion.” These are common along with the general know-how of program production [3,4].

Then, we conducted an in-depth analysis of “the introduction, the development, and the conclusion.” In our method of analysis, we arranged existing videos in chronological order on the coding sheet.

There are seven items on the coding sheet; they are the “object,” “subject,” “title,” “duration,” “contents,” “elements of the contents,” and “exposition of a scene.”

The “elements of the contents” describe technical aspects such as the angle of view and the quality of the sound. The “exposition of the scene,” describes the content of the segment.

The analysis of the exposition of a scene revealed specificity in the composition of video teaching materials.

The introduction reveals questions like, “What is the best way to present a subject?” and “How to present case studies and topics?” that communicate the purpose and contents of the video.

For example, in a video that teaches static electricity with the help of a scientific experiment, the teacher introduced this topic by stating, “I guess you know that static electricity occurs when a celluloid sheet is rubbed.” The employment of the question-and-answer method captures the students’ interest and makes them eager to watch the video.

“Development” is the section where the contents of the video are taught specifically and it is unique for each subject. For example, in videos teaching science experiments, we noticed that (1) videos offered explanations while showing an experiment, (2) videos described a comparison of two experiments, and (3) videos narrated the progress of an experiment.

In videos teaching mathematics, after the teacher described the calculation method in the example, it was illustrated by solving another question. The method of solving several questions enables the teacher to provide a better understanding of the calculation method.

The “Conclusion” again presented aspects such as the aim of the video, the purpose, the comments, and the messages. It made an important point by explaining the aim and purpose of the video repeatedly.” The comments and the messages had contents that encouraged viewers.

3.Points that confuse teachers when they consider the composition of video teaching materials

We conducted a short course in our university to train teachers in producing videos containing teaching materials. During this course, we observed and analyzed the teachers when they pondered methods to compose videos with teaching content.

As a result, we realized that it is difficult for a teacher with little experience of producing videos to visualize the completed video. We presented an example of a configuration that matches the theme selected by the teachers. This enabled them to understand the configuration of the video. Moreover, even when the teachers configured a video composition, they were unsure of selecting such as video angles, the best way to use the TELOP, and the ideal narrative style.

Based on these facts, we propose a support method for inexperienced teachers who wished to produce videos. This method presents an example of a video composition using the theme the teacher is interested in, so that they can visualize how the completed video composition will appear. In addition, we include pointers about suitable angles and good narrative.

4.Video composition supporting system for teachers

We developed the “Video composition supporting system,” which supports teachers. In the system, the teachers select an appropriate example of composition of a video in a relevant theme that guides their composition of video materials.

Figure 1 shows an overview of the proposed system. First, the teachers select a video theme, such as the subject from the menu screen.

In the menu screen, the video composition example is displayed in the list (Figure 2). When the teachers select a video composition, the system will show examples of the angle of view, the TELOP, and the dialogue as a composition pattern.

The teachers consider angles of view and dialogues using the video composition example to create their video composition (Figure 3). If the creation is completed and the video configuration table is displayed, it is possible to print it.

We used FileMakerPro16 for the development of this system. The video composition pattern created 23 patterns (Table 1).

Table 1. video composition pattern created(excerpted)

Subject	Pattern Name
Science	Explain the contents of the study by showing the experiment
	Experiment after presenting the question
	Explain by comparing the progress of the experiment
	Explain and compare two or more experiments
Mathematics	Explain the calculation method while solving an example
	Learn deeper while solving examples
	Explain after revealing examples and topics on calculation
Procedure/ Operation	Teach the operation
	Teach the operation after revealing the question
	Teach the operation after revealing cases and topics

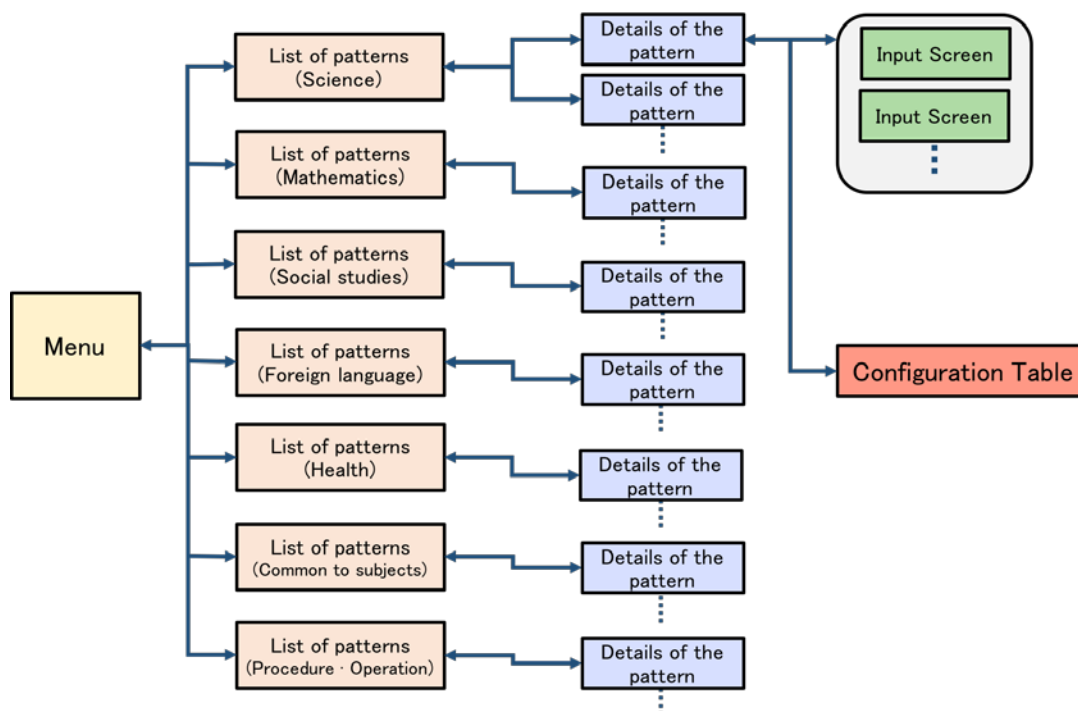


Figure 1. Outline of video composition support system



Figure 2. List of patterns



Figure 3. Details of the pattern

5.Future work

We confirm the usefulness of the video composition support system. As future work, we propose to use this system in the training course for teachers that will be held at our university this summer. In addition, we are planning to extend the scope of utilization of our system by increasing the video composition patterns.

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Education and disasters
Reflection from the 2017 earthquake in Mexico

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Abstract

This article presents an analysis of the development of a disasters prevention culture in Mexico and the contributions of the formal education system in this process. The article has two purposes; on the one hand, it identifies some of the factors that hinder the development of that culture and, on the other hand, it presents recommendations in order to increase the participation of the education sector in disaster prevention. Education is recognized as a transforming factor of the values, attitudes and behaviors of the individuals of a society.

The possibility of an increase in sudden or man-made catastrophes is greater. For this and other reasons the notion of risk is today more than ever present in political agendas of governments, academic debates and public discussion. One of the most important functions performed by the formal educational system is to socialize among students the values, attitudes and thought patterns and standards on which the functioning of a society should be based.

This document is organized in five sections. The first two briefly exposes different theoretical approaches to the study of natural disasters and those caused by man. In the third and fourth part, the relationship between disasters, culture and education is discussed. In the fifth section some proposals and specific suggestions are proposed to improve the contribution of the formal education system in the promotion of a culture of protection, prevention and emergency of disasters in Mexico. In the sixth, we reflect on the case of the September 2017 earthquake in Mexico (some of the most intense earthquakes of the last hundred years) and in the civil support initiatives from the education sector to support the victims who are sleeping in the streets because many houses collapsed and others have serious structural damage that makes them unsafe to be inhabited.

Keywords: education, disasters, Mexico, natural disaster, man-made, resilience.

Introduction

In recent decades there has been a trend towards the increase of natural and man-made disasters, with predominance to geophysical, environmental, human or material damage. Such disasters are occurring with greater frequency and greater potential for destruction in cities with a lower level of development. According to information from the World Bank, more than 95% of all deaths caused by disasters occur in developing countries (World Bank, 1999). Since a significant proportion of the population of these countries is confirmed by children and young people from the poorest social strata, the physical or mental impact caused by natural or human calamity makes them even more vulnerable.

This situation has been raised as a serious challenge for those in charge of planning and attending emergencies, in order to link their actions with those of other social institutions which, because of the importance and nature of their functions, can contribute through information, training and education to the tasks of prevention, mitigation and adjustment in disaster situations.

The importance of education as a capable element of modifying the behavior and attitudes of the various social actors to any natural disasters or those caused by man, has strengthened the belief of international organizations, which only through an active participation of the school, it will be possible to make progress in the creation and strengthening of a prevention culture that allows protecting societies from disasters.

From this perspective, there are three objectives: 1) reflect on the role played by education in the creation of a culture of civil protection and the prevention of disasters in Mexico; 2) to identify some of the most important factors which - from my point of view - limit the development of that culture; and 3) Propose some recommendations in order to achieve a more effective participation of the education sector in the actions of prevention, mitigation, adjustment and reconstruction in cases of disaster.

I. The approach of “risk society”

We are currently living in what some authors have called the risk society (Beck, 1998;) Giddens, 1998). In this new form of society are two fundamental transformations: the first called the *end of nature*, and the second characterized as the *end of tradition*.

With the *end of nature*, sociologists refer to the growing intervention of man on almost any aspect of the physical environment. As Giddens notes:

<<For hundreds of years, people worry about what nature can do: earthquakes, floods, epidemics, poor harvests, and others. At some point, located more or less in the last fifty years leave we stopped worrying so much about what nature could do to us and we began to worry about what we have done to the nature. This transition defines one of the main points of entry of the risk society. It is a society that lives after nature>> (1998:520)

The *end of tradition* refers to the process by which the world already does not live as a destination (or from traditional certainties), but on the other hand as a future. From this perspective, the risk no longer necessarily implies a danger, rather implies the need for a society that needs to control the future and has the opportunity to take the risk as an opportunity to take decisions or initiatives having a problematic world in perspective.

Unlike in the past, that the dangers were commonly attributed to the gods, nature or destiny, today they are increasingly more related to risky human decisions, product uses,

customs and daily habits. This is why the notion of risk is and should be present in the political agendas of Governments, academic debates and public discussion.

II. The sociological approach to disasters

From a sociological approach, we can say that

<<(…) a disaster is an event concentrated in time and space, in which society or one of its subdivisions suffers physical damage and social disruption, so that some or all of the essential functions of the society or subdivisions thereof are damaged (Fritz cited by Kreeps, 1995:256)>>

According to Kreeps (1995:258), disasters are sociological events that vary in four dimensions: 1) the extension or extent of the notice; 2) the magnitude of the impact; 3) the scope or extent of the impact and; 4) the duration of the impact. Between the triggering agents of natural disasters are identified earthquakes, hurricanes, droughts, floods, avalanches and tsunamis; disturbing agents of human origin include technological disasters, social unrest and terrorism.

Against this background, it is important to ask ourselves: Which role does the social institutions need to play, particularly the educational, in the conformation of a subculture of civil protection that will protect present and future generations of the possible damage resulting from natural or human disasters?

III. Culture, disasters and education

The word *culture* has different meanings. In western languages means “civilization” or “refinement of the mind”; particularly the results of this refinement, as education, art or literature.

According to Hofstede, culture is not inherited, it is learned since it is and act shared by people who live within the same social environment. (1999:34). According to Schoeck:

<<The concept of subculture should be used in an appraisingly neutral sense. It is not necessarily a culture of lower grade or of dubious value, but of a special culture that lives under the guise of a wider culture of normal and that imposes rules to people and groups targeted by it >> (1985:695-96)

The concept of *subculture disaster* began to be used since the mid 1960's to refer to a component of the dominant culture in a community not expressed and however secured by circumstances (Granot, 1996:37). In this way, for 1970's much of the data gathered by the Center for research on disasters in the United States about the subculture of disaster came from previous experiences, information and guidelines for preparation in disaster situations.

In this way, the concept of subculture disaster won greater acceptance, contributing significantly to explain some of the elements which, in his view, promote the development of a subculture of disaster. Main highlights:

- Repetitive impacts experienced by the community. Disastrous event affecting a society on several occasions and that leaves mark on the individual and collective memory of the community.

- Existence of a centralized agent that allows a period of early warning. After the disaster, there is a period of time allowing the community to provide their response to the emergency mode.
- Salient consequences of damage. Damage and casualties caused by the disaster.

Wenger's contribution on how to respond to emergencies is outstanding, says that "the form of response to the disaster depends on the previous experienced disaster and crisis of the community management capabilities. When these dimensions are extensive, we can speak of a community that has a - subculture of disaster"- (1978:41)

It is so one of the most important and institutionalized structures which are available to societies to develop a subculture of disaster is the educational system. From a sociological perspective, education that is taught through the educational system complies with multiple functions, such as developing the personality of the subject, contribute to their insertion in the world, provide a basis for democracy, culture, etc. (Sacristan, 2000:21-31).

In the field of disaster studies, education has traditionally been considered as a factor of transformation of values, attitudes and behaviors of individuals. However, education (formal and informal) has not been subjected to this high rating is why? We can mention at least three possible reasons:

- 1) In many countries, at least those that are poorly developed, there is a high degree of severance between the policies of prevention and mitigation of disasters, especially those related to the contents, orientations and learning promoted by the education system.
- 2) In many countries, persons responsible for emergencies are unaware of the potential that has the educational system to transmit and inculcate modify knowledge, attitudes, values and behaviors, which contribute to form a subculture of civil protection and disaster prevention.
- 3) Lack of communication among disaster experts and specialists in education, which translates into a little theoretical thought, resulting in lack of knowledge about the relationship between education and disaster.

IV. Education and disaster: some inter-relations

Until the end of the sixties, disasters caused by nature were considered as *external events* of the natural environment, endowed with unpredictable nature, to which the society had little ability to act. Over the last decades there are a number of social features that are considered factors that increase exposure to the damage caused by geological disturbances, hydro-meteorological or technology, such as the low income, the structure of age, family type, bad state of health and nutrition, or lack of education among the population.

Hewitt has found through various studies the impact of disasters of natural or human and how they have to affect the social, economic and culturally poorer and more vulnerable groups (1996:24-25); Since selectively tends to affect women, elderly people, people with disabilities and children with greater force.

According to the national organization for victims' assistance (NOVA) of the United States, schools can play a fundamental role by providing effective intervention and assistance to children and young people affected by violence, disasters natural and terrorism. It has been confirmed that many children as well as adolescents respond favorably to communication when it favors clear and honest way by adults (Drabek, 1986:42). Because of the importance

attached to this last aspect, Wilches-Chaux has defined education for disasters such as “the processing of information with the explicit purpose of reducing vulnerability.” (1993:9-50).

In summary, education, by its massive character and its socializing function, has the ability to provide to children and young people the scientific knowledge, attitudes and patterns of behavior that contribute to minimize social vulnerability to situations disastrous, contributing at the same time to restore a more balanced relationship between human beings, society and nature (Bermudez Chaves, 1993:136)

V. Education and civil protection: some specific proposals

With the aim that education plays a more significant role in the consolidation of a subculture of civil protection in the current and future generations, with emphasis on underdeveloped countries, it seems to me essential to carry out a set of specific actions such as:

- 1) Link programs, strategies and actions of the agencies responsible for civil protection and disaster prevention with the policies, goals and actions at the different levels of the education sector.
- 2) Improve horizontal and vertical communication among those responsible for coordinating, supervising and evaluating the activities of civil protection in the education sector in situations of emergency or disaster.
- 3) Strengthen programs aimed at reducing educational lag in several organizations, especially in those that are vulnerable to natural disasters or other caused by its geographical location, high rates of poverty, marginality and educational backwardness by the man-made disasters.
- 4) Regularly update the contents of the ecology-related textbooks, environment care and civil protection; democratize its content.
- 5) Increase human, material and financial resources for civil protection in the education sector.
- 6) Consider the incorporation of theoretical subjects and practices on curriculum related to ecology, health care, the preservation of natural resources or the social and environmental impacts arising from the use of new technologies.
- 7) Highlight on thesis and research degree related to disasters.

VI. Reflection from the 2017 earthquake in Mexico

Last September 2017, Mexico suffered some of the most intense earthquakes of the last hundred years. In the State of Oaxaca was presented greater damages to properties, with at least 57 thousand, while in the State of Chiapas are counted 53 thousand where 395 are businesses and homes damaged.

Currently much of the population is sleeping in the streets because many houses collapsed and others have serious structural damage that makes them unsafe to be inhabited.

In Oaxaca, according to the State Government, more than 80% of the inhabitants of the Isthmus of Tehuantepec are affected. Municipalities with higher impairments are Ixtaltepec,

Juchitán, Unión Hidalgo and Astata. They need to be rebuilt, total or partially, more than 47 schools.

Initiative

Promoting the formation of teams inter and multidisciplinary aspects as the construction technology, early warning systems, risk perception, the role of cultural resources (such as education) dedicated to the development of projects that analyze in reconstruction, the time and the social space recovery in various disaster arises the initiative as a necessary response to the situation of Mexico, therefore a network of professionals , students and civil society was born from an open call, where arises the need to propose ideas and solutions of prompt response.

In the same way, the initiative sends a clear message to the guild of architects, engineers and urban planners, as well as the participation and active responsibility of the Academy around the country to help manage crisis situations from the field of education.

Is why, facing an emergency, educational institutions must be leaders at the time of the Act; always in immediate, intelligent, orderly, coordinated and collaborative way.

Process

In the network, after few days, were involved on a voluntary basis over 120 contacts of experts in social projects, architects, engineers, universities and students, as well as scattered individuals in disaster areas.

It was proposed an orderly plan of action and fast execution, for which there was a phase of reliable information, rain of ideas and projects, open forums for discussion and debate and decision-making on the basis of the approaches carried out in a participatory manner.

Took out a selection process of the necessary and viable projects for a specific region with specific needs; This was taken as the first phase of action the isthmus of Tehuantepec: municipality of Juchitan, one of the most affected regions and neuralgic node of the zone.

Integral proposal

The action plan is a comprehensive proposal, which dealt with each of the stages of the emergency.

This raises the *first phase* with a prototype of pop-up shelter, which abate primary and basic needs of the population, which are intensified by the presence of constant rain in the affected regions. Therefore required a ceiling, a place of shelter and safe against the constant aftershocks, as well as a dry floor and a place to sleep and save the few belongings of the families. This first phase this targeted vulnerable populations such as children, elderly people, single mothers, disabled.

The *second phase* proposes a community shelter; therefore, works in a design of a space of higher dimension to be able to accommodate more people, this space is intended to be a multifunctional space to prepare food, meetings and assemblies, or a place safe to go regaining normality, as the kinds of children in the region.

The *third phase* is the implementation of actions of a social nature, where follow-up can be given to the population for the strengthening of the social fabric of the community reconstruction process, as well as follow-up to the supports for the population affected.

VII. Conclusions

An increase of natural phenomena and technological accidents that can cause disaster is expected in the future, it is of vital importance to highlight the important role that education can play in shaping a culture of civil protection and prevention of disasters in Mexico.

The experience of many countries shows that education can contribute in various ways to reduce social vulnerability and strengthen the actions of prevention, mitigation, adjustment and reconstruction in disaster situations.

In the case of Mexico, since the earthquake of 1985 the educational system has been playing an increasingly important role in the confirmation of a culture of civil protection and disaster prevention that reinforced the need to conform in the recent earthquakes of 2017 teams, projects, research allowing to decrease the negative associations (destruction, damage and death) disasters, mainly in vulnerable or marginalized population.

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Educators' Perceptions of Organizational Health in Primary Schools:

A case Study of the Local School District

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This exploratory descriptive study examined the educators' perceptions of organisational health in two primary schools in a Free State, School District (SA). Participants were 32 teachers (females=81% males = 19%) from two primary schools. Their teaching experience ranged from less than five years to more than twenty years. They completed the Organisational Health Inventory for Elementary schools (OHI-E). Descriptive data analysis was done and the findings presented in tables reflecting frequencies, means and standard deviations. The overall organisational health index was calculated for each school, as well as the means and standard deviations for each category of the inventory. In analysing the OHI-E the data were categorised into five, namely, institutional integrity, collegial leadership, resources, teacher affiliation and academic emphasis. The overall OHI for school the two schools was 2.99 and 2.75 respectively.

Key words: Organisational health, healthy environments, healthy schools

1. INTRODUCTION

Murphy cited in Gholamzadeh & Khezaneh (2012: 9) define organizational health as an organizations' ability to function effectively, to cope adequately, to change appropriately, and to grow within. Similarly, Alman (2010:1) defines organizational health as an organizations' ability to achieve its goals based on an environment that seeks to improve organisations' performance and support employee well-being. Organisations, therefore, need a healthy environment, healthy employees, and leaders who have an appropriate leadership style to be successful. Thus the role of the leader becomes very crucial in co-ordinating the activities of different role players within an organisation. Within the school context, such a role becomes that of a school principal. In order for schools to achieve long-term success, they need to create a healthy environment where there is among others, effective communication between colleagues and leaders (Gholamzadeh & Khazaneh, 2012: 10).

One of the key roles of a school principal is to create an environment that is conducive to learning. They need to contribute towards making schools healthy organisations. A society's development heavily relies on the type, the nature and how activities are carried out at schools where the important factors are the teachers and learners. School management can play an important role in training learners, establishing their personalities, facilitating their growth process, effectively improving teaching and learning and achieving educational goals (Ghorbani; Afrassabi and Razvani, 2000). Furthermore, principal leadership is a measure of the effectiveness of the principal in enabling all the various role players in the school community to collaborate in the furtherance of school goals. School principals need to provide leadership as well as administrative support which will ultimately lead to healthy school environments. Fullan in Ramdas and Lewis asserts that the difference between success and failure of any school is the quality of the principal (Ramdas and Lewis, 2012: 485). Principals especially are expected to make learning the centre of the organisation, to empower teachers, and to ensure that parents are involved in their child's education (Khademfar and Idris, 2012: 218).

Teacher characteristics have a bearing on school leadership and organisational health. At the teacher level, healthy schools exhibit characteristics such as sound classroom management practices by teachers, collegial relations among staff, research based instructional strategies and positive teacher and student relationships. Factors like relationships between teachers

and students in the classroom, opportunities for student participation and responsibility and support structures for teachers have consistently shown to be associated with student progress (Ramdas and Lewis, 2009:486).

The study was undertaken to examine the teacher perceptions of the organisational health of schools.

2. THEORETICAL PERSPECTIVES

2.1 Theoretical Framework

This study is grounded in Parsonian framework of organisational levels of control and how they relate to the different dimensions of organisational health. Parsons argues that there are three levels of formal organisations (Savas and Karakus, 2012:67) as well as levels of controlling activities, namely, technical, managerial and institutional levels. This means that a healthy organisation has to be in harmony at all three levels of control as these levels of control produce a healthy organisation. The technical level deals with issues related to an organisation's academic emphasis and the connection it has to its employees, including job satisfaction and organisational commitment. This level is concerned with the teaching-learning action, for which the staff is responsible (De Villiers, 2006:31). The technical level functions to produce educated students and is concerned with the teaching processes (Korkmaz, 2007:33).

At the managerial level Parson's model deals with issues of leadership, principal effect, and resource support. The managerial level focuses on the control of internal administrative functions, focusing on the control of internal administrative functions, thereby focusing on the principals' abilities to develop and instruct loyalty, trust, and commitment (Korkmaz, 2007:33). People at this level are responsible for administrative control of the organisation. The principal is the primary administrator of the school and is responsible for the coordination of work and the distribution of resources, he or she has to find ways in which to satisfy the needs of the staff, motivate them and gain their trust and loyalty. The administration controls and services the technical subsystem in two ways: first, it mediates between the teachers and those receiving services; and second, it procures the resources for effective teaching (De Villiers, 2006:32).

Lastly the connection of the school with the environment occurs at the institutional level. Institutional integrity which operates at this level, is described as the degree to which the organisation can deal with environment in a way that sustains the educational integrity of its programs (Savas and Karakus (2012: 67). This level connects the organisation with its environment. It is important for schools to have legitimacy and backing in the community. The staff and the administrators should be able to do their work without external pressure or meddling (De Villiers, 2006:32).

In a healthy organisation the technical, managerial, and institutional levels are in harmony. The school is able to meet its basic needs and the energy is directed to the schools' mission (Korkmaz, 2007: 33). Healthy organisations create fruitful atmosphere for employees to effectively achieve both employees and organisational goals (Gholamzadeh and Khazameh, 2012: 9).

2.2 Healthy organisations and healthy schools

A healthy organisation is functional, it functions regularly and can effectively offer goods and services. The health level of an organisation is related to its ability to achieve instruments and goals (Cemaloglu, 2006:64).

A healthy organisation is the one that can evaluate itself and always tries to scrutinizingly, recognise internal inconsistencies with its social structure doing its best to remove them. It always tries through updating and upgrading itself to get to enjoy such characteristics as conformability, flexibility, potential and increasing productivity. A healthy organisation is the one that is able to encounter, recognise and eliminate obstacles on its way to live on. It is an organisation that is realistic about its' own situation, flexible and able to use the best resources to solve any problem (Ghorbani, Affrassiabi and Rezvani, 2012: 694).

A healthy school is likely to be an effective school, one which conducts all of its critical functions at a high level (Ramdas and Lewis, 2011:483). It gives freedom to its staff as far as it is legal. The school principal develops dynamic leadership for teachers, leads them through challenges and maintains high performing standards. Teachers of healthy schools are committed on teaching, learning and higher objectives feasibly practical for students and enjoy high performance and spirit. Enthusiasm, loyal personnel and a strong driving force characterise a healthy school (Ghorbani, Affrassiabi and Rezvani, 2012: 695; Mohammad, Seyyedali and Azizollah, 2012:229). Healthy schools are good places where people like each

other and their schools. Trust, commitment, cooperation, loyalty, teamwork are the hallmarks of such schools (De Villiers, 2006: 14).

Hoy and Forsyth cited in De Villiers summarise the characteristics of a healthy school as follows:

- The healthy school is protected from unreasonable community and parental pressures.
- The principal of a healthy school provides leadership, leadership that is both task and relations-oriented. Such behaviour is supportive of teachers and yet provides direction and maintains high standard of performance. Moreover, the principal has influence with his superiors as well as the ability to exercise independent thought and action.
- Teachers in a healthy school are committed to teaching and learning. They set high but achievable goals for students, they maintain high standards of performance, and the learning environment is orderly and serious.
- Students work hard on academic matters, are highly motivated, and respect other students who achieve academically.
- Classroom supplies and instructional materials are accessible if needed.
- Finally, in a healthy school, teachers like each other, trust each other, are enthusiastic about their work, identify positively with the school and are proud of their school (De Villiers, 2006:32).

2.3 Dimensions of organisational health

Hoy and Feldman cited in Moses (2010:11) identify seven dimensions of organisational health. These dimensions include institutional integrity, principal influence, consideration, initiating structure, resource support, morale and academic emphasis. Some authors have collapsed these dimensions into five. These five are the ones that make up the Organisational Health Inventory for Elementary schools used in the study. These are: institutional integrity, collegial leadership, resources, teacher affiliation and academic emphasis. The next section explains these five dimensions.

2.3.1 Institutional integrity

The institutional integrity dimension refers to the schools' ability to protect itself from unreasonable community and parental demands (Khademfar and Idris, 2012:221). It is the schools' ability to cope with its environment in a way that maintains the educational integrity of its program (De Villiers, 2006:54; Moses, 2010:12).

2.3.2 Collegial leadership

Collegial leadership refers to the behaviour by the principal that is friendly, supportive, open and guided by norms of equality (Khademfar and Idris, 2012:221). The principal sets the tone for high performance by letting people know what is expected of them (Moses, 2010:12).

2.3.3 Teacher affiliation

Teacher affiliation refers to a sense of friendliness and strong affiliation with the school. Teachers feel good about each other and have a sense of accomplishments from their work (Khademfar and Idris, 2012:221). They are committed to both their learners and their colleagues: they find ways to accommodate others and accomplish their jobs with enthusiasm (Moses, 2010:12).

2.3.4 Resource support

Resource support describes the principals' ability to provide adequate instructional materials and supplies easily to all teachers (Khademfar and Idris, 2012:221). This refers to a school where adequate classroom supplies are allocated to teachers and extra materials are readily supplied if requested (De Villiers, 2006:54).

2.3.5 Academic emphasis

Academic emphasis refers to the schools' press towards academic achievement. High achievement for learners is related to making a good effort, seeking extra work, and respecting high achieving students (Khademfar and Idris, 2012:221). De Villiers states that academic emphasis is the extent to which the school is driven by a quest of academic

excellence. High academic achievements are set for students, the learning environment is orderly and serious, teachers believe in their learners' ability to achieve and learners work hard and respect those who do well academically (De Villiers, 2006:54). These dimensions together provide an overall index of school health as shown in the table below (Khademfar and Idris, 2012:221).

2.4 Relating Parsonian levels to dimensions of organisational health

Parsonian levels of control	Dimensions of organizational health
Institutional level	Institutional integrity
Managerial level	Collegial leadership Resource influence
Technical level	Teacher affiliation Academic emphasis

2.5 Healthy and unhealthy schools

The following table compares healthy and unhealthy schools. Healthy schools demonstrate high levels of institutional integrity, teacher affiliation, academic emphasis, collegial relationship and resource influence. Unhealthy schools on the other hand demonstrate a low level of all these dimensions. There will of course be schools which could be high, moderate and low in some dimensions. Schools can have an idea of how they are performing and act accordingly.

Healthy schools	Unhealthy schools
High institutional integrity	Low institutional integrity
High teacher affiliation	Low teacher affiliation

High academic emphasis	Low academic emphasis
High collegial relationship	Low collegial relationship
High resource influence	Low resource influence

Hoy, Tarter & Kottkamp 1991

3. AIM OF THE STUDY

The aim of the study was to examine or measure teacher perceptions of organizational health of their schools.

4. RESEARCH QUESTIONS

The following questions guided the study:

- How do the teachers in the two primary schools perceive the organisational health of their schools?
- Are there differences in the different dimensions of organisational health of the two primary schools as perceived by the teachers?
- What can the school managers and teachers learn from the findings of the study?

5. RESEARCH METHODOLOGY

5.1 Research Design

This is an exploratory and descriptive survey of teacher perceptions of organisational health of their schools.

5.2 Participants

Participants in the study were 32 teachers from two primary schools in Bloemfontein. Of the 32 teachers 27 were females while five (5) were males. Convenience sampling was used to select the two primary schools.

5.3 Data collection

Instruments

The Organisational Health Inventory for elementary schools (OHI-E) developed by Hoy was adopted and adapted for use as the data gathering instrument in this study (Hoy; Tarter and Kottkamp, 1991:1). A section on biographical data was included in the questionnaire. The OHI-E as proposed by Hoy is a four-point Likert-type scale made up of 37 closed questions to which the teachers' responses ranged from very frequently occurs (4), to rarely occurs (1). Some of the items in this study were rephrased in the questionnaire to suit the context of the researcher. The questions in the questionnaire addressed the perceptions of teachers regarding the following aspects of organisational health: institutional integrity, collegial leadership, resources, teacher affiliation and academic emphasis.

Administration of the questionnaires

80 questionnaires were sent to the two schools after permission was granted by the school principals to do so. The school principals administered the questionnaires. The teachers were expected to answer questions on their perceptions of the organisational health of the schools in which they are employed.

Ethical issues

Participation in the study was voluntary. The aims of the study were made clear and the participants were assured of the confidentiality with which their responses would be dealt with. The school principals were assured that the overall index of the school and what it meant would be discussed with them.

5.4 Data Analysis

Descriptive data analysis was done and the findings presented in tables reflecting frequencies, means and standard deviations. The overall organisational health index was calculated for each school, as well as the means and standard deviations for each category of the inventory.

6. FINDINGS

6.1 Biographical data

Of the 32 teachers who answered the questionnaire 27 (84%) were female and 5 (16%) were male. Convenience sampling was used to select the two primary schools.

6.2 Organisational health of the two schools

Table 1 presents the Organisational Index of the two schools. The full scale is used.

TABLE 1: Responses of teachers per school (N=32)

No.	STATEMENTS	School A N=16		School B N=16	
		Mean	SD	Mean	SD
1.	The principal explores all sides of topics and admits that other opinions exist.	3.69	0.48	2.88	0.81
2.	The principal gets what he or she asks for from superiors.	3.19	0.54	2.81	0.91
3.	The principal discusses classroom issues with teachers.	3.44	0.81	3.25	0.86
4.	The principal accepts questions without appearing to ignore the teacher.	3.56	0.89	3.06	0.77
5.	Extra materials are available if requested.	2.88	0.81	2.63	0.96
6.	Learners neglect to complete homework.	1.88	0.81	1.44	0.63
7.	Learners are cooperative during classroom instruction.	2.75	0.77	2.31	0.48
8.	The School is vulnerable to outside pressures.	2.88	0.72	2.50	1.10
9.	The principal is able to influence the actions of his or her superiors.	2.94	0.85	2.50	0.89
10.	The principal treats all staff members as his or her equal.	3.56	0.63	2.81	0.83
11.	The principal goes out of his or her way to show appreciation to teachers.	3.63	0.50	3.13	0.96

12.	Teachers are provided with adequate materials for their classrooms.	2.94	0.57	2.50	0.89
13.	Teachers in this school like each other.	2.63	0.72	2.81	0.91
14.	Community demands are accepted even when they are not consistent with the educational program.	2.75	0.77	2.88	0.62
15.	The principal lets the staff know what is expected of them.	3.75	0.45	3.50	0.52
16.	The teachers receive necessary classroom supplies.	3.00	0.73	2.69	1.08
17.	The principal conducts necessary classroom evaluation.	3.38	0.72	2.88	1.02
18.	Learners respect others who get good grades.	2.31	0.95	2.13	0.81
19.	Teachers feel pressure from the community.	2.63	0.89	3.00	1.03
20.	The principal's recommendations are given serious consideration by his or her superiors.	3.13	0.72	2.75	0.86
21.	The principal maintains definite standards of performance.	3.69	0.48	3.31	0.79
22.	Supplementary materials are available for classroom use.	3.00	0.73	2.38	0.96
23.	Teachers exhibit friendliness towards each other.	2.75	0.68	3.00	0.82
24.	Learners seek extra work so they can get good grades.	1.94	0.93	2.00	1.10
25.	Select (top quality) citizen groups are influential with the SMT	2.81	0.98	2.75	0.77
26.	The principal looks out for the personal welfare of staff members.	3.50	0.97	3.25	0.86
27.	Teachers express pride in their school.	3.19	0.75	2.88	0.96
28.	Teachers identify with the school.	3.00	0.73	2.88	0.89
29.	The school is open to the whim (fancies/peculiarities) of the public.	2.50	0.82	2.38	0.89
30.	A few parents can change school policy.	3.31	0.79	3.31	0.70
31.	Learners try hard to improve on previous work.	2.06	0.77	1.94	1.00
32.	Teachers accomplish their jobs with enthusiasm.	3.00	0.63	2.81	0.91
33.	The learning environment is orderly and serious.	3.00	0.63	2.81	1.05
34.	The principal is friendly and approachable.	3.38	0.89	3.44	0.73
35.	There is a feeling of trust and confidence among staff.	2.88	0.72	2.63	0.89
36.	Teachers show commitment to their learners.	3.25	0.68	2.94	0.93
37.	Teachers are indifferent to each other.	2.38	0.62	2.75	0.77
	Overall Mean	2.99	0.48	2.75	0.43

The overall mean score for School A was 2.99 and that for School B was 2.75. The organisational health index of School A was higher than that of School B. A computed t-test showed a statistically significant difference between the two mean scores. With the mean scores of 2.99 and 2.75, the organisational health of the two schools is high.

The next section looks at the different dimensions of the organisational health index, starting with institutional integrity. Institutional integrity is had six questions (8,14,19,25,29,30), as shown in Table 2.

Table 2. Institutional Integrity (N=32)

No.	STATEMENTS	School A N=16		School B N=16	
		Mean	SD	Mean	SD
8	The school is vulnerable to outside pressures.	2.88	0.72	2.50	1.10
14	Community demands are accepted even when they are not consistent with the educational program.	2.75	0.77	2.88	0.62
19	Teachers feel pressure from the community.	2.63	0.89	3.00	1.03
25	Select citizen groups are influential with the board	2.81	0.98	2.75	0.77
29	The school is open to the whim (change of mind) of the public.	2.50	0.82	2.38	0.89
30	A few parents can change school policy.	3.31	0.79	3.31	0.70
	Overall Mean	2.81		2.80	

The overall mean score on institutional integrity was 2.81 for School A and 2.80 for School B. As far as institutional integrity is concerned, the results of the two schools were comparable. The institutional integrity high in the two schools is high.

The next section is on collegial leadership. Collegial leadership had 10 questions (1,3,4,10,11,15,17,21,26, and 34). Table 3 shows the results.

Table 3. Collegial Leadership (N=32)

No.	STATEMENTS	School A N=16		School B N=16	
		Mean	SD	Mean	SD
1	The principal explores all sides of topics and admits that other opinions exist.	3.69	0.48	2.88	0.81
3	The principal discusses classroom issues with teachers.	3.44	0.81	3.25	0.86
4	The principal accepts questions without appearing to snub (ignore) the teacher.	3.56	0.89	3.06	0.77
10	The principal treats all faculty members as his or	3.56	0.63	2.81	0.83

	her equal.				
11	The principal goes out of his or her way to show appreciation to teachers.	3.63	0.50	3.13	0.96
15	The principal lets the staff know what is expected of them.	3.75	0.45	3.50	0.52
17	The principal conducts necessary classroom evaluation.	3.38	0.72	2.88	1.02
21	The principal maintains definite standards of performance.	3.69	0.48	3.31	0.79
26	The principal looks out for the personal welfare of staff members.	3.50	0.97	3.25	0.86
34	The principal is friendly and approachable.	3.38	0.89	3.44	0.73
	Overall Mean	3.56	0.13	3.15	0.24

The overall mean score is 3.56 for School A and 3.15 for School B. The two means show that collegial leadership in both schools is high. There is an observable difference in the mean scores. The mean score for School A is higher than that of School B. A computed t-test showed a **statistically significant** difference between the two mean scores [at $p=0.002$; $t=4.6835$; $df=18$]. Although there are collegial relationships in both cases, there is more collegiality in School A.

The next section presents results on resources or resource influence. Resource influence had seven questions (2,5,9,12,16,20, and 22). Table 4 shows the results for this section.

Table 4. Resources (N=32)

No.	STATEMENTS	School A N=16		School B N=16	
		Mean	SD	Mean	SD
2	The principal gets what he or she asks for from superiors.	3.19	0.54	2.81	0.91
5	Extra materials are available if requested.	2.88	0.81	2.63	0.96
9	The principal is able to influence the actions of his or her superiors.	2.94	0.85	2.50	0.89
12	Teachers are provided with adequate materials for their classrooms.	2.94	0.57	2.50	0.89
16	The teachers receive necessary classroom supplies.	3.00	0.73	2.69	1.08
20	The principal's recommendations are given serious consideration by his or her superiors.	3.13	0.72	2.75	0.86
22	Supplementary materials are available for classroom use.	3.00	0.73	2.38	0.96
	Overall Mean	3.01	0.11	2.60	0.15

There is an observable difference in the overall mean score of the two schools as far as resource influence is concerned. The overall mean score for School A was 3.01 and 2.60 for

School B. This means that resource influence is high. The difference was found to be *statistically significant* at [95% confidence interval; $p=0.0001$; $t=5.6024$; $df=12$].

The next section looks into teacher affiliation. Teacher affiliation had nine questions (13,23,27,28,32,33,35,36, and 37) as shown in Table 5.

Table 5. Teacher Affiliation (N=32)

No.	STATEMENTS	School A N=16		School B N=16	
		Mean	SD	Mean	SD
13	Teachers in this school like each other.	2.63	0.72	2.81	0.91
23	Teachers exhibit friendliness towards each other.	2.75	0.68	3.00	0.82
27	Teachers express pride in their school.	3.19	0.75	2.88	0.96
28	Teachers identify with the school.	3.00	0.73	2.88	0.89
32	Teachers accomplish their jobs with enthusiasm.	3.00	0.63	2.81	0.91
33	The learning environment is orderly and serious.	3.00	0.63	2.81	1.05
35	There is a feeling of trust and confidence among staff.	2.88	0.72	2.63	0.89
36	Teachers show commitment to their learners.	3.25	0.68	2.94	0.93
37	Teachers are indifferent to each other.	2.38	0.62	2.75	0.77
	Overall Mean	2.90	0.27	2.83	0.11

The overall mean score for School A is 2.90 and School B is 2.83. In both schools, teacher affiliation is high. There is a difference in the overall means of the two schools. The means score for School A is slightly higher than that of School B. The difference was found to be *not statistically significant* at [95% confidence interval; $p=0.5287$; $t=0.6441$; $df=16$].

Table 6 presents data on academic emphasis. This section had five questions (6,7,18,24, and 31).

Table 6. Academic Emphasis (N=32)

No.	STATEMENTS	School A N=16		School B N=16	
		Mean	SD	Mean	SD
6	Learners neglect to complete homework.	1.88	0.81	1.44	0.63
7	Learners are cooperative during classroom instruction.	2.75	0.77	2.31	0.48
18	Learners respect others who get good grades.	2.31	0.95	2.13	0.81
24	Learners seek extra work so they can get good grades.	1.94	0.93	2.00	1.10
31	Learners try hard to improve on previous work.	2.06	0.77	1.94	1.00
	Overall Mean	2.19	0.35	1.96	0.33

There is an observable difference on the overall mean scores of the two schools. The overall mean for School A is 2.19 and School B is 1.96. In academic emphasis, the mean scores are below the median, that is 2.19 and 1.96, respectively. In both schools, academic emphasis is low. The difference in means was found to be **not statistically significant** at [95% confidence interval, $p=0.3286$; $t=1.0403$; $df=8$].

7. DISCUSSION

The mean scores for the two schools for the full scale were 2.99 and 2.75 respectively. This means the organizational health in both schools was moderately high. Teachers from the two schools perceived the organisational health of their schools differently. This difference was found to be statistically significant. For both schools, collegial leadership ranked high with mean scores of 3.56 and 3.15, respectively. The difference between the mean scores for collegial leadership was found to be statistically significant. For resource influence the means were 3.01 and 2.60, respectively. This difference was also found to be statistically significant. For institutional integrity (2.81 and 2.80); teacher affiliation (2.90 and 2.83) and academic emphasis (2.19 and 1.96), although School A showed higher means than School B, such difference was not statistically significant.

There were also variations in the mean scores among the different dimensions of organisational health within each school. For School A the ranking was: 1)collegial leadership, 2)resource influence, 3)teacher affiliation; 4)institutional integrity and 5)academic emphasis. For School B the ranking was: 1)collegial leadership, 2)teacher affiliation, 3)institutional integrity, 4)resource influence, 5)academic emphasis. Taking 2.5 as the median, we could infer that both schools are leaning more towards being healthy schools in four dimensions of the organisational health inventory. It is only in academic emphasis that the mean scores are below the median, that is 2.19 and 1.96, respectively.

Maika (2007) argues that measuring teacher perceptions of school health provides invaluable insight into a school's strengths and weaknesses. Identification of problem areas provides opportunities for school staff to address areas of deficiencies which could lead to school improvement. It is therefore critical to understand how the various aspects of organisational health affect a school.

The results in this study point to varying levels or areas of strength in the different dimensions or aspects of school health within and between the two schools. Both schools show high collegial leadership, a moderate level of institutional integrity, teacher affiliation and low academic emphasis.

8. CONCLUSION

The areas of strength and weaknesses in the two schools have been identified. School A appeared stronger than School B in all dimensions of the OHI-E. Both schools need to improve on academic emphasis.

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Effectiveness of Headhunting on the Recruitment Process Strategies on Selected Contact Center Providers

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Abstract

Headhunting is a type of external recruitment sourcing that helps to select qualified applicants who fits the position needed by the company. The goal of this study was to answer the effectiveness of headhunting on the recruitment process strategies on selected contact center provider companies in Ortigas center, Quezon City, Philippines. This study used descriptive method. Sixty recruitment personnel were conveniently selected to participate and completed a survey questionnaire. The results of the data showed by the respondents exhibited an average weighted mean of 3.6 verbally interpreted as very effective. Therefore, it suggests that headhunting is a very effective in providing a pool of qualified applicants to respective contact center providers. The study also showed that there is no significant relationship between the profile variables of the respondents and as to how they perceived the effectiveness of headhunting. This findings led to some recommendations such as such as other contact center provider companies may consider implementing Headhunting in recruiting applicants and that headhunting process may be applied to online platforms such as social medias, to reach out more audiences and to select the most qualified applicants

Keywords: Headhunting; Recruitment; Effectiveness; Applicants

Introduction

Contact Center Providers (CCP) is regarded as one of the fastest-growing industries in the world. The CSP commonly known as Business Process Outsourcing (BPO) has been in the country for almost two decades providing jobs and hope to job seekers. Call centers began in the Philippines as plain providers of email response and managing services. But later decided to provide other types of customer relations, such as travel services, technical support, education, customer care, financial services, online business to customer support, and online business to business support.

In the CCP industry, there are different clients who look for particular people for a specific position which will help the company to excel on its specific goal or aim. In this case, the call centers recruitment team uses different strategies or outsourcing processes to select potential candidates to fill those available or vacant positions needed by the clients. They use two types of sourcing, the internal and external sourcing. Internal sourcing which is commonly used by several CCP companies because potential candidates can be seen inside the company uses promotion, reassignment of employees, and referrals. External sourcing involves the hunting of prospective employees from outside the organization. One of its types is Headhunting, where the recruiter finds specific candidates that have some specific skills and contacts him/her in order to convince them to participate in the recruitment process. There goes the need of a third party or subcontractor to help them look for potential applicants and screens them. Headhunters can make the life of the recruitment team a lot easier because they can already filter qualified applicants so that it will not cost them a lot of time to screen or to interview further.

The researcher noticed that there is growing number of CCP in the Philippines, which causes the Filipinos to work in this kind of field. Filipinos chose to work in CCP for one particular reason, because of a high salary despite of the high risks.

This research was conducted in order to assess the effectiveness of headhunting for the selection process of the recruitment team, or in order to know if headhunting is more convenient to use for the recruitment team to select potential applicants to fill the vacant positions in the company.

The research study was based on Resource Dependence Theory (RDT) which is defined as organizations maximizing their power (Pfeffer 1981). It also the study of how the external resources of organizations affect the behavior of the organization. The procurement of external resources is an important tenet of both the strategic and tactical management of any company (Pfeffer and Salancik 1978). The Theoretical paradigm of the study is shown in figure 1.

Statement of the Problem

1. What is the demographic profile of the personnel in recruitment team of selected CCP in terms of the following: Age, Sex, Civil Status, Length of Service and Educational Attainment?
2. How effective is headhunting in selection of applicants done by each recruitment team of selected CCP?
3. Is there a significant relationship between the profile variable of the respondents and their perceived extent of effectiveness in external recruitment sourcing particularly headhunting among selected CCP?

Hypothesis

The study was claimed by the hypothesis that headhunting is an effective way in providing potential applicants for the recruitment team in selected CCP. It is also a cost effective way to fill vacant positions and the client's payment for headhunters is worth it since they can produce successful job candidates.

Review of Related Literatures and Studies

The selected literature and studies reviewed were on a certain extent related to the present study which provided adequate background on how to proceed with the present study. The literature of Mcdonald (2013), Guillermo and Gamboa (2008), Finlay and Coverdill (2016), Ho (2013), Morray and Constandanche (2010); Studies by Baldo (2015), Peltonen (2013), Zho Yu and Zeng Xiangquan (2008) when reviewed provided essential ideas to support this study.

The Study of Mcdonald (2013) and Ho (2013) about Headhunters were somehow interrelated. The main idea about their study is headhunters finding qualified applicants for a certain job. In connection with this research study, one of the aims is to prove the quality of applicants given by the headhunters. The description from Mcdonald (2013) and Ho (2013) may indicate that headhunters are not just looking and gathering a pool of applicants but also they filter and screen of which those candidates are suitable for the specific position. Based on the study of Baldo (2015), it may imply that headhunters serve as an intermediaries or a third party that helps the recruitment team look for the individuals that has the characteristics and skills that the position requires. One of the literature given by Gamboa and Gamboa (2008) that is based on the impression of some of the well-known HR practioner in the CCP in the Philippines viewed headhunters as necessity in providing the right candidate who fit the job within a given time. In addition, they considered external sourcing particularly, headhunting when internal sources are not enough to find applicants. This proved to be relevant and related to the current study, since the study aims to determine the effectiveness of headhunting in CCP. In these literatures and studies, the researcher found out that headhunters are not just a typical search firms or agents who search for applicants but indeed they are the one who focus on the goals of the recruitment team and strategies to provide best person and the most potential talents for position.

Methodology

This study used descriptive method. Sixty recruitment personnel in selected CCP at Ortigas center, Quezon City, Philippines were conveniently selected to participate and completed a researcher made survey questionnaire. The questionnaire was divided into two parts: Part 1 which includes the profile of the respondents such as age, civil status, sex, length of service and educational attainment. Part 2 which measure the assessment of the recruitment team in using headhunting. Their insight on how headhunting was efficient in giving qualified or potential applicants. And this was measured using four (4) point scales as shown on table 1.

The following statistical tools were utilized in analyzing the results of the data that was gathered from the respondents. Frequency, percentage and ranking as shown on equation (1) were used to quantify the profile variable of the respondents. Weighted mean as shown on equation (2) were used to denote the average of the effectiveness of headhunting in selection of applicants and Chi-square as shown on equation (3) was used to find out if there is a significant relationship between each of the profile variables and their assessment of the effectiveness of headhunting as external recruitment sourcing.

Results and Findings

1. On the demographic profile of the respondents, as to age, 24 or 40% belongs to the age bracket of 22-25 years old. As to sex, 38 or 63% are female and the other 22 or 37% of the respondents are male. As to civil status, 53 or 88% of the respondents are married and 7 or 12% are single. In terms of length of service, 21 or 35% worked in the industry for at least 6 months, 14 or 23% worked for 6 months up to a year, 15 or 25% worked for 1 to 2 years and 10 or 17% are employed for 3 up to 4 years. Regarding to the educational attainment, 58 or 97% are college graduate and 2 or 3% had master's degree holders. The summary of the profile of the respondents is shown on table 2.
2. The study proved that headhunting was very effective as a recruitment process strategy done by selected CCP. It was supported by the general weighted mean of 3.6 or verbally interpreted as very effective as assessed by the recruitment team of respective CCP as shown on table 3.

This shows that Headhunting is an effective way in immediate filling of vacant positions, efficient in supporting the need of recruitment team, and for finding qualified applicants that fits vacant positions in the company as supported by the study of Montenegro (2008), Florencio-Caguiat (2008) and Ongpin (2008).

3. The study revealed that there is no significant relationship between the profile variables of the respondents and to how they assessed the effectiveness of headhunting as shown by the computed P-value in terms of Age: 0.480; Sex: 0.293; Civil Status: 0.666; Length of service: 0.419 and Educational Attainment: 0.916, the values were higher than the level of significance of 0.05 and failed to reject the null hypothesis or verbally interpreted as no significant relationship.

Conclusions

1. Most of the respondents were female, married, young adults, college graduate, and at least 6 months in the service.
2. The study had proven that recruitment officers of selected CCP had a good impression with headhunting process. Also, there was an indication that headhunters produce qualified applicants who fits the position needed by the company. And lastly, the study showed that paying scheme that the company provides for the headhunters is highly competitive.
3. No significant relationship existed in the study between the demographic profile of the HR personnel conducting headhunting and their assessed effectiveness of headhunting as a recruitment process strategy.

Recommendations

1. The management may maintain good relationship with the headhunters that work for their recruitment team to improve sense of belongingness and commitment in attaining/supporting the needs of the management in finding applicants.
2. The headhunting firm is also suggested to try benchmarking with other headhunting companies to adapt new trends or practices for developing their organization function and to further improve their services in terms of immediate filling of vacant positions.

3. Due to advancement of technology, it is suggested that headhunting process be done online such as social medias, to reach out more audiences and to select the most qualified applicants.
4. It is highly suggested that other CCP may consider implementing Headhunting in recruiting applicants because it is proven to produce qualified applicants.
5. It is also suggested that headhunting may be used to other fields of business in search of qualified applicants.

Tables

Table 1. Four (4) Point Scale for Level of Effectiveness

Scale	Range	Descriptive Interpretation	Narrative Interpretation
4	3.5 – 4.0	Very Effective	This means that headhunting is very effective in the selection of applicants as recruitment style of the company
3	2.5 – 3.0	Effective	This means that headhunting is effective in the selection of applicants as a recruitment style of the company
2	1.5 – 2.0	Semi-Effective	This means that headhunting is somewhat effective in the selection of applicants as a recruitment style of the company
1	0.5 – 1.0	Not Effective	This means that headhunting is not effective in the selection of applicants as a recruitment style of the company

Table 2. Summary of the demographic profile of the respondents

Profile of the respondents	Frequency	Percentage
22-25 years old	24	40%
Female	38	63%
Married	53	88%
Work for at least 6 months	21	35%
College Graduate	58	97%

Table 3. Effectiveness of Headhunting in Selected Contact Center Providers

Item	Weighted Mean	Interpretation
1. The impression of the headhunting in the recruitment team of your company	3.8	Very Effective
2. Level of expertise of headhunters that works on your company	3.6	Very Effective
3. The commitment of headhunters to the recruitment tem.	3.5	Very Effective
4. Impact of headhunting in organizational performance	3.6	Very Effective
5. Quality applicants given by headhunters in terms of their performance	3.6	Very Effective
6. External recruitment in headhunting provides potential candidates compared to internal recruitment	3.5	Very Effective
7. Immediate filling for vacant position is observed with headhunting	3.5	Very Effective
8. Overall efficiency of headhunting in attaining/supporting the needs recruitment	3.5	Very Effective
9. The worth or value of contingency being paid for headhunters	3.7	Very Effective
10. Qualifications of applicants fit the vacant position as performed by headhunters	3.7	Very Effective
Average Weighted Mean	3.6	Very Effective

Variable	P-value	Df	χ^2 value	Decision	Interpretation
Age	0.480	3	2.469	Fail to reject Ho	No Significant relationship
Sex	0.293	1	1.103	Fail to reject Ho	No Significant relationship
Civil Status	0.666	1	0.186	Fail to reject Ho	No Significant relationship
Length of Service	0.419	3	2.826	Fail to reject Ho	No significant relationship
Educational attainment	0.916	1	0.011	Fail to reject Ho	No significant relationship

Illustration

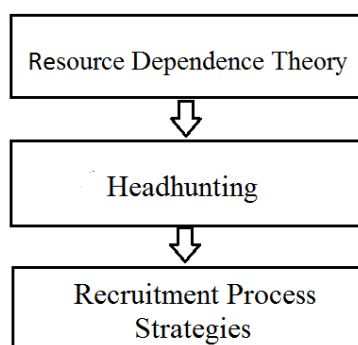


Fig. 1. Theoretical Paradigm of the Study.

Equations

$$\% = \frac{f}{N} \times 100 \quad (1)$$

$$x = \frac{\sum fx}{N} \quad (2)$$

$$\chi^2 = \sum \frac{(O-E)^2}{E} \quad (3)$$

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**FACTORS AFFECTING THE CAREER PREFERENCE MOTIVATION
AMONG TECHNICAL AND VOCATIONAL STUDENTS IN
JACOBO Z. GONZALES MEMORIAL SKILLS AND TRADE, BINAN CITY,
LAGUNA, PHILIPPINES**

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Research Abstract

In the Philippines, high school graduates who cannot afford to continue their studies in collegiate level are most likely enrolled in technical and vocational courses as offered by the Technical Education Skills and Development Authority (TESDA). Students are driven by motivation, which plays an important role in career selection. As observation and thorough journal reading, the vital links between the motivational factors and career preferences remain unexplored.

This study was conducted to determine the factors affecting the career preference motivation of the technical and vocational students in Jacobo Z. Gonzales Memorial Skills and Trade during the school year 2017-2018. Since the study was investigative in nature and in intention, the researchers employed both qualitative and quantitative data gathering techniques with the survey as its main method. A one-shot interview was also conducted to determine the underlying factors affecting career motivation. Based on the results of the interview, the collected responses were manually reduced to avoid redundancy. Data analysis was employed to yield independent factors through synthesizing them based on one principal idea or factor. Specific points of concern were internal factors and external factors. Internal factors include career commitment and career personal choice while external factors include teacher, peer, and the environment.

The study used the descriptive type of research utilizing a valid questionnaire, as generated from the results of factor analysis, which was personally administered and distributed by the researchers to gather the needed data. To test the hypothesis stating that there is no significant relationship between the perceived factors and the age of the respondents, regression analysis was utilized. It was found out that factors such as career commitment, teacher-related factor, environment-related factor, and peer-related factor were found to be significantly related to age. It is also recommended that career planning policy through career orientation and skills analysis relative to the required skills of the course that the students want to take must be pushed through to align their expertise and motivation to their career preferences.

Keywords: Career Motivation, Technical and Vocational Education,

Introduction

In the Philippines, high school graduates who cannot afford to continue their studies in collegiate level are most likely enrolled in technical and vocational courses as offered by the Technical Education Skills and Development Authority (TESDA). Secondary education is at the crossroad of education systems. It is tasked to prepare unprecedented numbers of young people for further learning and sustainable means of livelihood. According to the policy report of SEAMEO INNOTECH (2015), far too many young high school students leave high school before earning their diploma. The high school graduation rate is only 58.52% and those who earn their high school diplomas do not possess the necessary knowledge and skills for success in post-secondary education and in the workplace. This underscores the need to strengthen the technical-vocational high schools in order to bring students into employment and the mainstream of social and economic activities.

Prior to the implementation of K-12 curriculum in the Philippine Education system, students, who completed their secondary education and failed to have enough resources to support their studies in the collegiate level, are given special rights to still uplift their socio-economic status through the technical and vocational courses offered by the TESDA. This is done to realize the goal of Philippine government in education which is to provide a solid foundation of a lifelong process that can directly help the manpower in the near future. Also, Technical Education Skills and Development Authority (TESDA) strengthens its goals through the continuous establishment of technical and vocational schools and offers in-demand courses across the country.

However, despite aiming for improvement, job mismatching and hiring unskilled workers have been considered as important issues that need to be addressed in the workplace. This is happened largely due to the inconsistent relations between the career preference and the skills of the students, who are taking up technical and vocational courses. It is important to note that in selecting a future career, students must consider different factors that affect their career preference. Truly, career planning is an essential part of student's life because it determines the future success of the student. Career preference or choice allows the students to discover their unseen potentials, hone their unrecognized skills, and improve their abilities on decision-making.

Nyamwange (2016), in his study, explained that career choice has lately become a very complicated science, considering that the decision is influenced by numerous factors. Yet, choosing the right career is important in ensuring that individuals lead rewarding lives, are motivated by their jobs and can achieve remarkable productivity, thus setting the stage for organizational success and sustainability. Given the importance of making the right career choice, it is imperative that individuals are aware of the factors that influence such weighty decisions and do so from a point of knowledge.

Furthermore, careers once chosen will probably affect an individual throughout their lives. Relative to this, Sharf (2010) contends that clarity and meaning of life are expressed in one's career. Consequently, it is by being armed with accurate knowledge, recognized skills and abilities, and proper guidance that individuals are able to make appropriate career decisions. Due to the need for specialization at the workplace, choosing a career is not an easy and straightforward undertaking. It is a complicated and daunting task because the decision is influenced by various factors – extrinsic, intrinsic or a combination of both (Hewitt, 2010).

This study aimed at determining the factors that greatly affect the career preference motivation of the technical and vocational students at Jacobo Z. Memorial Skills and Trades. The study also dealt with the significant relationship between the perceived motivational factors and age of the respondents. Similar to related studies, it is assumed that motivational reasons in career selection are directly related to the age of the respondents.

Theoretical Framework

Career preference is a preferred choice of a course taken by a student which culminates to a specific career. A comparative lack of interest in a career can affect students' interest or commitment to a course and influence their academic performance (Hellen & Kitainge, 2016).

The study is anchored on Career motivation theory which applies motivation theory to understanding career plans, behaviors and decisions of employees, such as searching for and accepting a job, deciding to stay with an organization, revising career plans, seeking new job experiences, and setting and trying to accomplish career goals. Career motivation is defined in terms of three major components: career resilience, career insight, and career identity. Each component has multiple elements (London, 1983). Understanding how each element is related to students' affective commitment to the organization and their job satisfaction may help to foster student motivation and improve the effectiveness of human resources. However, there has been limited empirical work to examine the relationship between the elements of career motivation and key employee behavior such as employment and turnover intentions, job satisfaction, organizational commitment and work performance.

Another well-known motivational theory that is related to career preference motivation is the Self-Determination Theory. Deci et al. (1991) describe the self-determination theory which identifies six distinct levels of motivation. The progression from a motivation (not being motivated) towards intrinsic motivation is called internalization. The levels of motivation can be considered by choices/decisions we see our students make. Deci et al. present a compelling discussion of factors affecting internalization. Self-determination theory focuses on three needs: competence, relatedness, and autonomy (self-determination). These researchers proposed that to move towards intrinsic motivation requires external (instructor, parents, etc.) support in these dimensions of competence, relatedness, and autonomy. . Extrinsic motivations are important and can be effective, but they may not lead towards the goals we set for our students. Internalization takes more effort as it requires a move towards autonomy that the student must make. It cannot be done for them. Deci, et. al. pointed out that self-determined forms of motivation are critical because intrinsically motivated students are more likely to stay in school, achieve conceptual understanding, and be well adjusted.

The stated theories above are related to career preference motivation because both provide concepts and ideas on how motivation is being affected by the following identified factors. These also explored the different elements that dictate the preference in career selection.

Statement of the Problem

This research aimed to determine the factors affecting the career preference motivation of selected technical and vocational students in Jacobo Z. Gonzales Memorial Skills and Trade (JZGMST-TESDA). The researchers also identified the age of the respondents for it is assumed that age greatly affects the motivation in career selection. Also, the researchers conceptualized the study based on journals and studies related to the present topic.

Specifically, this paper sought to answer the following question.

1. What is the demographic profile of the respondents in terms of:
1.1 Age?

2. What are the factors affecting the career motivation of selected technical and vocational students in terms of:
 - 2.1 Intrinsic Factors
 - 2.1.1 Career Personal Goals;
 - 2.1.2 Career Commitment?
 - 2.2 Extrinsic Factors
 - 2.2.1 Teacher-Related factor;
 - 2.2.2 Peer-Related factor;
 - 2.2.3 Environment-Related factor?
3. Is there a significant relationship between the career motivation of the technical and vocational students when they are grouped according to their age?

Significance of the Study

Vocational and Technical Teachers. This study greatly benefits the teachers as they develop strategies and evaluate the relevance of motivational factors that affect the career preference of the students to make a good career development plan, which is useful to avoid job mismatching and allowing unskilled graduates and workers.

Educational Planners and Curriculum Experts. They would find this study useful in creating and designing a curriculum that must be fitted with the skills and competencies of the students. This also helps them to guide the vocational students in the critical process of career selection through career orientation, competencies, and identification, personality and skills test.

School Administrators. The present study is also beneficial to the TESDA School Administrators as they help teachers in boosting the potentials and enhancing the skills of the students because they know the students are being motivated.

Students. Since they are the main subjects of the study, this will primarily benefit them as they become aware of the influences that affect their preference in selecting their career. It is important to note that they must weigh up those factors to arrive at good career selection.

Hypotheses

This study also aimed to accept or nullify the following hypotheses below. It utilized regression analysis to find out the significant relationship between the perceived factors affecting the career preference motivation and the age of the respondents. It is assumed that as the people grow older, they perspective and preference are also changed because of the influential factors that dictate the career selection process. Sullivan (nd) explained that regression analysis in research is a related technique to assess the relationship between an outcome variable and one or more risk factors or confounding variables

Ho. There is no significant relationship between the factor affecting the career preference motivation of the technical and vocational students in terms of career personal choice and their age.

Ho. There is no significant relationship between the factor affecting the career preference motivation of the technical and vocational students in terms of career commitment and their age.

Ho. There is no significant relationship between the factor affecting the career preference motivation of the technical and vocational students in terms of teacher-related and their age.

Ho. There is no significant relationship between the factor affecting the career preference motivation of the technical and vocational students in terms of peer-related and their age.

Ho. There is no significant relationship between the factor affecting the career preference motivation of the technical and vocational students in terms of environment-related and their age.

Scope and Delimitation of the Study

The study was conducted in one of the TESDA schools in Laguna, the Jacobo Z. Gonzales Memorial Skills and Trade (JZGMST-TESDA) in the City of Binan, Laguna. The respondents were technical and vocational students from different short and vocational courses. Moreover, the study was conducted during the first semester of the school 2017-2018.

The focus of the study was on the internal and external factors that greatly affect the career preference motivation such as career commitment, career personal choice, teacher-related, peer-related, and environment-related factors. These identified factors were supported by the study of Liao, C.W. (2016) which indicates the factors affecting junior high school career plans such as personal choice factor, environmental factor, and social factor. Other factors not mentioned above such as family factor and school administration factor were not included in the study largely due to the insufficient details and responses given by the respondents during the conduct of the career preference interview.

Review of Related Literature and Studies

Career selection is one of many important choices students will make in determining future plans. Technical and vocational students must consider career selection as a very serious task to do because it will measure the possible accomplishment especially if one is highly motivated in finishing the chosen career. The following studies and research are related to the present study:

Mwanje (2010), in his study, found out that lack of career advancement after training in Bank of Uganda is an area of great interest and concern. The lack of career advancement affects motivation and performance. However, how training influences motivation is not well researched in BoU. The study assessed career advancement after training, identify constraints to career advancement, assess the level of motivation among trained personnel, establish strategies to minimize constraints to career advancement and assess the effect of career advancement on motivation. The study employed a case study research design where information was solicited mainly through the use of self-administered questionnaires and face-to-face interview guides. Respondents for the self-administered questionnaires were picked through stratified sampling. From each stratum or group, a random sample was selected. Purposive sampling was employed for key informants who were subjected to face-to-face interviews. Data analysis was done using percentages. The study revealed that among other things, low chances of promotion after training seem to point to the irrelevance of training to promotion. A marked lack of opportunities regarding career paths was revealed.

Moreover, the study revealed that although Bank of Uganda recognized skills and accomplishments after training, the staff at levels do not benefit from career advancement after training. It was revealed, through the study, that the inflexible organizational structure, poor policies

on promotion, favoritism and irrelevant training were responsible for lack of career advancement after training. The study identified setting clear and transparent policies on promotion and free and fair competition for promotion as a few of the strategies that could minimize constraints to career advancement. The study also revealed that career advancement had a highly significant effect on motivation. The study has recommended among other things, that Bank of Uganda improves the relationship between training and promotion through a more flexible structure and new reward system.

Dilay Ergün (2012) explored the factors that affect the motivation of students towards mathematics in trade vocational high schools in Ankara as perceived by their mathematics teachers. The teachers' opinions about the common types of motivation (intrinsic or extrinsic) among students, the role, and place of the goal orientation theory on students' motivation towards mathematics lessons were investigated. This study was conducted with an exploratory mixed-methods design which included two phases. Trade vocational high schools which consisted of Accounting and Financing department were the sample of this study. In the first phase, in a trade vocational high school in Çankaya, Turkey, a focus group interview was conducted with seven mathematics teachers. Afterwards, findings from the interview were analyzed by content analysis and a survey was developed based on these findings. In the second phase of the study, data were collected by surveying 31 mathematics teachers from six trade vocational high schools in Ankara, Turkey.

Based on this study, the results showed that external incentives are more efficient than internal incentives (curiosity or interest) for trade vocational high school students. The most effective factor was found to be that students were studying mathematics in order to obtain a high school diploma. The second most effective factor was that students valued getting rewards from their teachers. The goal orientation theory ranked below extrinsic motivation, indicating that students are less motivated by a desire of having skills for a professional life. Results showed that students did not have sufficient confidence in their mathematical ability to be successful in lessons or to want a professional life. Furthermore, the teachers stated that the curriculum as a whole does not satisfy students' professional needs, as it is not suitable for students' mathematics knowledge level.

Pascual, N.T. (2014) affirmed that unemployment rate in the country is commonly associated with the misfit graduates produced by universities and colleges and the workforce needed by different companies. The wrong choice of course taken by most of the high school students adds to the unemployment and underemployment rate of new graduate students. With this, the study determined the factors affecting the fourth year high school students' career preference of University of Rizal System' Laboratory School in Morong Rizal.

Moreover, Marinas et. al. (2014) investigated career motivation among students from the Bucharest University of Economic Studies. This analysis is consistent with the effort of national and supranational institutions and Romanian universities to bridge academic curriculum and requirements of the labor market and to properly prepare students for the transition from university to active professional life. The outcomes presented resulted from the analysis conducted within the pilot study, which implies a smaller sample. In the first part of the paper, some of the most important motivational theories are critically presented. Students' motivation is assessed by means of a questionnaire which evaluates three dimensions: factors which influence career choice, further professional development, and motivational factors. The empirical results are relevant in order to ensure the sustainability of the larger study which will be conducted in the future but also to adjust the offer of internship places according to students' needs and career expectations.

Aunzo, Jr. and Lanticse (2015) analyzed the students' motivation and intention towards learning Mathematics, Mathematics performance and students' preferred track in the senior high during the first batch of the K-12 implementation. The respondents of this research study were the 276 third-year high school students from the University of San Carlos – North Campus. This batch of students will be the first batch to enroll the grade 11 in the senior high school during the school year 2016 – 2017.

The findings revealed that Mathematics performance has no relationship between the students' perception of the idea that their friends think that Mathematics is a worthwhile class and students' intention to continue taking Mathematics classes and Mathematics performance has low correlation between the students' attitude towards doing Mathematics and students' perception on their ability to do Mathematics.

Lin, C.W. (2016) indicated that affecting career plan are a personal factor, environmental factor, group factor, school factor and social factor. This study investigated these related personal, group, school and career exploration factors that affecting junior high school students of a technique arts education program for their career decision-making.

Nyamwange (2016) examined the influence of interest on career choice decisions among first-year university students. The study utilized two hundred and ninety-six (296) first-year students selected from six universities. The Respondents were selected using purposive as well as systematic sampling approaches within the descriptive survey design. They responded to a specially designed questionnaire and the data collected were analyzed descriptively using the Statistical Package for Social Sciences as the main tool of analysis. The study concludes that student interest is significant in determining career choice decisions for an individual's career.

Research Methodology

Since the study is investigative in nature, it employed both qualitative and quantitative research. The researchers utilized both purposive and convenience sampling technique. Since the data gathering procedure is by the use of survey questionnaire, the researchers were restricted to include students who were readily available only on the schedule given by the TESDA school administrator and were permitted by course head to be part of the study. There were 180 students from vocational and technical courses such as Bread and Pastry Production, Beauty Care, Electronics Installation and Maintenance, Automotive Servicing, Shielded Metal Arc Welding, Housekeeping, Food and Beverages, and Wellness the researchers interviewed before the conduct of the distribution of the questionnaire.

Qualitative research includes a one-shot interview to determine the underlying factors affecting career motivation among 180 technical and vocational students from the different courses. The interview question asked of the students was: What motivates you to take up the course you have selected? The purpose of the open response question was to generate the probable motivation for career selection. Since this is an open response question, there was no limit to the number of answers each student could give. Based on the results of the interview, the collected responses were manually reduced to avoid redundancy. This process yielded 25 independent factors. Data analysis was also employed to synthesize the 25 probable reasons based on one principal idea or main factor. Specific points of concern were internal factors and external factors. Internal factors include career commitment and career personal choice while external factors include teacher, peer, and the environment.

The study also used the quantitative descriptive survey type of research utilizing a valid questionnaire, as generated from the results of data analysis, which was personally administered and distributed by the researchers among selected 180 students to gather the needed data. Out of the 180 questionnaires, only 150 were retrieved. Of the 150 students, 76 (51%) were male while 74 (49%) were female. The respondents were asked to rate each statement as they generally related to them by checking “strongly disagree”, “disagree”, “moderately agree”, “agree”, and “strongly agree”. Furthermore, the respondents were given enough time to answer the survey questionnaire before the retrieval of survey tools to ensure the reliability of the results. Lastly, the researcher summarized and concluded the study and gave recommendations that would serve as the basis for career guidance planning for the technical and vocational students.

The weighted mean was used to calculate the central tendency response of the respondents and arbitrary scale to interpret the motivational factors that greatly affect the career preference motivation of the students. To test the hypothesis stating that there is no significant relationship between the perceived factors and the age of the respondents, regression analysis was utilized.

Results and Discussion

After yielding to five independent factors, each of them was subjected to data analysis and discussion through the support of the following studies conducted by the other researchers. Intrinsic factors include Career Personal Choice and Career Commitment while Extrinsic factors include teacher, peer, and environment.

Factor 1

Career Personal Choice. One of the internal factors that greatly affect the career selection is the career personal choice. Students strongly agreed with they pursue their chosen career because it will enhance their skills and talents which got the highest weighted mean of 4.51. This implies that students are being motivated to choose a career that can help them to develop themselves and discover their unseen potentials. Moreover, they are also agreed with background experience, related activities, personal belief, and career calling affect the motivation in selecting their career.

Factor 2

Career Commitment. Aside from the career personal choice, career commitment is also an indicator of career preference motivation. Career commitment refers to a composite of individual attitudes towards a career, and it is reflected from his/her career decisions and behaviors such as career identification, career planning etc (Shim and Rohrbaugh, 2011). Based on the results of the study, students agreed with getting more into a chosen career and assessing the competencies of oneself relative to the selected career allow them to become always motivated to continue the undertaking. This is similar to the study conducted by Chang and Ho (2001) which indicates that trainees with high career commitment were likely to exercise greater effort towards learning the program with the intention of improving their job performance.

Factor 3

Teacher-Related Factors. Teachers are mentors, life shapers, destiny makers and they must be prepared to undertake the task which has been put into their hands. Students are motivated by teachers who show that they are concerned about their well-being, that they have answers to life's questions, that they can rise to challenges, that they can be mothers, fathers friends or second parents, because just like teachers they perform a very important job when it comes to students' motivation since they are the primary source of resources and stimuli that call for enthusiasm in doing tasks. Consequently, students consider advice, life stories, activities, and life experiences in selecting their career path. This is supported by Barnett (2007) in which teachers are major

influences in career choice of their learners. Teachers like parents are viewed as key players (or role models) in the career paths that young people eventually pursue especially girls. This implies that teachers' beliefs influence their learners' self-perceptions of ability and consequently career choice. In fact, some teachers encourage students to take certain subject options that are congruent with aptitudes and abilities that they identify (Falaye and Adams, 2008). Naong & Shumba (2012) also recommended that Teachers like parents work very closely with learners in schools and they know the abilities of their students in various subjects. Therefore, teachers should guide their students in their career choice and aspirations in line with their abilities in various subjects.

Factor 4

Peer-related Factors. Peers are also a great source of motivation for one another. Lifelong friendships are formed at school and peers have been known to stand up for one another sometimes even more than siblings. They assist one another with school work and also become mentors to one another in their personal lives. Students agreed with peer input, motivational words, study habits, techniques to carry tasks, and deep acquaintance assist them in selecting their career. Khan et. al. (2014), in his study, found out that that peers and friends have considerable impetus towards career decisions and academic choices. They also concluded that peer and friends dominate in academic choices and career decision-making process. The study also highlighted that peer and friends have a positive role in the selection of subjects, selection of a class, selection of laboratory, library and books and facilitation in homework and co-curricular activities owe much influence of their peers and friends. The results regarding career decision making show that peer and friends help in career decision making, professional career, helping in the selection of job, help in employment opportunities and earning tendencies are mostly influence by peer and friends.

Factor 5

Environment-related Factors. Environment plays a very important role in shaping career preference of the students. Family, salary wage, school administration, and even the school physical appearance add to the motivation of the students in career selection process. The results were similar to the finding of Ohiwerei, F.O., and Nwosu, B.O. (2009) in their research work, discovered that parents, as one of the environmental factors, generally wish their children to achieve where they have failed and stated that there is a need for parents, teachers, government and the students to take career choice very seriously as this will determine whatever the child will become in future.

Table 1. The Weighted Mean Distribution of the Factors Affecting the Career Preference Motivation of the Technical and Vocational Students

	Factors	Weighted Mean
Career Personal Choice		
Q9	I have a background experience in my chosen course.	3.99
Q25	I pursue my chosen career because it will enhance my skills and talents	4.51
Q1	I believe I am able to perform well in my chosen career	4.37
Q3	I consider my career choice as my motivation to continue this undertaking.	4.42
Q23	I usually make desirable works and activities connected to my vocational career	4.23
Career Commitment		
Q2	I actively participate and cooperation in every activity which helps me to get more knowledge related to my chosen career.	4.36
Q20	I believe that my chosen career allows me to achieve my career goals in life.	4.33
Q24	I learn how to accomplish important matters when I chose this technical course.	4.35
Q19	I engage myself in my chosen course whatever it takes because it helps me to become a productive person	4.35
Q10	I promote self-assessment of my career performance rather than comparing myself with others because it helps me to become more committed to the vocational course that I have chosen.	4.43
Teacher-Related		
Q11	I usually get motivated to participate when the activities given by the teacher are related to my chosen career.	4.31
Q18	I eagerly listen to the advice of my teacher on which career I have to take due to the credibility he possesses.	4.21
Q8	I easily comprehend the discussion of my teacher if it taps my passion and chosen profession.	4.29
Q17	I always consider the perspective of my teacher in career selection because he consistently shares life experiences related to my career preference.	4.35
Q12	I am easily influenced by the teacher's beliefs and perspective because of the life stories and future possible outcomes the teacher injects during the discussion of the lesson.	4.37
Peer-Related		
		3.31
Q4	I take up this vocational course because I am acquainted with my classmates and friends.	
Q13	I can easily relate to the discussion because my peer helps me to understand the lesson effectively	3.69
Q21	I do all my academic undertaking well because my peer provides me techniques to carry out technical and vocational tasks.	3.73
Q5	I can connect with the class discussion effectively because I value and seek peer input on every decision that I make.	3.77
Q16	I prefer to contribute to my insight and ideas during class discussion due to the effective study habits and hobbies that I do together with my classmates and friends, especially if those were related to understanding the nature and purposes of technical and vocational tasks.	3.82
Environment-Related		
Q6	I am eager to venture into a specific vocational course when the classroom looks accommodating.	4.14
Q14	I am being commanded by the parents in choosing a career considering also their personal choices and dreams for me.	4.09
Q22	I choose a career based on its current demands and the possible salary wage that I might earn	4.34
Q7	I am eager to pursue a career due to the scholarship given by the employers, government officials, and administrator.	4.25
Q15	I am easily persuaded to take up a course because of the advertisement provided by the school, especially emphasizing its advantage to work abroad.	4.24

Table 2 shows the significant relationship between the factors affecting the career preference motivation and the age of the respondents. It can be gleaned from the table that career personal choice was not significantly related to the age of the respondents. The result is a contrast to the analysis of Gorlick et. al (2011) in which they explained that as the people grow older, the decision-making power also changes. While aging may lead to some cognitive declines, it may also lead to gains in the insight and wisdom used to make the best decisions. Choosing a career must undergo decision-making process because it will impact future possible outcomes.

The table also shows that career commitment, teacher-related, peer-related, and environment-related were found significantly related to their career preference motivation because p-value 0.012, 0.023, and 0.030 were all less than 0.05 level of significance. This implies that since age comes with maturity, person's preference largely depends on the influential factors that directly and indirectly affect his motivation. In terms of intrinsic factors, specifically, career personal choice, the result is similar to the finding of Brislin et al. (2005) and Travis (2006) in which they all reported no significant correlations between age and intrinsic/extrinsic motivation in their samples. However, the results are contrasted to the study of DeVoe and Iyengar (2004) reported a significant positive correlation between age and intrinsic motivation, but no parallel correlation for extrinsic motivation.

Table 2. The Significant Relationship between the Factors Affecting the Career Preference Motivation and the Age of the Respondents

<i>Factors</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Career Personal Choice	1.129572	1.129572	3.111782	0.079791
Career Commitment	4.983734	4.983734	13.98991	0.000262
Teacher-Related	2.890108	2.890108	6.323687	0.012982
Peer-Related	2.145803	2.145803	4.804943	0.029941
Environment-Related	3.679736	3.679736	4.818897	0.029707

LEVEL OF SIGNIFICANCE- 0.05

Conclusion

Career selection is a very crucial part of schooling after high school because it is a time when one needs to take a career. In doing so, there are influential factors that affect one's career preference. Despite the firm decision of the students, it is still subjected to changes depending on the factors that greatly affect his motivation. The hypothesis stating that there is a significant relationship between the perceived factors affecting the career preference motivation and the age of the respondents was partly upheld by the study. Age was found to be significantly related to career commitment, teacher-related, peer-related, and environment-related factors.

Moreover, students are found to be intrinsically motivated when selecting a career. This is manifested through the positive responses given by the respondents which imply that students are somewhat independent in selecting their career and not much influenced by their family and peer. Further, in every TESDA satellite institutions, career development plan must be carefully made to help the students in making decisions relative to the technical and vocational course they want to take. And through this, it would lessen the unemployment rate and job mismatching in the country because these are commonly associated with the misfit graduates produced by a technical and vocational institution such as TESDA.

Recommendations

In light of the results and findings of the study, the following recommendations have been made.

1. Educational Planners and School Administrators must take into consideration the career preference motivation of the students in career planning. It is very important for the students to be guided to whatever career they want to pursue. However, it must be related to the skills and competencies they possess. In doing so, there is a need for educational planners and school administrators to employ career guidance strategies to identify the strengths and weaknesses of the students and their skills and competencies fit for the course they prefer to take.
2. Vocational and Technical teachers must be guided with the skills and competencies of the students through the use of personality test, skills identity test, and even peer-evaluation. There are done to align the abilities of the students to the right course they must take. Job mismatching and being unskilled can be prevented through career planning policy and intensive guidance from the teachers.
3. Since age was found to be significantly related to the career preference motivation, there must be varied activities and exercises which can cater the individual differences of the Tech-Voc students. Also, teacher-related factors were found to be significantly related to the career preference motivation, teachers must be role models and approachable in dealing with career selection problems of the students. Explaining to them the disadvantages and advantages of the career they have selected would be a great help for them to realize their potentials and unseen abilities.
4. Students' career success can be best attained if the right course suited to their personality, ability, and intellect serves as their guide in choosing the course they are to take in college. It is very important to integrate career plan with the curriculum because it will students to make good decisions in what course to take in college. A good career development plan will enhance not only the students but the educational institutions because they will be able to produce graduates due to the alignment of skills and motivation to pursue their undertaking.

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Gender and Education

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Abstract:

The overall purpose of the study is to investigate the present condition of educational discrimination based on gender, how it resists the feminist identity development and how it should be removed from the society. Data was collected from different schools, colleges, articles, internet sources and prevailing condition of the society. It finds that historically, women have been regarded as constituting a weaker section. Extension of the voting right to woman in Britain and America in the beginning of the 20th century brought about a series of changes in the status of woman especially in the western world. Now a days investment in education for boys and girls stands as one of the most important determinants of development having positive implications for all other measure of progress. But still a variety of reasons like socio-economic, socio-cultural and school related factors still stand as big barriers to ensure gender friendly environment. Finally it was recommended to contain proper co-ordination between governmental and non-government institutions to increase considerably the literacy level of woman. It was hoped that with the help of literacy, women would be able to lead a life of self -reliance.

Key words: education discrimination based on gender, feminist identity development, voting right to woman, barriers to ensure gender friendly environment, Literacy level of woman.

Introduction:

Education is a process of teaching, training and learning, especially in schools and colleges, to improve knowledge and develop skills. Gender is the state of being male or female. Typically this word is used with reference to social and cultural differences rather than biological ones. Is there any conflict between these two words? Is education only the privilege for male?.....So how can this type of topic arise? This type of topic is the humiliation for human. But the fact is that education does not discriminate gender, but the society and religion discriminate education based on gender. In today's world empowering woman is one of the crucial elements in successful social and economic development. Nondiscriminatory education benefits both men and women and ultimately equalizes relations between them.

Gender Discrimination:

Gender is the biological word. In every species gender is there. Nature creates gender as the medium of Reproduction process. From the ancient period to today's modern age we are practicing gender discrimination.

Natural differences exist between the senses based on biological and anatomic factors. Biological differences include chromosomes and hormonal differences. No differences between male and females exist in general intelligence. Men are stronger physically, but women are stronger mentally. Prenatal hormone exposure influences to what extent one exhibits traditional masculine or feminine behavior. Men are significantly more likely to take risks, to be aggressive. Females are more empathetic than males.

From birth males and females are raised differently and experience different environments throughout their lives. In the eyes of society, gender has a huge role to play in many major milestones or characteristics in life, like personality. Males and females are led to different paths before they are able to choose their own. These paths set by parents or society in the child's life set them on certain paths. This leads to a difference in personality, career path, or relationships. Throughout life males and females are seen as two very different species who have very different personalities and should stay on separate path.

Gender and Education:

From the ancient time society set the path that woman's place is at home and Man's place is outside home. So, only males were involve in education process. That's why we can't find any notable female philosopher, Scientist, scholar in history.

But now the situation has been changed, it has crossed the boundary of doubt that investment in education for boys and girls stands as one of the most important determinants of development having positive implications for all other measures of progress. Sending only boy children to schools does not occupy the thought of guardians as happened two decades ago. Educating the boys and girls proves a signal and most powerful vehicle of self-advancement and holds the prospect of development for future generation. It undeniably makes a strong foundation of national development .The present scene of school where the number of girl students outnumbers the boys makes us optimistic about the bright future generation. But the statistics of all over world is not optimistic.

Worldwide, men and women are more likely to be literate, with 100 men considered literate for every 88 women. In some countries the difference is even greater. For example, in Bangladesh only 62 women are literate for every 100 men.

In a study of 43 developed countries,15-years-old girls were ahead of boys in literacy skills and were more confident than boys about getting high-income jobs. In the United States girls are significantly ahead of boys in writing ability at all levels of primary and secondary education. However boys are slightly ahead of girls in mathematics ability.

In 2005-2006 in USA women earned more Associate's with Bachelor's and Master's degrees than men and earned 48.9% of Doctorate degrees. This is repeated in other countries, for example, women make up 58% in UK, 60% in Iran, 15% in Canada for university participation.

In the year 2015 the journal of 'Intelligence' study by researchers found that girl's overall education achievement is better in all the 47-75 countries. The study consists of 1.5 million 15-years-olds girls. This study found that female achievement across reading, Mathematics and science literacy show better performance across 70% of participating countries. So it can be said that education achievement is not linked to gender.

In another study examining the influence of woman's suffrage and democracy on gender equality in education in a sample of 80 countries, covering Asia, Africa, South America and Eastern Europe, This study shows that countries with a large duration of suffrage tend on average to perform better in terms of gender equality in education. The empirical association between democracy and gender equality in education disappears when religion is controlled for. In Asia and Africa other factors, including income, employment in agriculture and colonialism, also help explain the under-representations of girls in education.

Forms of Sex-Discrimination in Education:

Sex-differences in education are a type of sex discrimination in the education system affecting both men and women during and after their educational experiences. Men are more likely to be literate on a global average, although women are more prevalent at higher education in some countries. Sex-discrimination in education is applied to woman in several ways, first, many sociologists of education view the educational system as an institution of social and cultural reproduction. The existing patterns of inequality, especially for gender inequality, are reproduced within school through formal and informal processes.

Some studies identify that gender stereotypes exist in a number of forms in the primary classroom, including the generalization of attainment levels based upon sex and teacher attitudes towards gender appropriate play. Like-

Hidden Curriculum:

One study conducted field observations and interviews with British primary school teachers from a range of schools located in both rural and urban and wealthy and less wealthy areas. This study confirms that gender stereotypes and discrimination were widely seen in the classrooms. In an extract from one of the interviews, a teacher claimed that it is 'subjects like geographywhere the lads do come out, they have got the facts whereas the girls tend to be a bit more woollier in most of the things.' Meanwhile other teachers claimed that 'They (girls) haven't got the imagination that most of the lads have got'. In another interview, a teacher perceived gender behavior differences, remarking the girls seem to be typically feminine whilst the boys seem to be typically male....more aggressive.. the idea of what males ought to be.

The study terms this bias as "Hidden curriculum", which arises from a teacher's own underlying beliefs about gendered behavior and causes them to act in favor of the boys but to the detriment of the girl pupils. This ultimately leads to the unfolding of a self-fulfilling prophecy in the academic and behavioral performances of the students.

Linguistic Sexism:

Another form of gender discrimination is linguistic sexism. This term is the consistent and unconscious use of words and grammatical forms by teachers that denigrates women and emphasize the assumed superiority of men, not only in lesson content but also in situations of disciplinary procedure. One example like teachers, together with TV presenters and characters

as well as curricular materials all refer to Dinosaurs, Pandas, Lions and mathematical characters as "He", conveying the young children that these animals all only come in the male gender. Meanwhile only motherly figures such as Ladybird, Cows and Hens are referred to as "She". As a result school books, media and curriculum content all give students the impression that females do not create history which contributing to the damaging assumption that females cannot transform the world, whereas men can.

Beside the above discussion, Poverty, geographical isolation, minority status, early marriage and pregnancy, gender-based violence and traditional attitudes about the status and role of women, are among the many obstacles that stand in the way of women and girls fully exercising their right to participate in, complete and benefit from education.

Consequences of sex discrimination in education:

Discrimination results, the most part being in low status, sex-stereotyped occupations. The women endure the main responsibilities of domestic tasks, and they are not being prepared or qualified to pursue more prestigious, high paying occupations. Sex discrimination in education also results in women being more passive, quiet and less assertive.

Some gender discrimination whether intension or not, also effects the positions of the students in the future. Female may not interest in science, technology, engineering or math, because they have not been exposed to those types of classes. This is because interactions with in the school and society are pushing them towards easier, more feminine classes, such as home economics or art. This also has a similar effect on males. Because of interaction from teachers, such as saying boys do not usually cook, males may then be less likely to follow careers such as a chef, an artist, or a writer.

A study show more girls than boys still remain out of school-16 million girls will never set foot in a classroom (UNESCO statistics). And women account for two thirds of the 750 million adults without basic literacy skills.

Boys and girls face different issue in educational institutions. Their dealing with emotions also goes differently .Sometimes their goals for life also prove different.

Steps needed for change:

Several forms of action have been taken to combat institutionalized sexism. Gender equality is a global priority for UNESCO and inextricably linked to its efforts to promote the right to education and support the achievement of the sustainable Development Goals (SDGs). Through the education 2030 framework for action, SDG 4 aims to "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" and SDG5 to "Achieve gender equality and empower all women and girls".

The education 2030 agenda recognizes that gender equality requires an approach that "Ensure that girls and boys, women and men not only gain access to and complete education cycles, but are empowered equally in and through education."Large gender gaps exist in access, learning achievement and continuation in education in many settings.

Teachers, school management, curriculum should introduce a balanced way to deal with these issues and the teachers who directly deal with the students must have clandestine and transparent ideas about the different issues of boys and girls and our curriculum should reflect the same. When teachers remain aware of these issues, they can reach their students in the best possible ways.

Relationship is especially important when it comes to gender sensitivity. Teachers must know their hearts and needs and have to realize that each student is unique. It is a wrong notion that all the students are bad and again girl students cannot do the same as boys do. Girls' students face various barriers in the family, on the road, on the way to school. But classroom must be a place where they must feel absolutely safe and this is the duty of the teachers first to ensure it.

It is true that significant progress has been made at policy level to have gender sensitive education. The attitude towards the role of gender in language has been one of the

progressive changes as more establishments, publishers and indeed society aim for gender neutral pronoun use and terms as opposed to gender specific. If we read books of various subjects, there will be many more references to 'He'. However, nowadays it is more likely that he/she, he or she or even they plural they are used. Job titles have also gained gender neutrality for example, the transition from "firemen" to "Fire fighter", "Policemen" to "Police officer". Still many things to be done.

For gender equality in Education field the following steps can be taken----

- * Gender-awareness and analysis training for programme staff.
- * Developing monitoring and evaluation systems that include sex-disaggregated data.
- * Education stipends for girls (eg-Bangladesh Girls Education stipend Scheme)
- * Support parents with the care cost (eg-South African child/disability grants)
- * Awareness raising regarding gender-based violence, and other preventing measure, such as financial support for women and children escaping abusive environment. (eg- NGO pilot initiatives in Ghana)

Malala Yousafzai and Conclusion:

Malala Yousafzai, the co-recipient of the 2014 Nobel Prize, has been advocating across the world for girl's education rights, even in the face of extremely difficult circumstances in her home country of Pakistan, where gunman attempted to assassinate her in 2012.

Of course, women throughout the world face a range of challenges and none more so than in the developing world. Levels of education, health care and political representation can be dauntingly low, and discrimination and sexual violence are all too frequent.

But discrimination against women must be stopped. And there should be social policies to empowering women need to account for the intersectionality with social identity.

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GEOFUSION- MAPPING OF THE 21st CENTURY

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The study behind this presentation is based on a thorough investigation regarding the recent global, social and geographical processes. The presentation 'Geofusion' guides the audience with the help of maps in the global world of the 21st century through the quest for the winning nations, communities, leaders and powers of this age.

The findings of the study include a significant recognition that the scientists who are taken as explorers geostrategists of this century in this case, are expected to present guidelines of our new world full of global social and economic challenges. To do so, new maps are needed which do not miss the wisdom and tools of the old, but complement it with the new structure of knowledge.

Using the lately discovered geographic and economic interrelations, the presentation tries to give a prognosis of the global processes. The methodology contains the survey and analysis of many recent publications worldwide, regarding geostrategic, cultural, geographical, social and economic surveys structured into global networks.

In conclusion the author presents the result of the study which is a collage of the global map of the 21st century as mentioned above. In summary the presentation displays the results of a several year long study giving the audience an image how economic navigation tools can help the investors and travelers to get along in the changing new world.

INVESTIGATING THE EFFECTIVENESS OF ROLE PLAY AS AN INNOVATION FOR TEACHING SPEAKING SKILLS TO SOPHOMORES AT THE ACADEMY OF POLICY AND DEVELOPMENT

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ABSTRACT

This study investigates the effectiveness of role play as a technique for teaching speaking skills to sophomores at the Academy of Policy and Development. Qualitative research design, action research in particular, was applied to take an in-depth investigation into the problem.

Triangular methods namely questionnaires, semi-structured interviews, and semi-structured teacher journals were conducted in each class to discover the impact of role play on students in terms of students' vocabulary, students' speaking ability and students' attitudes toward role play use. The data collected were coded then decoded and analyzed by the researcher. It was found out from the study that a large number of lexical items were gained by some students in the project. Moreover, there were improvements in speaking skills among participants, especially active students. Finally, students' positive attitudes were also recorded while implementing role-play activities.

Keyword: role play use, role-play activities, speaking skills

1. INTRODUCTION

As Vietnam is in the process of globalization, Vietnamese students should be facilitated to promote their ability to communicate in English at all levels. However, teaching speaking is generally considered by Vietnamese students as the most challenging because students need to have enough courage and good and thorough preparation in order to produce utterance. There is no exception about challenges in teaching speaking skills to the second year non-English major students at Academy of Policy and Development (APD), where the teachers and students have been facing many obstacles in speaking skills. The question of how to improve students' speaking ability has drawn much attention of Vietnamese teachers and researchers in general, and at our institution in particular. As observed by myself as a teacher of English for four years, most of the students at the institution are shy and not confident when communicating in English answering the teachers' questions or participating in discussions in class. However, they seem to be more active and engaged in some cooperative work, and role play is one of the activities the students show more enthusiasm in practice. Based on this observation, I would like to investigate the effects of role play in teaching English speaking skills to the students at the institution where I work. The main focuses of my literature are on the teaching speaking skills and role play in teaching speaking. Specifically, the issues to be addressed in this writing include the principles for teaching speaking, possible problems in teaching speaking, definitions of role play, types of role play, importance of role play, and possible challenges in using role play to teach speaking skills.

2. LITERATURE REVIEW

2.1. Principles in teaching speaking skills

According to Bailey (2013), teaching speaking skills should be based on the following principles. First, learners should be provided practice with both accuracy and fluency. Learners, therefore, should have opportunities to be exposed to speaking activities that focus on form and meaning so that they can practice both accuracy and practice (Brown & Nation 1997). Knowledge of vocabulary and functional language is important in developing speaking fluency of language learners (Hedge 2000). The second principle is preparing communicative tasks that are based on information gap. Learners should talk to each other to share the information to bridge the gap. The third principle is giving students opportunities to talk by using group work or pair work and limiting teacher's talking time in class. Students should be given as many opportunities as possible to speak English through collaborative work. This also means teachers should minimize their speaking time in class.

Another principle is arranging tasks involving negotiation of meaning. Teachers should create speaking activities for students to develop their strategies of asking for slow speech, clarification, paraphrasing, and confirming what they think they have heard (Brown 2000). The final principle is planning activities that involve guidance and practice in interactional and transactional speech. The former is relatively unpredictable (as participants cover different topics and comment freely), and the latter has quite predictable patterns. Students should have opportunities to practice both types of speaking activities (Nunan 2003).

The five principles described above should be followed if teachers of English would like to improve their students' speaking skills. These will be considered carefully in further research of my future project attempting to use role play to teach speaking to the students at the Academy of Policy and Development (APD).

2.2. Definition of role play

Role play has been defined by many researchers and linguists. Ladousse (1987) separates the words role and play, stating that when students assume a “role”, they play a part in specific situations, and “play” means that the role is taken on in a safe environment where the student is as creative and playful as possible. Role play is a classroom activity that gives learners opportunities to practice a language in actual roles outside the classroom (Ladousse 1987; Livingstone 1986). Similarly, Budden (2006) believes that in role play practice, you put yourself into somebody else's shoes, or put yourself into an imaginary situation. In role play activities, the teacher gives information to learners such as who they are and what they think or feel.

In role play activities, students are given roles in imaginary outside-classroom situations that they may encounter in real life. As role play activities simulate real life, the range of language functions that may be used expands remarkably. Role play can be used for various kinds of participants, for a single person, in pairs or in groups with each person given a role to accomplish an objective (Brown 2000).

The definitions described above will be researched carefully and to be blended in this project to ensure the maximum possible effects of the intervention (i.e. the use of role play in teaching speaking skills). The next section is a detailed description of role play procedures.

2.3. Steps of role play in teaching speaking

Kodotchigova (2002) suggests that there are six steps for a successful role play. In step one (called a situation for a role play), teachers should select roles giving students opportunities to practice what they have learned, which are also appealing to them. Students should be given situations about their lives, or in books or movies. In step two (role play design), teachers develop situations accommodating the students' language proficiency. In step three (linguistic preparation), teachers select the language suited to students' level. It should be noted that new vocabulary should be introduced before the role play. In the next step (factual preparation), students are given detailed information and role descriptions to role play with confidence. In this step, cue cards with detailed instruction may be used for beginner learners. In step five (assigning roles), teachers can ask some volunteers to act out a role play in front of the class, yet the roles should be assigned to students before acting. For the beginner level, the teacher may model a role for students to watch and follow. Also students may learn useful words at home to act role play in the next class. In the last step (follow-up), teachers should ask students to discuss what they have learned during the class time. In a slightly different way, Huang (2008) indicates six main steps in using role play which include deciding on the teaching materials, selecting situations and creating dialogues, teaching dialogs to role play, having students practice role play, having students modify the situations and dialogues, evaluating and checking students' comprehension.

The steps suggested by the researchers above will be researched and combined to form a new set of steps for this project by myself, which, to my belief, would best suit my teaching context at the academy.

2.4. Benefits of role play use in teaching speaking

According to Ladousse (1987), role play helps to develop language and communication skills. It encourages learners to interact with peers to express ideas and feelings in a relaxed environment, make sense of and experience real-life situations, build up confidence (especially for shy students), build up critical thinking, creative problem-solving skills, creativeness and imagination, and learn different cultures. Role play makes speaking lessons more interesting, funny and lively, and motivating, thus making students more active and

engaged in the lessons. Role play helps to encourage cooperation among students, and makes the target language sound more natural and fluent. When involved in role play activities, students will develop fluency in language and verbal communication skill as well as ability to use body language, facial expressions and gestures in face-to-face communication (Rahimy & Safarpour 2012). This is partly due to the fact that learners feel they are in a safe environment with no drastic consequences of communication breakdown, which helps to create involvement for learning to happen. Students creativity is encouraged by role play because students learn and practice how to communicate with others, how to socialize, and how to manage problems (Budden 2006).

Role play also helps to enhance flexibility in learning speaking. According to Ladousse (1987), role play encourages the peer learning and the responsibility sharing for learning between teacher and student. Role play contributes to increasing individual flexibility and develops a sense of mastery in different situations, thus facilitating students' application of the language in new situations.

Based on the evidences mentioned above, it can be stated that role play activities benefit students in various ways. When role play is applied in teaching speaking, it will help improve students' target language fluency, encourage them to speak and interact with each other, increase the learning motivation and therefore make the learning process more engaging to learners. However, challenges in using role play should be considered before implementing the project.

2.5. Challenges in role play use in speaking classes

Sari (2011) argues that role-play activities takes much time especially if they include preparation and follow-up work. The effectiveness depends on students' ability to perform the tasks which requires teachers to know the class well so as they can assign suitable activities to students. Besides, the lack of space and the large number of students can cause challenges to the organization of the activities as noise level will also be high, especially in small classrooms, thus making students lose concentration and teachers may find it hard to monitor the different groups. This should be particularly considered in the Vietnamese teaching contexts. Bharathy (2013) refers to other limitations in applying role play in speaking which may arise as sometimes learners become very over self-conscious and end up in an embarrassing situation, feeling awkward and result in unproductive performance. There are occasionally passive students in class, which may cause distraction the class.

These problems will need to be considered very carefully by the researcher to minimize in order for role play to be effective in this study. Sufficient teachers' support and human power are required to provide better guidance and support to assist the students. Training should be provided to equip teachers with required skills to facilitate a congealing environment as well as guidance for students' progress.

3. RATIONALE FOR MY CURRENT CONTEXT

As mentioned in the first section, my observation as a teacher of English is that most students at our academy are not confident when communicating in English. They tend to focus on knowledge of grammar, vocabulary and their end-of-term exams (i.e. written tests). Even when a very small number of students are aware of or fond of speaking, they lack confidence and motivation in learning and practicing this skill. There are several reasons for this: due to the syllabuses designed by the Ministry of Education and Training, students did not have opportunities to practice speaking at school levels (from primary to high schools); they had no motivation in learning speaking skill as this subject is not included in any English exams

at school levels; they are non-English-major students; and Vietnamese students are shy by nature. These factors could be solved with the use of some innovative teaching methods. Through my own teaching experience and via informal talks with my colleagues and previous as well as current students, I realized that students are more motivated in some cooperative work, especially role play activities.

From the issues discussed in the previous sections, it can be stated that if implemented in the right way based on suggestions by previous researchers, role play can be a proper solution to encourage Vietnamese students speak English more in class, and improve their speaking skills. As there have been a number of empirical studies on the effectiveness of role play in English as a foreign language or a second language contexts such as Iran, Thailand, Malaysia, Indonesia, China, and several Vietnamese contexts, I would like to investigate the effects of role play use in our particular context of Academy of Policy and Development conducted in the appropriate way.

As the objectives of this study are to investigate the possible effects of the use of role play activities on the students' speaking performance and their attitudes towards role play use in speaking classes at the institution, the following questions are addressed:

- 1. Does role play help to improve the students' speaking skills in English classes?*
- 2. What are the students' attitudes towards the use of role play in English classes?*

4. RESEARCH METHODOLOGY AND METHODS

4.1. Research methodology

4.1.1. Qualitative data

To answer the research questions above, the qualitative data methods employed in my study enables the researcher to gain a thorough understanding of culture, opinions, and experiences in people's lives (Creswell 2012). The qualitative data helps me to get deep understanding of the students' response to the innovation of using role play in their English speaking lessons. In qualitative research, the researcher plays the key role in collecting and analyzing data; goes to the field physically to observe behaviors; and the data is described richly with words and pictures (Merriam 1998). The three qualitative methods used in this study were teacher journals, the open-ended questions in the student questionnaire, and semi-structured interviews with five students who volunteered to take part in the interviews, which are presented following.

4.1.2. Action research and mixed methods

Action research and mixed methods were chosen as the research design of this study. Action research is started with a problem that needs solving by researchers. With action research, researchers can reflect on their practices, thus making changes for their teaching (Burns 2010). Action research fosters democracy in education, encourages collaboration and bridges the gap between teachers' views and their teaching practices (Mills 2000). The four steps of action research suggested by Burns (2010), namely planning, acting, observing, and reflecting were strictly followed in this study.

Mixed methods (i.e. a combination of both quantitative and qualitative data) were used in my study (with much more of the latter). The mixed methods design is suitable for my study as it enables me to exploit strengths of both the quantitative and qualitative data (Creswell 2012).

Quantitative data is measurable, structured, systematic, and usually standardized (Patton 2002). The quantitative data of this study was collected by the close-ended section of the questionnaire, which helped me to collect quantitative data to investigate their reaction to the use of role play in their English classes (See Appendix 2)..

4.2. Research methods

The three methods that helped me collect qualitative data are student questionnaires, semi-structured interviews, and teacher journals, which were discussed following.

4.2.1. Student Questionnaires

The survey questionnaire was used in this study for a qualitative data collection. Questionnaires were used for collecting survey information, and could be conducted without the researcher's physical presence and quite straightforward for analysis. There are other benefits of questionnaires, such as being not expensive to administer, and flexible about the time and place; can survey many people; and saving time (Cohen, Manion & Morrison 2007). Based on the questionnaire designed by Islam and Islam (2013), and on the research questions, I designed the questionnaire as follows. There were two sections for the respondents to fill in: the first one with closed questions and the second with open questions. The scale for the closed questions is based on Likert scales, which covers from 1 (strongly agree), 2 (agree), 3 (neutral), 4 (disagree) and 5 (strongly disagree). This wide range helped the researcher to have a clear view of what the students think about role play activities. These questions were presented in the tabular form. In the second section, respondents were asked to answer open questions about their opinions of role play in their English classes. It was expected by the researcher that the students would answer them freely in the best way to their understanding and knowledge. This might help me to investigate not only their attitudes but also what they thought about their speaking skills improvement after the action (which is the intervention of role play) was taken. Some examples of open questions that were asked were:

1. Do you like to have role play in your English classes? Please give at least one reason.
2. Do you have any problems when having role play with your peers? What are they?
3. Would you like to have role play in the next course? Why/ Why not?

It should be noted that more questions were added in the later phase of this study. The questionnaire were conducted twice, the first time it was answered by the students before the project starts (in early November 2015), and the second time was at the end of the project. The reason for this was to enable the researcher to make comparison between the two versions of the students' answers, which would help me to find answers to the research questions of my study.

4.2.2. Semi-structured Interviews

The interview is believed by Smith and Bowers-Brown (2010) to help the researcher obtain deep information about interviewees' views over the issues under investigation. Among the three kinds of interview (namely, unstructured, structured, semi-structured), the semi-structured interview was opted for this study. The answers by the five interviewees decided the number of as well as the order the questions were asked (prepared by the researcher based on the issues of concern). The interview would create a free and flexible atmosphere for the interviewees to share their feelings or views over things. The items of the interviews can be seen in Appendix 3.

The interviews were in Vietnamese to ensure that the students could understand the questions correctly and express all they wanted to say in their mother tongue more freely and clearly.

At the permission of the students, I recorded the interviews for later transcription and analysis.

4.2.3. Teacher journals

As described by Smith and Davies (2010), journals are documents for researchers and stakeholders to write their observations, views, activities, or feelings about the issues under investigation. With journal data, the researcher could gain more details about things that may be hard to observe or obtain by other instruments (Cohen et al. 2007). The activities, behaviors, language skills obtained, and views of the students were carefully noted down in detail by me into journal entries after every speaking lesson. The contents covered in the teacher journal include the lesson contents, role play applied in class, students' behaviors, or their language and/or skills gained that I could observe or notice (see Appendix 1).

5. ETHICAL ISSUES

As a researcher, I am aware that no harm should be done to my students (as warned by Dahlberg & McCaig 2010). Prior to my research, I asked the leaders of the department for permission to conduct the project. When granted permission, I provided information about the project to the students, and explained to them their right to choose either participation or non-participation, to withdraw from the project any time and to change any information they had provided, and that these decisions would not affect their study or English marks at the department (These can be seen in the forms in Appendices 4A, 4B and 5A, 5B). Also, I had to ask all the students for permission to audio-record their lessons for my journal writing, and the interviewees for the interviews. For the questionnaire, I asked them for the best time and place to complete it.

6. RESEARCH DATA AND DATA ANALYSIS

The data collected was kept carefully in my locker in the department office for security. The interview data was transcribed and put into Microsoft Word files with the interviewees' names. After verification of data, coding was conducted basing on the themes found. I followed the three coding phases by Strauss and Corbin (1998), which are open, axial and selective. First, the data was read carefully, key ideas were highlighted, with notes taken for paraphrasing of ideas. The coding was done axially by asking such questions as what, where, why, when, and how to find out relationships between data categories. For instance, with the questionnaire data, I asked this question: "How does she feel about role play?", and see some words as "enjoyable", "exciting", or "encouraging", I would put them under the category of "positive attitude". For selective coding, I found out core categories representing the main themes, which was the most difficult for a novice researcher like me. Based on the data collected, I identified such themes as: vocabulary, speaking skills, attitudes toward role play, and concerns in role play use. I coded the questionnaire data as QS1 (ie. Questionnaire student 1), QS2, etc.; the interview data as IS1 (Interview student 1), IS2; the journal entries chronologically as TJ1 (teacher journal entry number 1), TJ2, etc.

6.1. Students' vocabulary learning

The data collected shows that the students made some progress in their vocabulary learning. Answering question 3 in the questionnaire (*Role play helped me remember more English new words than before*), ten students agreed that they learned more new words with role play, and over a third (8/25) of the respondents chose a neutral opinion for this item. This information was also confirmed by four out of five interviewees (but to different degrees). In the interview, IS5 said:

I think I gained more new English words with role play. .. (Why?) Because I had to memorize English words in the role assigned by you (the teacher) to express my ideas to my partners. And the language in the roles in later lessons became more complicated, so my vocabulary improved.

From the teacher journal, I noted that the majority of the students (over half of them) gained English new words with role play as they were quite active in their roles in the later lessons. For example, my objective in the first lessons was to teach them about five new words, yet toward the end of the project, I set an increase to seven or eight as the students seemed to memorize and use more new words. Near the end of the project, I wrote: *“The students could use new English words they learned in previous classes when acting their roles in class today. They could even sometimes make jokes in their roles.”* (TJ13)

However, my own notes in the journals sometimes reveal that some students were a bit passive in the class activities and seemed not to have gained more new words than just learning with the textbook. In the TJ14 entry (near the end of the project), my notes were:

A couple of students could not really communicate in English. When asked, S1 said she felt shy acting her role; S8 explained things too much in Vietnamese. This has been on with these two students since the beginning and seems not have improved.

Generally speaking, some of students benefited from role play in terms of vocabulary learning, some kept neutral opinions, and over a quarter did not think so. Further on this would be found in the discussion section.

6.2. Students’ speaking ability

The data of student questionnaires, journals and interviews also reveals some information about the students’ speaking skills in my project. The data triangulated helps me see some relationship between role play and the students’ speaking skills. The opinions about their pronunciation improvement with role play were different. It was believed by only ten students that the activities with role play helped them pronounce English better: they chose number 4 (disagree) for item 7 (*Role play did not help me pronounce English words better*) of the questionnaire, and ten had a neutral opinion. In one of my first journal entries, it was observed that: *“About ten students make mistakes with the two difficult sounds /θ/ and /ð/; four or five can’t pronounce /ŋ/ and some can’t say the /r/ sound correctly”*. During their role play classes, I tried to help the students practice these sounds. From my journal notes of later lessons, some of those students made certain progress in pronouncing these sounds. This was supported by some interview data. Three interviewees agreed that role play helped them improve their pronunciation of some difficult sounds and their word stress and even rhythm in English.

The other two interviewees, however, did not really see progress in their pronunciation. It was also noted by myself in the journal that some students did not make improvement in their pronunciation, or did not take pronunciation very seriously during their role play, and only focused on expressing themselves in English while carrying out the activities. Only when reminded by me as their teacher did the students correct their mistakes.

In speaking fluency, most of the students chose “agree” (15/25) and “strongly agree” (3/25) for item 6 that role play helped them convey their ideas in English faster and/or more fluently. Toward the end of the course, however, I could observe in TJ12 that: *“Now more*

students could communicate faster and more fluently in English, which took less of the class time. Their ideas became easier to understand than before, thus helping them act out their roles better.” The interview data supports this too. All the five students stated they could speak more fluently and faster, as explained by IS2: *“I used to pause in the middle of sentences, but now I can say the whole sentences. (Why?) Because I had to express my ideas in the roles, and also helped partners to do so timely”*.

However, not all the students shared the same view. Five students chose number 2 (agree) for item 4 of the questionnaire, which means they tended to use Vietnamese to explain things to their partners, or sometimes to express their ideas faster. This must have happened when I was busy supervising the other students, which was a limitation of the study to be discussed later.

In general, in terms of speaking ability, the innovation of role play did not come up to the expectation of the researcher of this study. Further discussion will be found in the coming sections.

6.3. Students’ attitudes toward role play

The information provided by the students in the questionnaires, journals, and interviews generally reveals that the students became more engaged in role play activities. The majority of the students (19 /25) chose either “strongly agree” (4/ 25) or “agree” (15/ 25) for the first item of the questionnaire (*Role play contained interesting activities*), and only two students chose “disagree” for this item (the rest chose a neutral opinion). My observation noted down in the journal entries was similar: the students responded more quickly and actively to the activities assigned by the teacher (they asked more questions about vocabulary, grammar, pronunciation; they asked to change roles if not suitable; they cooperated with one another more and better. The notes in TJ15 were:

“I could hear more laughs (a bit noisy though), some students with big smiles or beams, some stood up and moved around, used more body language, they seemed so excited in their roles”.

In answering the open-ended question 5 of the questionnaire, QS7 wrote: *“Yes, I certainly would like to have role play in the future. All the roles I played were enjoyable. Otherwise, I would not have communicated actively in English”*. In the interviews, all the five students shared the same view that role play made their classes increasingly interesting and effective (to a certain extent).

Despite the positive signs described above, some data collected shows several negative aspects of role play in my classes. It was also observed by me (i.e. the practitioner researcher) that some students got somehow fed up practicing role play in every class. Towards the end of the course, my observation notes (later noted in TJ12) were: *“I heard one student speak softly: “Oh no, not again! I don’t wanna play any more roles... I want some reading instead”*. Some students somehow became distracted during the role play acting. Also, as indicated at the beginning of this section, five remaining students did not agree with item 1 of the questionnaire, and they chose either 3 or 4, which means they did not like role play. Further discussion on this will be seen in the later section of this study.

6.4. Concerns about role play use

The concerns will be presented from the perspectives of myself (the practitioner researcher of this study) and of the students. My first concern was that it was not easy to select enough role play activities for the 16 classes of the project, which should be fun, various, suitable for the students, and still match the objectives set in the syllabus. Also, it was a hard job for me to manage the class activities so that the students were not distracted, too noisy, bored, over-dominant (stronger students), too passive (weaker students). These were noted in some of my journal entries.

Some students also expressed their concerns over the innovation. Over a third of the students (8/25) agreed with item 5 of the questionnaire that role play made the class too noisy at times. In answering the open-ended question number 3 (*What aspect of role play did you find the least enjoyable? Why?*), one student shared:

It was so hard sometimes to make my voice heard in all the noise made by the others around me. I wish the teacher had controlled this better, for example, setting strict regulations since the beginning of the lessons, reminding us at times, and walking around more to manage the groups. (QS10)

A complaint from one interviewee (IS3) is that some of her role play partners talked too much time. Another comment from an interviewee (also reflected in three “agree” answers for item 8 of the questionnaire) is that role play somehow took too much time from other language skills: *“I would rather have more reading or listening exercises than role play in too many classes like that. Role play is ok every now and then, but not that often!”* (IS4).

All these concerns will be discussed further in the coming sections of this study.

7. DISCUSSION

As stated in the previous section, the research questions I would like to find answer to are: “***Does role play help to improve the students’ speaking skills in English classes***” and “***What are the students’ attitudes towards the use of role play in English classes?***”. The two main aspects in this section I would like to discuss are the strengths and weaknesses of role play use in English classes, and the factors affecting the extent of success of the innovation.

The first finding revealing from the data is the increased vocabulary gained by some students in the project. This finding is supported by some previous research (as mentioned in the first section of this study), which could be explained by the fact that the students had to memorize English words in order to act out their roles assigned by the teacher; and/or they also had to repeat words and structures in different English classes when acting their roles. Besides that, the objective of helping the students learn an increasing number of new words set in my lesson plans also made them study harder. An explanation by Harmer (2007) about the positive relationship between role play and vocabulary learning is that students acting role play could help each other memorize words better and correct mistakes for each other about using words in English. It should be also noted that the students’ better vocabulary learning could have come from learning with the textbook, which provides them with large English vocabulary. However, as indicated in the previous section, a small number of students in my project were still passive or used Vietnamese in their roles instead of using English. This may have been caused by the students’ shy nature, fear of making mistakes, lack of English words, which made them lag behind the others in the class, causing no gain in their vocabulary learning. Another factor was that the students were surrounded by all other first language

(L1) speakers, which would encourage them to express themselves in their mother tongue for faster communication.

The second finding is the improvement in speaking skills of some students participating in my project. The two aspects of speaking skills mentioned by most of the students in the questionnaire and interview are pronunciation and fluency. As presented in the previous section, it was perceived by some students and the researcher (via teacher journal) that the students improved their pronunciation in terms of English sounds and word stress, and an equal number kept a neutral opinion about this. The improved pronunciation perceived by some students appears to be a new aspect in the research area of role play, since to my limited knowledge and research of literature, no previous researchers have found a positive relationship between role play and pronunciation of English learners. That possibly explains why nearly half of the students chose a neutral idea for the item referring to pronunciation. As the students would mostly focus on producing more fluency than accuracy so as to convey their ideas, it is not very likely that correct pronunciation can be improved with role play. Also, some students from other provinces or cities of Vietnam with strong accents when speaking Vietnamese may take quite long time to pronounce English words better. However, better speaking fluency due to role play was strongly agreed among the students as well as observed by me as the practitioner researcher. According to Rahimy and Safarpour (2012), this is due to the fact that the students had to express themselves in English while acting the roles, so “practice makes perfect”. Besides that, as role play enabled students to work in pair or group, they became feel more free and confident expressing their views with their partners than talking with me as their teacher, so they became faster and more fluent speaking in the target language. Another fact is that the vocabulary gain observed by me and the students (as indicated earlier) somehow may have positively affected their speaking ability: the more vocabulary they gained, the better they could express themselves in English. Nevertheless, similar to the argument about vocabulary learning above, it must be acknowledged that the students’ better learning could have resulted from their regular learning with the textbook, which contains many language skills and activities that helped develop their language skills. Besides that, as role play was only conducted two out of three regular English classes per week, it should not be too conclusive in saying that the students’ developed speaking skills merely came from learning with role play.

The third aspect found in this study is my students’ attitudes toward role play in their English classes. The positive attitudes toward role play as perceived by many students and as observed by the teacher researcher is supported by previous research (such as Clements and Jones 2008; Nguyen 2015). According to Clements and Jones (2008), role play can create more interaction among learners and more fun real-life activities than textbooks, which makes them more excited and interested in learning. The positive attitudes toward role play would in turn bring about better learning outcome. As indicated in the previous part, however, a couple of students did not find role play enjoyable, and as observed, were uncooperative in the class activities. This could only be explained by the students’ own characters (being shy) or preferred learning style (being passive in learning), or their typical way of learning since high school (with only written English exercises to do in class). They could have been assigned special roles to get more active and engaged in learning.

The concerns about the use of role play from myself (as the researcher) and the students. My concerns were how to select suitable and fun activities for regular practice to avoid boredom or uncooperativeness by the learners. Also, it was somehow not easy to have good class

management in all role play activities. Besides, the students were concerned with some of the students' domination in class activities, too much noise at times, or too much time on role play practice. These could have been better managed by me as the teacher by better instruction from the beginning of the class, and better class management. These concerns will be discussed in the section following.

8. REFLECTIONS ON FUTURE WORK

As presented in the above section, the innovation of using role play in my project was up to my expectation to a certain extent, and to some other extent did not really work the way I wanted it to be. In general, some (often more than half) of the students benefited from role play in certain ways, such as large vocabulary, better pronunciation, better fluency in speaking, and motivated in learning, with some had all of these benefits. The ways the innovation of role play in English lessons worked well were: the advantages of role play itself in language learning (as previous studies show); my thorough research on role play prior to the project; my carefully planned lessons with role play; the students' cooperation in class activities; the support from the department leaders for my project (letting us choose the most suitable classroom with good facilities, enough space and natural light, etc.). On the other hand, my innovation did not work the way it should have been: (i) it did not help as many students to improve their speaking in terms of pronunciation (this could have been caused by the students' strong Vietnamese accents, or their language speaking gift); (ii) similarly, only under half of the students seemed to have gained more vocabulary in English, and the rest over half were either not sure or did not gain more vocabulary, which could be explained by their Vietnamese speaking environment where everyone else speak Vietnamese, or lack of supervision by me as their teacher at times when I was stuck in one group too long; (iii) although all the students seemed to have gained better speaking fluency as perceived by the students themselves and observed by me as the researcher, this is arguable as both the students and I may have been biased: the students may have tried to please the teacher (due to the close relationship between us) or they may have believed so (which may also be biased), and being the teacher and researcher at the same time may have affected the way I taught and researched (this would be further discussed in the next paragraph); (iv) a small number of students were not really positive about role play: they were reluctant to cooperate and/or felt bored, which could be due to their shy nature, or some other over-dominating students, or my poor class management at times. These drawbacks would have been minimized with my better plan for the research (explaining and emphasizing the nature of the research to avoid biases), more thorough understanding of some shy students' personalities so as to support them more, more careful lesson plans, and better management of the class activities. If would try to do these in my future projects with role play.

In terms of research methods, the three methods (teacher journals, student questionnaires, and interviews) were employed so that the data collected from these methods were triangulated to help me find the answer to the research question. The combination of both quantitative and qualitative data was suitable for my study. With the questionnaire, I could collect information quickly, anonymously, conveniently, without taking too much of the students' time answering the questionnaire. The interviews were with only five students on the voluntary basis. The journal entries were completed in detail by myself after every class with role play. All these three sources of data helped me gain in-depth information about the students' responses to role play in their English classes as well as their speaking learning progress from the perspectives of the teacher researcher and of the students. On the other hand, the amount of data collected seemed too large for me to handle. As indicated earlier, I tried to code the

data to find out the main themes for analysis. Another issue is that the data collected from these methods was somehow biased: the students were biased due to the relationship with me as their teacher, which made them somehow want to “please” me with nice words about the innovation); and also because they “thought” they benefited (not they did actually benefit from role play); being the only researcher, I may have been biased in my journal notes, the interviews, as well as in analyzing the data. In order to minimize these, I kept reminding myself the main purpose of my research, and also reminded the students to be honest in sharing their opinions about role play in their classes, making them assured that their answers would not affect their study or scores in any way.

As mentioned earlier in this study, I had certain advantages being the practitioner researcher. I could get access to the students any time, use the “power” of their teacher to ask them to participate in my role play innovation as well as answering the questionnaire, ask some of them to take part in the interviews, and have their classes and the interviews audio-recorded. Things went smoothly partly due to this fact. Had I not been their teacher, I would not have had all their enthusiastic participation in my research project. However, being a teacher researcher brought me certain challenges. The first thing was the overlapping roles which made me sometimes overwhelmed or stressed, which made me sometimes push my students a bit too much. I should have balanced the two roles better for better results of my study.

If I could conduct this research again, I am quite sure I would still use the same methods of questionnaires, teacher journals, and semi-structured interviews for data collection and triangulation for data analysis. I may want to do deeper research in order to design better items for the questionnaire and interview so as to gain better results than this project. Another possible method I may want to do if I have opportunities is to use observation, and train someone to observe the whole process of my teaching. With an outsider observer, I can make sure not to miss any details of the role play activities by the students, can somehow minimize the biases of my being the practitioner and researcher at the same time, and also focus more on my teaching with role play, which may result in better outcomes of the project.

9. CONCLUSION

In conclusion, this project was aimed at investigating the effects of role play on the students of pre-intermediate English at the Academy of Policy and Development, which was successful to a certain extent.

Being the practitioner researcher of this project, I had a number of difficulties in conducting this study. It was very hard for me to design the research instruments, collect data, organize and categorize it for analysis and writing the final report of the project. Hence, it took me too much time and so many efforts to be in two roles, carrying out the innovation and research steps, yet this actually helped me to grow a lot as a teacher researcher. As a novice researcher, I have learned much experience about how to conduct an action research project in the right way with the support of my students and my employers at the academy. I have learned how to research the literature that is suitable for my study in order to conduct the innovation, design the items for the questionnaire and interview, collect data with those methods for my evaluation project, and then triangulate the data in the analysis process. Finally, I have learned how to write the report on what I have gained as a teacher researcher of the current study. I am confident about more success in conducting more research in the future if I have opportunities to do so.

Being a researcher conducting my own teaching innovation project brought me benefits as a teacher. I have improved my teaching thanks to my project in different ways: some of my students expanded their vocabulary and bettered their pronunciation, and the majority of them improved their fluency and had positive attitudes towards role play in learning English. These factors in learning a language are actually inter-related, which means the enhancement of one would boost up the others and vice versa (Anderson & Lynch 1988). The findings that some of the students were not sure or even negative about the benefits of role play use in language teaching, and their concerns about the innovation would help me as a novice teacher researcher draw experience in my future teaching and research. With better planning and preparation, my future research projects would be improved.

With certain gains of this project, I would be more inspired in taking more and different initiatives in teaching and doing more research in teaching, which would help to upgrade my teaching and research career to a higher and more professional level. I would also like to inspire these to my colleagues so as to help improve the teaching and research situation at our department as well as the academy, thus contributing to the development of the institution. The development of the academy would, in turn, benefit me and the other teachers as well as our students. The better quality in teaching and learning at the academy would somehow contribute to the development of the society.

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APPENDICES

Appendix 1: Teacher journal

Date:

Week: Class number:

Time:

No. of students present:

Late comers:

Questions to answer:

1. What lesson did I teach today?

.....
.....

2. Any difficulties in lesson plan? In class management?

.....
.....
.....

3. What role play technique did I use?

.....
.....
.....

4. How did the students respond to the role play English class today?

.....
.....
.....

5. How was the students' pronunciation in role play activities?

.....
.....
.....

6. How was the students' speaking fluency in role play activities?

.....
.....
.....

7. How was the students' vocabulary?

- 1 -

.....
.....

8. Other comments:

.....
.....
.....

Appendix 2: Student questionnaire

I. Students' opinions about role play:

Please show the degree of your agreement / disagreement with the following statements by using the scale below:

Strongly agree: 1 agree: 2 Neutral: 3 Disagree: 4 Strongly disagree: 5

No	Items	1	2	3	4	5
1.	Role play contained interesting activities.					
2.	Role play distracted me from learning.					
3.	Role play helped me remember a lot of English new words.					
4.	Role play encouraged me to speak more Vietnamese than English in class.					
5.	Role play sometimes created too much noise in class.					
6.	Role play helped me speak English faster.					
7.	Role play did not help me pronounce English words better.					
8.	Role play takes too much of our time for other language exercises and/or activities.					

II. Open-ended questions: (Please try to be specific by giving EXAMPLES)

1. What would you find most useful about role play use in speaking classes? Why?

2. What aspects of role play did you find the most enjoyable? Why?

3. What aspects of role play did you find the least enjoyable? Why?

4. What comments/suggestions do you have which could improve the use of role play to help you develop your vocabulary?

5. Would you like to have role play in the future English classes? Why / Why not?

6. Other comments please?

THANK YOU FOR PARTICIPATION!

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Appendix 3: Semi-structured Interview:

1. *Do you think role play is interesting? Why / why don't you think so?*
2. *Do you think role play motivated you to speak English? Why / why not?*
3. *Did you gain more language skills with role play? Which skills? What makes you think so?*
4. *Did you gain more English new words with role play? Why / why not?*
5. *Would you like the teacher to apply role play in the future classes? Why / why not?*

Appendix 4A: Participant information sheet

INFORMATION TO PARTICIPANTS INVOLVED IN RESEARCH (for student interview)

You are invited to participate

You are invited to participate in a research project entitled **Using role play in teaching speaking to EFL students at the Academy of Policy and Development**

This project is being conducted by a student researcher, Mr Hoang Anh Phong, as part of a Masters' degree in TESOL programme at Victoria University.

Project explanation

My tentative innovation is using role play in teaching speaking to EFL students at the Academy of Policy and Development. In particular, you will be involved in the project, which aims at investigating the effects of role play on your speaking ability, and also your future attitudes toward the use of role play in your speaking classes conducted by Mr Hoang Anh Phong, who is also your teacher at the academy.

What will I be asked to do?

Take part in a semi-structured interview with some questions about the effects of role play activities on your speaking skills; and your opinions on the use of role play in speaking classes.

What will I gain from participating?

There will be possible benefits of role play in your speaking skills (e.g. you are expected to gain more knowledge and skill in learning speaking)

How will the information I give be used?

I will transcribe the interview data, translate them, and put them into different categories for later analysis.

What are the potential risks of participating in this project?

I can ensure that no risks are encountered in this project.

How will this project be conducted?

- Role play will be used in every speaking class with the teacher's modelling and instruction.
- An interview will be conducted at the end of the project.

Who is conducting the study?

Mr Hoang Anh Phong, teacher of English at the Academy of Policy and Development
Phone number: +84965959567

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Appendix 4B: Participant information sheet

INFORMATION TO PARTICIPANTS INVOLVED IN RESEARCH (for questionnaires and observation)

You are invited to participate

You are invited to participate in a research project entitled **Using role play in teaching speaking to EFL students at the Academy of Policy and Development**

This project is being conducted by a student researcher, Mr Hoang Anh Phong, as part of a Masters' degree in TESOL at Victoria University.

Project explanation

My tentative innovation is using role play in teaching speaking to EFL students at the Academy of Policy and Development. In particular, you will be involved in the project, which aims at investigating the effects of role play on your speaking ability, and also your future attitudes toward the use of role play in your speaking classes conducted by Mr Hoang Anh Phong, who is also your teacher at the academy.

What will I be asked to do?

- be observed for data about role play activities use in speaking classes
- fill in the questionnaire at the end of the project

What will I gain from participating?

There will be possible benefits of role play in your speaking skills (e.g. you are expected to gain more knowledge and skill in learning speaking)

How will the information I give be used?

I will transcribe the questionnaire and observation data, translate them, and put them into different categories for later analysis.

What are the potential risks of participating in this project?

I can ensure that no risks are encountered in this project.

How will this project be conducted?

- Role play will be used in every speaking class with the teacher's modelling and instruction.
- Observation is conducted in the speaking classes with role play.
- Questionnaires will be filled out by you at the end of the project.

Who is conducting the study?

Mr Hoang Anh Phong, teacher of English at the Academy of Policy and Development
Phone number: +84965959567

Appendix 5A: Consent form

CONSENT FORM FOR PARTICIPANTS INVOLVED IN RESEARCH (for questionnaires and observation)

INFORMATION TO PARTICIPANTS:

We would like to invite you to be a part of a study into **Using role play in teaching speaking to EFL students at the Academy of Policy and Development**

This is an action research project, which aims at investigating the effects of role play on the first-year students at our academy. You will be asked to: (i) answer a questionnaire at the end of the project; (ii) observed during the classes of the project; (iii) answer the interview

You are encouraged to ask any questions for clarification of the research purposes, and questionnaire items. You can withdraw from the project any time as you wish without any being questioned why. The information you provide will be kept confidential. The research will be conducted by your lecturer, Mr Hoang Anh Phong. Further questions or concerns about the study can be discussed with Mr Hoang Anh Phong.

CERTIFICATION BY SUBJECT

I,
of Academy of Policy and Development

certify that I am at least 18 years old* and that I am voluntarily giving my consent to participate in the study:
Using role play in teaching speaking to EFL students at the Academy of Policy and Development being conducted at
Victoria University by: Mr Hoang Anh Phong

I certify that the objectives of the study, together with any risks and safeguards associated with the procedures listed hereunder to be carried out in the research, have been fully explained to me by:

Mr Phong Hoang

and that I freely consent to participation involving the below mentioned procedures:

- Being observed for data about role play activities use in speaking classes
- Filling in the questionnaire at the end of the project

I certify that I have had the opportunity to have any questions answered and that I understand that I can withdraw from this study at any time and that this withdrawal will not jeopardise me in any way.

I have been informed that the information I provide will be kept confidential.

Signed:

Date:

Any queries about your participation in this project may be directed to the researcher
Mr Hoang Anh Phong
+84965959567

Appendix 5B: Consent form

CONSENT FORM FOR PARTICIPANTS INVOLVED IN RESEARCH (for student interview)

INFORMATION TO PARTICIPANTS:

We would like to invite you to be a part of a study into **Using role play in teaching speaking to EFL students at the Academy of Policy and Development**

This is an action research project, which aims at investigating the effects of role play on the first-year students at our academy. You will be asked to answer some questions in a semi-structured interview at the end of the project.

You are encouraged to ask any questions for clarification of the research purposes, and interview items. You can withdraw from the project any time as you wish without any being questioned why. The information you provide will be kept confidential. The research will be conducted by your lecturer, Mr Hoang Anh Phong. Further questions or concerns about the study can be discussed with Mr Hoang Anh Phong.

CERTIFICATION BY SUBJECT

I,
of Academy of Policy and Development

certify that I am at least 18 years old* and that I am voluntarily giving my consent to participate in the study:
Using role play in teaching speaking to EFL students at the Academy of Policy and Development
being conducted at Victoria University by: Mr Hoang Anh Phong

I certify that the objectives of the study, together with any risks and safeguards associated with the procedures listed hereunder to be carried out in the research, have been fully explained to me by:

Mr Phong Hoang

and that I freely consent to participation involving the below mentioned procedures:

- Being interviewed with some questions about the effects of role play activities on your speaking skills; and your opinions on the use of role play in speaking classes.

I certify that I have had the opportunity to have any questions answered and that I understand that I can withdraw from this study at any time and that this withdrawal will not jeopardise me in any way.

I have been informed that the information I provide will be kept confidential.

Signed:

Date:

Any queries about your participation in this project may be directed to the researcher
Mr Hoang Anh Phong
Phone number: 84965959567

Appendix 6: Teacher journal Sample

Date: 18/12/2015

Week: 7 Class (of innovation): 14th class

Time: 7.30 – 9.30 am

No. of students present: 24

Late comers: 01 (1 student was sick)

Questions to answer:

1. What lesson did I teach today?

Module 7: Ambitions and Dreams

2. Any difficulties in lesson plan? In class management?

It was so hard to find some new role play activities for the students at this stage so that they wouldn't get bored! I was searching very hard for some really fun stuff for them though!

3. What role play technique did I use?

Roles were assigned to the students: Pair work: One was Bill Gates, the other was a poor Vietnamese guy who just graduated from university, unemployed: How would you carry out the conversation? What questions would you ask Bill Gates? What advice did Bill give you? What conclusion would you come up with? Why?

4. How did the students respond to the role play English class today?

A lot of students were making noise (positive noise I think!) about the situation:

- They were laughing, sometimes teasing each other: I heard someone say: "You gained so much weight, Bill! What have you eaten these days? Hahaha..."*
- Some students got out of their seats, moved around excitedly with the idea that they were the real Bill Gates. A lot of gestures could be seen during the conversations.*
- I could hear many students laugh sometimes, and some new words were asked to me while students acted their roles so that they could express their ideas.*
- However, a couple of students didn't want to act the roles. When asked, they said they were tired of playing roles all the time in my lessons ☹️ Erm..., I will have to find better ways to motivate them!*

5. How was the students' pronunciation in role play activities?

- 10 -

I could see some students became more aware of producing word stress in English. They sometimes corrected themselves or their friends when wrong word stresses were heard, and asked me for the right ones of some difficult words such as "wonderful", "development", or "inform", etc. when they were not sure. This has not happened before.

6. How was the students' speaking fluency in role play activities?

My observation is that the students could express their ideas in different roles more quickly than when the project started, less Vietnamese was used than before. Some students in the back rows (e.g., S5, S7, S9, S15, 22) used English more freely and confidently.

7. How was the students' vocabulary?

More new words were used during the students' conversations. Many of them tried to use the new words learned from previous lessons. However, I also observed that some students (S12, S18, S22) didn't seem very interested. They were laughing at something else until I got to their place and reminded them to focus (sighing ☹)

8. Other comments:

I would combine some video of real people in the next lesson for motivation.

Appendix 7: Student Questionnaire Sample (translated version)

I. Students' opinions about role play:

Please show the degree of your agreement / disagreement with the following statements by using the scale below:

Strongly agree: 1 agree: 2 Neutral: 3 Disagree: 4 Strongly disagree: 5

No	Items	1	2	3	4	5
9.	Role play contained interesting activities.		√			
10.	Role play distracted me from learning.				√	
11.	Role play helped me remember more English new words than before.		√			
12.	Role play encouraged me to speak more Vietnamese than English in class.				√	
13.	Role play sometimes created too much noise in class.		√			
14.	Role play helped me speak English faster.		√			
15.	Role play did not help me pronounce English words better.			√		
16.	Role play takes too much of our time for other language exercises and/or activities.		√			

II. Open-ended questions: (Please try to be specific by giving EXAMPLES)

1. What would you find most useful about role play use in speaking classes? Why?
I've gained many English words from the teacher and my classmates. Coz I had to play different roles, this made me try to memorize new words in English.
2. What aspects of role play did you find the most enjoyable? Why?
I can be a lot of people. It's so fun! I like the experiences, especially being Princess Diana when she was living!
3. What aspects of role play did you find the least enjoyable? Why?
I dislike the noise sometimes made by my friends around. I wish they could turn down their "volume"!
4. What comments/suggestions do you have which could improve the use of role play to help you develop your vocabulary?
5. Would you like to have role play in the future English classes? Why / Why not?
Sure I would like to have more role play classes, yet we need more guidance from the teacher.
7. Other comments please?
None!

THANK YOU FOR PARTICIPATION!

Appendix 8: Semi-structured Interview Sample (translated version)

Student's code: IS3

1. Do you think role play is interesting? Why / why don't you think so?
Yeah I quite like the roles I was assigned to play. They were fun, helped me to imagine situations, to be in different people's shoes. I enjoyed them (I mean the role play activities)... However, I don't like it when some of my friends took too much time talking, not leaving me any gap to talk in between. I mean they dominated most of the role play time.
2. Do you think role play motivated you to speak English? Why / why not?
Yes definitely, role play motivated me to speak more in English, to practice using the target language. Why? Because I had to express myself to my friends in that language, not in Vietnamese. The teacher was there to check, and people around me would remind if I spoke Vietnamese.
3. Did you gain more language skills with role play? Which skills? What makes you think so?
Yep, I think I improved speaking in terms of fluency, I think role play helped me to speak faster now, but I am not too sure if it helped me at all in improving my pronunciation of English sounds, I talked to my friends in class about that and some thought they did improve their sound production, but I don't really know if I did...
4. Did you gain more English new words with role play? Why / why not?
Yes, I've gained a lot more new words in English. Cuz in the role play classes, I had to try my best to express myself for my peers in other roles to understand me, that's why I could remember more English words. Also sometimes the vocabulary came back in later classes by accident, which helped me learn them again.
5. Would you like the teacher to apply role play in the future classes? Why / why not?
Yes sure, I would love to have more role play in the future English classes. Cuz as I said earlier, it was fun, motivating, and useful for my learning English, especially my speaking. But I would like the teacher to have more guidance and better control of the activities so that we would have more equal roles, equal time of practice. Nobody is gonna take the lead all the time.

Jamaican Creole:

A Language of Self-Assertion and Masculine Identity in a Canadian Community

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Abstract

Gendered identity is a complex issue for many, but even more layered for some adolescent migrant boys exploring their masculine identities. In this paper, I will examine how four new migrant Jamaican adolescent boys are using Jamaican Creole (JC) to shape their masculine identity in Canada. It reports findings from semi-structured interviews, video dairies and the graphic novels of four boys from low- income families who recently migrated to Toronto, Canada, whose masculine identities are evolving in a new cultural context. With these findings, using the authentic voices of the boys through their graphic novels and videos, I seek to demonstrate how and to what extent they use JC to assert self. While the sample size does not generalize to a larger population, the findings demonstrate the value of educators engaging in deeper discussions surrounding migrant boys' emerging masculine identities and how best to support them without negating the value of their language to them or stereotyping their practices. Finally, I theorize that there is a need for more collaboration with migrant boys to unearth different interpretations of masculinity and provide opportunities for them to express these without fear of stigmatization. These conditions will allow them to thrive in the Canadian classroom.

Key words: Jamaican Creole, boys, identity, masculinity

Purpose

The purpose of this paper is to examine how four new migrant Jamaican adolescent boys, age 14-17, from low-income families are using Jamaican Creole (JC) to shape their masculine identity in Victoria, Canada. This inquiry is significant because it is a collaborative effort with the boys to foster greater insights into how they create their masculine identities through language. Often, researches on boys' language use and identity present perspectives that sometimes lack their authentic voices, thus silencing them. However, this inquiry empowers them to reclaim their voices and share their stories of emerging masculine identity through their own creative forms, namely graphic novels and videos. The research seeks to unveil current practices of masculine identity in Jamaica surrounding language use with the intent being to expose how these, whether positive or negative have influenced the boys emerging masculinities. While the research is located in Canada, the emphasis is on the Jamaican context because researches show it still has the greatest impact on recent migrant boys' perception of their masculinity and language use (Boxill, Martin, Russell, Waller, Meikle & Mitchell, 2011, 2012; West and Cowell, 2014). I will ask probing questions of how and to what extent the boys use JC, a dominant marker of masculinity in Jamaica, as a shield against effeminacy; as is widely documented (Chevannes, 2001; Hope, 2006). Greater understanding of this phenomenon of language and masculine identity is very relevant to Canadian educators who are seeking to engage Jamaican young men in meaningful teaching learning experiences. The boys' shared stories in this research is an opportunity for such educators to deepen their understanding of not only some Jamaican boys' reluctance to embrace English, but other migrant groups, and use this knowledge to create more ideal conditions for them to thrive in schools.

Theoretical Frameworks

The principal theoretical frameworks that inform this research is social constructivism and behaviorism. Creswell (2013) reminds us that social constructivism is an interpretative framework whereby individuals seek to understand their world and develop their own particular meanings of it. A social constructivist approach is the springboard for greater insights into the boys' developing identities as well as an opportunity to provide a platform for them to construct their own stories of their masculine identity using their language. Implicit in this discussion, is the concept of voice and authentic representation. Bhabha (1994) contends that this will allow for deeper understanding of culture, people and practice in research to create change (p.56). On the other hand, behaviourism (Skinner, 1976) will serve to unearth some of the underlying tensions of the boys' stories and the role the social environment plays in their emerging language behaviours as evidenced by numerous researches in Jamaica (Bryan, 2010; Christie, 2003; Craig, 2006; Crawford, 2010). It will also lead to critical questions of how people behave and why they behave as they do (Skinner, 1976 p. 10). These questions are relevant for further exploration of why Jamaican boys may choose to use JC to reassert their masculine identity and the possible impact on their use of English.

Techniques

I will engage in deliberate qualitative methods that employ a narrative inquiry and case study approach to document how language experiences shape the masculine identities of four new migrant Jamaican boys in Canada.

I will conduct more semi-structured interviews and focus group discussions with the boys over a three- week period to gather data about how they use JC to shape their masculine identities. I will also encourage them to use video dairies and graphic art/novel to share their

thoughts and some of their experiences that have influenced their emerging identities. These tools will give them ownership of how they share and what they share as well as create an atmosphere of inclusivity to bolster openness.

Data Sources

For the research location, I targeted an area with a small Jamaican migrant population in Victoria. I sought recent migrant boys (14-17) who are fluent JC speakers from low-income families. The boys use video dairies and graphic art works to share information about themselves, family background and important influences in their choice of language and the impact on their identity. They spoke in JC and were encouraged to share their diaries and graphic works with each other to facilitate focus group discussions on the impact the language has on their emerging and evolving masculine identities.

Results and Interpretations

This research is still ongoing; as such further interviews and recordings will be done to gather more data. Nevertheless, preliminary findings show that some of the boys' do think that it is necessary to use JC to assert their masculine identity in some social settings. Some believe being in Canada, a country that is more fluid with identity and accepting of different representations of masculinity, reinforces the need for them to reassert their masculine identity through the language; especially in social settings with other boys. Connell (1987; 2005) reminds us that masculinity is ever changing. The implications of this for educators and other stakeholders is that many opportunities will exist to engage the boys through dialogue to foster deeper understandings of how their masculine identities are developing. Educators can use these opportunities to deconstruct stereotypical masculine identities and perceptions about the boys themselves to nurture views that are more positive.

Educational Importance

This research will extend discussions on how the use of JC shapes the masculine identities of adolescent boys of low-income families. While there are researches that examine the impact of language on Jamaican boys' identity, few provide a platform for the boys to tell their stories in their words of how their masculine identities are emerging and evolving. The results from this study will also benefit educators and second language researchers who are seeking to engage more meaningfully with immigrant boys and create opportunities for them to thrive in Canadian schools. Whilst this paper focuses on Jamaican boys, some of the findings are applicable to other groups who may display similar traits of resistance to English and may open up discussions on perceived 'at risk' boys. Finally, the boys shared stories in this research may better equip teachers with the knowledge they need to engage them in rewarding experiences in the classroom and create more respectful, open spaces for collaboration.

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Making is thinking – the instinctive act of knowing in making

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Abstract

“...technique is not simply the application of skills, but an application through intention, criticality, and improvisation. Technique then is not a function of thinking then making, but of thinking through making.” Mark, C., 2005

Making through the use of hands is an important kinaesthetic act of a human, and human intelligences as advocated by Howard Gardner. It has direct relation to thinking and henceforth in the development of human cognition. This is possibly one axiom advocates of ‘thinking through making’ holds dearly to and many artists culture; architecture; design and engineering professions; to name a few, live by it!

In the education of our secondary school pupils, is there value in making through hands-on experiences in the making and creating of objects? Or should it be in the creating and making of objects? The author finds interesting and anecdotal episodes of ‘thinking through designing and making’ and ‘making to inform thinking’ in the numerous designing of training programmes for design and technology teachers.

This paper seeks to understand the notion of ‘making is thinking’ through ‘quantitative’ iteration act of designing, making and designing, and designing through making. The author will attempt to discuss and address a number of questions, namely, (a) is there educational value in the quantitative act of making? (b) What would a secondary school design and technology educator gain if he/she were to indulge in the act of making, and making ‘quantitatively’ as iteration act of designing through making? (c) How would this support his/her act of teaching design and technology pupils. The author will attempt to share some insights of his own experiences gained through the quantitative nature of making in designing to achieve a sense of knowing in making, whereby, he coined this sense of knowing in making “the instinctive act of knowing in making”.

Keywords: Making is thinking, Quantitative act of making, Instinctive act of knowing in making

1 Introduction

Design & Technology (D&T) is a compulsory subject for lower secondary level and an elective subject for upper secondary level in Singapore government secondary schools. Pupils (aged between 13 and 17 years old) taking the D&T subject are engaged in design and make activities. Making activities in D&T aim to develop in pupils, concrete/iconic modes of cognition (Cross, 2007).

Pupils are generally excited and motivated in making activities. There are many opportunities for thinking and learning to take place through well-planned and well-facilitated making activities. However, these opportunities are not often well seized by the D&T teachers. What is hindering teachers from effectively helping their pupils learn through the making activities, and what could be done to overcome these shortfalls?

The Singapore D&T syllabus recommends exposing pupils to three resistant materials, namely wood, metal and plastics. Many teachers, however, tend to focus mainly on plastics, normally acrylic, as acrylic is relatively easier to work with in terms of shaping, bending, and joining. It is lower in cost and has a wide range of colours to choose from as compared to wood and metal. Many teachers also seem to be too busy to prepare an effective lesson in making. This often results in poorly facilitated making lesson where time is not well spent on guided-learning, e.g. materials or tools are not prepared beforehand.

This study aims to emphasize the notion that quantitative making, and thinking and learning through making, will benefit the teachers, and more importantly benefit the pupils' learning. The teachers will be able to gain greater understanding and insights through their working of the various materials. The act of quantitative making will not only improve teachers' skillset in processing the various materials, but will also develop in teachers, in a long run, an instinctive act of knowing and thinking. With this instinctive act of knowing and thinking through making, D&T teachers will be able to better judge the suitability, limitations, and intensity of the making experience with regard to different materials; the processes required to fulfil the planned design; the modification of design, where necessary, in view of limitations of the material's properties; and the functional modification, if required. In turn, they will then be able to more effectively and efficiently advise and guide their pupils through their design and make activities, to produce artefacts that are fit for purpose and with acceptable workmanship and quality. The learning by the pupils would then be productive, intense and pupils would as a result acquire such instinctive act of knowing and thinking as well.

2 Background and Literature Review

The authors provide training to pre-service and in-service D&T teachers. In such train-the-trainer situations, where in this case the 'trainer' is the D&T teacher, the desire is to impart as much useful and relevant knowledge as possible within the short duration of the course to the course participants (D&T teachers). One of the aims is to inspire the course participants to further explore and self-direct their own learning after they return to schools, and thereafter be effective in onward transmission of their learnings to their pupils. This would need the authors to be pre-equipped with the knowledge and competency to deal with different designs, materials, situations and difficulties that may arise during a lesson in making. Such

knowledge and competency can be gained only from personally going through the designing and making of as many different samples of designs as possible. One must be fully and authentically engaged in the process of making, and there must be sufficient mileage to allow one to be confident and be immersed in such making knowledgebase. The teaching of Confucius had it that *“I hear and I forget. I see and I remember. I do and I understand.”* Doing and making and making it quantitatively and intensely allows knowledge, in this case practical knowledge, to be tacitly acquired and thereafter the instinctive act of knowing to grow and be useful in a human.

In discussing quantitative making, however, there is one very key point to note here. Quantitative making does not refer to doing the same thing repeatedly, in the same way. This is because, if this ‘same way’ was an excellent way, then at best, it may result in an improvement in that specific skill and work, and often, only applicable in very similar situations. That’s what ‘practice makes perfect’ probably refers to. On the other hand, if this ‘same way’ was a less-than-desired way, or was a mistake, then the same mistakes will be made repeatedly, which is worse off. So, the assumption is if something is not carried out or made in the right way, the maker will instinctively know it is not the right way, because the result does not appear correct and there may be issues and difficulties encountered, and the maker will think of an alternative way to work on it, hence the phrase “making is thinking”.

“...the evolution of specialized body movements is of obvious advantage to the species, and in human beings his adaptation is extended through the use of tools.”

Gardner, H., 2006

Referring to the quote above by Gardner (2006), tools are just objects, but there are different ways to use and handle them. Every exploration of a new tool, or even a re-exploration of a tool that has been previously used, will lead to a new learning and aid in the development of human intelligence. Likewise, the authors believe that exposure to making and the use of tools in a D&T workshop is beneficial to the pupils’ intellectual development. How well the pupils are exposed to the various tools depend a lot on the teacher, and the D&T workshop can often be seen as a place of opportunity for cognitive apprenticeship, where

“...one needs to deliberately bring the thinking to the surface, to make it visible, whether it's in reading, writing, problem solving. The teacher's thinking must be made visible to the students and the student's thinking must be made visible to the teacher. That is the most important difference between traditional apprenticeship and cognitive apprenticeship. Cognitive research, through such methods as protocol analysis, has begun to delineate the cognitive and metacognitive processes that comprise expertise. By bringing these tacit processes into the open, students can observe, enact, and practice them with help from the teacher and from other students.”

Collins, A., 1991

Therefore, the role of the teacher can be very demanding, and as described by Adams (1991, p. 170):

“The teacher's task is a complex and demanding one. It requires them to create opportunities for learning, to manipulate situations to stretch able pupils and support weaker ones; to introduce unfamiliar concepts and new ways of working appropriate for their pupils. It involves them in a variety of roles:

organiser, mentor, devil's advocate, information source, guide, supervisor, instructor, commentator, demonstrator, facilitator, referee, critic, interpreter, counsellor and fellow traveller."

Adams, E., 1991

To meet the demands of being a good teacher, lesson preparation is important for every educator. As quoted by Colin Powell:

"There are no secrets to success. It is the result of preparation, hard work, and learning from failure."

How the teachers can be prepared for the lesson, is to be well equipped with the knowledge, and to be well equipped with the knowledge, in making, is to be experienced in the making itself.

Figure 1 illustrates the phenomenon of our mind reading and creating new knowledge from previous knowledge through sketch.

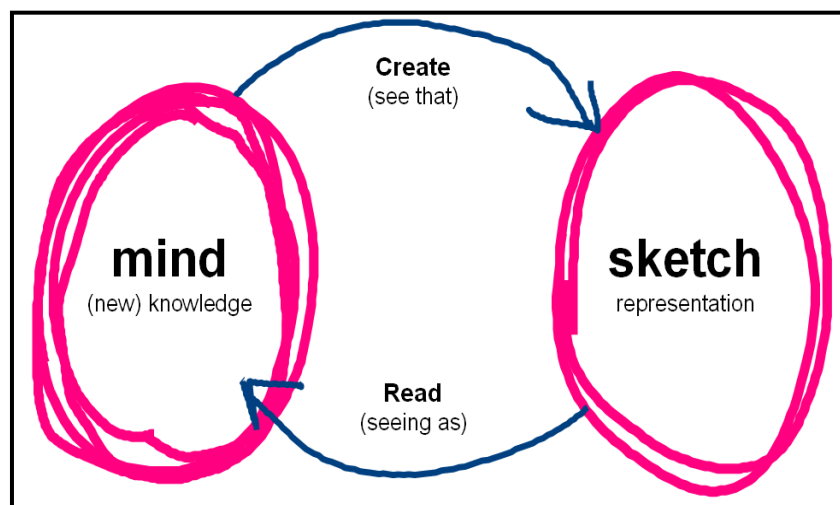


Figure 1: Extracted from 'Sketching User Experiences – getting the design right and the right design', Buxton, B. (2007)

In this case, making an object is likened to producing a sketch in its physical 3D form but at a much slower pace than sketching, and hence the above is still very applicable. A physical 3-dimensional sketch (making an object) requires longer hours to produce but it is a necessary evil in design and make activities. Parallels could be drawn from the notion of 'quantitative-purposeful sketch' to designing under girthed by this 'seeing as' and 'seeing that' reasoning (Goldsmith, 1991) to bear on learning through making. The notion of 'quantitative-purposeful sketch' is therefore also likened to 'quantitative-purposeful make'.

3 Approach and Findings

This study is a combination of a narrative of the author's own practical work experience during his early days' work and a descriptive analysis of two case studies of the author's own preparation work for two recent in-service courses as follows:

- Experience 1: Changing door knob
- Experience 2: Soldering circuit components
- Case Study 1: Making a metal support stand for a speaker
- Case Study 2: Making a night light holder with a switch mechanism

3.1 Changing door knob

When the author was just a teenager, he had his first challenge of having to replace a faulty door knob. This was to avoid having to call in a handyman and to pay some handsome dollars for it. Being totally inexperienced, and never having previously had to do any such house repair work, he removed the door knob in the only way he thought was the right way – taking a hammer and just whacking it out. The result? Many marks on the door and door frame made by the hammer, unintentionally. It was only after the attempt to repair the door knob that he thought it was probably not the right or smartest way to do it. While trying to install a new knob, he noticed a catch on the base plate of the door knob and thought about it – if there is a catch on the knob holder to secure the knob in place, then there might be a way to release the catch for the knob to come loose. As the author installed the new door knob piece by piece, he also observed and thought about how the process could be reversed, should he next need to remove a spoilt door knob. By repeating these actions of replacing many spoilt door knobs year after year, the act of replacing door knobs became second nature to him. This was then a beginning of the act of making versus thinking. A handyman would have done a good job, and a handyman would have learnt and perfected his skillset through lessons or through trial and error just like the author. There is something about making that is translated into thinking to perfect an act. Such may be the instinctive act of knowing acquired over a long period of making.

3.2 Soldering circuit components

When the author was a student in a polytechnic, he was selected to take part in an international electronics skills competition. In this competition, speed and skill, including quality of work, were both important aspects of the competition. To develop his speed and skill, he had constructed many circuits as part of his weekly training. As he built each circuit, he actively thought about how he could do it better and faster the next time. A simple example is on soldering. Different circuit components have slightly different leg structures that affect the soldering process and level of difficulty to solder it on. Some components may be damaged if it gets too heated. This means that when soldering, the hot soldering iron cannot come into contact with the component legs for too long, otherwise the heat from the hot soldering iron may travel up to the component through the legs and therefore may damage the component. A damaged component would cause the circuit not to work well or not work at all. This then took a bit of trial and practice to find out which worked best – heat the solder first; or the component leg first; or the circuit board first; for how long; with how much solder; and how to hold the component in place while soldering; etc. With repeated trials, and with adjustment of soldering technique, the result was a technique that the author

felt comfortable at executing, and that delivered speed and quality. This resulted in an instinctive act of knowing the insights to all soldering episodes and circumstances and an act acquired tacitly by the author to be able to perform well and excel.

3.3 Making a metal support stand for a speaker

This section describes the process that the author went through as part of his preparation of a 4-part making course that focused on increasing the competency and confidence level of the D&T teachers in handling practical work. The course required the participants to handle machines for 5 processes, namely, milling, drilling, brazing, bending and welding. These processes are applicable to working on different metals.

The course was originally planned such that for each part of the course, participants would make a metal support stand using the same design but with 4 different types of metals, namely aluminium, mild steel, brass and copper. To prepare for the course, the author attempted to make samples of the support stand using each of the 4 types of metals. Figure 2 shows a rough sketch of the initial planned design, which would have required the participants to use 4 of the 5 processes to make the stand, namely milling, drilling, brazing and bending. Welding was to be used only with mild steel. The attempts with each of the 4 types of metals are described below, including descriptions of how the design or process was modified along the way to circumvent the issues faced.

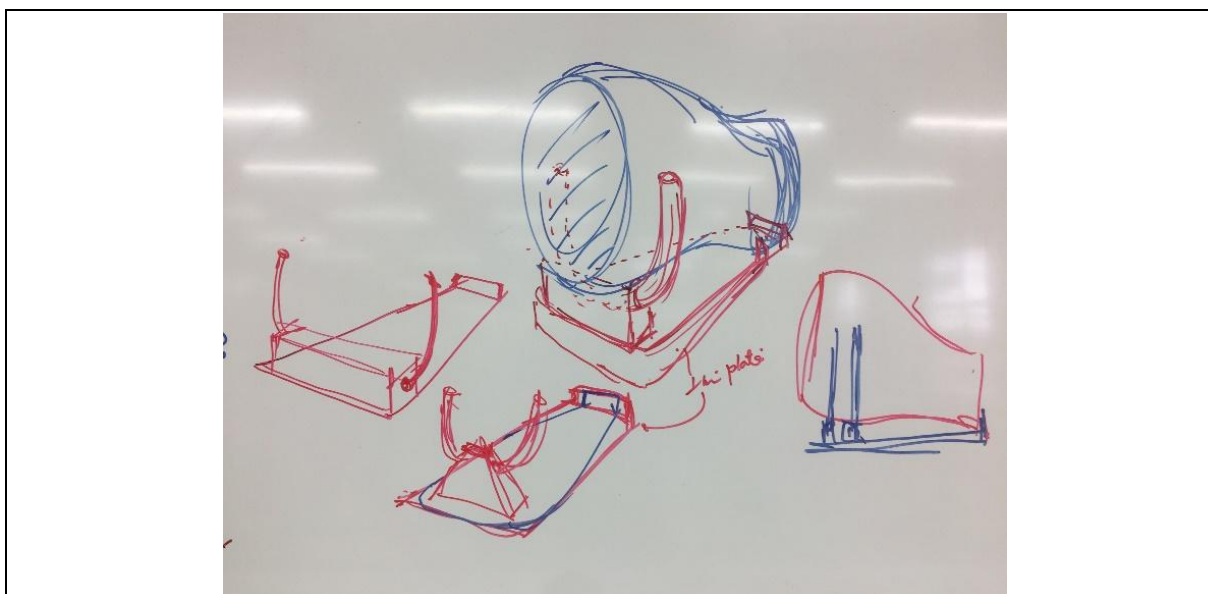


Figure 2: A rough sketch of the initial design for a metal stand for a speaker

3.3.1 Making an aluminium support stand for a speaker

Four processes were planned to be incorporated into the making process when using aluminium to make the support stand for the speaker. These processes are milling, drilling, brazing, and bending. Little or no issues were faced when milling, drilling, and bending the aluminium. Even so, the author repeated these processes at least 20-30 times to build up his familiarity and skill on these processes.

The largest issue faced when using aluminium was the brazing process. Theoretically, aluminium pieces can be brazed together to form a permanent joint. In the first few attempts, a standard soldering rod was used. The aluminium pieces were found to blister, warp and

melt before the soldering rod melted, because of the heat from the brazing torch. To try to understand the reason for the negative result, the author did some research and found out that the melting point for pure aluminium is 660°C while the melting point for the soldering rod used was 650°C. For a successful braze, the soldering rod should melt at a temperature significantly lower than the piece of metal to be brazed. Thinking that the melting point for the soldering rod was too high, the author searched for soldering rods with a lower melting point. The author identified some soldering rods that were supposedly suitable to braze aluminium and had melting points of between 300°C and 550°C. However, none seemed to be available locally in Singapore, and the author resorted to purchasing online a brazing rod with a melting point of about 350°C.

Using the new soldering rod did not bring about any better results. While the soldering rod managed to melt before the aluminium did, the aluminium pieces still blistered, warped and melted very shortly after the soldering rod melted. This was tried repeatedly even with various designs, shapes and sizes of the aluminium pieces; however, the aluminium pieces still could not be brazed together properly (see Figure 3).

As a result of the many failed attempts, the course plan was changed, removing brazing from the plan, and replacing it with riveting instead. The description of the failed attempts by the author here is not so much to show that aluminium cannot be brazed. We know that it can be brazed with the proper torch setting and soldering medium, but it may be too costly to do so in a D&T workshop. This was beyond that of the author at the time of practice. The intent here is to illustrate the point of trying out a practical process before the course starts. This has implication on the teaching process and this also has implication on the knowledge gained for the author.

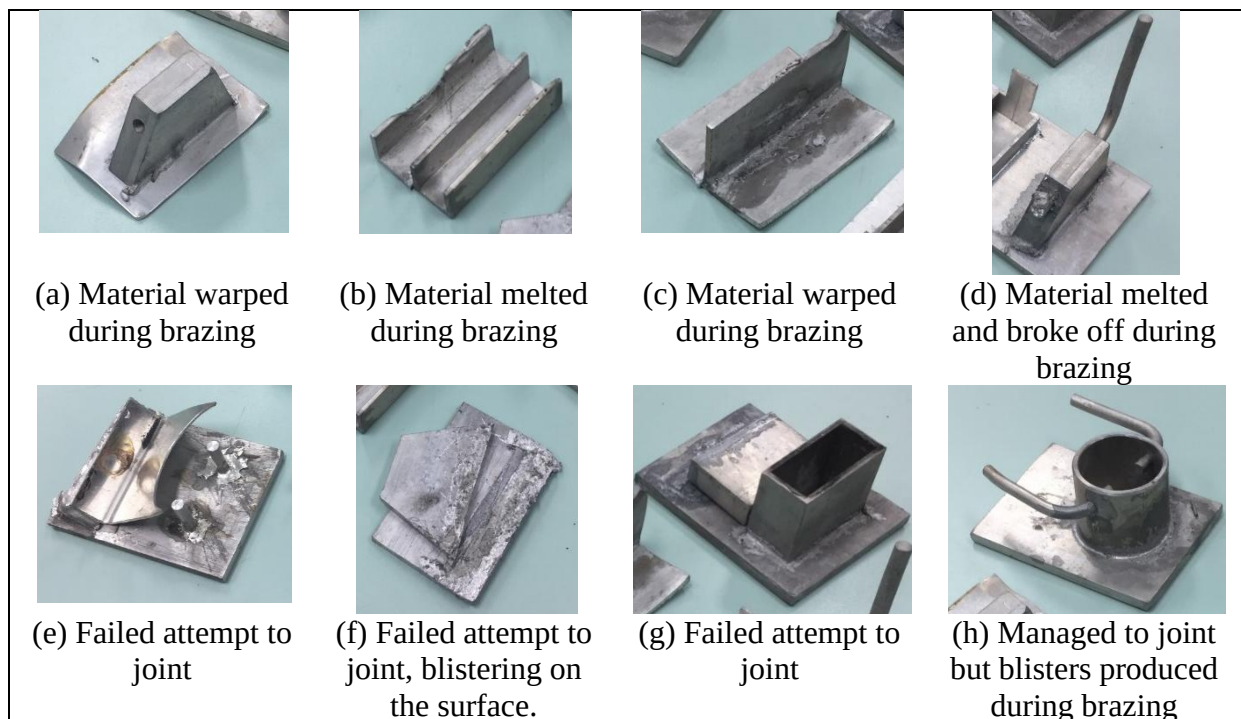


Figure 3: Samples from many attempts at brazing aluminium

3.3.2 Making a mild steel, copper and brass support stand for a speaker

Mild steel, copper and brass are not often used in the D&T classroom and likewise the author has had little experience with them. The approach was to gain a better sense of these 3 metals by applying the same processes of drilling, milling, bending and brazing on these metals.

Milling and drilling

Before milling the mild steel, the author was advised by the workshop technician, who has had good experience milling mild steel, that the mild steel needs to be milled a thin layer at a time due to the hardness of the material, and that the speed needs to be slow. To determine how slow or how fast, or how thin or thick each round of milling should be, the author tried milling many times, using many different combinations of speed and thickness each time. The finding was that when milling too fast and/or when trying to mill off a thick layer of metal, the machine would vibrate a lot more, indicating a stress on the machine and possible damage if used in this manner repeatedly. In one instance, when the author used a faster speed, bits of the mild steel flew off and when it touched the skin, it caused small burns as the bits of steel were hot.

The author similarly experimented on drilling and milling on brass and copper in different combinations of speed and thickness and drill bits (in the case of drilling). It was found that when drilling and milling on brass, the brass would chip off easily, even at lower speeds. The brass chips were very fine, and when the author was cut by a brass chip, the cut was fine but still rather painful. The resultant recommendation when drilling into brass is to use full face protection as compared to just using goggles.

When drilling using copper, the experience was different. Copper would give a sticky and pasty feeling when drilling and could easily cause the drill bit to get stuck, and if it breaks, could fly off and hurt the user or anyone around. After multiple tries, the author found that drilling using a sharper drill bit and applying softer, steady pressure of the drill onto the material would reduce the stickiness and risk of drill bit breaking off.

Brazing

The author had some prior experience brazing together two pieces of mild steel. However, when trying to braze together pieces of mild steel for the support stand, there were parts that could not be brazed together properly. The author had tried welding as an alternative joining method for the mild steel, however, the outcome was not aesthetically pleasing (see Figure 4(a)). The author then returned to attempt to braze the mild steel again but with each attempt he made modifications to the design of the support pieces. Through observation of the brazing process during each attempt, the author came to understand that the two parts could not be brazed together properly because the material was too thick and the surface areas of the parts to be brazed were too large, such that no matter how long the parts were heated, the desired temperature for brazing could not be reached at the joints. Thus, by modifying the design to use thinner pieces of material, or by reducing the surface area, the brazing could be done properly and successfully. Figure 4(b) shows that the thickness of the base plate was reduced, and legs were introduced to reduce the surface area of the joints to the base. The outcome was passable, but the time taken to complete the brazing work was too long (more than an hour). In Figure 4(c), the thickness of the base plate was further reduced to just a very thin sheet, and the time taken to braze was further reduced (to less than 30 minutes).

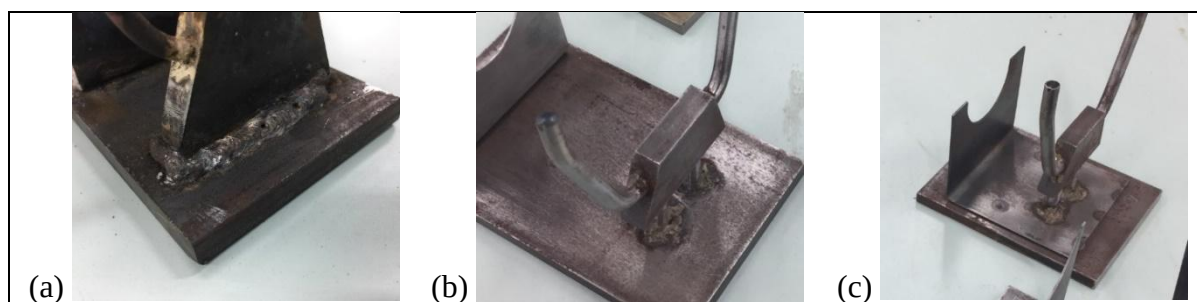


Figure 4: (a) Welding together mild steel, the appearance is not pleasant. (b) Legs were added, and base plate was reduced in thickness. (c) Thickness of base plate further reduced.

With the lessons learnt from brazing mild steel, the author made modifications to the brass and copper designs before attempting to braze them. However, the author still wanted to try brazing using a design very similar to the original one, i.e. without the legs. A slot was created in the base piece to reduce the amount of material to heat. After heating for an hour, it was still not possible to braze the pieces together (see Figure 5). Therefore, just as he had done with mild steel, the author further reduced the thickness of the base material to just a thin sheet and re-introduced the two legs. The result was much improved (see Figure 6(a)), however, it still took quite a long time (about 20 minutes) to complete the brazing work. The author then further reduced the amount of material by only using a very small thin piece of base sheet (see Figure 6(b)), and the outcome was satisfactory – a well brazed joint, done in a very short time (less than 5 minutes). The results for both brass and copper were very similar. With the modifications made to the design and with the reduction of the thickness of the metal base plate, an alternative base to the speaker stand was required. Figure 7 shows a sample of the final product with the metal pieces attached to a wooden base.

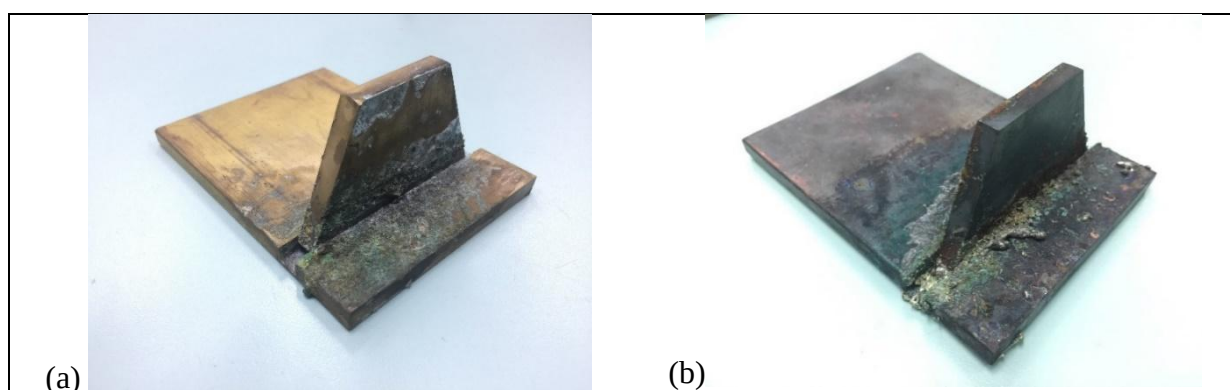


Figure 5: A slot was made to reduce the amount of material, but there was still a problem to braze (a) brass and (b) copper.

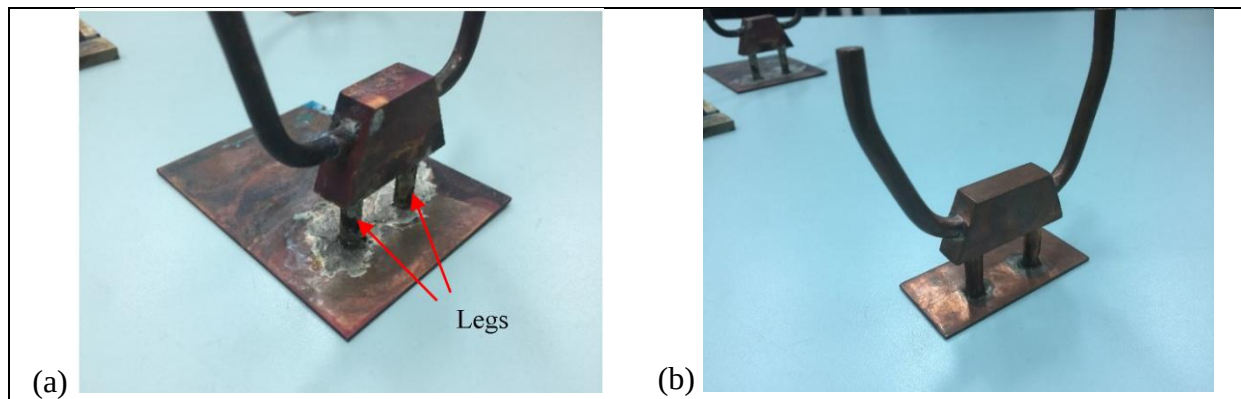


Figure 6: (a) Copper base is reduced to a thin sheet and holder is now raised by legs.
(b) Size of thin copper base sheet is greatly reduced to an absolute minimum.



Figure 7: Sample of a final product using brass, with the metal holders attached to a wooden base plate.

3.3.3 Summary of results

Due to the different properties of the different metals, the same design and process could not be applied to all the metals. It is through quantitative making acts that the author was able to first discover the problems faced, analyse the cause of the unsuccessful attempts, and modify the process or design to ensure a successful outcome.

For milling and drilling, the ease and success was largely affected by the hardness of the material. For brazing, the success largely depended on the heating of the material, which in turn was dependent on the heat conductivity of the material, amount of material that needed to be heated and surface area of the joint. With this gained knowledge and experience, the author was then able to modify the designs to produce satisfactory outcomes.

3.4 Making a night light with light-shade, frame and a switch mechanism

The second case study is based on the author's preparation for a design and make in-service course that involved designing and making of a night light using a Yakult bottle as the light-shade (or encasement) and where the light-shade is used to turn on the light that is to be

placed inside. A frame or holder was also to be designed to hold the lighting components and the Yakult bottle. Due to time constraints, the course participants were not required to design the lighting switch component. They were only required to make the pre-designed lighting and switch component. However, the participants were required to design and make the light-shade frame. Figure B1 in Appendix B shows a few samples of the completed night light project.

3.4.1 Designing and making the lighting switch mechanism

For this project, the design rule for the lighting switch mechanism was for the lights to turn on and off when the lighting switch mechanism was inserted in or removed from the Yakult bottle. A simple circuit was conceived – this involved a micro switch, LEDs and batteries and a simple mechanism incorporated as part of the switching on and off process of the LED lights.

The first set of test designs was based on a blind-hole design, with the intention of having the Yakult bottle fit snugly into the blind hole. Figure 8 shows three samples, with different placements and orientations of the micro switch. In the design shown in Figure 8(a), it was difficult to insert the bottle into the blind hole as the switch lever would need to be manually depressed by the user to move it out of the way so that the bottle can fit into the hole. In the designs shown in Figures 8(b) and 8(c), the lever of the micro-switch pushed the bottle upwards and out of position, probably because the bottle was light in weight.

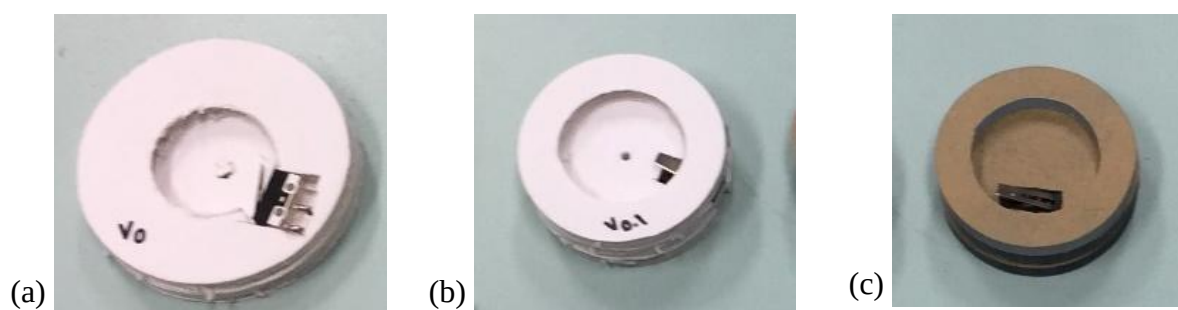


Figure 8: Test designs with switch (a) on the outside of the bottle, placed horizontally on its side, (b) on the outside of the bottle, placed vertically and (c) under the edge of the bottle.

In the next 5 designs as shown in Figure 9, the author tried various design changes, exploring different positions for the batteries to allow easy replacement of the batteries, and different positions for the micro-switch. In designs 9(a) and 9(b), the round base was intended to fit at the mouth of the bottle to hold the bottle in place. In design 9(c), the batteries were stacked within a rectangular frame. In designs 9(d) and 9(e), different battery positions and heights of the holder were explored. Designs 9(a), 9(b), 9(d) and 9(e) all had the switch in the same orientation which allowed easy insertion into the bottle mouth to depress the lever so as to turn on the switch (refer to Figure B2 in Appendix B for an illustration of how the bottle was to be placed over the switch unit). However, all mock ups still faced the problem of the lever pushing away and tilting the bottle. The author had considered changing the type of switch but experience told him that a micro-switch was still probably the best option, and hence to focus on understanding the reason for the tilt and how to overcome the issue.

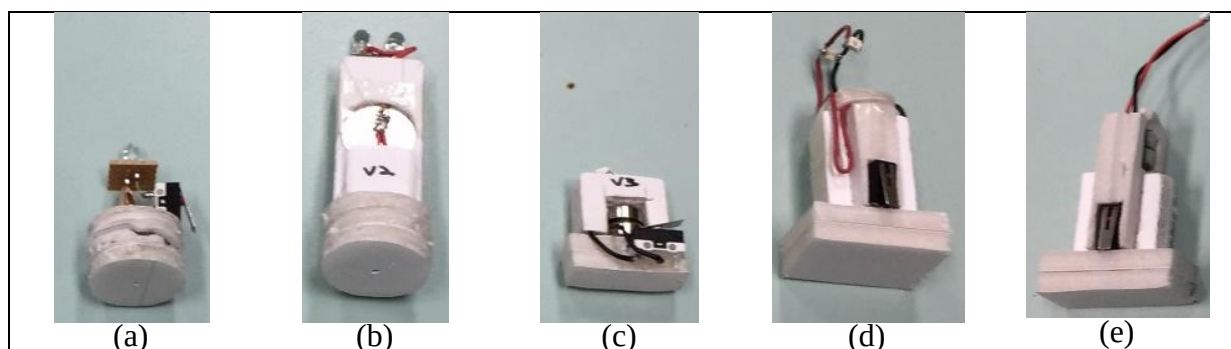


Figure 9: Samples of the light and switch mechanism inserts, using a single micro switch.

After some observation and thinking, it was clear that the outward and upward force of the switch lever on one side was causing the bottle to tilt. The round bases as what was shown in Figures 9 (a) and (b) were not good enough to keep the bottle in position. What was required was an active force opposite to the switch. After much thinking and trying, the author found that it could be achieved by putting another micro-switch on the opposite side of the device so that the opposing forces from the two switches can balance each other out and hold the bottle firmly in position. A sample of the first design with 2 micro-switches is shown in Figure 10. Pushing the bottle all the way down would close the switch and turn on the LEDs.

In a simple circuit, normally only 1 switch is used as there is no need for a second switch. In this case, the author chose to connect the 2 micro switches in parallel so that if any one switch was turned on, the LEDs would light up.

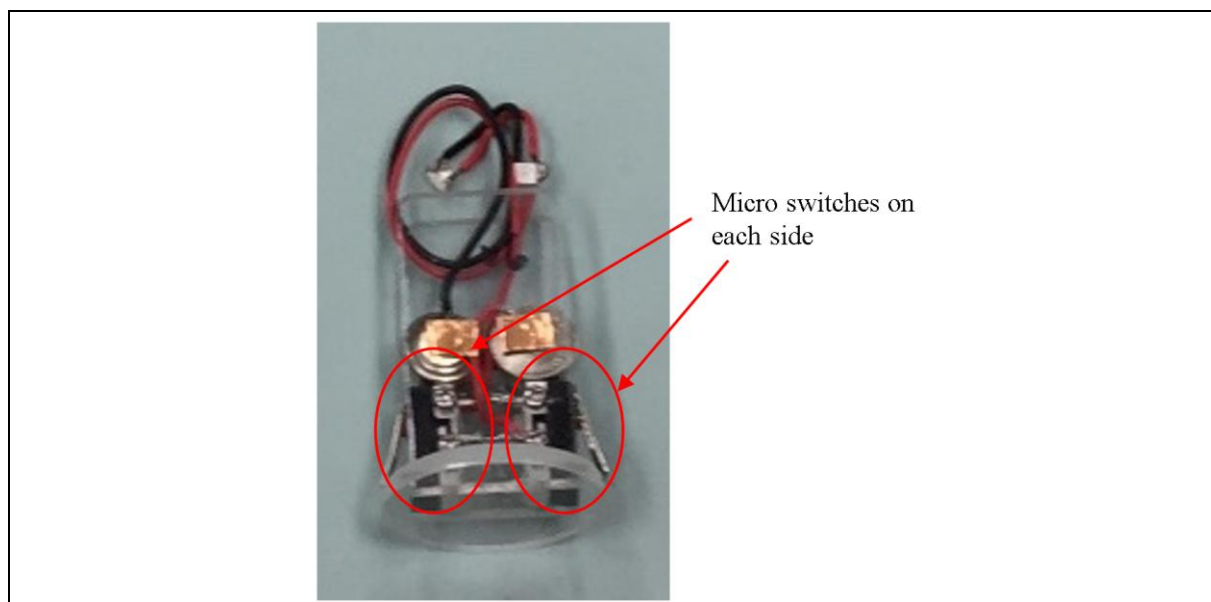


Figure 10: Design with two mirrored micro switches.

With a working model now in place, the author continued to make further improvements to the design. The design as shown in Figure 11(a) was an improved version of the design as shown in Figure 10, with the vertical acrylic piece made taller to improve the stability, and to be able to position the LEDs and wires neatly. Improving from the design in Figure 11(a) to get the design in Figure 11(b), the batteries were moved further away from the micro switches to make it easier to solder the parts. The next improvement that was made (Figure 11(c)) was to vertically align the batteries one top of the other, so that they were further away from the edges of the acrylic, to reduce the chance of the batteries falling out. Figure 11(d)

shows a design where the LEDs were connected to shine in two opposite directions for better light distribution, and with a base fixed on, so that it can stand on its own. This was the final design that was given to the course participants to make.

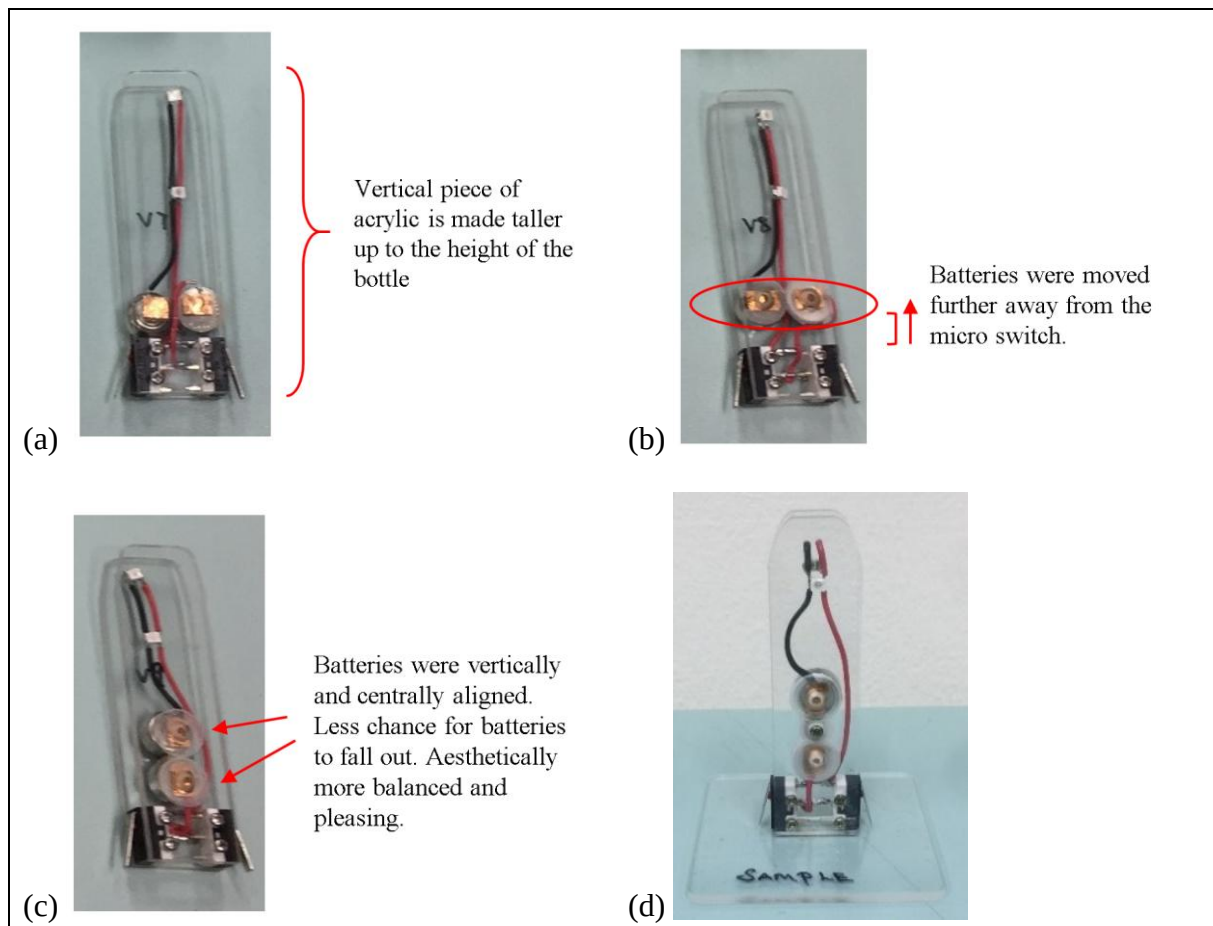


Figure 11: (a) to (d) Progressive design improvements

3.4.2 Making the night light frame

Participants in the course would have to sketch and design a variety of designs and eventually select one to make. To prepare for the course, the author designed and made many samples of the night light frame, using paper-foam-paper, acrylic and teak, to try to anticipate any problems that the participants may face during the course. Figure 12 shows a sample of the designs created by the author. Some of the problems faced in making each of the designs are described below. For each design, a mock-up was first created using paper-foam-paper, then samples using acrylic and teak were also made.

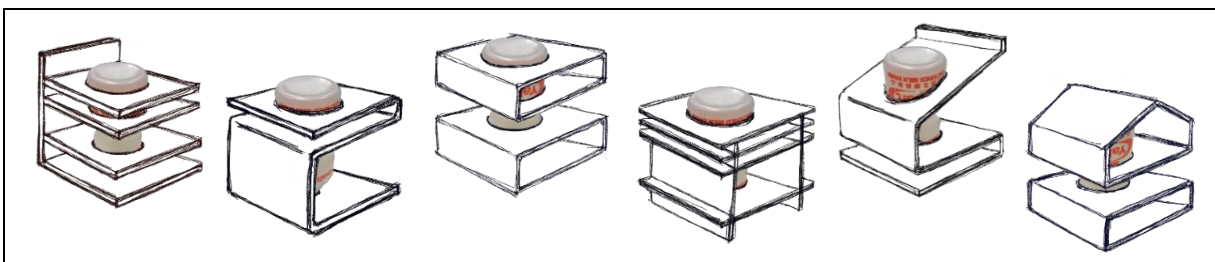


Figure 12: Sample designs for the night light frame

Design 1

The issue and difficulty faced in making the acrylic sample was on the strength of the joints between the horizontal pieces and the vertical piece. There were two reasons for the weak joints. Firstly, it was because the acrylic was only 3mm thick, providing only a small surface for joining. Secondly, if the horizontal pieces of acrylic were not well straightened by filing, the horizontal pieces of acrylic would not stick properly when they are chloroformed to the vertical acrylic piece. To reinforce the joints, the author had instinctively used commonly-available triangular reinforcement bars to provide additional support for the joints (see Figure 13(c)). While the strength of the joints had improved, the aesthetics was negatively affected because of the visibility of the reinforcement bars (see Figure 13(b)).

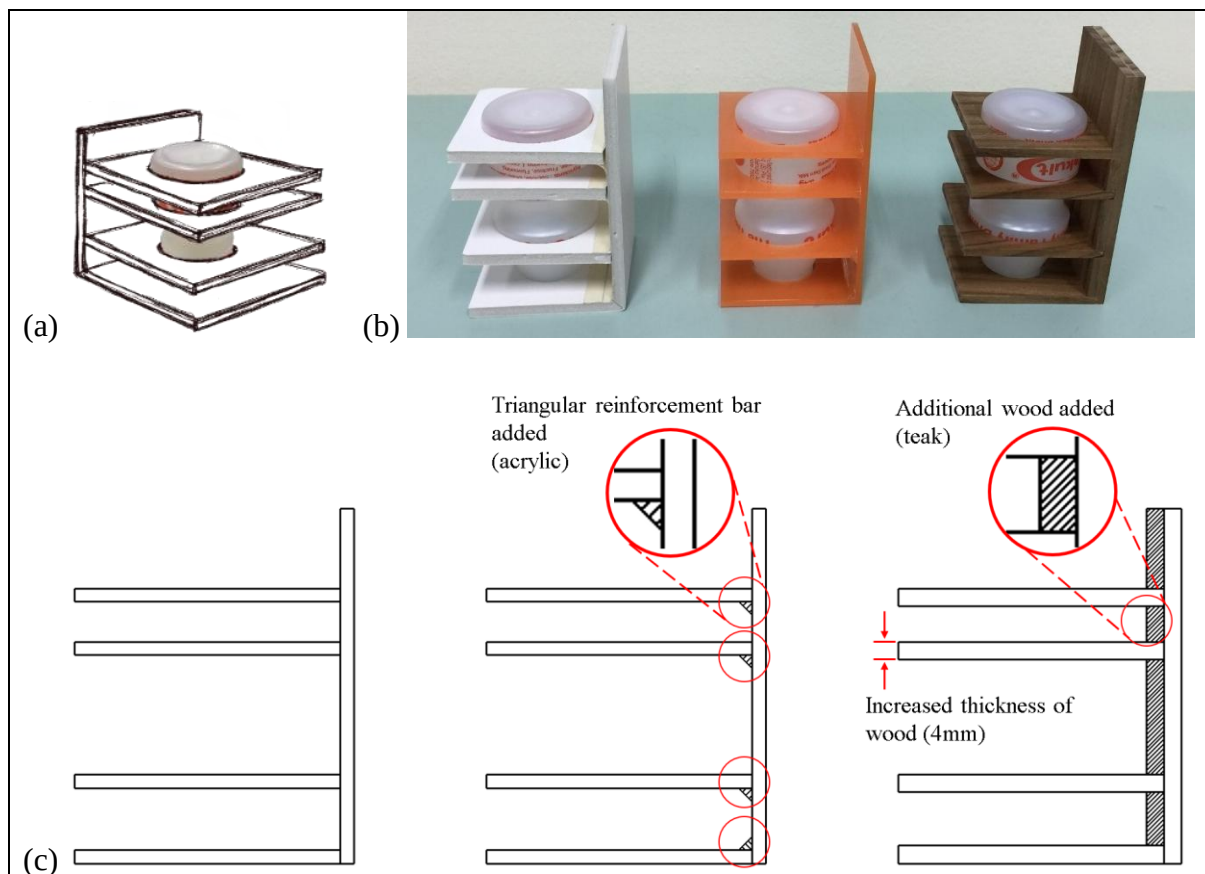


Figure 13: (a) First design. (b) Mock-up and samples using acrylic and teak.
(c) Diagram of the side view showing the reinforcements used.

When making using teak, the author faced the same problem of a weak joint even though the thickness of the teak was increased to 4mm. However, as there were no pre-made standard reinforcement bars, an alternative strengthening method had to be sought. The author decided to go with using housing joints that are commonly used with wood. This, however, needed another modification to the design. Panels of teak pieces were added to the original vertical support to provide sufficient thickness and slots for housing joints (see Figure 13(c)). The housing joints would provide more surface area for the teak pieces to be glued together.

Design 2

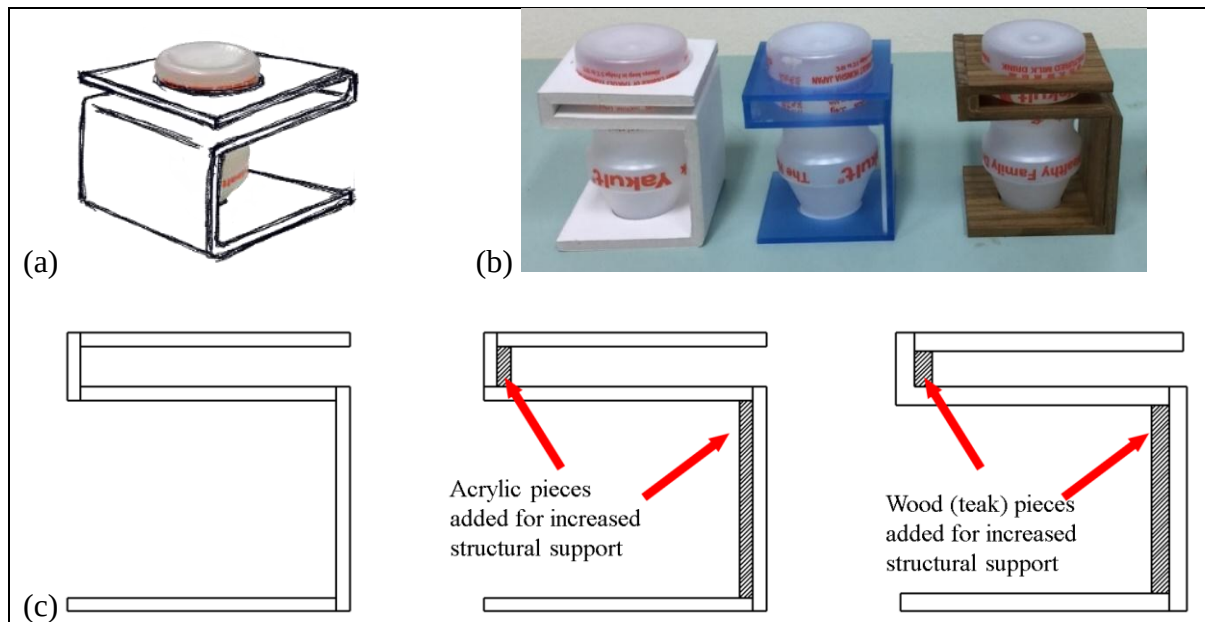


Figure 14: (a) Second design. (b) Mock-up and samples using acrylic and teak. (c) Diagram to illustrate the full-piece supports.

Like Design 1, the joints between the horizontal and vertical pieces needed to be reinforced. For acrylic, instead of using the triangular reinforcement bar, which the author had already determined to be aesthetically non-pleasing, the author tried an alternative method based on the same principles. He used a clear piece of acrylic, cut it to as big as the whole surface of vertical piece between the horizontal pieces, and used it as a support for the horizontal piece. This resulted in a much stronger joint that was also more aesthetically pleasing as compared to the joint in Design 1. The same concept was also applied to the teak sample.

A difficulty faced in this design was the alignment of the holes in the upper two horizontal pieces. Extra care was needed to ensure the dimensions of each piece was considered properly when marking the position to drill, by adding or subtracting the thickness of the material where necessary.

Design 3

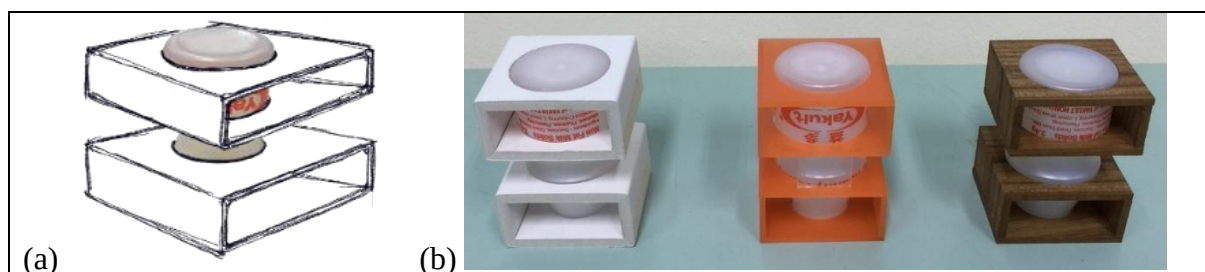


Figure 15: (a) Third design. (b) Mock-up and samples using acrylic and teak.

Design 3 was much simpler to make. No reinforcements were required as there was sufficient support from both sides of the rectangular frame. Also, the horizontal pieces were of the same size, which made it easy for alignment of the holes. However, in the case of the acrylic sample, an additional clear piece of acrylic was needed to support or hold the upper

structure in place. In the case of the teak sample, the bottle fitted tightly into circular hole and could hold up the upper structure.

Design 4

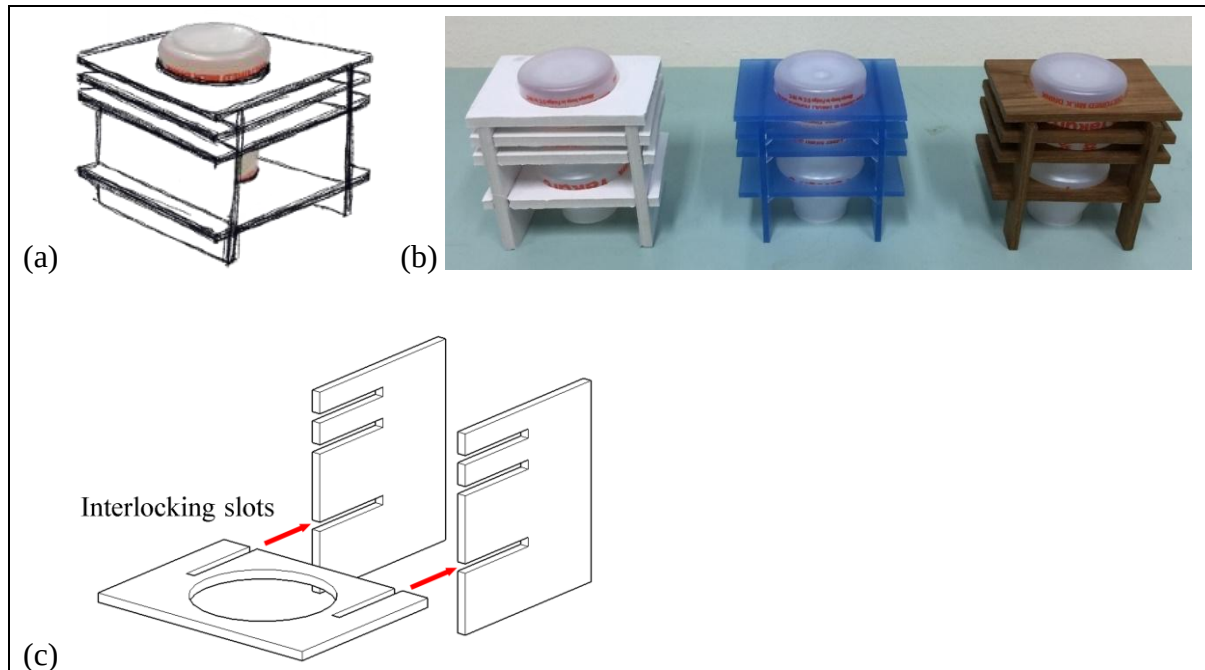


Figure 16: (a) Fourth design. (b) Mock-up and samples using acrylic and teak. (c) Diagram to illustrate how slots were used to interlock the horizontal and vertical pieces for both acrylic and teak.

Design 4 was a lot more tedious to make. Slots had to be created to interlock the horizontal and vertical pieces together. A lot of time and careful effort was required to ensure accuracy of the slots otherwise the pieces would not fit together properly, or the horizontal pieces may not be nicely aligned.

Design 5

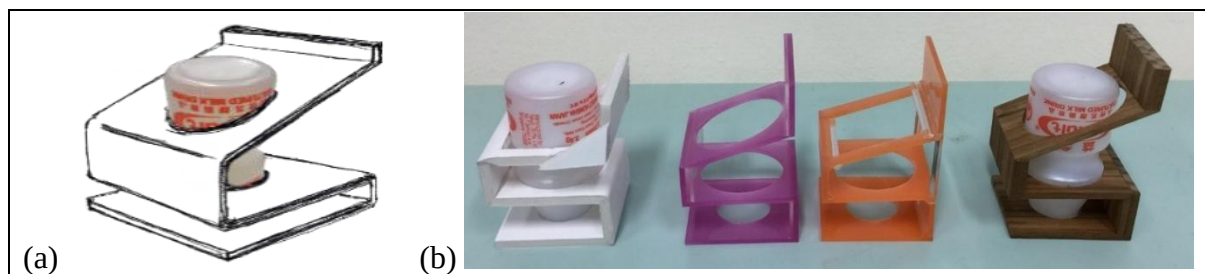


Figure 17: (a) Fifth design. (b) Mock-up and samples using acrylic and teak.

A level of complexity was added in Design 5 as compared to the previous few designs because of the inclined piece. It was no longer just horizontal or vertical pieces. The first sample was the orange coloured acrylic (see Figure 17), where a rectangular hole was cut in the inclined piece to avoid having to make an elliptical hole for the bottle to pass through. This, however, exacerbated the joining problem – more reinforcements were required, and this greatly affected the aesthetics of the product. The author returned to trying to make the elliptical hole. After doing some calculations, the author decided to try to form the ellipse by

drilling two holes slightly apart and filing off the protruding bits (see Figure 18). While this did not form a snug fitting elliptical hole, it was a reasonably passable elongated hole.

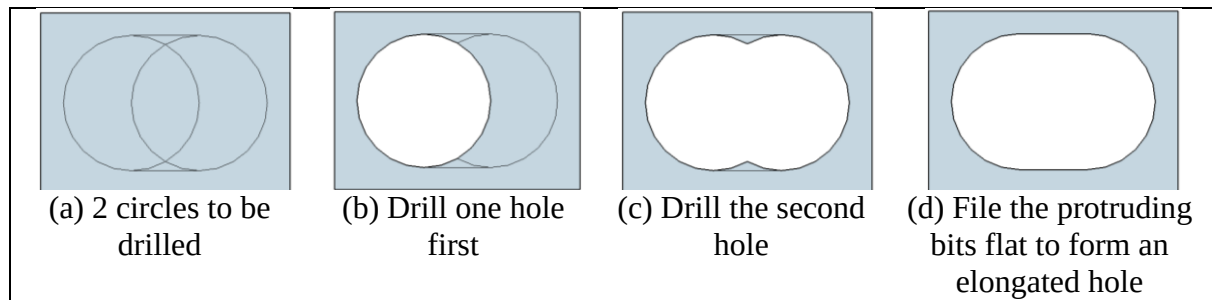


Figure 18: Steps to drill an elliptical hole.

Design 6



Figure 19: (a) Sixth design. (b) Mock-up and samples using acrylic and teak.

Design 6 was a hybrid of the various previous designs (see Figure 19). There was the upper structure like Design 3, and there were the inclined pieces like Design 5, that formed the roof, except that Design 6 did not require an elliptical hole to be made through the inclined pieces. The new challenge here was stabilizing the roof-like design. While the measurements and cuttings needed to be accurate, especially for the angles, this design was structurally more sound because of the balanced support on each side and did not require reinforcements if it was made well.

The impact of quantitative making during preparation on the facilitation of the course

The above paragraphs describe the knowledge, particularly practical knowledge, gained by the author, through the quantitative act of making of the samples in preparation for the conduct of the courses. The significant insights gained from the author's preparation work had strong positive bearing on how the courses were to be conducted and more importantly on the participants' learning as follows:

- The author was able to use his experience and instinct gained to advise the course participants on what to consider when making e.g. measurements and structural stability, even though course participants' designs were different from that of the author's.
- When the participants encountered problems, the author was able to quickly troubleshoot and explain what the problems were, and how the problems could be overcome and be resolved.
- The author was able to anticipate and to get ready both commonly and uncommonly used tools and equipment that the participants might need during the making.

Precious time was not wasted looking for the tools when participants requested for them.

4 Discussion

4.1 Changing door knobs

One may use a door knob every day. However, how many people would really observe it? That is what the author had experienced. If not for the need to change the faulty door knob, he would not have thought about how to remove one, how to fix up a new one and how it works from the inside. To figure out how to remove the door knob, the author had observed and learnt first from putting together a new door knob, thinking about it as he put the door knob together, and how he could reverse the process of putting together when dismantling it. It was not without problem when the author removed and fixed his next few door knobs. However, with constant observation, active thinking and practicing using his hands, eventually, he was able to change door knobs with ease, and therefore it became an instinctive ability.

This process of observation and practice is key to learning and can be applied to any other practical situation. This can be compared to learning how to ride a bicycle. On the first few tries, the rider may falter and fall. However, with more practice, a person may get a better feel of the balance and as a result learn to ride the bicycle with ease and confidence. If the person does not ride the bicycle for a long duration of time the next time that he rides he may find himself a little shaky on the bicycle. But with a little practice he will get back his instinctive feel and would then be able to ride smoothly again. A skill that is learnt well may become rusty over time, however, as such skills were internalised somewhat and ingrained in a person through constant practice, it could be quickly recovered.

4.2 Soldering circuit components

When the author was training for the competition, he was very focused on the two things that mattered - speed and quality. To measure his progress on speed, a timer was always placed in front of him while he trained. Having the timer visibly in front of him kept him on his toes, and he would try his best to beat his previous timing. However, while trying to put together the circuit faster, he also needed to improve on the quality of the circuitry. Just repeating the same steps, in the same way, would only get him that far in improving on speed. He also needed to modify his technique with each round. Observation and reflection of what worked well and what did not work well guided him in what to modify and adopt in the next round. With repeated trials and improvements, the author was able to find his own technique that he felt comfortable with and confident in executing, and with speed and quality.

One may argue that this specific learning of soldering well is very specific to soldering skill and does not help in other areas. However, the author strongly believes that such competitive and repetitive trainings train a person to think critically, constantly asking ‘why’ something happened the way it did, and ‘how’ it could be done better the next time. Such thinking contributes to a winning attitude and ability to problem solve in any situation. Initially, it may need very conscious effort to think of the ‘why’ and ‘how’. With constant practice, it becomes an instinctive nature to do so.

4.3 Making a metal support stand for a speaker

Prior to this preparation work for the in-service course, the author had some exposure to working with metals. This exposure was from facilitating many one-off projects with his ex-pupils when they were doing their national coursework examination. Although there were many one-off projects, many were not well planned or thought through. Many prior experiences were regimental and dictated – just follow the steps and do it. In contrast, the lessons learnt while making the samples for this in-service course were interesting and valuable.

When working with aluminium, despite the research and many trials, including changing the soldering rod, the author still could not get the brazing to work well. Theoretically, the new rods should have worked well to braze the aluminium. Upon further observation and deeper thinking, the warping and blistering of the aluminium piece had nothing to do with the rod. The new rod was working well as it should have been. The problem could only therefore be with the aluminium. What was wrong with the aluminium? The author brought in a temperature sensor to test the melting temperature of the piece of aluminium, and found that it melted at a temperature of less than 400°C. This was far below the theoretical melting point of 660°C for pure aluminium. The reason for the failure to braze was likely that the so-called aluminium that the author was working on was not pure aluminium but rather an alloy of aluminium and another unknown metal with lower melting temperature. Therefore, it resulted in the failure to braze properly. Given the problem of brazing aluminium, the author decided that he would not include brazing of aluminium into his course. While it would have been good for the course participants to encounter the problem first-hand, this was not carried out in view of time constraint. The problem encountered by the author was shown and explained to the course participants for them to appreciate the intensity and rigour of the entire preparation process.

It is apparent from paragraph 3.3 above, through making using different metals, one may be exposed to the different problems posed by the different metals. Through reflective thinking, trying out the process repeatedly and with modifications to the design and/or modifications to the processes each time, comes learning and knowing. In addition, this knowledge is not only applicable to future scenarios of dealing with the same design and metal, but the thinking and analytical skills that has been developed through the course of quantitative making can be applied to new designs, new materials and new tools.

Relating back again to Buxton (2007) as shown in Figure 1, the act of making (or doing) and thinking about the thing a person is doing, is essentially active learning. By repeating the cycles of doing (or making) and thinking (critically), the person is continuously in an active learning mode. So why is active learning or learning how to actively learn so important?

The author believes that a responsible educator needs to always be in an active mode of learning and in this case through carrying out making activities himself. For every new course developed, the author believes there will be something new to learn and something new to discover. An educator cannot be planning what and how to teach in their Scheme of work (SOW) and executing the SOW without trying. By trying and finding what is feasible, is the best SOW planning at work.

How then did the author utilize his experience and learning from his own making to conduct his courses? With a rich repertoire of knowledge, knowledge of problems faced, and tried-and-tested solutions at the back of his mind, it was easy for the author to instantaneously on-the-spot address queries and difficulties that course participants encountered while making. This is what the author has coined the phrase ‘the instinctive act of knowing in making’. One interesting encounter with the participants was this - after the participants encountered the problems, the author explained to the participants the resolution through demonstration and verbalizing the thinking behind the solution, and many participants reacted with a “why didn’t I think of that” response. Course participants provided feedback that after seeing the author make with competency and confidence, they felt an increased level of confidence that if they were to also indulge in making, they would be better skilled and more confident in conducting their own classes in school. With each new prototype or attempt to make a variation of a previous prototype, there is always potential for a new ‘discovery’ on how to improve the design; how to simplify and quicken the process; which tool is best suited; and how to bring this learning back into a classroom setting to scaffold the pupils’ learning.

If teachers themselves can be in this mode of active learning rather than planning their SOW in theory and just teaching transferable knowledge from the textbook that pupils can read on their own, they will be able to better plan a lesson that can impart the act of active learning to our pupils. Teachers who have gone through active learning themselves would be better able to bring the active learning into the school workshops and to the pupils. If the teachers themselves extensively experience the making of the project prior to the start of the term by creating many samples of different designs, they will be able to better identify the type of materials, tools and equipment that will be most suitable for their project. This would then mean that they can prepare the materials beforehand so as not to waste time getting the materials ready only during the lesson. They can also check that the required tools and equipment are in good condition and ready for use by the pupils. By trying out various designs for the same project, the teacher will be able to better anticipate different problems that may arise during the making process and in turn structure the lesson plan for progressive learning, starting from easier tasks and then moving on to more difficult tasks, i.e. scaffolding.

An example is shown in Figure 20 below. From the author’s own learning, through his own quantitative making, the author was able to produce a step by step guide on the recommended approach in making the speaker stand that best fits the allocation of time, machines and materials. Figure 20 shows the guide using brass. A similar step by step guide was also produced for copper (See Appendix A).

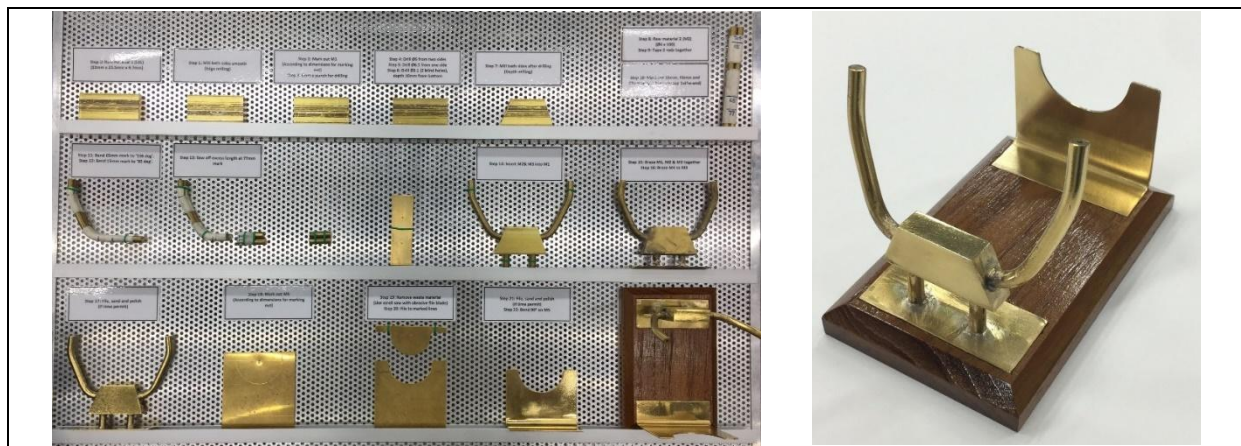


Figure 20: Step by step reference guide towards making a manageable outcome.

This step by step reference could only be created after the artefact was tested feasible to be made within the D&T workshop facilities. A normal workshop lesson will begin with a live demonstration before participants start to work. Having a quick step by step guide allows participants to refer to the process they need to carry out with minimum interruption to a lesson and allows the trainer to assume the role of a facilitator to go around to check and pick up good and bad practices by the participants (learning examples) during the lesson for discussion. And with the experience, the teacher will be able to correct the mistakes on the spot, and spot good practices worthy of praise. This increases the value of the lesson.

The teacher could even introduce a few known ‘failure’ scenarios to also allow the pupils to experience the problematic situation themselves, to stimulate their thinking and develop problem solving skills, and henceforth experience that joy of knowing in making. After all, to really understand something, it is important to not only know what works but also to know what does not work and why it does not work.

The argument by the author here is that a well-executed making lesson can only be possible when the facilitator knows the ins and outs of making that project. When he knows the ins and outs of things around him, that instinct of knowing will naturally surface during his facilitation work in class.

4.4 Making a night light with encasement, frame and a switch mechanism

4.4.1 Designing and making the lighting switch mechanism

In this case study, it was very clear how Buxton’s (2007) concept of the cyclical relationship between new knowledge and representation was in play. Seeing how the Yakult bottle was being pushed away by the lever of the micro switch (the ‘representation’), it enabled the author to think of another method to solve the problem (the ‘new knowledge’). Each new method was made (‘created’) and being explored with improvement each time. This cycle of making, to thinking through and again modifying to make and thinking through seeing again kept repeating until a ‘best solution’ was found, within the time frame given.

The approach of making, and thinking through making, will eventually lead to some feasible outcome. The author had created different makeable outcomes before deciding which one best fit into his teaching and his participants’ learning. In deciding which one best fits, there were many considerations such as number of processes involved, number of repeated

processes that can be removed, whether the participants can complete making within the allocated timeframe for learning to take place, and even which one looks better or functions better.

Curriculum time is limited and precious to the pupils and teachers. The aim is to enable the pupils to learn as much as they can during the allotted curriculum time. For a 13 to 14 years-old pupil to design a light holder that incorporates a Yakult bottle and a switch mechanism is typically beyond their ability and experience, going by what the author had experienced. Therefore in such situations, there is a need for the teacher to pre-design parts of the project, in this case it was the lighting and switch mechanism, so as to allow pupils to see how their design will eventually come together and therefore learn from the design and make activities.

4.4.2 Making the night light frame

The focus again was for the author to indulge in the making of many possible samples. By doing so, he was able to understand the problems of making each of the unique designs, or common problems in similar designs, or even the time that might be required to make the different designs due to differing complexities. By understanding the problems he himself faced, and thinking about the potential problems the course participants might face, and in turn the potential problems the pupils might face, he was able to craft out a suitable scaffold to support the participants in the making process.

For each design, why did the author first do a mock-up and then also make the model using both acrylic and teak? The mock-up is very quick to make and the objective is to give a quick visualisation of the physical product in 3-dimensions, providing a base prototype and opportunity for observation and thinking prior to starting work on the acrylic and teak.

Why make the prototype in both acrylic and teak? As shown in the findings in Section 3, while there are common problems faced when working with both the two materials, there are also differences in the problems and solutions in both materials or for that matter other materials not mentioned or used here. An example of a common problem between using acrylic and teak was how to drill the elliptical hole in Design 5, and in this case, the solution was the same. An example of a common problem, but with different solutions, is how to provide additional support or reinforcement as encountered in Design 1. There were ready-made reinforcement bars available for acrylic, however nothing of similar make up for teak. Instead, for teak, housing joints were used, which is common for wood, but not so for acrylic. This is a good example of the need to use different processes when dealing with different materials, and hence there is value in making using different materials.

Why produce multiple samples based on many different designs? Each design comes with its own set of challenges, problems and possible solutions. For example, it was easy to get the hole aligned and drilled for each horizontal piece in Design 1. However, when it came to Design 2, getting the alignment right was more difficult because of the need to add or subtract thickness of the material, and the need to do this was because of the way the pieces were joined together. If Design 2 was attempted in the classroom and if the holes were drilled wrongly, the pupils would have to work on the project all over again, which would result in a waste of precious lesson time. Therefore, if pupils really wanted to attempt this design, the teachers would need to provide a lot more guidance, or discourage less able pupils to attempt a simpler-to-make design instead.

5 Conclusion

In a typical D&T class of 20 pupils, there could be 20 different designs from the pupils. To be an effective teacher and coach to the pupils, it is necessary for the D&T teacher to have a good sense of the materials and processes. This is so that he/she is able to determine if those designs by the pupils could be fulfilled as planned or with foresight to potential problems, whether the designs require modifications. On the other hand, one might also consider allowing pupils to experience the problem and be given a chance to work through the problem under guidance, if curriculum time permits. The author believes and has shown in this paper that development of this instinctive sense of the materials and processes can be developed from the quantitative and reflective act of making. As a final remark:

- One needs to design and make to develop one's act of 'knowing'.
- One needs to hone one's skills to develop the 'instinctive act of knowing'.
- The instinctive act of knowing gives a deeper insights to knowing and through continuous act of self-honing of design and make practices.
- The ingrained act of knowing gives you the confidence in guiding, facilitating, advising, suggesting, supporting, co-designing and co-making with pupils.
- The self-developed 'instinctive' act of knowing gives a rational way of reasoning and down to earth realistic way of thinking about designing and thereafter the act of making.
- Instinctive act of knowing makes teaching and learning D&T rich. Every D&T teacher ought to grow to become ingrained with this instinctive act of knowing. Just like English teachers who must write and speak good English, D&T teachers must have the ability in guiding, facilitating, advising, suggesting, supporting, co-designing and co-making with pupils.

The learnings from making can also develop one holistically. In the bigger picture of things in real-life context people faced new challenges each day. These challenges, small and big, will require analyzing, be it consciously or unconsciously. Observation and analysis based on knowledge gained from encounters with similar challenges will allow one to better understand the challenge and derive a good solution to the new challenge.

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Appendix A

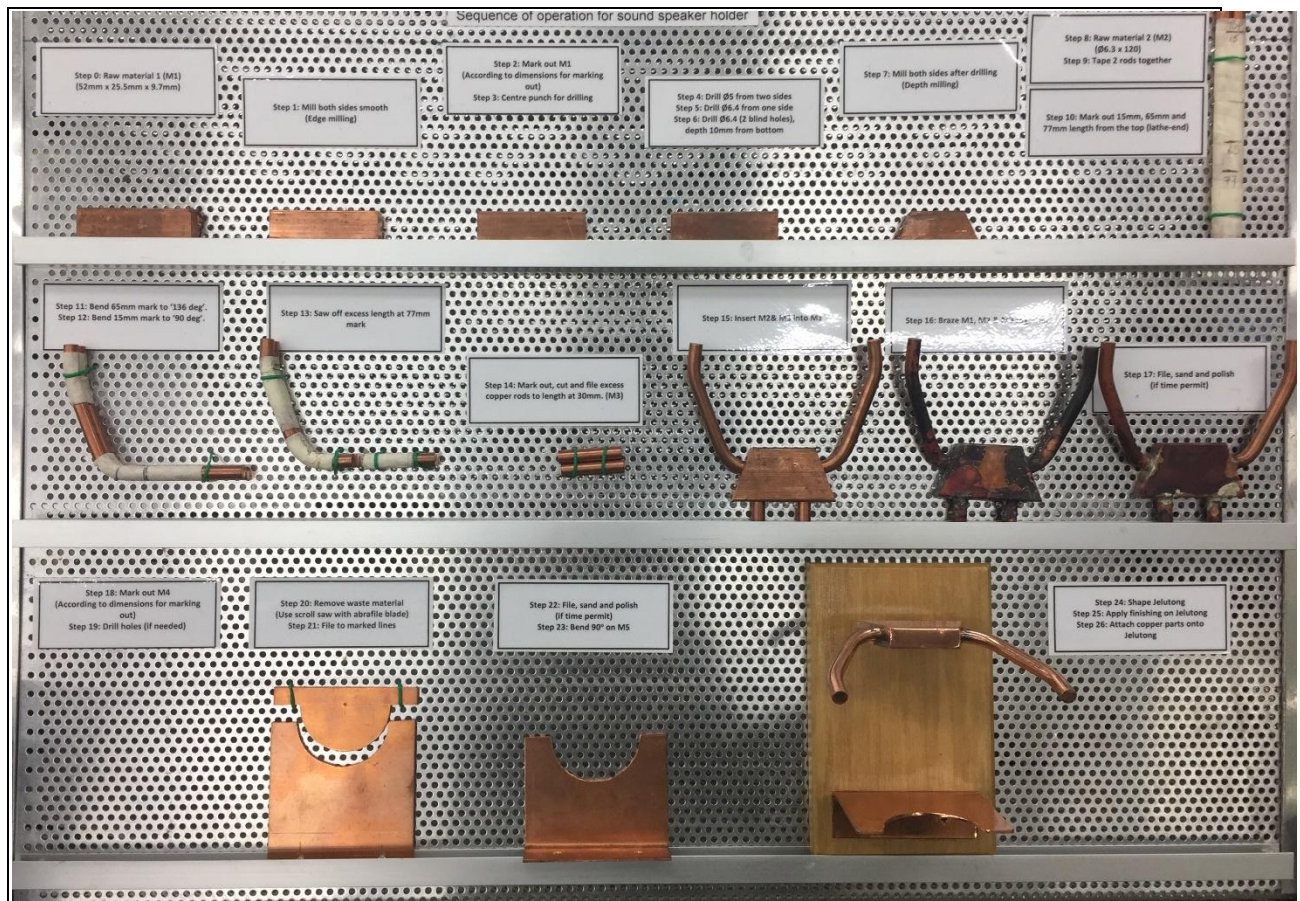


Figure A1: Step by step reference created with copper.

Appendix B



Figure B1: Samples of completed night light projects.

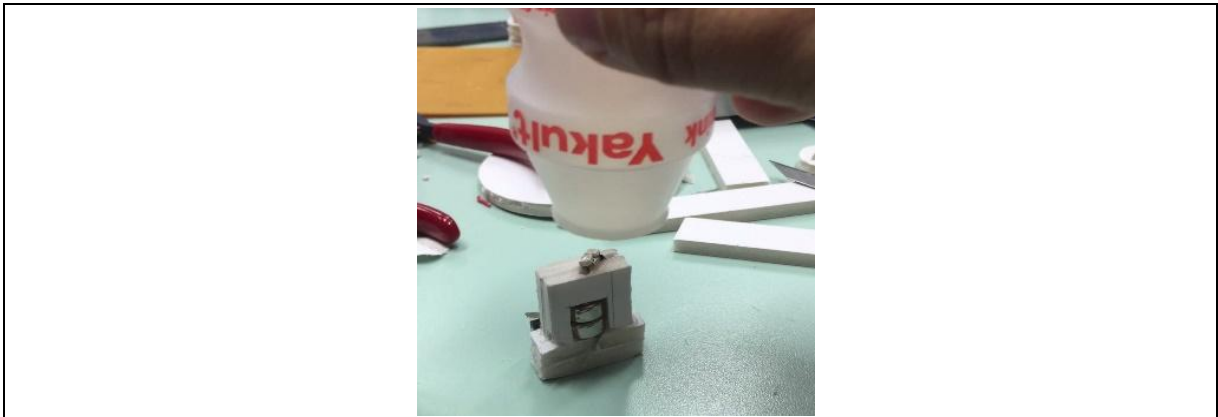


Figure B2: The Yakult bottle (encasement) is to be fitted over the lighting and switch mechanism.

Managing Classroom Interactions to Increase Student Output

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Abstract

In traditional classroom contexts students commonly view the teacher and textbook as the sole sources of information (Dashwood, 2005). This perception is often reinforced by teachers who want to use it as a way of ‘imposing order’ (Arum & Ford, 2012: 58). However, rather than consolidating and reaffirming learners’ roles as passive, silent listeners, teachers need to encourage students to speak and communicate effectively in order to prepare them for the real-life communicative contexts that present themselves in the world of work.

The majority of classroom interactions in formal education contexts are shaped by questions (Bury, 2014). While typical question and answer structures, such as the IRF model (Sinclair & Coulthard, 1992), set cognitive challenges for students, guide the direction of learning, provide the opportunity to start discussion in the classroom, and are effective for managing classroom behaviour, research has indicated that teachers could encourage more student output by using alternatives to questions in their moves within classroom discourse (Dashwood, 2005; Bury, 2014; Bury, 2016).

This study explores the effect eight teacher moves had on the amount of student output in the context of English communication classes in a Japanese high school. The eight moves utilized by the teachers in this research were open questions, closed questions, reflective statements, statements of mind, declarative statements, statements of interest, speaker referrals, and back-channeling. Data was collected in two stages. First, ten-minute recordings of six different classes were taken, transcripts were made, and the data was then analysed. In the second stage, interviews with the participating teachers were conducted so that their perceptions of the effect the different moves had had on classroom interaction could be ascertained.

The utilization of the eight different moves in this study provided students with the opportunity to produce output following prompts that they would not usually encounter in classroom interactions, but which may be used in authentic communicative situations. Analysis of both the classroom discourse and teacher interviews indicated that the type of move employed by the teacher influenced the length of the students’ responses. Further analysis found that four moves consistently encouraged more student output in this context. In addition, the interview data suggested that the other moves were a good way of highlighting different conversational moves.

These findings suggest that by introducing a wider range of moves into their classrooms, teachers can encourage students to produce more and feel more comfortable when responding to different discourse moves. After all, natural conversations are not just a series of questions being asked by one person and answered by another and this should be reflected within the communicative classroom.

Keywords: Classroom Interaction, Student Output, Classroom Language, Discourse Analysis

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Mariano Marcos State University College of Teacher Education: Its Performance as Center of Excellence

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Abstract

This study determined how Mariano Marcos State University College of Teacher Education (MMSU CTE) performs its mandate as Center of Excellence in Teacher Education in influencing and assisting the Teacher Education Institutions (TEIs) in Region I and the Department of Education (DepEd), particularly the Divisions of Ilocos Norte and Laoag City. MMSU CTE was identified by the Commission on Higher Education (CHED) as one of the 18 Centers of Excellence in Teacher Education in the whole Philippines in 1996 and continues to the present. As a Center of Excellence, it is mandated to act as model/leader in teacher education programs.

This study employed the descriptive-correlational method of research with randomly selected administrators and teachers from TEIs in Region I and DepEd Ilocos Norte and Laoag City as respondents and whose numbers were determined using the Slovin's formula. A survey and an interview were undertaken. Document papers and other records on file at MMSU CTE were also used. Mean, weighted mean and percentage were used to describe the data while Pearson Product Moment Correlation was used to determine the relationship between the variables.

Findings reveal that MMSU CTE has *satisfactorily attained* its objectives in line with its roles and functions as Center of Excellence in Teacher Education and it has *greatly influenced* the TEIs in Region 1 and DepEd Ilocos Norte and Laoag City along areas of instruction, research and extension. Also, among the determinants of the performance of MMSU CTE as Center of Excellence, competent administrative and support staff contributed most in its performance. Results further reveal that the relationship of the attainment of its objectives as Center of Excellence and the perceived influences to the TEIs in Region I and DepEd Ilocos Norte and Laoag City were found *significant*.

Key Words: Center of Excellence, determinants, objectives, performance, College of Teacher Education, Mariano Marcos State University

Introduction

In response to the declining quality of education in the Philippines, R.A. 7722 was enacted into law in 1994. This Republic Act sought to strengthen teacher education by establishing Centers of Excellence (COE) in Teacher Education.

Mariano Marcos State University College of Teacher Education (MMSU CTE) was identified by the Commission on Higher Education (CHED) as one of the 18 Centers of Excellence in Teacher Education in the country in 1996 and continues to the present. As a Center of Excellence, it is mandated to act as model/leader in teacher education programs; sustain and enhance research capabilities and upgrade professional or research graduate programs in Teacher Education; provide assistance to agencies/ institutions within its geographical area of coverage; undertake activities and projects necessary in developing quality Teacher Education programs; accelerate the development of Teacher Education programs through strategic development agenda and projects; develop quality instructional programs through faculty development and upgrading of facilities and library holdings; undertake basic and applied research activities on emerging trends and developments in the field of Teacher Education; and undertake extension and linkages through consortia and collaborations with academe.

The recognition of MMSU CTE as Center of Excellence was brought about by some determinants such as: relevant goals and development programs of the College; well-planned curriculum and instructional program; professionally qualified faculty; competent administrative and support staff; adequate student development programs and support services; commendable performance in licensure examination; relevant extension service and outreach programs; and adequate research and publication.

Being a Center of Excellence carries with it pride, honor and prestige but the recognition means great responsibility in acting as model and leader in teacher education programs and in assisting other institutions especially the Teacher Education Institutions (TEIs) for the maximum utilization of human and material resources to ultimately benefit the students.

Considering the significant role of MMSU CTE as Center of Excellence, the researcher determined whether MMSU CTE performs its mandate as Center of Excellence in influencing/assisting TEIs in Region I and the Department Education (DepEd), Divisions of Ilocos Norte and Laoag City.

Objectives of the Study

This study determined how Mariano Marcos State University College of Teacher Education performs its mandate as Center of Excellence in influencing and assisting Teacher Education Institutions (TEI's) in Region I and the Department of Education, Divisions of Ilocos Norte and Laoag City.

Specifically, this study:

1. determined the extent of attainment of the objectives of MMSU CTE in line with its roles and functions as Center of Excellence as perceived by the teachers of TEI's in Region I and DepEd (Ilocos Norte and Laoag City) along areas of:
 - 1.1 instruction
 - 1.2 research
 - 1.3 extension
2. determined the extent of influence of MMSU College of Teacher Education as Center of Excellence to the teachers of TEI's in Region I and DepEd (Ilocos Norte and Laoag City) along areas of:
 - 2.1 instruction

- 2.2 research
- 1.2 extension
- 3. determined which of the following determinants contributed the most in the performance of MMSU College of Teacher Education as Center of Excellence as perceived by the CTE administrators, faculty, non-teaching staff and students:
 - 3.1 relevant goals and development programs and projects of the college
 - 3.2 well-planned curriculum and instructional program
 - 3.4 professionally qualified faculty
 - 3.5 competent administrative and support staff
 - 3.6 adequate student development programs and support services
 - 3.7 commendable performance in Licensure Examination and globally competitive graduates
 - 3.8 relevant extension service and outreach programs
 - 3.9 adequate research and publication
- 4. determined the relationship of the attainment of objectives of MMSU CTE as Center of Excellence and the extent of its influence to TEIs in Region I and DepEd (Ilocos Norte and Laoag City).
- 5. identified suggestions and recommendations of administrators of TEIs in Region I and DepEd (Ilocos Norte and Laoag City) in improving the services of MMSU CTE as Center of Excellence.

Theoretical Framework

This study was anchored on the systems approach to education which views system as a whole made up of many parts or subsystems which are interconnected. It is also viewed as a set of habits and practices within a framework that is based on the belief that the component parts of a system can best be understood in the context of relationship with each other and with other systems. The system's parts work together as a whole to accomplish the system's objectives by performing certain tasks.

The educational system is an integrated assembly of interacting elements designed to carry out cooperatively a predetermined function. Educational systems are open and exchange materials and other resources with their environment in order to survive. Educational institutions are ultimately judged by their service to the larger environment where systems contribute to and enhance their environment.

Figure 1 shows how MMSU College of Teacher Education works as Center of Excellence. It performs as an open educational system influencing and working together with other systems to carry out its roles and functions as Center of Excellence in Teacher Education in Region I. The diagram presents a holistic view of education which considers an educational institution as a set of coordinated, interrelated and interdependent parts working in a unified manner and interacting with the environment. (There are times, however, when there are disruptions and threats to the subsystems creating an imbalance in the otherwise harmonious operation of the system. It is through communication and facilitation that homeostasis is brought back into the system.) Also, systems' ideas indicate a need for communication to maximally permit the exchange of necessary information in an organization due to the flow of information in all directions.

The MMSU College of Teacher Education, being the Center of Excellence in Teacher Education in Region I, can be viewed as a learning-producing enterprise and as a system with inputs, processes and outputs.

The inputs refer to the relevance of goals and objectives of the college; the quality of human resources which include the faculty, administrative and non-teaching staff and students; the usefulness of the material resources and non-material resources which include

curriculum, instructional materials and facilities; and adequacy of support services. These inputs contribute a lot in the achievement of MMSU CTE's status as Center of Excellence and in performing its roles and functions especially in influencing Teacher Education Institutions of Region I and the Department of Education, Divisions of Ilocos Norte and Laoag City.

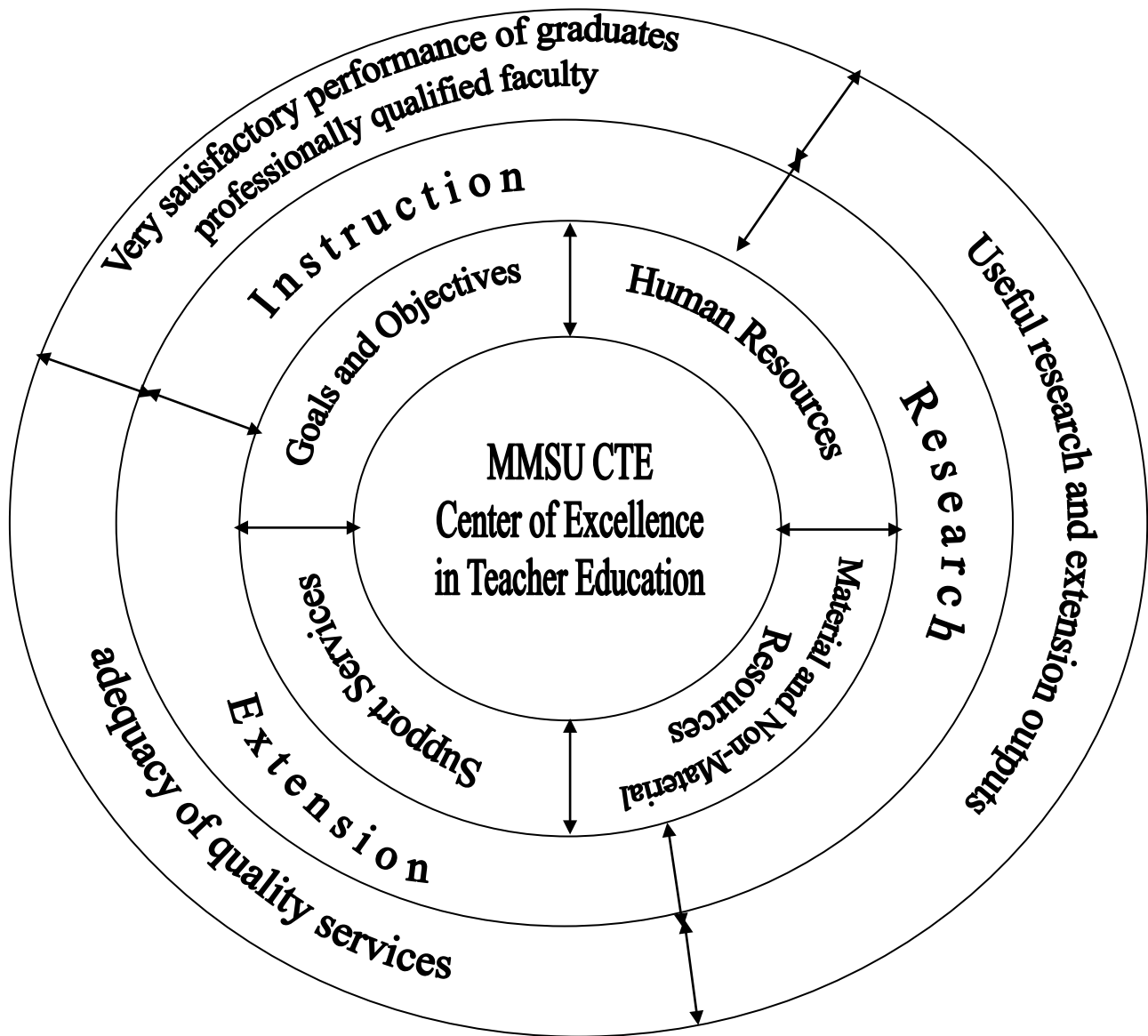


Figure 1. The research paradigm of the study

The trilogy of functions of the college- instruction, research, and extension are the transformational processes in performing MMSU CTE's role as Center of Excellence. In instruction, MMSU CTE serves as Training Center for Manpower Development, Data and Information Center, Center for Networking between and among TEIs and Center for the Try-out of Innovations. Also, the college serves as Center for Networking both in research and extension. The method oriented programs and projects of the college run in parallel to several projects that are pursued in collaboration with industrial partners.

Outputs which are the outcomes of the processes or the results of the operation of the college include the very satisfactory performance of the graduates; the professionally qualified faculty who are satisfied with their work and professional development; the usefulness of research and extension outputs; and adequacy of quality services to the educational institutions and the community.

Significance of the Study

This study provides feedback on MMSU CTE's performance as Center of Excellence in Teacher Education Institutions and may therefore serve as basis for further improving the system. This encourages other Centers of Excellence to perform their roles and functions well in influencing and assisting other schools in order to remedy the declining quality of education.

Likewise, the Commission on Higher Education and the Teacher Education Council are acquainted with how a Center of Excellence performs its roles and functions, thus, enabling them to make plans, comments and suggestions on strengthening the roles and functions of Centers of Excellence.

Also, the results of this study encourages administrators of Teacher Education Institutions to strengthen and improve their respective schools. This serves as an eye opener for them and they may be guided in making decisions, objectives and goals that would lead to the development of their school.

Moreover, this study enjoins education policy makers and stakeholders to ensure continuous support, provide for a strong and sustainable development in Teacher Education Institutions and further strengthen teacher quality education. Also, this strengthens coherence of government responses to school's situations and conditions, thus, improving the quality of education being offered to the students. This would surely open doors for better instruction.

Furthermore, the results of this research ignite teachers' interest to perform their work well considering that they play the greatest role in student learning and achievement. This gives them directions and guidance in performing their roles effectively and efficiently in order to give quality education to their students and this motivates them to attend seminars and training and graduate studies for their professional growth and development.

Methodology

Research Design

The descriptive-correlational method was employed in this study. It determined how the MMSU College of Teacher Education performs its mandate as Center of Excellence in influencing/assisting Teacher Education Institutions in Region I and DepEd, (Ilocos Norte and Laoag City).

Using the input-process-output (IPO) as a model, this study described the inputs by which the objectives of MMSU CTE as COE are attained/evident at TEIs in Region I and at DepEd (Ilocos Norte and Laoag City); processes or the roles and functions of MMSU CTE to influence and assist TEIs in Region I and at DepEd (Ilocos Norte and Laoag City); and the outputs or the influences of the instruction, research and extension programs of MMSU CTE as Center of Excellence.

Setting / Locale of the Study

This study was conducted at the Mariano Marcos State University College of Teacher Education (MMSU CTE), TEIs in Region I, namely, Pangasinan State University (PSU), Don Mariano Marcos Memorial State University (DMMMSU), and University of Northern

Philippines (UNP), private TEIs in Laoag City, namely, Northwestern University (NU), Divine Word College of Laoag (DWCL) and Data Center College of the Philippines (DDCP) and the Department of Education, Divisions of Ilocos Norte and Laoag City

Population and Sampling Procedures

The population of the study included the administrators, faculty, non-teaching staff and students of MMSU CTE, the administrators and teachers of the Department of Education (DepEd), Divisions of Ilocos Norte and Laoag City, and six Teacher Educations (TEIs) in Region I. Among the six TEIs, three are state universities (SUCs) and three are private schools. The three state universities (SUCs) are University of Northern Philippines (UNP) in Ilocos Sur; Don Mariano Marcos Memorial State University (DMMSU) in La Union; and Pangasinan State University (PSU) in Pangasinan. The three private schools are located in Ilocos Norte, namely: Northwestern University (NU), Divine Word College of Laoag (DWCL), and Data Center College of the Philippines (DCCP). The total number of samples was determined using the Slovin's formula as follows:

$$n = \frac{N}{1 + Ne}$$

Where:

n= total number of samples

N= population

1= constant

e= percent error which is .05

Using the formula, the number of teacher-respondents who were chosen as samples was proportionately allocated to the different schools. Likewise, in choosing respondents for the administrators, teachers, non-teaching staff and students of MMSU CTE, the same formula was used.

Research Instrument

This study utilized two-data gathering instruments. These are questionnaires and interview guide.

The researcher used three questionnaires namely: (1) Survey Questionnaire on the Attainment of Objectives of MMSU CTE as Center of Excellence (2) A Questionnaire on the Extent of Influences of MMSU College of Teacher Education as Center of Excellence, and (3) A Questionnaire on the Determinants of the Performance of MMSU CTE as Center of Excellence. The first and second questionnaires were accomplished by the teacher-respondents of TEIs in Region I and DepEd, Ilocos Norte and Laoag City with slight variation while the third questionnaire was accomplished by the administrators, faculty, non-teaching staff and students of MMSU-CTE.

Likewise, an interview guide was used in this study. This was used to interview the administrators of TEIs in Region I and DepEd (Ilocos Norte and Laoag City) to determine the influence of MMSU CTE on their schools/ institutions. This aimed to validate the information gathered in the first and second questionnaires and to identify their suggestions and recommendations in improving the services of MMSU CTE as Center of Excellence.

In order to elicit the desired responses, the three questionnaires and the interview guide were subjected to validity and reliability tests. These were checked and critiqued by the adviser and panel members of the researcher.

Filed documents as supporting papers submitted to the CHED particularly the Committee in the Selection of Centers of Excellence in Teacher Education were also utilized. All available sources such as records and old documents were also sources of data.

Statistical Analysis of the Data

The mean and weighted mean. The mean and weighted mean were used to determine the extent of attainment of the objectives of MMSU CTE in line with its roles and functions as Center of Excellence to Teacher Education Institutions in Region I and DepEd, Ilocos Norte and Laoag City; to determine the extent of influences of MMSU CTE to TEIs in Region I and DepEd Ilocos Norte and Laoag City and to identify the determinants that contribute most to the performance of MMSU CTE as Center of Excellence. To describe the attainment of objectives of MMSU-CTE in line with its roles and functions as Center of Excellence, the following numerical values and descriptive ratings were used:

Numerical Values	Descriptive Rating
5 - 4.51 – 5.00	Highly Satisfactorily Attained
4 - 3.51 – 4.50	Satisfactorily Attained
3 - 2.51 – 3.50	Moderately Attained
2- 1.51 – 2.50	Needs Improvement
1 - 1.00 – 1.50	Not Evident

To describe the extent of influence of MMSU-CTE to Teacher Education Institutions in Region I and DepEd Ilocos Norte and Laoag City, the following numerical values and descriptive rating were utilized;

Numerical Values	Descriptive Rating
5 - 4.51 – 5.00	To a Very Great Extent
4 - 3.51 - 4.50	To a Great Extent
3 - 2.51 – 3.50	To a Moderate Extent
2 - 1.51 – 2.50	To a Slight Extent
1 - 1.00 – 1.50	No Extent

To describe the contributions of the determinants of Center of Excellence to the performance of MMSU-CTE as Center of Excellence, the following numerical values and descriptive rating were utilized;

Numerical Values	Descriptive Rating
5 - 4.51 – 5.00	Very Much
4 - 3.51 - 4.50	Much
3 - 2.51 – 3.50	Moderate
2 - 1.51 – 2.50	Little
1 - 1.00 – 1.50	No Extent

The Pearson Product Moment Correlation was used to determine the relationship between the attainment of objectives of MMSU-CTE in line with its roles and functions and its influence to the teachers of TEI's in Region I and DepEd Ilocos Norte and Laoag City.

Results and Discussions

Attainment of the Objectives of MMSU-CTE along its Roles and Functions as Center of Excellence as Perceived by the Teachers of TEI's in Region I

As *Training Center for Manpower Development*, the objectives are all satisfactorily attained. The provision of various trainings to update the knowledge and improve the

competencies of teachers obtained the highest rating of 4.13. As *Data and Information Center*, the objectives are all satisfactorily attained. MMSU CTE helps update curricula to comply with the CHED Memorandum #30, s. 2004 and to comply with the policies and standards for teacher education including the NCBS and conducts periodic review of existing curricular programs for relevance and quality obtained the highest ratings of 4.05 and 4.00, respectively. Likewise, as *Center for Networking in Research*, the objectives are all satisfactorily attained. The role of the college of assessing academic programs through research and its participation or undertaking researches in relevant areas in teacher education and training programs obtained the highest mean ratings of 3.99 and 3.97, respectively. Also, as *Center for Networking in Extension*, all the objectives are satisfactorily attained. MMSU-CTE coordinates with other agencies on the implementation of community outreach and extension activities, the representatives of the college act as trainers/lecturers in different seminars and workshops, and implements teacher education and training projects for the communities within the service area obtained the highest mean ratings of 4.05, 3.96 and 3.94, respectively.

Attainment of the Objectives of MMSU CTE along its Roles and Functions as Center of Excellence as Perceived by the Teachers of DepEd Ilocos Norte and Laoag City

As *Training Center for Manpower Development*, five objectives were rated highly satisfactorily attained while nine were satisfactorily attained. Obtaining the highest mean rating of 4.56 is MMSU-CTE's role of assisting in the implementation of programs of DepEd and the conduct of induction training and mentoring program for new teachers. As *Data and Information Center*, out of the five objectives, one is rated highly satisfactorily attained while four are satisfactorily attained. The highest rating of 4.52 is the role of the college of sharing experts who will serve as speakers, lecturers on various training conducted by the schools in the Department of Education. Likewise, as *Center for Networking in Research*, the seven objectives are all satisfactorily attained. The development of instructional materials on Teacher Education and trainings appropriate to local conditions and the conduct of researches on relevant areas in teacher education and training programs obtained the highest ratings of 4.44 and 4.41, respectively. Also, as *Center for Networking in Extension*, the objectives are all rated satisfactorily attained. Given the highest rating of 4.50 is the MMSU CTE's role of serving as the service provider for the Induction Training of the Teacher Education Council of the DepEd.

Influences of MMSU CTE as Center of Excellence to Teacher Education Institutions in Region I as perceived by the Teachers

Along instruction, the influences are rated to a great extent. Obtaining the highest rating of 4.02 is the presence of updated syllabi and lesson plans while TEI teachers are rated excellent and very satisfactory in the performance evaluation by the students. In research, the influences are rated to a great extent. Obtaining the highest rating of 3.81, the teachers undertake researches which was rated to a great extent. Because of the trainings on research proposal preparation conducted by MMSU CTE, teachers among TEI's are now very capable in conducting good researches with the proper methodology, hence, research outputs are now very satisfactory and useful. With a rating of 3.76, results of researches are now disseminated in the college/department. Along extension, the influences are rated to a great extent as indicated by the obtained mean ratings ranging from 3.73 to 3.86. The teachers of TEI noted

to a great extent that faculty and students are involved in extension with the highest rating of 3.86 and there is a continuing extension activity of the college/department.

Influences of MMSU-CTE as Center of Excellence to DepEd Ilocos Norte and Laoag City as perceived by the teachers

Along instruction, four of the influences are rated to a very great extent while the other six are rated to a great extent. The greatest influence is having lesson plans which are updated with a rating of 4.57. Also, the instructional competence of the teachers is enhanced to a very great extent. In research, the influences are all rated to a great extent. The teachers believe that MMSU-CTE has influenced them to undertake research and research outputs are very satisfactory and useful to the community with ratings of 4.38 and 4.32, respectively. The teachers also believe that student teachers make good researches because of the influence of MMSU-CTE with rating of 4.30. Likewise, the schools produce research based instructional material with a rating of 4.30. Along extension, all the influences are rated to a great extent. The teachers act as lecturers and trainers in different seminars and workshops of other schools obtained the highest rating of 4.42. Obtaining a rating of 4.37, teachers and students are now involved in extension activities while there is a continuing extension activity of the school is having a rating of 4.36 which means to a great extent.

Determinants of the Performance of MMSU-CTE as Center of Excellence in Teacher Education

Among the determinants of MMSU CTE as Center of Excellence, competent administrative and support staff contributed (very much) most to its performance and the rest of the determinants: relevant development programs, well planned curriculum and instructional programs, professionally qualified teachers, adequate student development programs and support services, commendable performance in licensure examination and globally competitive graduates, relevant extension service and outreach programs, and adequate research and publication contributed much to the performance of the college.

Relevant Development Programs and Projects. The involvement of faculty and students in the planning and implementation of programs and projects contributed very much to the performance of MMSU as COE as it obtained the highest rating of 4.57. Because of the involvement of both the teachers and faculty, programs and projects are carefully planned and implemented, hence, this contributed much to the performance of the college with a rating of 4.33. These programs and projects improve instruction, enhance faculty and students' research capabilities and enrich their experiences in community outreach and extension services that further contributed much to the performance of the college.

Well Planned Curriculum and Instructional Programs. The curriculum is relevant to the CHED requirements on Policies and Standards for Teacher Education obtained the highest rating of 4.64. The curriculum develops the needed competencies of the future teachers contributed very much with a rating of 4.58. To complement curriculum, syllabi are reviewed and updated every semester to meet the needs and interest of the students wherein variety of methods, approaches and techniques are used by the teachers to develop the creative and critical thinking of the students. These contributed much to the performance of the college.

Professionally Qualified Teachers. The attendance of faculty members to international trainings and post graduate studies as well as their attendance to graduate studies and continuing education for professional growth obtained the highest mean ratings of 4.72 and 4.69, respectively contributed very much to the performance of the college. . The

faculty members serve as speakers, lecturers, consultants and trainers in various fields and involved in research and extension services also contributed much to the performance of MMSU-CTE.

Competent Administrative and Support Staff. The dean administers his duty well obtained the highest rating of 4.87. This has contributed very much to the performance of the college. The dean follows standard policies and proper procedures in the selection of department chairs and area coordinators also contributed very much with a rating of 4.73. The dean administers regular faculty meeting to settle issues and problems of the college and a council meeting is held every year. The support staff are evaluated every semester to determine their effectiveness in performing their task also contributed very much to the performance of MMSU-CTE with a rating of 4.62.

Adequate Student Development Programs and Support Services. Students are given financial aid in case of illness or death aid in case of death of parents contributed very much to the performance of the college which obtained the highest rating of 4.85. The students are involved in community outreach and extension services and are involved in doing action researches regarding problems met in school contributed very much to the performance of the college with ratings of 4.63 and 4.53, respectively.

Commendable Performance in Licensure Examination and Globally Competitive Graduates. Contributed much to the performance of the college is the attendance of students to national, regional, and local conferences, symposiums and scholarly lectures with the financial support of the college and the travels of students outside the country for trainings and seminars with ratings of 4.43 and 4.11.

Relevant Extension Service and Outreach Program. Obtaining the highest ratings of 4.33, 4.45 and 4.43 include the outreach activities that are planned to meet the needs of the community people which the faculty as well as students participate, and are well documented and properly evaluated to have feedbacks for improvement. Moreover, the college extension office coordinates with other agencies in the implementation of its activities obtaining a rating of 4.27; making these as continuing activities of the college obtaining a mean of 4.27; and these activities are functional which has a rating of 4.18.

Adequate Research and Publication. Obtaining the highest rating of 4.44 is the encouragement of the Research Office of the college to faculty and students to undertake research. This has contributed much to the school performance because as COE, the Research Coordinator motivates both the faculty and students to undertake research for they are required to have action researches which solve problems in the classrooms with a mean of 4.38. The research outputs improve the quality of teaching and classroom instruction obtained a rating of 4.43 indicating the relevance of the researches conducted.

Relationship of Attainment of the Objectives of MMSU-CTE and Its Influence to TEI's in Region I and DepEd Ilocos Norte and Laoag City

All the obtained *r values* between the test of relationship of the attainment of objectives of MMSU-CTE as Center of Excellence in line with its roles and functions along instruction, research and extension and the perceived influences to the teachers of TEI's in Region I were all found significant. All of these *r values* including the *r* between the whole of the attainment of objectives and the entirety of perceived influence of 0.764 are probable at significance level lower than 0.05, the previously set level of rejection.

The findings indicate that there is a significant relationship between the attainment of objectives of MMSU-CTE as Center of Excellence and its perceived influence to the teachers along instruction, research, and extension and their totality. The positive and

significant *r* values indicate that teachers of TEI's in Region I and DepEd Ilocos Norte who believed that the objectives of MMSU-CTE as Center of Excellence are highly attained have greater influence on them. MMSU-CTE as COE has a great influence among the teachers, thus, the college has done its roles efficiently and effectively in all its three major functions as stated in CHED Memorandum, Order No. 31, series of 2008 (MMSU CTE's mandates as Center of Excellence in Teacher Education).

Suggestions and Recommendations of Administrators of TEIs in Region I and DepEd Ilocos Norte and Laoag City in Improving the Services of MMSU CTE as Center of Excellence

Instruction. It was suggested by the administrators of TEIs in Region I and DepEd Ilocos Norte and Laoag City that the conduct of trainings and seminars should be well-disseminated and trainings should focus more on developing teachers' teaching skills and competencies specifically on the art of questioning, higher order thinking skills, classroom management, improvement in speech, grammar, and organization of thoughts, ethics which include dress code and dealing with parents and personality development seminar. Likewise, administrators recommend for a longer stay of practice teachers in the field for more exposure to real classroom situations. Also, some reiterated that teachers should expose the future teachers with ICT guided instruction for this will help them cope up with the latest trends and innovations in education.

Research. Administrators suggested that MMSU CTE should guide teachers of TEIs and DepEd to do action researches that address problems inside the classrooms like poor discipline of pupils, poor study habits and poor reading, speaking and writing skills of learners. Findings of these researches should be disseminated to all teachers not only to some teachers as had been done in the past so that many of them would be guided accordingly with what to do to improve teaching-learning process. Lastly, there should be a collaborative efforts among TEIs in the production of researches that would develop the socio-economic conditions of our province. MMSU CTE should take the lead being the Center of Excellence.

Extension. Some administrators emphasized that the field needs more extension services which will cater to the academic needs of the learners. According to them, this can be done through tutoring, remedial teaching and other related tasks that ensure mastery learning in the different subject areas especially English, Math and Science. More schools should be benefited from the programs of the college for they observed that same schools are recipient of such extension programs every year. Another good activity recommended is the conduct of basic lessons for adults in the community because there are many adults who do not know how to write their names nor read basic sight words.

Conclusions

Based from the findings, it can be concluded that Mariano Marcos State University College of Teacher Education has satisfactorily attained its objectives as Center of Excellence in Teacher Education and has greatly influenced the teachers in Teacher Education Institutions in Region I and Department of Education, Divisions of Ilocos Norte and Laoag City. Among the determinants of the performance of MMSU CTE as Center of Excellence, competent administrative and support staff contributed most (very much) in the performance of the college. The rest of the determinants contributed much to the achievement of the school. It is also concluded that the influence of MMSU-CTE as Center of Excellence is greater to the teachers and schools particularly to TEIs in Region I and DepEd Ilocos Norte

and Laoag City when the objectives of the college as Center of Excellence are highly attained. Thus, the relationship of the attainment of its objectives as Center of Excellence in line with its roles and functions along instruction, research and extension and the perceived influences to Teacher Education Institutions in Region I and Department of Education, Divisions of Ilocos Norte and Laoag City were found significant.

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Non-Hierarchical Learning: A Pedagogic Approach

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Abstract

For educators that teach a wide range of students from diverse backgrounds, there are two central beliefs that should inform their pedagogic approaches: (i) every student has the capacity to succeed, and (ii) every student must be provided with the opportunity to succeed and reach their full potential. In order to help students reach their full potential, it is imperative that educators create curriculums that are engaging, relevant, demanding, and fulfilling.

In an era of intensified competitiveness among colleges and universities, especially in Japan with the decreasing number of students, faculty members and educational institutes are recognizing that competitive advantage can be gained through excellence in teaching (Byrne, 2000). Furthermore, student expectations regarding their learning are rising (Page & Mukherjee, 2000) as they seek more engaging class environments (Schneider, 2001) in which they can both obtain knowledge and learn how that knowledge can be applied in their future careers (Merritt, 2001).

The education system in many countries is similar to a mass production system with large groups of students being taught the same subject matter in the same way at the same pace year-on-year, resulting in courses eventually becoming stagnant and outdated (Holmes et al., 2001). This is an outcome that must be avoided, as every year educators encounter different students with different knowledge, experiences, beliefs, and cultures. Consequently, a diverse range of techniques need to be employed in order to maximize the learning opportunities offered (Beecher & Sweeny, 2008) and help students reach their full potential (Tomlinson & Imbeau, 2010).

While a large body of research acknowledges differences in student learning styles and focuses on matching teaching approaches with student learning styles (De Vita, 2001), further research indicates that the mismatching of teaching and learning styles helps students stretch their abilities (Smith, 2002). Thus, by using a wide range of teaching techniques and approaches, educators can not only cater to diverse learning styles, but also challenge their students to think and learn in new ways (Keyser, 2000).

In this presentation, a pedagogic approach called non-hierarchical learning (Bury & Masuzawa, In Press) will be introduced, outlining the influences it has drawn on and presenting a theoretical frame and conceptual framework. It is hoped that educators will reflect on some of the concepts described and, if possible, incorporate them into their teaching practices.

Keywords: Pedagogy, Educational Theory, Teaching Practice, Non-Hierarchical Learning.

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**PARTICIPATION LEVEL AND PROBLEMS ENCOUNTERED BY ELEMENTARY
TEACHERS IN COMMUNITY INVOLVEMENT ACTIVITIES IN THE CITY OF
SANTA ROSA: A BASIS FOR COMMUNITY
DEVELOPMENT PLAN**

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ABSTRACT

This descriptive study was conducted to determine the level of participation of elementary teachers in community-based activities in the City of Santa Rosa during the school year 2016-2017. Specific points of concern were the participation of elementary teachers in Peace and Conflict Prevention/Resolution, Hygiene and Sanitation, Basic Education and Literacy, Disaster risk prevention and Mitigation, Disease Prevention and Treatment, Sports and Recreation, Cultural and historical Preservation , Food Production and Economic Stability , and Environmental awareness. Problems encountered by the respondents involve public relation, government/ administration, operations, and community resources. The respondents of the study were the 681 elementary teachers in all public high schools in the division of Santa Rosa.

Most of them were female and were already married. Further, majority of them have spent 1-10 years in the realm of teaching and held the position of Teacher 1. Majority of the respondents were Bachelor's degree holders and have attended 1-10 seminars only. Most of the elementary teachers participated in different community-based activities. They were found to be highly participative in Peace and Conflict Prevention/Resolution activities. They were moderately participative in other enumerated community-based activities. The public relation was considered as the serious problem in community participation. They also considered government/administration, operations, and community resources as moderately serious problems. Community, school heads, and principals need to conduct proper monitoring and evaluation of the community-based activities, in which the elementary teachers are involved with, to identify the strengths and weaknesses, and likewise the impact of the program to the community. A committee may be created to formulate possible solutions to the problems encountered by the teachers in community-based activities.

Keywords: Community-based Activities, Teacher's Participation, Community Development

Introduction

In recent years, school-community collaboration becomes a great issue for research in sociology, psychology, community development, and in education. Many researchers, academicians, and community developers from different countries in the world have worked on it. Some researchers claimed that strong collaboration between the school and local community may open new educational perspective, build trusting relationships, strengthen children's educational resources, and sensitize about the usefulness of true cooperation. (Mendel, 2005; Yeo, 2005). Thus, the school and the community are mainsprings of effective and powerful forces that can create a wholesome climate for mutual gains and betterment (Bilbao, 2006).

Likewise, the school and the community are on the front lines of the teacher's educational reach and limitation. Both are instrumental in bringing about a favorable environment that could facilitate mutual assistance and needed services to improve quality teaching and to promote public welfare in the community. Additionally, the school serves as the sanctuary for educational pursuits and endeavor while the institutions of the community serve as the extension of learning centers and sources of instructional materials. The existence of collaboration between and among them guarantees a valuable and promising affiliation that is bound to work effectively for both and is beneficial to have equal access to quality education.

Community developers, policymakers, educational planners and others involved in education and in community development are pursuing ways to utilize limited resources efficiently and effectively in order to identify and solve problems in the education sector, provide quality education for children, and to help the community in achieving its quintessence through active participation in different community-based activities. Their efforts have contributed to realizing the significance and benefits of community participation in education and have recognized community participation as one of the strategies to improve educational access and quality. With these, teachers and school leaders must be active change agents and team builders in order to guide their institutions in the preparation of future educators and leaders that will conduct effective community involvement programs and practices (Epstein & Sanders, 2006; Symeou, 2006).

In the local context, Based on Section 4 of Education Act of 1982, the teacher belongs to the "educational community" which refers to a group of persons as such association in institutions involved in organized teaching and learning systems. The members of the educational community are parents or guardians, students, and teachers. The obligation of the teacher in this law indicates that every teacher shall perform his duties to the school by discharging his responsibilities in accordance with philosophies, goals, and objectives of the school.

Moreover, the teacher should actively participate in different activities so that strong collaboration among the members of the community will be exhibited. In lieu of this, DepEd Primer on School Community Partnership (2015) considered "school community as a set partnership that provides opportunities for support from all members of the populace for improved student learning". These opportunities may come as initiatives and interventions that address hindrances to learning, strengthen families, and improve the whole neighborhood." It also entails that the Philippine Schools have already developed and established a working relationship with community partners because as mandated by Department of Education school should practice partnership with the community.

The Department of Education has institutionalized the school-community partnership as an indispensable element in school improvement. It emphasizes that at the school cluster and school level, any existing organization such as PTCA (Parents, Teachers, and Community Association, NGO (Non-Government Organization), and Barangay Council that demonstrates interests towards collaborative problem solving on educational needs and opportunities will be generally called school-community partners.

Gonzales (2008) also explained that the academe is one of the main actors in the society which could possibly effect change by way of empowering people in the community. Thus, any academic institution is socially responsible in bringing its expertise to the community especially in the field of teaching, research, and community extension.

Considering that perspective, elementary teachers, as members of the community, are also responsible for developing progressive community outside of the schools. Community development aims to attain growth and progress in the community to improve the quality of life of residents. A community development depends much on its members. If the community has a dedicated leader with members who participate actively in community development efforts, and with the help of concerned government agencies and the private sector, then the community has a better chance of progressing. Most of the community projects are listed and are initiated by the different agencies and non-government organizations, as well as by community-based groups. A community will not be progressive as it could be if its members just depend on the government to solve their problems. Also, a community development can be attained if its members work together in addressing the community needs and problems. Residents, including teachers, should recognize their role in participating in community projects and activities. They can contribute by attending community meetings, participating in community cleanliness campaigns, and others. In addition, they are given tasks to promote community development through participation in a collaborative relationship, public safety, beautification, cleanliness, cultural and historical preservation, and organized association.

The vision of the city explicated that “Santa Rosa is world class, smart, and green city with a sustained and inclusive economic growth that is driven by a transparent and accountable local government, effective civil servants, and empowered citizenry.”

The City of Santa Rosa envisions itself to be a model of local governance effectively responding to the welfare of its people through innovative policies and programs, and integrative strategy anchored on creation of business-friendly and competitive climate, support for poverty alleviation and capability building and establishment of priority infrastructures, protection of environment and promotion of a healthy lifestyle, and maintenance of peaceful and orderly communities, and resilience against disaster.

Elementary schools in Santa Rosa City have become more professionalized and centralized, in which they have tended to distance themselves from their local communities. The vital links between experience, work, and education have been weakened. As a result, public and private schools in Santa Rosa City have lost their power as valuable community resources. In realizing the vision and mission of Santa Rosa City, schools are considered as institutions that can prepare children to contribute to the betterment of the society in which they operate, by equipping them with skills important in society.

This research aimed to determine the level of participation of elementary teachers in community-based activities and compare agent’s involvement on the specific topic in the local community of Santa Rosa and their demographic profile. Also, this research explored the differences between the problems encountered and reasons of involvement in community-based activities which could be useful in making a comprehensive community development plan.

Review of Related Literature

According to Section 6 Code of Professional Ethics for Teachers (R.A. 7836), *“every teacher is an intellectual leader in the community, especially in the barangay, and shall welcome the opportunity to provide such leadership when needed, to extend counseling services, as appropriate, and to actively be involved in matters affecting the welfare of the people.”*

Relative to this, Cavaye (2015) further explained that school and community links do not mean that schools change their focus from education to community revitalization. Strengthening links between the school and communities can lead to clear educational outcomes. There is considerable evidence of improved student performance and competency levels from the school-community interaction.

Dilao (2013) emphasized that the academic people are in the position to recognize social problems and take effective steps to solve the problems. As a group, they are supposed to be trained and experienced in social criticism and thus be able to cut through rhetoric and apologetics to the roots of problems. In addition, Krezmann (2014) underscored that schools are the key hubs for many communities and can play an important role in their community without stepping outside their educational core. The school, in fact, is a collection of valuable assets which might be mobilized to assist the development process. They also can serve as places that “incubate” community activities—from small business to neighborhood festivals to social service programs. Also, schools have the local power to generate and receive special funds through bond issues and proposals to government agencies, corporations, and foundations not usually accessible to community groups. This special capacity can be an important resource in a community development strategy and the local school is potentially a strong magnet for attracting the interests and commitments of parents and other adults in the community.

Necio (2013) also underscored that teachers in the community are the best means of promoting community and local development which precedes national development. Schools should be community-directed and passionate to promote the welfare of the community thru extension and outreach services. Schools with teachers who are committed to effecting local development through projects and programs of extension can partner with industry, non-government organizations and national agencies for resource generation to implement their specific action plans for community extension. The teacher can provide the community with encouragement for further motivation to pursue extension and outreach work. Local government units need the assistance of schools and its teachers to make extension services successful (Young, 2011).

Likewise, Nebor (2007), in his study, found out that the role of the teacher in a positive school-community relationship is extremely important since it is the teacher who is the backbone of the educational system. Although school boards create school policy and administrators interpret these policies, teachers are the personnel who implement school policy. Teachers must also be prepared to make the most favorable impression possible in even the most innocent of circumstances in order to maintain public support. The community's perceptions of the teacher affect their perceptions of the school and subsequently student morale, school resources, and support for the school in general.

In relation to the level of participation of teachers in community-based activities, a similar study was conducted by Romance (2009) which sought to determine the teacher's attitude towards community activities in relation to community involvement. It was found out that teacher's attitude toward community activities was favorable, likewise, they are much involved in the community activities.

Romance (2009) also found out that the teacher's attitude towards community activities was not significantly related to their level of involvement. In terms of the difference regarding the attitudes of teachers toward community activities when grouped according to age, sex, civil status, and length of teaching experience, all of these were not found to be significant. In terms of community involvement, sex was found to be significantly different which means that male teachers were more involved compared to the female teachers in terms of community activities. However, age, civil status, and length of teaching experience were not found to be significant. She also recommended that schools should give awards and recognition to stakeholders of DepEd, helping the schools in its programs and projects.

Gonzales and Maghamil (2009) highlighted that teachers have an only favorable attitude towards community activities. Based on the results of their study, they recommended that teachers should have a more favorable attitude as an agent for change and should also support the activities of the LGU officials for the good of their community. It is also recommended that teachers should be more involved in community activities so that the parents of their students should be encouraged to help the LGU officials carry out the programs in the community. Teachers should also engage in community outreach activities especially in health, sanitation, and some educational information that are beneficial to their socio-economic status.

Masarap (2013), based on the findings of her study, suggested that principals must have a harmonious relationship with everyone to have a strong link to school staff and to the community for every school operation. They must feel that they are part of it. Also, the Local government Unit must have full support for the school activities and must give the allocated budget for education.

In tertiary level, Bidad and Campiseno (2010) made a study about the assessment of SUCs community extension services in Region IX along education, livelihood generation, health and nutrition, good governance, and environmental awareness during the school 2008-2009, a basis for the sustainable community enhancement program. The result of the study revealed that the extension program of SUCs was well-implemented; faculty and students were well involved. There was no significant difference in the ratings of the implementers and beneficiaries along education, livelihood generation, health and nutrition, good governance, and environmental awareness implementation. Usually, this is requested by the Local Government Unit concerned upon the identification of the specific needs of their constituents. In order to serve and improve community life, SUCs offer a wide variety of extension programs and services. These are designed primarily to increase the security of livelihood, alleviate poverty, reduce illiteracy, improve health and nutrition, creates a system of governance that promotes supports and sustains human development and protecting and preserving the environment.

The study conducted by Chifamba (2013) revealed that government and rural development agencies face barriers and challenges in promoting participation of local communities in rural development projects. Successful rural development requires reducing these barriers to participation in rural development initiatives and addressing the challenges. Government communities and donor agencies have recognized the need for creating ways to facilitate community participation in rural development initiatives and have taken initial steps toward removing obstacles that hinder community participation.

Schools and communities should establish a positive relationship between them because it would greatly contribute to the welfare of both. The community is considered as one of the stakeholders of the schools because it gives resources that every school needs, while the schools, especially teacher's participation, serve as the key facets to achieve the development goals of any local community. This research would be a beneficial for both the school and the community because it presents the idea that participation could be a powerful tool to develop community understanding.

Methodology

The study adopted the descriptive-survey type of research in determining the level of participation of elementary teachers in community-based activities which also includes reasons and problems encountered during their participation. The teachers were given a valid questionnaire to gather data and information for this study. Items in each variable were conceptualized based on some studies.

The researcher employed both purposive and convenience sampling technique. Since the data gathering procedure is by the use of survey questionnaire, the researcher was restricted to include teachers who were readily available only on the schedule given by the school principal and were permitted by head teacher to be part of the study. The respondents were given enough time to answer the survey questionnaire before the retrieval of survey tools to ensure the reliability of the results. A total of 797 questionnaires were distributed to elementary teachers in all public elementary schools, but only 681 questionnaires were retrieved.

Aside from the availability of the teachers, time constraint was also considered in the selection of respondents. The survey covered the elementary teachers in all public elementary schools in the Division of Santa Rosa. The data was gathered based on the recommended guidelines of research procedures. First, the researcher asked permission from the Division Superintendent to distribute the questionnaire among elementary teachers in all public elementary schools in Santa Rosa City. After getting the approval of Division Superintendent to conduct the study, the researcher sought permission to distribute the questionnaire among the elementary teachers from the office of elementary school principals in the Division of Santa Rosa.

With the assistance of the assigned teachers, the researcher personally distributed and collected the survey questionnaire from the respondents after one week. Then, the data gathered were recorded, tabulated, analyzed, and interpreted. Lastly, the researcher summarized and concluded the study and gave recommendations that would serve as the basis for community development plan.

The weighted mean was used to calculate the central tendency response of the respondents and arbitrary scale to interpret the level of participation of elementary teachers in community-based activities in Santa Rosa City. Skewness was also used to determine the degree of responses in the enumerated indicators.

To test the hypothesis, chi-square was employed to know the significant relationship between the level of participation of elementary teachers in community-based activities when they are grouped according to gender and civil status while Pearson r was utilized to determine the relationship between the independent and dependent variables, specifically the age of the respondents. .

Results and Discussion

Table 1 illustrates the reasons of elementary teachers in participating in community-based Activities in Santa Rosa City, Laguna. It can be gleaned from the table below that all indicators obtained high responses that ranged -.378 to -.631 which made the distribution a negatively skewed. Teachers agreed with all reasons indicated below because they consider participation as an important concept in development and because of its wide application, it means different things to different people (Barasa & Jelagat, 2013). As a process, participation gives experience to individuals which provides and equips

them with insights, confidence, and skills to solve existing problems, which is crucial in achieving individual and communal goals (Samah & Aref, 2009).

Table 1. Reasons of Elementary Teachers in Participating in Community-Based Activities

Indicators	Weighted Mean	Standard Deviation	Skewness	Descriptive Interpretation
1. I participate in community-based activities because it is one of the required activities that I should undergo as a part of DepEd order.	4.10	.734	-.631	Agree
2. I get connected with other people in the community because it ensures a more balanced set of political, social, economic and cultural priorities, resulting in shared power and shared resources, thus leading to equity and social justice.	4.04	.699	-.418	Agree
3. I get involved in community-based activities because it is a great way to extend professional networks and meet individuals who are already established in my chosen industry.	4.15	.684	-.476	Agree
4. I usually join in community-based activities because it helps me foster practical skills such as time management, leadership, and responsibility.	4.02	.737	-.412	Agree
5. I learn valuable character traits such as pride, productivity, perseverance, hardworking, and self-esteem when I am able to know the lives of others through community participation.	4.20	.699	-.418	Agree
6. I am encouraged to be actively involved in the community-based activities because it calls for additional compensation since it is one of the requirements for promotion.	3.78	.853	-.497	Agree
7. I feel satisfied when I am able to help my community through participating in the meeting, symposium, and conference which discusses the ways to improve our locality.	4.15	.684	-.476	Agree
8. I am deeply encouraged to help the people when the community leaders are consistent with their rules and are dedicated enough to solve the problems in the community.	4.12	.697	-.410	Agree
9. I learn to serve the public because community people are unaware of the problems in the community.	3.96	.738	-.396	Agree
10. I get motivated to participate in community activities due to the recognition which is given by the leaders of the community.	3.71	.887	-.378	Agree
Overall	4.02	0.623		Agree

Legend: 4.21-5.00 Strongly Agree; 3.51-4.50 Agree; 2.51-3.50 Moderately Agree; 1.51-2.50 Disagree; 1.00-1.50 Strongly Disagree

Table 2 shows the level of participation of elementary teachers in community-based activities in the City of Santa Rosa. It can be gleaned from the table that elementary teachers were highly participative in Peace and Conflict Prevention Activities. This is anchored on the research of Professor Yusuf Sayed (2011), which explained the overview of engaging teachers in peace-building in post-conflict. He emphasized that since teachers are the agents of learning they need continuous training in peace-building

studies. Teachers are perennial learners who need continuous professional development regularly to enhance their competencies. Moreover, elementary teachers were moderately participative in other listed community-based activities.

The result is similar to the findings of Francisco (2005) in his study. He found out that in terms of other community activities, teachers were moderately participative, which implied that as perceived by the teachers themselves, their involvement in the economic community was good. Similarly, Bidad and Campiseno (2010), in their study, found out that the faculty members and the beneficiaries of community services rated education and livelihood generation as well-involved.

Table 2. Level of Participation of Elementary Teachers in Community-Based Activities in Santa Rosa City.

Pairs of Variable	Weighted Mean	Standard Deviation	Interpretation
Peace and Conflict Prevention/Resolution Activities	3.52	3.52	Highly Participative
Water, Hygiene and Sanitation Activities	3.17	1.005	Moderately Participative
Basic Education and Literacy Activities	3.00	1.246	Moderately Participative
Disaster Risk Prevention and Mitigation Activities	3.27	.960	Moderately Participative
Disease Prevention and Treatment Activities	3.14	1.003	Moderately Participative
Sports and Recreation Activities	2.77	1.131	Moderately Participative
Cultural and Historical Preservation Activities	2.92	1.118	Moderately Participative
Food Production and Economic Stability	2.55	1.17	Moderately Participative
Environmental Awareness Activities	3.40	.992	Moderately Participative

Legend: 4.21-5.00 Highly Participative ; 3.51-4.50 Participative ; 2.51-3.50; Moderately Participative; 1.51-2.50 low participative 1.00-1.50 non-participative

Table 3 presents the problems encountered by the elementary teachers in participating in community-based activities. Based on the results of the study, elementary teachers considered public relation as a serious problem in community participation. Similarly, Gueverra (2001), in her study, also found out that the teachers and principals indicated the clientele problems they encountered in community development activities as serious with an over-all mean of 3.98. This covers the problems with regard to informing the public, negotiating, and dealing with other community members towards the achievement of developmental goals.

Moreover, elementary teachers considered government, operations, and community resources as moderately serious problems. According to the study conducted by Thurlow (2013), the relationship between communities and government is strained by the community perception that governments do not understand issues and impose policies and programs that negatively affect community members. The government is also seen as sometimes downloading responsibilities on communities without providing the necessary resources (e.g., financial support, educational programs) for communities to assume these responsibilities.

Relative to the government problems, Chifamba (2013) also mentioned that government and rural development agencies face barriers and challenges in promoting participation of local communities in rural development projects. The government should divulge in the operation of community projects to analyze the dire needs of the people for the improvement of any project or activity they implement.

Further, Thurlow (2013) described that lack of access to financial resources, human resources, and coordination necessary to address problems and concerns of communities lead to organizations relying on volunteers to carry out community-based activities.

Table 3. Problems Encountered by Elementary Teachers in Participating in Community-Based Activities

Pairs of Variable	Weighted Mean	Standard Deviation	Interpretation
Public Relation	3.62	.781	Serious
Government/ Administration	3.44	.832	Moderately Serious
Operations	3.44	.817	Moderately Serious
Community Resources	3.40	.866	Moderately Serious

Legend: 4.21-5.00- very serious ; 3.51-4.50 moderately serious ; 2.51-3.50 serious I; 1.51-2.50 not serious; 1.00-1.50 not evident

Table 4 depicts the relationship between the level of participation of elementary teachers and their gender. Based on the results presented, gender has no significant relationship to the level of participation of elementary teachers in the enumerated community-based activities with p values .261 to .759, which are greater than 0.05. This is a contrast with the findings of Romance (2009), in which she found out that in terms of community involvement, sex was found to be significantly different which means that male teachers were more involved compared to the female teachers in community activities.

However, in terms of Food Production and Economic Stability, gender was found to be significant with the p- value of 0.03 which is less than 0.05.

Table 4. The Relationship between the level of participation of elementary teachers and their Gender

Pairs of Variable	Correlation Coefficient	P-value	Interpretation
Peace and Conflict Prevention/Resolution Activities	1.873	.759	Not significant
Water, Hygiene and Sanitation Activities	2.922	.571	Not significant
Basic Education and Literacy Activities	3.684	.451	Not significant
Disaster Risk Prevention and Mitigation Activities	3.899	.420	Not significant
Disease Prevention and Treatment Activities	2.325	.676	Not significant
Sports and Recreation Activities	3.934	.415	Not significant
Cultural and Historical Preservation Activities	5.266	.261	Not significant
Food Production and Economic Stability	10.706	.030	Significant
Environmental Awareness Activities	4.922	.295	Not significant

P value < 0.05 Significant

Table 5 exhibits the relationship between the level of participation of Elementary teachers and their age. As shown in the table, age has significant relationship to the level of participation of elementary teachers in some enumerated community-based activities such as in Peace and Conflict Prevention/Resolution Activities, Water, Hygiene and Sanitation Activities, and Disaster Risk Prevention and Mitigation Activities with p values .003 to 0.045, which are less than 0.05.

However, age is not significantly related to community-based activities such as Basic Education and Literacy Activities, Disease Prevention and Treatment Activities, Sports and Recreation Activities, Cultural and Historical Preservation Activities, Food Production and Economic Stability, and Environmental Awareness Activities, with p values .114-.492 which are higher than 0.05. It can also be deduced that the level of participation of elementary teachers is either affected or not affected by their age depending on the community-based activities they are involved with. Brenann (2015) pointed out that participation is also affected by the age. He emphasized that the older youth is being more active, provide opportunities for community involvement. This may reflect that older youth are more in need of community service credit, skills attainment, and experience. Alternately, it indicates that younger adolescents might be an untapped audience from which volunteers and future community activists could be recruited.

The result is congruent with the study conducted by Nuquid (2001), as cited by Francisco (2005) in which she found out that age exhibited significant differences. Furthermore, the result is contrary to the study conducted by Gueverra (2009), in which she concluded that community involvement did not differ significantly when the respondents were classified according to age.

Table 5. The Relationship between the level of participation of elementary teachers and their Age

Pairs of Variable	Correlation Coefficient	P-value	Interpretation
Peace and Conflict Prevention/Resolution Activities	22.979	.003	Significant
Water, Hygiene and Sanitation Activities	18.323	.019	Significant
Basic Education and Literacy Activities	8.486	.387	Not significant
Disaster Risk Prevention and Mitigation Activities	15.833	.045	Significant
Disease Prevention and Treatment Activities	7.424	.492	Not significant
Sports and Recreation Activities	8.729	.366	Not significant
Cultural and Historical Preservation Activities	11.159	.193	Not significant
Food Production and Economic Stability	9.146	.330	Not significant
Environmental Awareness Activities	12.943	.114	Not significant

Table 6 shows the relationship between the level of participation of Elementary teachers and their civil status. Based on the results presented, civil status has no significant relationship to the level of participation of elementary teachers in the enumerated community-based activities with p values 2.77 to .935, which are all greater than 0.05. On the contrary, civil status was found out to be significantly related to environmental awareness activities with a p-value of .002 which is less than 0.05. This also implies that the level of participation of elementary teachers in most of the community-based is not affected by their civil status which can be single, married, and widow.

Moreover, this is also related to findings of Kinyanjui and Josephine (2013) in their study. They found out that socio-economic status, including civil status, has nothing to do with the level of participation in participatory development in Kenya.

Table 6 . The Relationship between the level of participation of elementary teachers and their civil status

Pairs of Variable	Correlation Coefficient	P-value	Interpretation
Peace and Conflict Prevention/Resolution Activities	5.470	.706	Not significant
Water, Hygiene and Sanitation Activities	2.983	.935	Not significant
Basic Education and Literacy Activities	8.672	.371	Not significant
Disaster Risk Prevention and Mitigation Activities	6.219	.623	Not significant
Disease Prevention and Treatment Activities	9.830	.277	Not significant
Sports and Recreation Activities	5.545	.698	Not significant
Cultural and Historical Preservation Activities	3.124	.926	Not significant
Food Production and Economic Stability	3.586	.892	Not significant
Environmental Awareness Activities	24.525	.002	Significant

Table 7 unleashes the relationship between the gender of the respondents and the problems they encountered in participating in community-based activities. Based on the data presented, gender was found to be not significantly related to the problems encountered by elementary teachers with a p-value that ranged from .202 to .902. This implies that male and female elementary teachers have no differences in terms of the problems they encountered in participating in different community-based activities. In contrast, Liu and Ramsey, in their study, found female teachers were more satisfied than male teachers. This gender difference has been confirmed by several other studies (Bogler, 2001; Papanastasiou, & Zembylas, 2008).

Table 7. The relationship between the gender of respondents and the problems they encountered in participating in community-based activities

Pairs of Variable	Correlation Coefficient	P-value	Interpretation
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Public Relation	5.967	.202	Not significant
Government/ Administration	0.930	.920	Not significant
Operations	1.959	.743	Not significant
Community Resources	4.935	.294	Not significant
P value < 0.05 Significant			

Table 8 shows the relationship between the age of the respondents and the problems they encountered in participating in community-based activities. As presented in the table, age was found to be significantly related to the problems encountered by the elementary teachers in terms of government, operations, and community resources problems with p values from .001 to .047.

This implies that as the teachers grow older, the bigger responsibilities and the cautious they are in analyzing the problems in the community. Experienced teachers tend to be more observant and more critical in assessing the needs of the community. On the other hand, age was found to be not significantly related to public relation problems with .355 as a p-value.

Table 8. The Relationship between the age of respondents and the problems they encountered in participating in community-based activities

Pairs of Variable	Correlation Coefficient	P-value	Interpretation
Public Relation	8.846	.355	Not Significant
Government/ Administration	27.657	.001	Significant
Operations	15.724	.047	Significant
Community Resources	20.622	.008	Significant

Table 9 summarizes the relationship between the civil status of the respondents and the problems they encountered in participating in community-based activities. Based on the results, it can be deduced that civil status was found to be significantly related to the problems encountered by the elementary teachers in terms of operation and community resources problems with p values .005 and .018 respectively. It also implies that since most of the respondents were married, more responsibilities are bestowed to them which might create a great impact in dealing with everyday life. They become more observant and careful in making a decision especially in different community problems that affect the welfare of their family. But in terms of public relation and government/ administration problems, civil status was not significantly related to the problems encountered by the elementary teacher with a p value of 0.589 and 0.71 as a p-value.

For public relation and government, the result is confirmed by the study of Odanga (2015), in which she found out that marital or civil status has no influence on the teacher's efficacy in analyzing problems. On the other hand, in relation to operations and community resources, a study done in Nigeria by Klassen and Chiu (2010) showed that there was a statistically significant relationship between marital status and self-efficacy. Hence, those who were married had higher levels of self-efficacy than those who were not. Self-efficacy helps the teachers participate in the community-based activities since physical and mental effort should be always exerted.

Table 9. The Relationship between the civil status of respondents and the problems they encountered in participating in community- based activities

Pairs of Variable	Correlation Coefficient	P-value	Interpretation
Public Relation	6.524	.589	Not Significant
Government/ Administration	14.453	.071	Not Significant
Operations	21.835	.005	Significant
Community Resources	18.471	.018	Significant

Conclusions

The following conclusions were drawn based on the findings of the study.

Relative to the results of the study, the hypothesis stating that there is no significant relationship between the respondent-related factors in terms of gender, civil status, position classification, highest educational attainment, the length of service, and the number of seminars attended and their level of participation in community-based activities was partly upheld by the study. Also, the hypothesis stating that there is no significant relationship between the respondent-related factors in terms of gender, highest educational attainment, the length of service, and the number of seminars attended and the problems they encountered in community-based activities was also partly upheld by this study. Age, civil status, and position classification were found to be significantly related to the problems encountered by the elementary teachers in participating in community-based activities.

Based on the relationship between the level of participation and personal-related variables, gender was found to be significantly related to the level of participation of elementary teachers in Food Production and Economic Stability activities. It was also found out that the level of participation of elementary teachers in peace and conflict prevention/ resolution, water, hygiene and sanitation, and disaster risk prevention and mitigation activities was affected by their age. Further, civil status has a significant relationship with teacher's participation in environmental awareness activities.

Recommendations

In view of the findings and the conclusions, the researcher hereby recommends the following:

Based on the results of the study, it is recommended that community developers and leaders need to consider schools, especially teachers, as a primary support in initiating community-based activities. There must be some form of consultation, communication, and coordination between the schools and community heads relative to the assignment of teachers in the community. Community, school heads, and principals need to conduct proper monitoring and evaluation of the community-based activities, in which the elementary teachers are involved with, to identify the strengths and weaknesses, and likewise the impact of the program to the community. A committee may be created to formulate possible solutions to the problems encountered by the teachers in community-based activities.

There is also a need to include participation in community-based activities in the official time of teachers. Giving incentives and certificates in the form of service credits should be given to those teachers who actively participate in community-based activities. An extended period of time for the training on skills enhancement and development to carry out community-based programs and projects need to be highly considered by the school heads and even by the community leaders.

Moreover, it is also recommended that experienced teachers need to undergo enrichment seminars and in-service training and workshops to strengthen their commitment and dedication not only to the improvement of the school but the whole community as well. This is very important since according to the findings they are moderately involved in community-based activities. Since age was found to be significantly related to the teacher's participation, there is a great need for the younger

teachers to continue participating in different community-based activities and older ones need to be more involved in such activities for the personal and professional development.

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**Practices and challenges in managing curriculum implementation by female
school heads in South Africa and Zimbabwe**

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ABSTRACT

This study is part of a broader project that investigated curriculum management and implementation practices and the challenges being faced by some female primary school heads in South Africa and Zimbabwe. The study attempted to establish the extent to which subordinate teachers and the female heads themselves perceived issues and challenges in managing curriculum implementation in school heads' quest to improve learning. The research adopted a mixed research design, where descriptive survey was employed. A randomly selected sample of ten female school heads and forty teachers from both countries was used. Two self-constructed questionnaires were used to collect qualitative and quantitative data. The research results showed that, though female primary school heads (as a unitary group) perceive themselves as effective and confident in managing curriculum implementation, teachers perceive them as weak in managing curriculum implementation. Good management practices were as perceived as impacting positively on learning. The major challenges women school leaders face are cross-national and emanate from lack of resources, cooperation, support from teachers and the community. Despite these challenges, female leaders were found to be resourceful in improving learning and their schools. Very few workshops and in-service programmes to enrich female heads have not been initiated in the areas they are perceived to be weak, especially curriculum evaluation. The paper calls for more interactive meetings between and among teachers, the department of education and female school leaders to improve decision-making and curriculum management and implementation in respective schools.

Key words: Female school heads; curriculum; challenges; management; South Africa, Zimbabwe;

INTRODUCTION AND BACKGROUND TO THE STUDY

Research shows that women are fundamentally disadvantaged in the social, economic and political spheres locally and globally (Bharath, Narayanan and Seyhun 2009; Coleman and Cater 2006; Hogan and Perrucci, 2007; Hunt, 2016; Johnson 2017; Khapoya 2015; Kumra. and Vinnicombe, 2008; Mandell and Johnson, 2016). In the area of educational management, for instance, the number of women remains quite low (Coleman 2012; Grogan and Shakeshaft 2010; Makura, 2011; Morley, 2013; Wrushen and Sherman, 2008). Several factors contributed to this seemingly unending trend. Societal culture and negative attitudes towards women (Dorsey, 1989; Eagly and Mladinic, 1989; Esmail, Darry, Walter and Knupp, 2010; Fernández, 2010; Mostafa, 2005, 2003) are commonly cited. Eagly (2007), Moore, Griffiths and Payne (1987) opine that the reason for this situation lies in the social and attitudinal factors.

Gender and educational management

Men have always been associated with school management while women are associated with classroom teaching (Dorsey, 1989; Skelton, 2002; Strober and Tyack, 1980). Women desire to enter and operate in educational management, which, traditionally, is viewed as exclusively for men. Such desire is often viewed with suspicion by some societies. Such notions stem from perceptions that still view women's roles as mothers, wives and care givers in the family. When women venture into this 'masculine terrain', they risk being accused of being labeled poor managers, and even earn euphemistic tags such as "male daughters and female husbands" (Amadiume, 2015) "lost leaders" or "absent talent" (Morley, 2013). No wonder that, before Zimbabwe's political independence, there were no women educational leaders in the Masvingo education district. A study by Oplatka (2006) revealed that in developing countries, women have been traditionally assumed to be domestic and household managers and thus divorced from organisational decision-making positions or managerial work. Women thus represent a very small percentage of school management personnel even though the overall state of the teaching service is balanced slightly in favour of women (Chabaya and Gudhlanga, 2013; Kochan, Spencer and Mathews, 2014; Marshall, 1985). Therefore, to break into school leadership and management, women thus meet stiff resistance unleashed by a patriarchal society.

Brunner (2001) argued that the fewer number of women who have made it to leadership positions as school heads have sometimes resigned and have taken lower positions because of lack of support from the community and other stakeholders. This is in addition to school-based ICT related challenges resulting from no or limited access to ICT and a rigid structural educational system (Buabeng-Andoh, 2012). Although some research results reveal that female school heads continue to be underutilised by societies who do not want to recognise the talents of aspiring female school heads (Morley, 2013) as they can make a real difference in the quality of schooling in respective nations. Brunner (2001) reveals that research studies that focus on women in school management are conducted mainly by women (see Shakeshaft 2010). This perhaps, is indicative of a literature that does not highlight female leadership as an important field of study in education.

At independence in 1980, the Zimbabwe government saw it necessary to bring about educational and professional equity in Zimbabwe. The same can also be said of South Africa. By promulgating policies meant to improve the welfare of women through the affirmative action policy (Chabaya and Gudhlanga, 2013). The policy recognises the role of women and has provisions that guarantee protection of women from any form of discrimination from entering especially school management. The effort by the government of Zimbabwe, for instance, to advance women to decision making positions, or school management positions through the affirmative action policy are reflected in several circulars such as No. 11 of 1991. It reads in part: "---- Heads of schools should identify women who could be promoted to school head position without reference to seniority, women to be given first preference to men". Subsequent circulars, notably, number 22 of 1996 and number 1 of 1997 prompted women to apply for school management posts. Consequently, many female teachers responded positively and joined the field

of school management. Despite these promotions, female school heads experience endemic challenges. Some communities do not readily support female school heads (Eagly, 2007; Mostafa, 2005 and Optalka, 2006). These challenges may impact negatively on female heads' achievements of curriculum goals especially in the digital era.

Studies by Lumby, Azaola, De Wet, Skervin and Williamson (2010) and Makura (2012) reveal that women themselves harbour low self-esteem because they have been appointed to traditionally male roles. Chabaya, Rembe and Wadesango (2009) share similar views arguing that women themselves lack self-confidence to handle school management issues. This view presupposes that women are unable to handle responsibilities. Doresh (2001) stresses that women who aspire to be school heads must identify gender specific factors that impede their professional growth and effectiveness, and must develop skills to surmount all the challenges. Women thus face plethora challenges in entering school leadership and managing school curricula. The preceding account and available literature point to a dearth in comparative literature on female school leadership in the Africa subregion.

The curriculum concept

A curriculum as applied to schools transcends the confines of the school by considering the values, traditions and beliefs of the whole culture of society (Fernández, 2010; Makura and Makura, 2012;). The word also evokes a variety of meanings to different people (Posner, 1995). In this paper, we look at curriculum as an "... instrument through which complex societies transmit and maintain cherished bodies of knowledge values and skills" (Gatawa (1990:16). Such knowledge could be sociological, philosophical, political and economic. These aspects reflect and reinforce the social realities in the wider society (Makura and Makura, 2012). Female leadership is a reality that society is slowly grappling to accept. Given the patriarchal nature of the African society, female leadership is accepted with a pinch of salt. Society is slowly being socialised into accepting women (and leadership) as part a social group (Cockburn, 1991) but not as unique individuals. Thus, women need to internalise certain values, customs and skills that characterise schools and society. Moreover, women need to be aware of the school characteristics and the values they espouse and identify with these. Posner (1995) opined that any curriculum developed by society is not value neutral. Hence society expects female leadership to manage a school curriculum without bringing in deviant patterns of leader behaviour. It is in this vein that curriculum implementation should be viewed as a conduit for the development and reflection of respective communities' 'grassroot' values (Chikoko, 2008).

Management of curriculum implementation in the 21st century

School management activities encompass management of curriculum implementation by putting human, material resources and tasks towards the achievement of curriculum goals (Coleman, 2012; Lee and Dimmock, 1999; Lumby *et al*, 2010; Nkomo, 1995). At school level, effective level of management of curriculum implementation involves effective planning (Nkomo, 1995). It is through this process of planning that the school heads set the pace and time of various school activities, setting goals and devising and means of achieving them. The effectiveness of school leadership in the management of curriculum implementation lies in the head's ability to establish a course of action for self and others to accomplish specific goals. Research shows that that schools run by female heads are better than those run by males in most respects (Brunner, 2001; Lumby *et al*, 2010; Grogan and Shakeshaft, 2010; Makura, 2011). Female headed schools reportedly produce outstanding examination results suggesting that female heads are effective on planning school activities and programmes. Hoy and Miskel (1995) stress that planning has greater effect on organisational effectiveness.

Management of curriculum implementation in the 21st century also involves effective organisation of staff and resources. Haskin (1995) reveals that female heads are perceived as collaborative in nature and thus create people-oriented decisions that utilise staff and resources effectively. This

implies that female heads are being perceived as effective in managing school curriculum implementation. Managing curriculum implementation also involves directing. It is through this process that the school head moves teachers in the direction that facilitates the achievement of curriculum goals. Directing also involves includes climate building, delegation of duties of teachers. Effectiveness in managing curriculum implementation also lies in the heads ability to handle these tasks. A study by Rimmer and Davies (1985) reveals that female are relation-oriented leaders such that they can create a conducive school climate which enhances effective accomplishment of curriculum goals. Therefore, if female heads are perceived to be effective in this task they are likely to be effective in managing curriculum implementation also involves supervising.

A study by Glass (2000) reveals that female heads use collaborative approach and people-oriented styles which makes them effective in managing school activities, the study also reveals that with this approach, female heads promote effective teaching because the use of effective management styles that forms the foundation of effective collaborative curriculum implementation. Literature shows that women who choose school headship as a career tend to introduce deviant pattern of behavior in such a role (Shakeshaft, 2010). It is such a notion that is rejected by post-colonial liberal feminists.

Theoretical framework

This work is guided by the Post-colonial feminist theory as articulated by Mestry and Schmidt (2012). Post-colonial theory is fundamentally an offshoot of, and reaction to western liberal feminism. Mestry and Schmidt (2012) posit that the skewed nature of gender demographics in school leadership positions is not a matter of equity but a historical, cultural, political and social imperative. Though the authors use South Africa as a case in point, it is our contention that the theory buys currency in our endeavour to articulate the Zimbabwean school leadership scenario as both countries have contrasting histories. Post-colonial feminists, according to Mestry and Schmidt (2012), argue that gender and patriarchy oppression have marginalised most women in post-colonial states of which Zimbabwe is one such. While the race card is not profound in the Zimbabwean case (due to the very insignificant numbers of whites, coloured and Indians in the country), it is traditional culture (Fernandez, 2010) that appears to have entrenched itself to the detriment of women advancement. Hence, post-colonial feminists challenge oppression in its many forms. They, as liberal feminists, are critical of past and current social relations, arguing that women are independent, non-submissive hence autonomous (Makura, 2011). Post colonial theory thus advocates the emancipation of women without “glorifying pre-colonial culture” (Mestry and Schmidt, 2012). Regrettably, recent studies (Skelton, 2012:77-78) view the large numbers of women in primary school teaching as ‘feminisation of primary schooling [that is] detrimental to the education of boys’. It is such notions that are rejected by post-colonial feminists particularly black feminists who are at variance with western notions of emancipation and instead propose the addressing power imbalances in society. The mission of Post-colonial feminists is to alter, by challenging aspects in society that seem to curtail women advancement especially perceptions which view women as docile victims of patriarchy. Instead, women in school leadership should be viewed as diverse, independent and unique experiences that should be tapped through listening to their own voices. This paper, thus attempts to report on women’s perceptions and that of their subordinates.

The purpose of the study

The study intended to establish the extent to which female primary school heads perceived themselves (alongside their subordinate teachers) as effective and confident in managing curriculum implementation in the digital era. Since educational management is traditionally viewed as exclusively for men, the study attempted to establish whether women educational leaders also faced challenges in managing curriculum implementation.

Statement of the problem

The comparative effectiveness of female primary school heads in managing curriculum implementation in an African context is an under-researched area. On the other hand, there is a substantial body of knowledge that catalogues challenges faced by women school heads, but these studies rarely refer to disadvantaged contexts. It is for these considerations that this study was conceptualised.

Research questions

The following questions constituted the research problem investigated.

- (a) To what extent do female primary school heads in South Africa and Zimbabwe perceive themselves as effective and confident in managing curriculum implementation?
- (b) To what extent do teachers perceive female primary school heads as effective and confident in managing curriculum implementation?
- (c) What challenges do female primary school heads face in managing curriculum implementation?

The significance of the study

It was the researchers' hope that this research was going to benefit the following people and institutions. To:

- (a) help policy makers to formulate policies that might improve the efficiency and welfare of women in school management especially utilising ICTs.
- (b) encourage curriculum planners to plan for effective workshops on curriculum implementation and to involve women in school management in curriculum planning issues.
- (c) suggest to the Department/Ministry of Education the need to plan for workshops or in-service programmes that enrich school leadership particularly through utilising technology.
- (d) prompt the female primary school heads to identify and conceptualise the challenges they faced and to make informed decisions in educational management.
- (e) to sensitise teachers on the challenges facing female heads in the hope that they realign their attitude towards female heads for the better.

RESEARCH METHODOLOGY

Research Design

The researcher employed the mixed methodology research design. This design emphasizes qualitative and quantitative of phenomena. Mixed methods enable the researcher to describe trends, attitudes and opinions on the studied phenomenon (Creswell, 2014). Partially, the design maximizes objectivity by using numbers and statistics (McMillan and Schumacher, 2014). Creswell (2014) that through statistical explanations and analysis used in quantitative design, results produced are more accurate and representative. The qualitative component focuses on phenomenon in their natural settings and without due regard to mathematical constructs. The researcher resultantly benefits from the experiences or narratives of phenomenon. Best and Kahn (1993) point out that qualitative designs are non-experimental, the data consist of words rather than numbers and there is in depth verbal description of the phenomena. McMillan and Schumacher (2014) also stresses that the major goal of qualitative designs is to capture the richness and completing of behaviors from the participants. Consequently, the researcher found this design very suitable for this study.

Population, Sample and Sampling Procedures

The population

The population of the study was all female primary school heads and their subordinate qualified teachers in Masvingo and Motheo districts of Zimbabwe and South Africa respectively. Their exact number could not be readily established from the district education offices.

The sample

A sample of ten (10) female primary school heads was selected from primary schools that are headed by females in the said districts. Forty (40) qualified teachers from the ten (10) selected schools constituted part of the sample.

The sampling procedure

The researcher initially used multistage sampling. Female headed schools in the education districts were identified and ten were conveniently selected to participate in the study. The respective female school heads automatically constituted the heads' sample. I then randomly selected four teachers from each school with the assistance of the respective school heads. We requested for both male and female teacher participants before coming up with the final sample of the teachers per school. Using this strategy, the required number was attained.

Research Instruments.

The questionnaire

The researcher used two self-constructed questionnaires to elicit information from both female primary school heads and their subordinate teachers. The selected female primary school heads completed a questionnaire with four sections. Section A solicited biodata, section B and C required respondents to show by ticking their perception of their effectiveness in managing curriculum implementation on at thirteen leadership and management dimensions. Section D required respondents to respond to structured or free response questions that also sought to establish the perception of their effectiveness as well challenges they face in managing curriculum implementation at their respective schools. The teachers' questionnaire was also divided into four sections. Section A also collected biodata. Section B to C collected data on teachers' perception of female heads' effectiveness in managing curriculum implementation on eleven leadership dimensions.

Validation

The level of validity and reliability of the questionnaires were determined before the questionnaires were administered in the field through a pilot study. In this case, questionnaires were administered to three (3) female Zimbabwean primary school heads and ten qualified teachers under female heads who were not included in the final sample. Statistical tests, comments and suggestions from the pilot study enable the researcher to come up with valid and reliable questionnaires before these were administered in the field.

Data Collection Procedures

Permission to collect data from respective school was sought from the respective Regional Education offices prior to the administration of the research instruments. Thereafter, the researcher personally administered the questionnaire to selected teachers and selected female primary school heads. Two schools were visited each other day during working hours. The researcher, after getting further permission from the school administration, personally administered the questionnaires to teachers in their classroom and collected all questionnaires after completion. The researcher also administered questionnaires to female primary school heads in their offices and collected all questionnaires after completion.

Data analysis procedures

The researcher used descriptive statistics (frequencies, mean, percentages, etc) to analyse data from Sections B and C of the two questionnaires. Where the respondents indicated very effective (V.E) and or effective (E) these were taken to mean effective (E). Where the respondents indicated strongly agree (SA) or Agree (A) these were taken to mean Agree (A). The responses were summarised and expressed as percentages. The data were presented in tables. Data from the free response questions of the questionnaires were studied and scrutinized for their content and meaning. Data were categorised to discern themes which are presented in tabular form.

Ethical considerations

In keeping with ethics, the names of the schools, their [school] heads and teachers shall remain eternally anonymous. Prior to collecting data, the participants were assured of confidentiality.

RESULTS

This section presents results of the study on perceived effectiveness of female primary school heads in managing curriculum implementation and the challenges they face in managing curriculum implementation. The first part presents the female heads' perceptions of their effectiveness in managing curriculum implementation. The data are presented in tabular form, followed by a detailed interpretation and discussion.

Female heads' perception of their effectiveness in managing curriculum implementation

Tables 1 presents the data collected from the school heads' questionnaire regarding their effectiveness in managing curriculum implementation.

Table 1: **Female primary school heads' ratings on their effectiveness**

Key

N	=	Total frequency
VE	=	Very effective
E	=	Effective
W	=	Weak
INE	=	Ineffective

No	Task performed	N	VE	E	% E	W	INE	%
1	Planning	10	5	5	100	0	0	0
2	Delegating	10	1	7	90	1	0	10
3	Organizing staff and resources	10	7	3	100	0	0	0
4	Communicating	10	60	2	80	2	0	20
5	Provision of resources	10	2	3	50	4	1	50
6	Supervision of lessons	10	8	2	100	0	0	0
7	Checking records	10	5	4	90	1	0	0
8	Demonstration lesson	10	1	2	30	6	1	70
9	Motivation of staff pupils	10	7	3	100	0	0	0
10	Staff development	10	1	3	40	5	1	60
11	Producing good results	10	5	3	80	2	0	20
12	Climate building	10	7	3	100	0	0	0
13	Evaluation	10	1	3	40	6	0	60

From the data displayed in table 1, the results of the study seem to suggest that female primary school heads perceive themselves as very effective in planning, organisation of staff and resources, communication, supervision of lessons, motivation of staff and pupils, checking records as well as creating a conducive school climate, on the other hand they perceive themselves as weak in evaluation and presentation of demonstration lessons. The results further indicate that female primary school heads rated themselves highly on planning, supervision and climate building (100%). The Table shows that 100% of female heads rated themselves as very effective planners. This means that the female heads feel that they can effectively establish a course of action for self and teachers to accomplish specific curriculum goals. It also means that the female heads feel that they can effectively establish procedures for monitoring and regulating, processes, tasks and activities for teachers and pupils as well as monitoring delegated assignments. In the same vein 90% of female primary school heads rated themselves highly in delegating of duties to teachers irrespective of gender. The research data indicates that female primary school heads rated themselves highly in communication. Table 1, shows that 80% of female primary school heads feel that they are good communicators. In other words, the female primary school heads feel that they are confident in expressing themselves or presenting

curriculum ideas, tasks clearly verbally or written. Table 1 reveals that 70% of the female school heads felt that they are weak in managing demonstration lessons. The results also showed that 60% of the female primary school heads rated themselves low on managing staff development and evaluations (60%). On provision of resources, half (50%) of the school heads neither felt confident nor weak.

Table 2: Teachers' ratings on their perception of female primary school heads' effectiveness

Key

N	=	Total Frequency
VE	=	Very effective
E	=	Effective
W	=	Weak
INE	=	Ineffective

No	Task performed	Male teachers						Female teachers							
		N	VE	E	%	W	INE	%	N	VE	E	%	W	INE	%
1	Planning	20	2	3	25	10	5	75	20	1	5	30	12	2	70
2	Delegating	20	3	4	35	10	3	65	20	1	4	25	13	2	75
3	Organising staff and resources.	20	1	5	30	12	2	70	20	3	4	35	10	3	65
4	Communication	20	12	2	70	1	5	30	20	10	3	65	5	2	35
5	Provision of resources	20	1	4	25	10	5	75	20	1	3	20	13	3	80
6	Lesson supervision	20	1	6	35	7	6	65	20	2	5	35	8	5	65
7	Demonstration lessons	20	0	2	10	13	5	90	20	0	3	15	14	3	85
8	Motivating staff and pupils	20	8	5	65	2	5	35	20	9	4	65	3	4	35
9	Producing good results	20	2	4	30	10	4	70	20	0	7	35	10	3	65
10	Evaluation	20	0	6	30	7	7	70	20	0	6	30	8	6	70
11	Climate	20	2	5	35	10	3	65	20	2	5	35	10	3	65

From the data displayed in Table 2 above, between 65 and 70% of the male and female staff members perceived the female heads as effective in two curriculum areas only. These were: communication (75% and 65% males and females respectively) and motivating staff and pupils (both 65%). Surprisingly, the female school heads were perceived as weak in all the remaining areas. These are: presentation of demonstration lessons (90% and 85% males and females respectively), planning (75% and 70% males and females respectively), delegating of duties (65% and 75%), organising of staff and resources and producing good results (70% and 65%), evaluation (70% in both cases) and supervision of lessons and developing the school climate (65% both cases). Thus, both male and female teachers, feel that the female primary school heads are weak in establishing a course of action for self and teachers to accomplish specific curriculum goals.

Table 3: Summary of the problems faced by female heads as perceived by themselves

Key

N	=	Total frequency
F	=	Frequency
%	=	Percentage

No.	Nature of the problem (Theme)	N	F	%
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1	Lack of trust from community	10	9	90
2	Lack of resources	10	9	90
3	Negative attitude of teachers	10	8	80
4	Lack of community support	10	7	70
5	Male teachers not accepting criticisms	10	6	60

From the data displayed on Table 3 above, the results of the study seem to indicate that the major challenges being faced by female head in managing curriculum implementation included: lack of trust from the community (90%), lack of resources (90%) teachers' negative attitudes (80%) and male teachers not supporting them (60%). Data from some of the narratives showed that parents did not respond to their call for a meeting. Most felt that parents did not support curriculum innovations especially the School Development Committee/Association (S.D.S/A) do not really accept heads decisions on financial issues. Data from the teachers (below) also pointed to a lack of community support as one of the challenges facing female primary school heads. The lack of resources especially for instructional purposes featured prominently. Observation by one of the researchers revealed that ICT resources were not available at all the schools visited. The female primary school heads (80%) feel that teachers' negative attitude towards female heads is also one of the major challenge they are facing. Most female heads (70%) felt that teachers do not accept female heads' criticisms after lesson supervision (data not revealed here) while some teachers were reportedly not performing duties delegated to them promptly. Male teachers, particularly were not very cooperative as compared to female teachers according to the female school heads. Some school heads opined that both male and female teachers preferred male primary school heads to female ones. Consequently, teachers who held such beliefs failed to cooperate with the female school heads. Our study also attempted to establish teachers' perceptions of the challenges facing their respective female school heads. Table 4 summarises the data.

Table 4: Summary of problems faced by female primary school heads as perceived by teachers

Key

N = Total frequency
F = Frequency
% = Percentage

No.	Nature of the problem	N	F	%
4.3.2	Acting on rumours	40	34	85
4.3.3	Lack of resources	40	34	85
4.3.1	Lack of confidence in decision making	40	28	70
4.3.4	Lack of community support	40	28	70

Data in Table 4 reveals that teachers (85%) felt that female school heads sometimes base their decisions on rumours as a result teachers fail to accept some of their decisions. An equal number (70%) of the teachers, cited lack of material resources as an issue the female school heads grappled with. Such resources include ICT related ones as it was evident that the visited schools did not have these. Seventy percent of the teachers opined that female school heads lacked assertive confidence in making decisions. An equal number also confirmed that the community was not supportive of the school heads.

DISCUSSION

From table 1, the results suggest that female primary school heads perceive themselves as very effective in planning, organisation of staff and resources, communication, supervision of lessons, motivation of staff and pupils, checking records as well as creating a conducive school climate, on the other hand they perceive themselves as weak in evaluation and presentation of demonstration lessons. The finding that female heads are effective in planning agrees with

Makura (2011) who reported that schools run by female heads produce good academic results because female heads are effective in planning. Effective planning leads to effective management of curriculum implementation (Makura & Makura, 2012). To this effect, Elms (2002) study confirms that female heads are people oriented leaders, hence can cultivate favourable school climate that can enhance effective curriculum implementation. It is easier to manage well planned curriculum activities. On this premise, if female primary school heads perceived themselves as good in planning they are likely to be effective in managing curriculum implementation.

A compelling finding was that female heads perceived themselves as good in communication. This concurs with Funk (2004) who reported that females tended to describe themselves as effective communicators and team builders, a point that corroborates Nkomo's (1995) observation. The fact that the female heads perceive themselves as good communicators and that they also cited communication as their major strength, implies that female heads perceive themselves as confident and effective in managing curriculum implementation. This finding also agrees with Hoy and Miskel (1991), Skelton, 2012 and Strober and Tyack (1980) who revealed that female heads perceive themselves as effective instructional leaders. Glass (2000) reveals that, because women are collaborative in nature, female school heads can effectively communicate with all stakeholders and produce meaningful and lasting curriculum changes. Surprisingly, the female school heads were perceived as weak in eight of the ten curriculum areas. Seventy percent (70%) of both male and female teachers feel that female primary school heads are weak in carrying out evaluations. This finding is at variance with some researches that report female heads as good instructional leaders (Funk, 2004; Lee and Dimmock 1999; Makura, 2011; Skelton, 2002) than as poor evaluators and poor decision makers. This implies that teachers perceive female heads as ineffective in managing curriculum implementation. The heads' effectiveness in managing curriculum implementation is also determined by his/her ability to organise staff, resources, workplaces and time to a large extent.

The study seem to suggest that the major challenges being faced by female primary school heads in their quest to manage curriculum implementation effectively ranges from, lack of support from the community (Lumby *et al*, 2010; Mostafa, 2005, 2003; Oplatka, 2006), lack of cooperation and support from teachers due to negative attitudes and finally lack of resources. The finding that parents do not give full support to female heads endorses Chabaya and Gudhlanga, (2013), Grogan, and Shakeshaft (2010) and Makura (2011) observation that some communities are at variance with female heads due to cultural myths and beliefs, as a result parents may fail to cooperate fully with female heads. Community support is very crucial to effective management of curriculum implementation. Nkomo (1995) opined that parents can hinder the effective implementation of curriculum innovations if they display negative attitudes. Therefore, without community support, female school heads might not manage curriculum implementation effectively. Teachers are also key implementers of the curriculum, so their cooperation with the school head determines the heads' effectiveness to a large extent. Therefore, lack of cooperation and support from community and teachers due to their negative attitudes (Chabaya *et al*, 2009; Kochan *et al* 2014) is also one of the major challenges facing female heads in managing curriculum implementation.

This study also indicated that lack of resources is also a major challenge facing female heads in South Africa and Zimbabwe in managing curriculum implementation. The study inferred that the absence of ICT resources (Buabeng-Andoh, 2012) could be part of the resources referred to by the school heads and their subordinate teachers. Moreover, resources like textbooks, syllabi and other resource materials are crucial to effective curriculum implementation (Nkomo, 1995). Some school heads argued that parents compounded the problem of resources by failing to pay school fees on time. Consequently, the female school heads struggled to provide adequate resources.

All these challenges can affect female primary school heads negatively in managing curriculum implementation.

Conclusion

The results of the study seem to suggest that female heads (as a unitary entity) perceive themselves as effective in planning, supervision of lessons, communication, motivation of staff and pupils, organisation of staff and resources as well as creating a good school climate. On the other hand, female primary school heads feel that they are weak in evaluation and presentation of demonstration lessons. The challenges are common in the studied countries. The research findings suggested that, both male and female teachers, irrespective of country under study, consider female heads as poor in eight leadership and managerial functions particularly, poor in presentation of demonstration lessons, planning, delegating, organising staff and resources and in general, as evaluators. Further results indicated that teachers, rated female heads as poor decisions makers arguing indecision was characteristic. But the teachers viewed them good at motivating staff and pupils towards the achievement of curriculum goals. Regarding challenges, the study revealed that the school heads faced several challenges notably lack of trust and support from the community, lack of resources teachers' negative attitudes particularly male teachers not supporting them. These are crossing cutting challenges.

To mitigate some of the identified challenges, the paper implores governments and schools to invest in ICT for learning, teaching and administration. My observations noted the lack of ICT in most of the schools visited. School heads and teachers alike never referred to ICT either as a challenge or as an asset that was instrumental in school administration and management. And yet technology for learning and teaching is the bye-word in the 21st century. School heads should call for more interactive meetings with teachers and communities while involving them in decision making in the hope that they may view the female school heads in good light. Above all, more females should be appointed into school leadership positions especially in the primary school sector where they have empirically excelled as leaders while constituting the greatest portion of the teaching fraternity.

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Professional knowledge for a higher education programme in Business and Information Administration

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This paper focuses on the development of a Diploma in Business and Information Administration to ascertain the knowledge base of the curriculum. The problem being investigated is whether the knowledge base of the curriculum supports the provision of epistemological access to professional knowledge. The study drew on the Semantic dimension of Legitimation Code Theory which was used to investigate the knowledge areas drawn on in the development of the Diploma. A multi-method research design was employed to establish the knowledge base of administration work which draws on a Delphi approach. The Delphi panel comprised employers, graduates and academics. Both quantitative and qualitative data was attained by using Delphi and student surveys, interviews, workshops, and an international benchmarking exercise. The feedback from the Delphi panel and students highlighted the significant knowledge bases which should be included in the curriculum. However, the choices made by the Business Faculty involving the standardisation of some first year subjects may hamper the students' epistemological access to the professional disciplinary knowledge needed for cumulative knowledge building. This has resulted in tensions within academic departments and difficulties for curriculum developers to ensure that the Diploma provides students with epistemological access to professional knowledge.

**Relevance of Literature in English Taught in Secondary Schools to
Students' Moral Development in Selected Secondary Schools in
Jinja District**

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2013/HD04/932U

**A Dissertation Submitted to the Directorate of Research and Graduate
Training in Partial Fulfillment of the Requirements for the Award of
Degree of Masters of Education in Language and Literature Education of
Makerere University**

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Abstract

This study was conducted in Jinja district, with the main objectives of: finding out the extent Literature in English taught in secondary schools is relevant to students' moral development, Establishing the extent to which the students of Literature in English are exposed to moral lessons during teaching and learning process, ascertaining the extent to which the Literature texts align with the moral development aspects outlined in the National Curriculum.

Questionnaires, classroom observation guides, interviews and document analysis were used to collect data. The study revealed that both learners and teachers are aware of the moral aspect of Literature subject. Forty six point two percent (46.2%) agreed that Literature is relevant to students' moral development while forty four point one percent (44.1%) strongly agreed. Forty three point eight percent (43.8) strongly agreed that students of literature are exposed to moral implications of the Literature subject while forty two point eight percent (42.8%) agreed. The results from document analysis and interviews indicated that the Literature texts on syllabus align with the moral development intentions spelt out in the national curriculum.

Therefore, all stakeholders directly involved in the education system should be made aware of the relevance of literature teaching, the teaching of literature should be practically done through learner centered pedagogy and the selected literature texts to be taught in secondary schools should clearly bring out the aspect of moral development.

Introduction

Literature in general terms has been part of the African people and the entire world. In Africa, for instance, Literature was majorly transmitted by word of mouth from generation to generation. This is what is referred to as oral Literature. This kind of Literature served several purposes but the major part of it was and still is to inculcate acceptable moral values to the young. Adedoja (2010) points out clearly that the social relevance of African Literature cannot be controverted, because Literature cannot be divorced from social values. She emphasises that literature is more or less about social values and how such values are being projected by the various writers in their various generations” (p.34). Similarly, society does not need an education that prepares learners only for academic excellence and demonstration of skills. Rather the society needs an education that makes learners morally equipped for useful and purposeful services to themselves, the nation and to live in manner required by God (Ochard, 2008). In East Africa and Uganda in particular, the elders used stories, proverbs, riddles, folk tales and narratives, legends and myths to communicate to the young (Okot 1973:90). Up to today, the parents and grandparents use oral literature to communicate to the young. African authors such as Achebe (1958) and Ngugi (1965) use a lot of oral literature to enrich their written literature. In the novel; the *River Between*, Ngugi (1965) uses a proverb, ‘the oil of a family is not for rubbing into the skins of the strangers’, a popular kikuyu proverb to develop his major concerns. In *Things Fall Apart*, Achebe (1958) uses the character of Okonkwo to explore the question of harmonious living. With the many African proverbs and sayings, the reader is made aware of the moral issues of society. This study therefore, sought to investigate whether Literature in English taught in secondary schools is morally relevant to students’ lives.

With the introduction of formal schooling (education), written literature was up lifted at the expense of oral literature. Some schools continued teaching oral literature others concentrated on written literature. However, one important thing noted in written Literature, especially African written Literature is the integration of oral Literature into the written Literature. On top of that, written Literature too contains very beautiful, artistically written out stories and people’s life experiences that carry a lot to learn from. The question of investigation, however, was whether the teaching of Literature in English exposed learners to moral lessons during the teaching and learning process.

Statement of the Problem

In Ugandan secondary schools today, there is an insistent moral deterioration among students, especially in Jinja district. This moral deterioration is anticipated to degenerate if immediate interventions are not devised. The unbecoming behavioral life style of our learners today leaves everyone agape! Almost every week, the media reports misconduct, an aggressive behaviour of our learners, a shocking story or a strike in one school or another. The society in Jinja is shocked by the immoral behaviour of their children in schools, something that was never heard of. The learners do fight amongst themselves or sometimes fight the teachers who teach them. The intentions of strikes are unclear since, dubious behaviour and misconduct are exhibited Sabates (2011). The male students get involved in raping their female counterparts, breaking into peoples’ shops and loot their goods and other times they even burn valuable school property. Several researchers have identified several factors for this alarming indiscipline including family background, school environment, and society among others (Aremu & Oluwole, 2000;) but the topic remains unsettled and inconclusive. Also, a number of studies have been carried out on the value of literature, importance of literature and the relevance of literature to students’ career development. However, little

attention has been paid on how literature taught in secondary schools in Uganda can mould and shape the behaviour of the learners. In an ideal African society, all the young revered a teacher, or an administrator, an elder or any other individual perceived as an authority (Adedaja, 2010). The shocking news, however, is that the young today no longer have regard for the elders, just as the learners have little respect for their teachers. Therefore, establishing the extent to which the teaching of literature in English is relevant to students' moral development is critical in helping students improve on their behaviour in school, the community and the entire nation.

Purpose of the Study

The purpose of this study was to establish the extent to which the teaching of Literature in English in secondary schools empowers students to develop acceptable morals in their society.

The objectives of the study

This study was guided by the following objectives:

- (i) To find out the extent Literature in English taught in secondary schools is relevant to students' moral development?
- (ii) To establish the extent to which the students of Literature in English are exposed to moral lessons during teaching and learning process?
- (iii) To ascertain the extent to which the Literature texts align with the moral development aspects outlined in the National Curriculum?

Findings and Discussion

The Relevance of the Literature Taught to Students' Moral Development

The first objective of the study was to establish the relevance of Literature in English taught in secondary schools to students' moral development. Question 1 stated; "to what extent is Literature in English taught in secondary schools relevant to students' moral development?" The present study showed that Literature teaching in secondary schools is relevant to students' moral development. The findings showed that forty three point eight percent (43.8%) of the respondents interviewed from the four selected secondary schools strongly agreed that Literature in English taught in secondary schools is relevant to students' moral development. This study is in agreement with the study conducted by Lakarebe (2004), who reported that, folk tales are a major means of inculcating the acceptable values in society. In her research she looked at just one aspect of Literature yet her results showed that Literature has a moral bearing in the lives of the young.

Furthermore, the findings revealed that all these literature texts are relevant to students' moral development. All the twelve teachers of Literature in English from the four selected secondary schools believe that Literature in English taught in secondary schools is beneficial to the lives of the students. They believe that the themes in Literature texts are universal and applicable to our Uganda setting. This finding is in agreement with Wanyenya (2013) who carried out his research in Eastern Uganda. He found out that the themes which are contained in oral literature are something of great importance. In his view, oral narratives usually have particular themes. Therefore, understanding the meaning which is reflected in a theme is something which pleases the audience.

From the study, it was revealed that, the teachers believe when they prepare the lessons, moral lessons are always at the back of their minds. They said that no Literature lesson can be conducted and concluded without reference to moral implications. They emphasised that the students of Literature have an advantage over other students who opt out Literature subjects because the moral lessons in Literature are not commands but practical. The results therefore, indicated that there was focus on moral values and discipline in the teaching and learning process. This is similar to Emike (2012) who conducted his research on Afenmai Proverbs: Towards a Pragmatic Analysis, concluded that most of the proverbs analyzed were morally didactic; they taught morals and ethics, hence, they advised, admonished, warned, informed, condemned, rejected, suggested, directed and declared. In his research he noted that the speech acts were conveyed across different domains of life; family relationship, communal life, leadership, and religion.

This study confirmed Wanyenya's (2013) assumption that oral literature carries themes which are relevant to the audience. The results analysed revealed that all these literature texts are relevant to students' lives. They carried almost similar thematic concerns that reflect our society today. The eight texts analysed were concerned with mostly love and marriage, friendship and love, suffering, poverty, hypocrisy, crime, religion, and politics among others which the learners can learn from. The study agrees with Itoro (2014) study who concluded that, in the proverbs studied, there was a warning against stubbornness, lawlessness, irresponsibility, greed, waste. The tradition is against bribery and cheating, corruption and suppression for there is vengeance for every evil action.

This research revealed that Literature in English is very significant and relevant in the lives of the learners. The results showed that Forty three point eight percent (43.8%) of all the respondents interviewed from the four selected secondary schools strongly agreed that Literature in English taught in secondary schools is relevant to the students' moral development. This is in agreement with Hughes (2009) in the paper presented to the 4th Asia Pacific Conference on Educational Integrity concluded that, fragmented modules or courses will impact on student learning to some degree, the strongest message we can give students that the development of ethics is valued is for it to saturate an entire program. This paper does directly allude to morals and strengthens this study by emphasizing the value of ethics to students' lives. He further asserts that the exploration of the assessment of ethics is problematic but, he argues that the development of ethics is too important to be left to chance.

Students Exposure to Moral Lessons during Teaching and Learning

The second objective of the study sought to establish whether the students of Literature are exposed to moral lessons. Question 2 stated that "are the students of Literature in English exposed to moral implications of Literature teaching?" the study revealed that in most secondary schools, learners of Literature are exposed to moral implications through teaching of Literature as a subject. The study showed that the teaching of Literature in English in the four selected secondary schools had a significant impact in the moral development of the learners. The results revealed that, Forty four point one percent (44.1%) of all the respondents interviewed from the four selected secondary schools strongly agreed that Literature in English taught in secondary schools is relevant to the students' moral development and that they are exposed to the moral implications of Literature. This is in line with a similar study carried out by Michaelson, (2005) who argued that part of the value of stories is moral, understanding them and the characters involved in a story is one way in which we make moral sense of life. When teachers teach or expose learners to plays like *The Government Inspector*, the story itself contains moral lessons. Learners come to realise that corruption is indeed a wicked practice. The study also showed that when lessons are drawn

from a Literature text; it makes sense of moral life. This strongly agreed with Michaelson, (2010) who argued that not until moral lessons are drawn from the Literature texts, do we make a sense of moral life. So, to him, there is no Literature without moral lessons drawn from it.

Along the same line, the results analysed concur with Gottschall (2012) whose study observed that the most impressive finding is just how fiction shapes the readers: mainly for the better, not for the worse. He added that fiction enhances the reader's ability to understand other people; it promotes a deep morality that cuts across religious and political creeds. More peculiarly, fiction's happy endings seem to warp our sense of reality. This is in agreement with this study whose analysed results revealed that the learners of literature have exposure to various characters presented in literature texts that they tend to emulate hence influencing their behaviour and the manner in they conduct they conduct themselves. Also Bullough (2011) conducted his study on "*Ethical and Moral Matters in Teaching and Teacher Education*". He observed that nearly all the authors of literature texts assume that teaching is essentially and fundamentally a moral enterprise. He argues that the nature and quality of the teacher/student relationship informs virtually all that the teacher does, including how they organize and present lessons.

Also a very important point to note from Michaelson, (2012) is that Literature introduces a panorama of characters, some wealthy, some poor, some morally exemplary, and some who seem in all their creative richness, morally bankrupt. It is now incumbent upon the teachers of Literature to guide the learners in how they view these characters and what they learn from them. Even those characters Michaelson calls 'morally bankrupt' can have a moral lesson from which the students of Literature can reflect upon, avoid, or even share with others. For example, Joshua in the *River Between* is presented as a cruel, arrogant and unkind pastor. He does not understand what he preaches but he is there to please the whites. He loses his daughter Nyambura, and even refuses to bury her. The learners who are exposed to this character have a lesson to learn and even share with others. This is because, in a Literature text, such characters are resented, disliked or talked against by other characters. By the end of the whole story, the learners identify which characters appeal to them and why, while others are not appealing and why.

From the study, the results indicated that there was focus on moral values during the teaching and learning process. In Literature lessons, learners have the opportunity to observe, experience or learn something moral from the texts presented. This study is in line with Milne (2008) who, in her research, suggested that stories in Literature dramatise the ability to distinguish actions in context of their objects and the overall purpose and meanings attached to them by their agents in ways that allow the reader privileged access to what are often unspoken and inaccessible. Therefore, when learners are exposed to literature texts, it is a privilege to them. Thus, it confirms Koyaiah, (2014) assumption who, in his study emphasises the role of the teacher in exposing the learners to moral development. He argues that nothing can be more helpful in moulding the child's moral behavior than the teacher's own conduct. He believes that a Teacher has to set a high standard of moral behaviour before the learners. In his study, Koyaiah found a strong relationship between the teacher's role in setting moral standards and the exposure of moral lessons to the learners. If the teachers set the moral standard, the learners are naturally exposed to moral lessons.

The Alignment of Literature texts With Moral Development in the National Curriculum

The third objective of the study investigated the alignment of literature texts with moral development intentions spelt out in the national curriculum. Question 3 stated that "Are the

Literature texts aligning with the moral aspect outlined in the National Curriculum?” The study from the four selected secondary schools showed that the teaching of Literature is done in line with the moral development intentions. Fifty percent (50%) of the teachers interviewed from the four selected secondary schools agreed that the teaching and learning of Literature in English aligns with the broad aims/goals of teaching it according to the national curriculum (Table 4.9 and Figure 4.9). This is consistent with NCDC (2012), which asserts that when a student is exposed to Literature in English teaching, he/she becomes more responsible, mature, patriotic, motivated and productive citizen. According to the Constitution of the Republic of Uganda, one of the objectives of secondary Education is to produce responsible and productive citizens of the country. This is in line with the aims and objectives of teaching Literature in English in secondary schools at all levels.

Conclusions

The existing research show that the indiscipline cases among students in Jinja district is on the rise (Drasimaku, 2010). Several researchers have identified several factors for this alarming indiscipline including family background, school environment, and society among others (Aremu & Oluwole, 2000;) but the topic remains unsettled and inconclusive. Therefore, this study sought to fill the gap from the Literature teaching point of view. It focused on establishing the relevance of Literature teaching to students’ Moral development, their exposure to moral lessons and the extent to which the Literature texts align with moral lessons. The data collected and analysed show that Literature teaching in secondary schools is relevant to students’ moral development. The respondents interviewed reported that plays and novels in Literature teaching enable learners to learn numerous values that they exhibit when they grow up. It teaches them to value one another’s role in the society and how they relate to people around them. This is an indication of moral development (Table 4.10 and Figure 4.10).

The study also revealed that Literature teaching in secondary schools exposes learners to moral lessons. The data collected from the four selected secondary schools showed that teaching of Literature in English had a significant impact in the moral development of learners. When lessons are drawn from Literature texts, it makes sense of moral life. The teaching of Literature in English in secondary schools equips learners with morals which are helpful in their adult life. Since Learners spend more time at school with teachers than with parents, schools play a big role in exposing learners to moral life especially the teaching of Literature. (Table 4.11 and Figure 4.11).

The study from the four selected secondary schools also showed that the Literature texts align with the moral development intentions spelt out in the national curriculum. When a student is exposed to Literature in English teaching, he/she becomes more responsible, mature, patriotic, motivated and productive citizen (Table 4.14)

Recommendations

Basing on the results obtained from this study and considering that the behaviour pattern of our learners is degenerating from time to time causing destruction of schools and property which has affected the educational outcomes, the practical implication of this study might benefit the government, curriculum developers, policy makers and other stakeholders. Thus, it is highly recommended that:

All stakeholders who are directly involved in the running and designing of the curriculum of the Education system, should be made aware of the relevance of literature teaching to

learners so that Literature in English is made a compulsory subject in all secondary schools in Uganda. This will act as a benchmark for the learners' moral development.

The teaching of Literature in English in secondary schools should be practically done, where it focuses on the learners through a learner centered pedagogy. The use of literature texts, role play, and drama during lessons should be emphasised as this exposes, challenges and inspires the learners to emulate what is morally acceptable and reject what is portrayed as evil in society.

The selected literature texts to be taught in secondary schools, should clearly bring out the aspects of moral development. This should be in line with the NCDC expectations on the teaching of literature and emphasises moral development. All secondary schools in Uganda should therefore, furnish their libraries with the recommended Literature novels, plays and poetry texts so that the broad aims of teaching literature is achieved.

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Schoology: Alternative Digital Teaching Tool for English Language Teacher at a Local University in Thailand

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ABSTRACT

Mobile learning and web 4.0 technologies provide an autonomous learning space that facilitates English language classroom activities and accommodates EFL students to display their own learning style. Schoology is a powerful m-learning platform created with the intention that it would assist EFL students to better participate in autonomous English language learning. This study aims to report on how Schoology facilitates in an English language classroom that is part of a local university in Thailand. This qualitative case study involved 40 weekend English major students who used Schoology as a learning platform to help them better acquire correct pronunciation of English words and sounds through an English Phonetics class. The finding suggested that the use of Schoology helped students to experience greater autonomy in English learning. Students were able to maintain more control over their learning management, cognitive process, and choice of learning resources. The autonomy is due to the ability of instructor who identified and managed the learning resources that students needed to practice outside the classroom into Schoology. Moreover, the results showed that Schoology facilitated interaction and communication among students and between students and teachers. The increased communication that was a result of the use of Schoology had a positive impact on the result. Schoology mobile application enabled students to learn English at their pace, place and time. Media-material used through Schoology encouraged students to explore more material online during the time they had available to extend their learning.

Keywords: *Schoology, M-learning, ELT, EFL, autonomous learning*

1. INTRODUCTION

In today's digital world English language teachers have access to an immense tool box that provides a wide selection of choices. As a teacher, part of our responsibility is to determine which online tools are the best for the education system and students we teach. Then we must integrate those tools into our lessons. There are two points of view to take into consideration when looking for the tools to supplement classroom instruction. They are the teachers, or teaching, point of view and the students, or learning point of view. Both are important. Teachers are familiar with digital applications but depending on their age they have had to adjust to this new school method. Students, for the most part, have grown up in a digital world and expect to find digital learning applications in the educational environment. Teachers must find a way to develop lesson plans that include the latest technology and make sure they are familiar with the operations. Students spend a lot of their time online so it is reasonable to ensure that online learning aids are added to the curriculum. The online resources must be evaluated to ensure they support the required levels of technology and target language to challenge student skills and provide sufficient motivation.

Teachers in Thailand will have to organize monitoring the participation in the online community by students of all levels, to include traditional and non-traditional students in order to verify real-time interaction, communicative purposes, and student safety. Most students do not have much experience in the academic educational environment. They tend to have more influence from general daily use and informal chat with friends. This study focused on Schoology, which is a teaching and learning tool. During the study the teacher explored this application to determine how a powerful online teaching and learning tool, such as Schoology, can impact how teachers and students behave, teach, and learn in an English language classroom.

2. LITERATURE REVIEW

The literature review section provides the description and function of Schoology. It is an E-learning application that is intended for academic environments. Schoology has been available for use in classrooms for several years but it is not utilized by Thai teachers as much as it could be because many are still uncomfortable with digital technology.

What is Schoology?

Schoology is what is known as a Social Learning Network (SLNs) that is an online teaching tool to be used by teachers who integrate blended technology in their classroom (Low, 2017). www.schoology.com is the website for the application. The webpage explains that "Schoology is an online learning, classroom management, and social networking platform that improve learning through better communication, collaboration, and increased access to curriculum and supplemental content". Schoology features are; Instructional tools, communication and collaboration, Mobile App, data analytics and personalized learning, interoperability, assessment management. Schoology is available online at no cost for teachers and students. The application is user friendly and provides a secure environment. The design of Schoology mirrors the functions of Facebook. Conversations can take place, messages can be sent, statuses are updated, and there is a sharing of information and other media within the group network.

A group of teachers who are members of a discussion board and users of Schoology in their English classroom point out that "Schoology helps meet literacy goals by keeping relevant the ways we teach and the ways students are expected to learn. Instead of forcing conversations to take place in our classrooms that rely so much on old ways of teaching and

learning, we can incorporate our teachings into this new digital age. Students can interact with one another, as well as their teachers, outside of the classroom in academic ways, emphasizing the bridge between academics and real life situations and helping students to be more involved in their schooling.” (Manning, et al , 2011).

Schoology in Education: Related Studies toward Schoology

Schoology was selected as a tool for learning and teaching in several learning areas of the study. The program has also been used as research material in educational studies.

Related studies can be found as follows:

Ardi (2015) studied about “Promoting Learner Autonomy through Schoology M-Learning Platform in an EAP Class at an Indonesian University”. The results showed that “Schoology m-learning platform help the students to exercise autonomy in EAP learning. The students exercised their control over learning management, cognitive process, and selection of learning materials. The exercise of autonomy is due to the affordance of Schoology.”

Pow (2017) formed the research on the topic “E-learning Implementation in Foundation English Class: Learners’ Perspectives and Learning Achievement”. The results of the study showed students’ positive attitudes on the use of Schoology e-learning platform at high level as well as the positive perception of Schoology as a language learning tool. The implementation helps improve students’ learning achievement as indicated by a large number of students with higher scores in summative test.

The purpose of the study of Wibowo (2016)’s research is to investigate the perception of the students who were using Schoology as online learning medium for argumentative writing class. The findings from the study indicated that Schoology could be an appropriate addition to teaching tools, providing an integration of technology that is well received for both of the teacher and the students.

Sherf and Graf (2014) referred to Laura Fox’s action research in their article toward using Schoology’s discussion forum in a Spanish classroom. The purpose of the study was to discover how the use of forum would affect student confidence in conversations in class and inspire them to connect with others. Fox reports that “Interestingly, the more active participants in class were not those who participated most actively in the forum, which seemed to offer a setting in which to converse more openly,”

Rubio (2016) conducted a research to identify the attitude of 101 students towards online-integrated teaching using the online program Schoology in the subject Literature. The findings of the study revealed that students have positive attitude toward online-integrated teaching using Schoology.

The researcher used the above information from literature review and related studies to form this study which confirms that Schoology is an appropriate learning platform to use in the classroom. The study will determine if it will be appropriate for English language classroom usage.

3. RESEARCH QUESTION

What are students’ opinions toward the use of Schoology M-learning platform in a Phonetics course?

4. METHODOLOGY

4.1 Subject

The subjects of this study were 40 English major weekend students. Six were males and thirty-four were females who enrolled in “1551012: English Phonetics”, which is a compulsory course for first year English major students at Ubon Ratchathani Rajabhat University (UBRU), in Ubon Ratchathani, Thailand.

Thirty-one subjects were employed at either government or private organizations. According to the survey they spent weekends studying English in pursuit of a bachelor degree that would help them upgrade their current job or get a better job before they got accepted to study in the department. The age range of this group was 25-45 years old.

The remaining nine students were unemployed or owned a business. They came to study on weekends to get a bachelor degree for the purpose of getting a job. The age range of this group of students was 22-27 years old.

4.2 Instrument

There are two instruments for the study; Schoology application and a questionnaire.

4.2.1 Schoology Application

A course was created with an access code that was used as the channel to offer online exercises and audio books for students to practice the lessons. The exercises and books contained the following; phonetic alphabet, phonetic transcription and pronunciation from an authentic sound from native speakers.

A regular textbook entitled “English Pronunciation in Use, Intermediate, Self-study and Classroom Use,” by Mark Hancock, Cambridge has been assigned to use in this course.

There are 60 sub-chapters to practice pronunciation with an audio CD that comes with the textbook so students can use it when offline. Students will need both textbook and a machine to play the CD; it could be either an individual CD player or a laptop with a CD function.

To facilitate this, the teacher inserted a page in the course which already existed and was available in Schoology, then put the content from the textbook (a scanned page from the textbook) and the matched audio into the same page. The purpose for this was so the student can access the lesson with the audio at the same time. That allows them to practice by listening to the sounds and pronouncing them out loud.

In the section of “Quiz”, the teacher created an online flashcard set of a phonetic alphabet or words using a phonetic alphabet. This allows students to practice by using a transcript of the lesson through a real-time quiz.

4.2.2 Questionnaire

Open-ended questionnaires were distributed to the students at the end of the course to administer the research instrument. The questionnaire attempts to evaluate students’ opinion toward the use of Schoology as the corporate learning activity in their English phonetics class.

4.3 Data Collection

The study was conducted after the completion of the English Phonetics course at the end of academic year 2/2017. The teacher created an online English phonetics course on Schoology. Sixty units of lessons were created on “Page” section in the course. Students accessed each unit and practiced their pronunciation of a phonetic alphabet. Words were also created in the “Quiz” section for students to practice their phonetic transcription.

4.4 Data Analysis

The responses from the open-ended questionnaire were analyzed to evaluate whether they were positive or negative opinions toward Schoology as an online learning platform in their English phonetics class.

5. RESULTS

Question 1: How difficult for you to start using Schoology in this Phonetics class?

The student answers to this question fell into three groups.

First group consisted of students who answered that it was very difficult for them to start using Schoology for the first few weeks of the course. The reasons they gave were; some of them rarely use computers or learning applications on their smartphone. They admitted that they use their smartphone only to call-in and out. Fewer answered that they mostly only use in their phones for Facebook, Messenger and LINE. After they were introduced to Schoology, they noticed that Schoology in the website and the smartphone application version are different. They were got confused, but got some help from classmates to solve the problem.

The second group of the students answered that it was not too difficult for them to start using Schoology because they have heard and seen the application because some students used it for other subjects. Some of them already had Schoology application and account in their smartphone but never used it in the classroom. They also mentioned that most of the functions in Schoology look like Facebook so that it was not too difficult for them to learn how to use it.

The third group of the students answered that it was easy for them to start using Schoology both in their laptop and smartphone because they have been using some learning applications with other subjects. But for Schoology, even though it was their first time to use in this classroom they found that it was not too difficult for them to learn how to use it. They commented that they were excited to use Schoology because it's new for them and fun to use new applications on the phone to learn and communicate with teacher instead of just Facebook. They also said that they enjoy helping students who had a difficult time to start using Schoology. They also discovered that they can learn new things while they teach others.

Question 2: How often do you use Schoology to practice your pronunciation toward the lessons through this Phonetics class?

Most students answered that they practice their pronunciation through the course created in Schoology almost every day because each assignment in the textbook required audio to listen to correct pronunciation from native speakers. They said that if they only read by themselves and use a regular dictionary to practice their pronunciation that when they

come back to the class and hear the teacher pronounce the words, they will be different. But if they listen through the audio book via Schoology they can hear the actual pronunciation. Then when they come back to class, they hear the same pronunciation that they have been practicing.

Some students answer that they use Schoology to practice their pronunciation only a few times during the week, due to their workload at the office and housework at home. But during weekends when they come to the university, they have more chances to use Schoology with their classmates. They mentioned that they enjoy using Schoology with their classmates on weekends because when they encountered any problem of the language function or Schoology system they can ask their classmates to help with solving the problem.

Few students answered that they can't use Schoology during the week, only weekends at university when they have access to the internet. This group of students works in a rural area during the week, so that it's difficult for them to get a high speed internet connection. What they have is the internet connection through their smartphone which is very low signal. They also comment that to get to this Phonetics course on Schoology they needed a strong signal for the internet connection because most of learning resources are audio books or audio files.

Question 3: What do you like most and least about using Schoology in this Phonetics class?

Some students answered that Schoology is very convenient to use for practicing their pronunciation toward the lesson and assignment each week because they didn't have to carry books and CD player around. They just need an earphone to plug into their smartphone and listen to the audio which they can view parts from the book display while listening to the audio running.

They liked that they can listen to the audio repeatedly as needed, which help them to practice their pronunciation more. They also liked that the audio is clear, so that it's good for them to listen again and again to practice their lesson.

Doing quizzes on Schoology was fun because it's real-time, so they can get results and feedback immediately. That allows them to evaluate and improve themselves faster.

Some students explained that they like that they can use Schoology anywhere anytime wherever they can access the internet. One student said that during the day after she had finished her chores at home, she went to a coffee shop and practiced Phonetics subjects while she enjoyed her coffee in the afternoon. Another student said that while she was waiting to pick up her kids at school, she could practice the lessons through Schoology which was very convenient.

The things that they liked the least while using Schoology was when there's no internet connection or they experience an interruption of the connection while they are listening to the audiobook.

Question 4: How do you evaluate yourself after using Schoology to practice your pronunciation?

Most students said that their pronunciation and their knowledge of learning to pronounce correctly have been improved. Their knowledge of the phonetic alphabet and phonetic transcription has also improved. They admitted that even though they still have not mastered the lessons they have gained a lot of English skills through this online course. They claimed they believe the main reason is because they can practice repeatedly.

Only a few students explained that their pronunciation had not improved much because they didn't have enough time to practice through this online application during the course. They would like to have more time to practice if they can arrange it.

Question 5: What would you like to recommend on using Schoology in English classroom?

The students' response to this question made it clear that a majority of them had positive feelings towards using Schoology as part of their learning process. Most of the respondents stated that they fully support an increase of Schoology use by their teachers because it made their lessons more productive. Many students recommended that teachers in all of the subjects they study make learning content be made available for them to download after classes. They suggested that more teachers in the English department use Schoology for their English courses so there will be greater access to learning resources. A good suggestion was made that asked for a Schoology manual be produced in Thai so that the students will have an easier time overcoming problems caused by technology challenges or not understanding instructions. The final suggestion was to provide more links to resources so that students can have more learning resources to supplement the textbook.

6. DISCUSSION AND CONCLUSION

According to the results of the study, it can be concluded that Schoology as an E-learning platform is an appropriate teaching tool for EFL classrooms. It provides benefits to both internal and external class activities. The majority of students in the study were satisfied in using and learning English pronunciation through Schoology the content that was created by the teacher. The created content was system ready for them to use to practice by themselves. Even the "digital immigrants" who were not familiar with new technology in the classroom enjoyed using Schoology to assist them to practice their pronunciation through the course. The fact is that Schoology is available on smartphones and tablets which made the application even easier to access and was convenient for students to do activities to practice their English skills.

In conclusion, Schoology encourages students' motivation and positive attitudes towards learning activities to practice their pronunciation and transcribe phonetic alphabet in Phonetic class. Using the online learning tool, Schoology, in regular lessons helps students by creating an effective learning and teaching environment. However, there were some technical problems reported by students while using the application online such as the inability at times to be able to listen to the audiobooks and access quizzes due to a poor internet connection or slow speed.

Overall, this study shows increased student engagement when technology is used. The implementation of Schoology through the course motivated students and produced a positive effect on student's learning outcome.

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Second Language Learning and Self-Confidence

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Abstract

In this study, I reexamine how a clearer pronunciation allows Second Language Learners to develop their self-confidence. Although I have previously researched this topic, my current project explores how increasing the time an instructor invests with students in practicing, correcting, and improving their pronunciation directly benefits their self-confidence allowing them to be better learners. The research is conducted in the Study Abroad Preparation course. My subjects are freshmen and sophomores, pronouncing clusters or words which contain different pronunciations of the letter “a.” I conclude that, once students get over the initial anxiety, and after the instructor corrects them with appropriate listening and speaking interventions, they are more confident and, therefore, can recognize and pronounce the words correctly.

Keywords

pronunciation, self-confidence, reading interventions, speaking interventions, anxiety, language production

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Secondary School Design & Technology Educators – Sketching to Design, What Makes a Creative-self?

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Abstract

...Thinking then, is something that goes on in the head, and only in the head, supported by appropriate internal mental representations. Designing is taken to be a kind of thinking, as a kind of mental problem solving. In principle, all designing could thus take place inside the head of the designer, with no external signs of any designing happening until the final design is delivered. In practice, this is not what usually happens: designers make and use so called external representations, and in particular, they make and use sketches, especially in the so called early stages of any designing. – Smithers, T. (2001)

Sketching is a nonverbal mode of representation (Cross, 2007). It is taught as design thinking tool in the subject Design & Technology (D&T) in Singapore secondary schools. The need to understand sketching and its educational role is therefore paramount for D&T educators in order to deliver a focused programme that will benefit the pupils.

This paper aims to discuss a pedagogy for teaching sketching-to-design at secondary school level, and to understand the act of developing a creative-self via the process of sketching-to-design. It is based on three events of design-and-make works, namely: collar pin logo design work for a school-based Talent Development Programme by 14 pupils'; classroom design work by nine lower secondary pupils'; and design work for in-service D&T teacher training by one of the author.

Keywords: Sketching, Sketching and thinking, Creative-self, Design thinking

1.0 Introduction

Creative-self is a human quality associated with a creative culture, to be encouraged and to be imbued among Design & Technology (D&T) teachers and pupils in the Singapore secondary schools. To this end, the author works on a pedagogical model through the teachers to grow creative-self in the pupils. D&T is a subject taught in the local secondary schools. It is compulsory for 13 to 14 year olds and an elective for 15 to 16/17 year olds. It aims to inculcate in the pupils an added dimension of thinking and practice through designing and making three-dimensional purposeful objects.

Creativity – a specific interplay between imagination, improvisation, and innovation (Beghetto, 2014; Sawyer, 2006) – is among the most valuable human qualities achieved during the process of learning and teaching
– Karwowski, M., 2015

Creativity is aspired by education systems all over the world. This is especially so when uncertainty is a constant. Related research work and books on creative self-concept; creative self-efficacy; and creativity of the human mind are vast and varied over decades. An almost unpublished creativity-laden area is sketching-to-design in D&T classroom practice. This is an aspect of non-verbal mode of representation among others (Cross, 2007) on which anchors the philosophy of Singapore D&T practice, with reference from design practices as an epistemological general knowledge human being needs to acquire apart from the 3Rs (reading, writing and arithmetic).

Sketches, in any form, of ideas by pupils are often readily accepted by teachers; any inaccurate representation of the ideas is substantiated by annotations and notes. The process of conceptualisation and development is also not obvious from the singly produced annotated and noted sketches. Such inept sketching-to-design reflects the teachers' view that sketching is unimportance and inconsequential in designing. The author has grappled with the attitude during their collective D&T practice over six decades.

Sketching-to-design in the industrial and product design practice is essential but presumed. Probing conversations with design practitioners revealed that they do not think much about sketching itself as they simply sketch to think and to design. This is understandable given their educational background/training and practice. However, young designers are often lamented to lack sketching abilities. Nonetheless, there seems to be a non-quintessential air and attitude when it comes to claiming sketching as part and parcel of the designing process. This is strangely so although sketches, drawings, visuals, images, digital images, digital image manipulations are ubiquitous in the material world. Perhaps it is because only the finalised high quality sketches/drawings are showed.

In response, the author argues for the need to indulge in purposeful-quantitative sketching as an important endeavour to designing and to creating with insights. It involves considerable time and efforts in numerous episodes of sketching to design. The argument is based on the author's insight into the importance of a laborious sketching-to-design process to designing of an object and in imbuing a creative-self culture in both teachers and pupils.

2.0 Background

D&T takes the essence of professional design practice in part as universal general knowledge good for the development of pupils as persons (Chia & Tan, 2011). The subject refers to the three main areas of justification for design education within general education (Cross, 2007, p. 30), namely:

- Design develops innate abilities in solving real-world, ill-defined problems.
- Design sustains cognitive development in the concrete/iconic modes of cognition.
- Design offers opportunities for development of a wide range of abilities in nonverbal thought and communication.

The nonverbal thought and communication dimension plays an important role in developing the designing action of both the D&T teacher and D&T pupil. When doing so, the author deliberated endlessly how could one acquire and strengthen nonverbal thought and communication through D&T or simply by designing.

...Thinking then, is something that goes on in the head, and only in the head, supported by appropriate internal mental representations. Designing is taken to be a kind of thinking, as a kind of mental problem solving. In principle, all designing could thus take place inside the head of the designer, with no external signs of any designing happening until the final design is delivered. In practice, this is not what usually happens: designers make and use so called external representations, and in particular, they make and use sketches, especially in the so called early stages of any designing. – Smithers, T. (2001)

Designing in the head of the designer in principle can happen but in practice, designers use sketches in their early stages of any designing. What does this ‘early stages’ of designing mean? Is this ‘early stages’ of designing and the use of sketches an important bridge for building a creative-self?

The phenomenon behind the extent of sketch or design sketch is rightly and effectively described in Goldschmidt, G. (1991) in Buxton (2007) A Sketch of a Dialogue with a Sketch, that the “conversation” between the sketch (right bubble) and the mind (left bubble). See figure 1 below. “A sketch is created from current knowledge (top arrow). Reading, or interpreting the resulting representation (bottom arrow), creates new knowledge. The creation results from what Goldschmidt, G. (1991) calls “seeing that” reasoning, and the extraction of new knowledge results from what she calls “seeing as.”

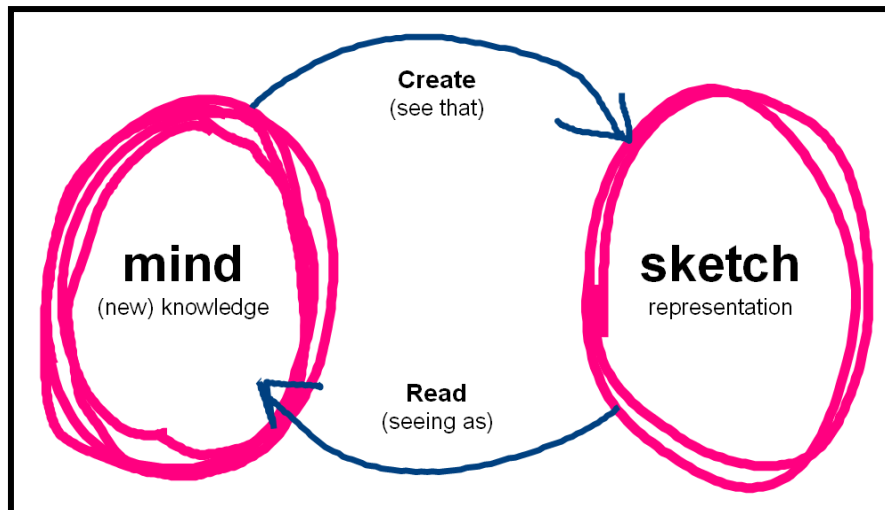


Figure 1: Extracted from ‘Sketching User Experiences – getting the design right and the right design’, Buxton, B. (2007).

The two reasoning acts that intertwined together, ‘seeing as’ and ‘seeing that’ reasoning, are essential and powerful visual thinking acts of sketching-to-design. In other words, it explains a person’s figuring/sorting out process using sketches. Perhaps there is more to this act of visual thinking. A pertinent application is the purposeful-quantitative sketching-to-design which has an important role in D&T teaching and learning. Through the integral teaching of designing and sketching, the enactment of purposeful-quantitative sketching-to-design allows pupils to learn how to sketch and to grow in confidence in the act of sketching while they attempt numerous episodes of designing.

Figure 2 shows a screen capture from a Google search on “design sketches”. It shows a sampling of designer sketches, offering a credible impression that sketches are made extensively to design and to create in the world of design. Drawing parallels from professional design practices, the advocated act of sketching-to-design in D&T education should be recognised as one important aspect for general education. When practiced intently and purposefully, a creative-self culture will form first among the D&T teachers and there after the pupils.

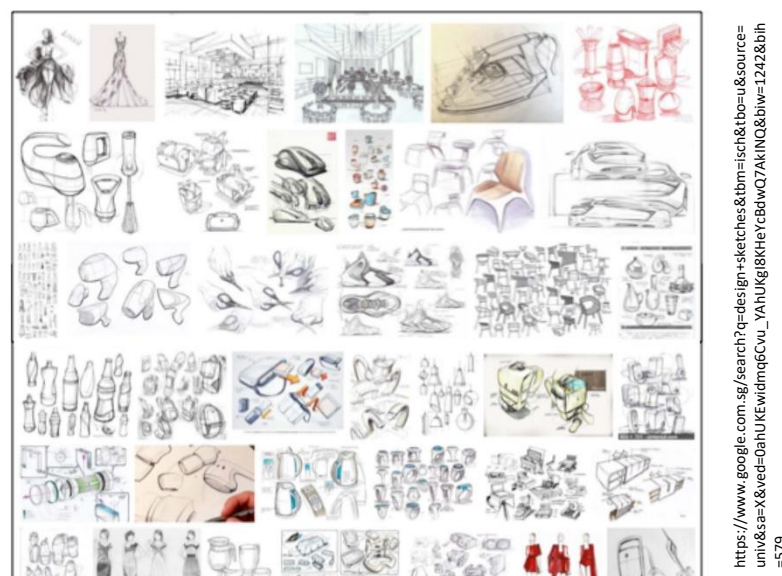


Figure 2: Screen capture of Goggle search on “design sketches”.

3.0 Approach

This study takes the form of a qualitative description of two events of secondary school pupils’ design work and one event of the author’s design work for D&T teacher in-service training. The events are as follows:

- Event 1: collar pin logo design work by fourteen lower secondary pupils in 2016
- Event 2: design journals and/or prototypes by nine lower secondary pupils in 2016 and 2017
- Event 3: design work for D&T teacher in-service training by one of the authors in 2017

3.1 Event 1: collar pin logo design sketches by fourteen lower secondary pupils in 2016

Fourteen lower secondary pupils from a local school (Sch A) were selected to participate in a Talent Development Programme¹ (TDP). They shall be named Pupil Group X (PG-X) for easy reference. PG-X was led by a D&T teacher (d&tTr). 2016, being the inaugural year, designing a logo representative of TDP for a collar pin was apt. PG-X was tasked to brainstorm for designs for the logo. They thought through and sketch their respective designs under the guidance of d&tTr. It should be noted that PG-X did not have prior sketching lessons in the school but in their respective primary schools and through self-practice. The design sketches were then submitted to the author for evaluation, further designing and enhancement. The outcomes were used in a half-day design workshop that the author was invited to conduct as part of the programme.

Event on PG-X’s design sketches is discussed in Section 4.0 Discussion of this paper.

3.2 Event 2: design works/design journals by nine lower secondary pupils in 2016 and 2017

Nine lower secondary design works/design journals from Sch A were picked for discussion and comparison. They were randomly picked from two classes; seven, including the respective prototypes from one class and the remaining two from another class. These works were not by any pupil in PG-X. The group of seven pupils shall be named Pupil Group Y (PG-Y) and the other two pupils shall be named Pupil 1 and Pupil 2. All nine pupils had d&tTr as their D&T subject teacher.

The task for the classes was to design tableware for a simulated restaurant with the theme entitled Cultural Fusion. The tableware were a napkin holder, a tea-light holder, a menu holder and a cup coaster. The task required pupils to work in pairs to design one or two tableware.

d&tTr, a beginning teacher, attempted to teach her lower secondary pupils designing based on what she learnt from National Institute of Education, NTU-Singapore. Rectangular frames (2-dimension) and perspective crates (3-dimension) drawn separately on A3-size paper as templates (to be used as underlay) and printed animal images as design work reference were

¹ TDP is one of the many enrichment programmes for lower secondary level that the school organises during the June school holidays. It lasts a week.

provided to the pupils. The intent was to engage the pupils in sketching, and sketching quantitatively, and at the same time to design the selected tableware.

Event on the nine pupils' designing is discussed in Section 4.0 Discussion of this paper.

3.3 Event 3: design work for D&T teachers in-service training by one of the authors in 2017

One of the author is a teacher educator with 25 years of D&T teaching experience in the school and in teacher training. In 2017, he designed an in-service course to train D&T teachers to teach lower secondary pupils designing through shape borrowing as a design trigger. To design the course materials, he put himself through an authentic process of designing – sketching-to-design. The outcome was used as teaching resource during the training. There were two parts to the designing work, namely, (i) shape borrowing to trigger design of some functional objects and (ii) shape borrowing to trigger a simple tea-light holder design.

Event on the author's authentic process of design work is discussed in Section 4.0 Discussion of this paper.

4.0 Discussion

Note: It is not the purview of this paper to discuss the level of creativity and the degree of likeability of a design concept. The focus is on a layman's view on the level of maturity of sketch work. It also includes teaching and training to reach a level of maturity of sketch work good enough for D&T education.

For the purpose of this discussion, good is defined as proper text, proper proportion, and proper graphic representation in contrast to typical visual representations by primary school children (below 13 year old).

4.1 Event 1: collar pin logo design work by fourteen lower secondary pupils in 2016

Appendix 1a shows the 14 logo design ideas for a TDP collar pin submitted by PG-X (13 to 14 year old pupils). They are labelled as PG-X1 to PG-X14.

PG-X4 and PG-X8 are examples of proper graphic representation in terms of the lion head. They are good in terms of level of maturity and visual representation compared to that in PG-X1 and PG-X5. See Figure 3.

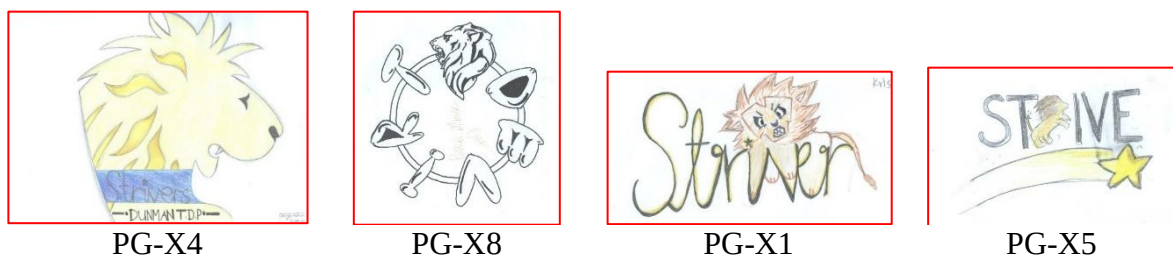


Figure 3: PG-X4 & PG-X8; PG-X1 & PG-X5.

Attempts were made by the author to take the pupils' sketches further and to illustrate the process of further idea exploration based on the pupils' submissions (see Appendices 1b to 1e). The reasons for this exercise by the author were as follows:

- PG-X was at a stage of developmental growth, having just started schooling in a secondary school. Their notion of themselves, their own level of competency in sketching/drawing and their concept of self-worth may be limited or yet to be educated. It was hoped that when the pupils saw how their own designs could be evolved, straightened and shaped to another level of likeability or 'aha this is it!' and/or 'this is mine!' kind of revelations, PG-X would be inspired, motivated and encouraged to have a positive attitude about themselves and that they could do it if they try and learn hard enough.
- The collages of explorations for the 14 submissions presented under column '*Exploration of ideas by author based on pupils' original design*' in Appendices 1a to 1d illustrate the essence of quantity vs quality. As quoted by Francis Crick (1996) in his presentation "The Impact of Linus Pauling on Molecular Biology that 'If you want to have good ideas you must have many ideas. Most of them will be wrong, and what you have to learn is which ones to throw away.' Extending the essence for the practice of designing that is solution focused (Cross, 2007), the act of exploring further or illustrating further the pupils' design concepts establishes the need for such a process, and especially for one to continue to work on his/her creative-self.
- The author also wishes to satisfy himself in terms of an authentic process of sketch to designing (although all these sketches/drawings were made using simple computer graphic tool) to surface another refined level of design using the pupils' original designs. This is to inform D&T teachers the need for quantity vs quality way of idea exploration. As Linus Pauling (Crick, 1996) opined: no quantity, no quality!

With 14 pupils each producing one idea (see Appendix 1a), i.e. 14 different designs from 14 different pupils, what if one pupil were to produce 14 different ideas? This the PG-X did not do or perhaps some ideas might had been discarded as the pupils might had deemed them inappropriate! The essence here, however, is about quantity vs quality. The author used the 14 ideas submitted by the pupils to further generate different designs as an authentic act of designing and as a showing of a limitless range of designs that could be generated. Therefore, a simple reasoning would be:

- 14 pupils' original ideas multiply by limitless range of design
being explored = lots of ideas to compare and to choose from!

Figure 4, extracted from Appendix 1b, illustrates on the above. It shows the process of idea exploration based on PG-X3 (see Figure 4(i)). The lion image is replaced with a more refined lion image, see Figure 4(ii). With essence of the pupil's design retained, it leads to an enhanced sketch, see Figure 4(iii). Figure 4(iv) shows a collage of many designs by the author based on PG-X3). Figure 5 shows the collar pin produced based on the design.

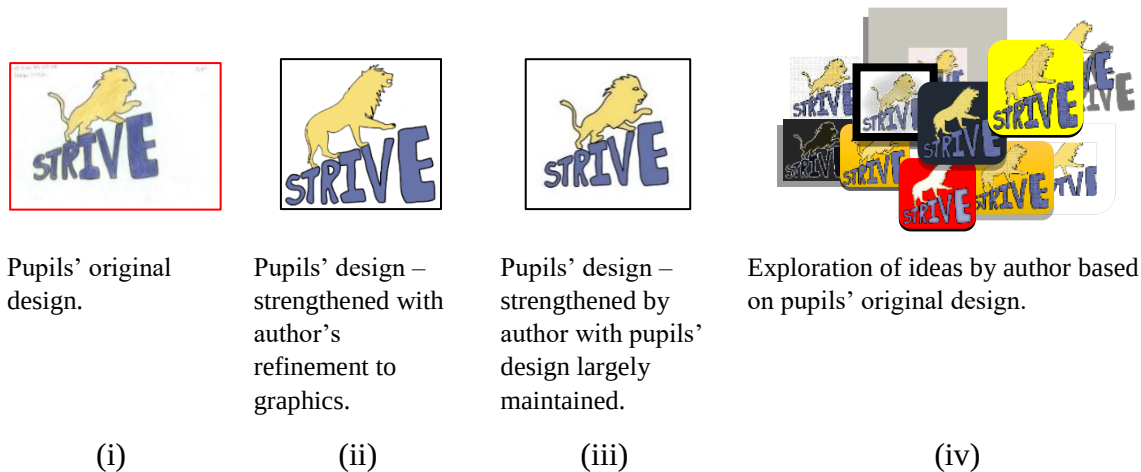


Figure 4: Illustration of the process of idea exploration.



Figure 5: The collar pin made by a vendor based on PG-X3.

In essence, the act of quantitative design ideas is marked in volumes as captured in Appendices 1a to 1d reflected under the forth column – ‘Exploration of ideas by author based on pupils’ original design’, manifesting the first flavour of quantity ideas to get quality ideas (Crick, 1996).

4.2 Event 2: design journals and/or prototypes by nine lower secondary pupils in 2016 and 2017

Seven lower secondary pupils’ design journals and prototypes from one class and two other lower secondary pupils’ design journals from another class are used. The design journals were picked for the many sketches produced in the process of designing which offers scope for discussion. They are not randomised samples as the focus is not on a generalizable conclusion for programme effectiveness. Primarily, the focus is on the following:

- range of sketches produced in the process of designing
- maturity of line work
- fun-play in generating lots of sketches from given reference images
- voluminous sketches practiced in the process of sketching-to-design
- intentional use of A3-size paper
- interesting outcomes produced by the pupils

4.2.1 Seven lower secondary pupils' design journals and prototypes

Appendices 2a to 2k show compilations of design sheets and prototypes by seven lower secondary pupils. The design sheets show sketching-to-design using techniques like shape borrowing, random line trigger; sketching practices; 3-dimension sketching and colour-rendered presentation drawings. The pupils were tasked to design tableware, namely, napkin holder, tea-light holder, menu holder and cup coaster for a restaurant setting based on the theme entitled Cultural Fusion.

The compiled pupils' works reflect their faithfulness in following d&tTr's instructions. Some observations made are as follows:

- All pupils produced the same number of pages for
 - the different episodes of design work, and
 - sketching practices.
- There is no correction of pupils' work by d&tTr.
- 3-dimension sketches are much defined in terms of line work and projection. The sketches look good.
- 3-dimension rendered drawings were very good, for a start.
- Prototypes were interestingly and nicely fabricated.

d&tTr was in her 2nd year of teaching service. It was her first attempt at teaching designing on her own. Design templates were provided for the pupils. While d&tTr was an inexperienced D&T educator, the works reflect a very strong sense of sketching-to-design in-action.

Following are qualitative observations of the pupils' work group according to the different episodes of design work:

Appendices 2a to 2e	The pages in the design journals were of A3-size. They showed authentic utilisation of the full sheet of paper, and was not contrived. These were in contrast with other A3-size design journals where the pages were pasted with smaller pieces of paper to meet the subject requirement of A3-size design journal.
Appendices 2a to 2b	The sketches were telling of the act of shape borrowing to generate design ideas. Pupils attempted to generate and morph different animal shapes for their designs. Design sketches were drawn within the 2-dimension rectangular/square framing provided to control the overall dimensions of the prototype. Areas that could be improved: • Do not limit the number of pages to be used. • Pupils could be told to sketch to fill the square frame so as to make full use of the resistant materials for prototyping. • Teacher's demonstration could be more intense to further stretch the pupils, though it was already intense given the works produced.
Appendix	Pupils demonstrated their ability to sketch freehand readily and effectively.

2c	The line work was much mature for their age. The work was very natural in approach. There was no constraint in terms of boundaries for sketching/drawing. Each pupil used only two sheets of A3-size paper. Areas that could be improved • Do not restrict pupils to just 2 sheets of paper for the exercise. There should be no limit as pupils ought to be encouraged to have a personal sketchpad so as to sketch as-and-when. • Correction and enhancement of pupils' sketches were not prevalent. This area could be better. When teachers enhanced the pupils' sketches, pupils would generally be inspired, motivated and would want to do more.
Appendix 2d	Overall, the random line design trigger sketches were very strong in line work and much mature for lower secondary pupils. The final outcome could come across as adult work. Similar to the episodes of shape borrowing and sketching, pupils seemed to have been instructed to use three sheets of paper. This restrictive instruction should be lifted. The degree of teacher's intervention in terms of enhancing pupils' work should also be increased.
Appendix 2e	Pupils practiced and sketched their final designs using a given 3-dimension perspective crate as underlay. The sketches were very strong in terms of perspective and line work. More similar exercises should be considered to give pupils confidence in sketching and drawing.
Appendices 2f to 2g	Pupils drew their final design ideas using a given 3-dimension perspective crate as underlay. This aspect of the drawing was very well executed. More similar practices and practices in pupils' own sketchpad would be good confidence building of pupils.
Appendix 2h	While colour rendering was not an emphasis, it was carried out to motivate pupils in their design work. They coloured their drawings without any teacher instruction. A few pupils demonstrated fairly good colour-rendered skills with good colour combination. This could be seen from their final completed prototype (see Appendices 2i to 2j).
Appendices 2i to 2j	The prototypes made by the pupils reinforced and concluded the notion of creative work in-action. Pupils were able to arrive at an outcome as a result of their own design-and-make endeavours based on the teaching and facilitation by d&tTr.

Referring to the seven pupils' work as a whole, it is evident that d&tTr's demand for pupils to sketch quantitatively to design is intentional. The pupils were able to generate different and

unique design ideas by themselves. The design acts by the teacher and the pupils culminated in the different interesting and unique outcomes (prototypes).

However, the mileage of the design acts were insufficient given the teacher-control on the number of pages that pupils ought to produce – evident from the same number of pages for each design episodes across pupils. This could be relaxed to allow pupils flexibility to indulge in idea exploration and sketching practice.

Deliberate action of sketching, deliberate action of sketching quantitatively, deliberate action of enhancing and improving pupils’ design sketches, and deliberate habit and culture of sketching anything under the sun in a personal sketchpad need to be the call of D&T practice. This part of Event 2 gives another very strong flavour of quantity-ideas-to-get-quality-ideas (Crick, 1996).

4.2.2 Two lower secondary pupils’ design journals

Two other pupils’ design journals were randomly selected for indicative comparison with the 7 pupils’ work discussed in 4.2.1. They worked on a design-and-make napkin holder project individually. Their teacher was d&tTr.

The two pupils’ design journals are compared based on the areas of work reflected in the Appendices as follows:

Pupil 1	Pupil 2
Appendices 3a to 3g: Pupil 1 design journal pages. This is the process of the pupil’s sketch to designing carried out on A3-size paper.	Appendices 4a to 4f: Pupil 2 design journal pages. This is the process of the 2 nd pupil’s sketch to designing carried out on A3-size paper.
Appendix 3a: Pupil 1 typical product analysis page. Analysis seems contrived and comparison products was not carried out. The extent of writing to explain and seemingly to analyse was inordinate for product analysis.	Appendix 4a: Pupil 2 typical product analysis page. Discussion on design specifications. Product analysis is the same as Pupil 1.
Appendix 3b: - Visual images given by teacher d&tTr for shape borrowing design exercise reference. 2-dimension square frames drawn on A3-size paper by teacher d&tTr. Used by Pupil 1 as underlay for shape borrowing sketch to designing.	Appendix 4b: - Visual images given by teacher d&tTr for shape borrowing design exercise reference. 2-dimension square frames drawn on A3-size paper by teacher d&tTr. Used by Pupil 2 as underlay for shape borrowing sketch to designing.
Appendix 3c: Pupil 1 shape borrowing sketches. Additional page of animal shape clip arts was given to pupils as reference.	Appendix 4c: Pupil 2 shape borrowing sketches. Additional page of animal shape clip arts was given to pupils as reference.

Pupil 1	Pupil 2
The designs were varied. 3 pages of A3-size (9 images per page) design sketches were produced. Sketches could be improved and enhanced. No teacher intervention.	The designs were varied. 3 pages of A3-size (9 images per page) design sketches were produced. Sketches were somewhat good. No teacher intervention.
Appendix 3d: 3-dimension design sketch. Pupil 1 practiced and sketched her final designs using a given 3-dimension perspective crate as underlay. 3 pages of A3-size (3 images per page) 3-dimensional sketches were produced. The quality of sketching was good and is better than Pupil 2's sketches. The perspective crates were fully utilized to its perimeter guides somewhat. No teacher intervention.	Appendix 4d: 3-dimension design sketch. Pupil 2 practiced and sketched her final designs using a given 3-dimension perspective crate as underlay. 3 pages of A3-size (3 images per page) 3-dimensional sketches were produced. The quality of sketching is not as good as Pupil 1. It could be improved. The perspective crates were not fully utilized to its perimeter guides. No teacher intervention.
Appendix 3e: 3-dimension design sketch. Pupil 1 drew her final design idea using a given 3-dimension perspective crate as underlay. The 3-dimension perspective drawing was well sketched. Pupil 1 used the given perspective crate as a guide.	Appendix 4e: 3-dimension design sketch. Pupil 2 drew her final design idea using a given 3-dimension perspective crate as underlay. The 3-dimension perspective drawing was well sketched. Pupil 2 used the given perspective crate as a guide.
Appendix 3f: Pupil 1 design sheets. Discussion on specifications and dimensions of support design.	<i>Part of the discussion pages (design specifications) is reflected in Appendix 4a above.</i>
Appendix 3g: Random line design trigger. Design sketches carried out using 2-dimension rectangular frames as underlay. Pupil 1 produced a total of 9 pages of A3-size (3 images per page) sketches. The teacher d&tTr used red pen to outline 3 images to show the boundary enclosure formed by the random line design pattern. There is no teacher intervention on Pupil 1's line work.	Appendix 4f (i) 2-dimension rectangular frames drawn on A3-size paper by teacher d&tTr. Used by Pupil 2 as underlay for random line trigger sketch to designing. (ii) Random line design trigger. Design sketches carried out using 2-dimension rectangular frames as underlay. Pupil 2 produced a total of 8 pages of A3-size (3 images per page) sketches. There is no teacher intervention on Pupil 2's line work.

Observations made based on the above and in comparison with the 7 pupils' work in 4.2.1 are as follows:

- Pupil 1 and Pupil 2 produced the same number of pages for the different episodes of design acts. Like the seven pupils, they followed d&tTr's instructions closely.

- 2-D shape borrowing sketches were varied and interesting which the two pupils generated their own. It is fair to speculate that the animal shape references provided by d&tTr helped to engage the pupils and enabled them to work independently without no teacher intervention.
- Whilst the two pupils were able to sketch using their own experience of sketching and be guided by the underlays (which is a good scaffold) and teacher demonstration, it is important for d&tTr to improve her pupils' work. This is lacking also in the seven pupils' work. Some design sketches did not fill up the entire framing boundaries (proportionate to the material size for prototyping). This could be corrected on the spot.
- 3-D sketches/drawings were good. The 3-D perspective representation was accurate. This was possible given the perspective crate to guide the sketching work; coupled with d&tTr demonstrating how it was used. However, there was no teacher intervention to improve the pupil's work.
- Random line trigger sketches were good and mature. d&tTr outlined in red three of Pupil 1's sketches. It was to emphasise the design outline and not to show what better line work looks like. This design sketch exercise was for pupils to get into the groove of sketching straight lines (lots of them), sketching circles (lots of them) and sketching ellipses (lots of them) so as to develop confidence in sketching. This being the case, d&tTr could show them what good line work looks like by improving on their work.

Event 2 gives a clear demonstration on sketching-to-design. The voluminous exhibition of pupils' act of sketching to generate design ideas is evident. Its quantitative nature is key for generative sketching actions that is important for creating 'something'. What is that 'something' to be created? That 'something' in this case is a napkin holder, a cup coaster, a tea-light holder or a menu holder. The greatest act here is the creative nature of the design that the pupils had demonstrated in their design work.

4.3 Event 3: design work for D&T teachers in-service training by one of the authors in 2017

The discussion based on Event 3 is to illustrate the point on the act of developing a creative-self via the process of sketching-to-design. It refers to part of the author's training materials created for D&T teacher in-service training in 2017. The works are in two segments and they are as follows:

- (i) Shape borrowing to trigger design of some functional objects
- (ii) Shape borrowing to trigger a simple tea-light holder design

4.3.1 Shape borrowing to trigger design of other functional objects

The in-service training focuses on design-and-make activities at lower secondary level and the design trigger is shape borrowing. Shape borrowing is one design trigger to be taught.

The act of shape borrowing may come in different forms, and in many commercial practices such as product design and even architecture design. Figure 6 shows a Google search on animal shaped lights.

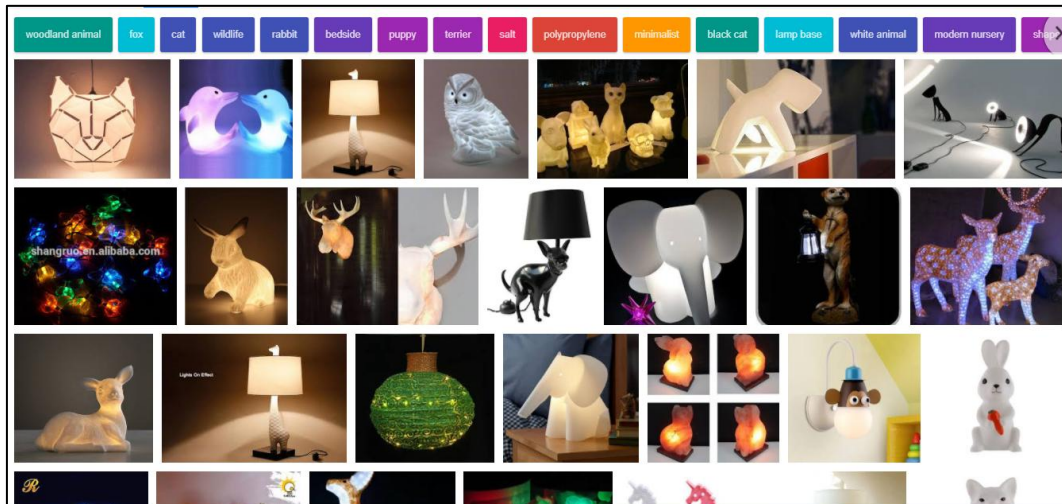


Figure 6: Screen capture of Google search on animal shaped lights.

https://www.google.com.sg/search?q=animal+shaped+lights&source=lnms&tbm=isch&sa=X&ved=0ahUKEwjMsOT--IPZAhWIrY8KHT8_BkUQ_AUICigB&biw=1517&bih=707

Subsequent search for 10 products (light, table, chair, pen, planter, cutlery, pen holder, cup, mechanical toy, and coin bank) each inspired by animal (general) and giraffe (specific) revealed the pervasive act of shape borrowing in professional design practices. Figure 7 showed the Goggle search of products both motivated by animal shape and giraffe shape.

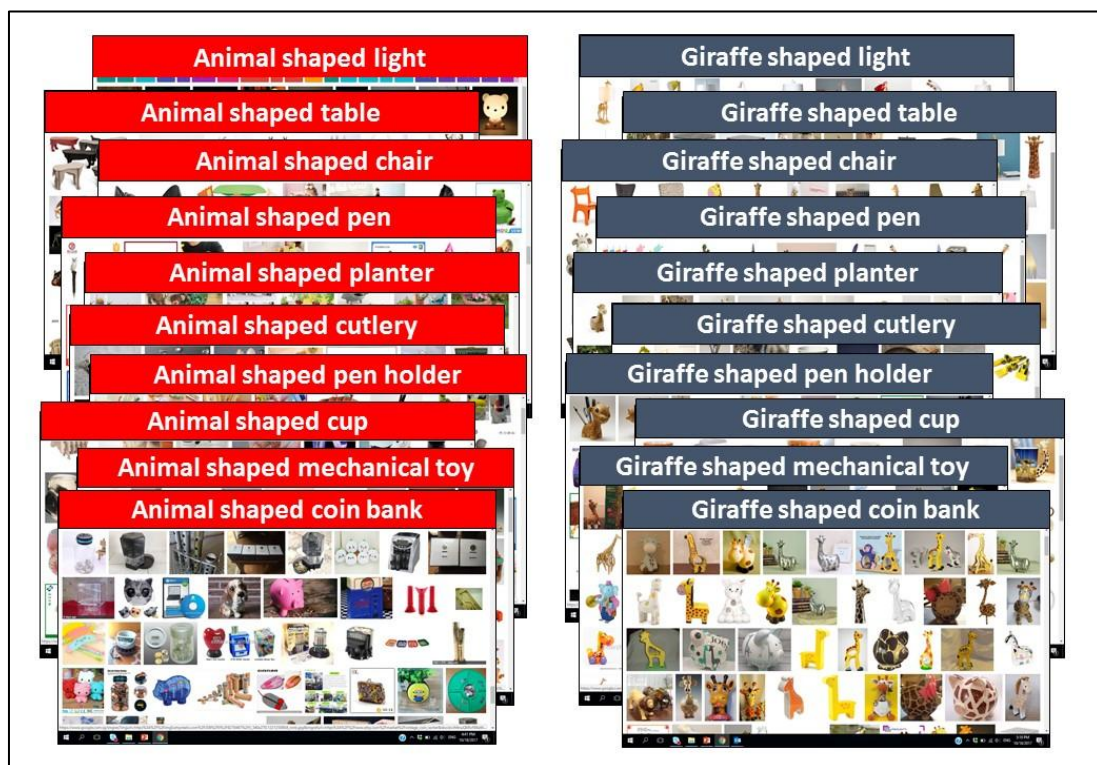


Figure 7: Screen captures of Google search on giraffe motivated products.

What can educators like D&T teachers learn from design practitioners? What does it mean to be shape borrowing? How is this act going to be useful in education and specifically in D&T education?

The act of shape borrowing in designing requires one to have the initial sketches; like the act of morphing a shape. A functional product could be stated at the start or the function/s could be emergent. Figure 8 shows the morphing of a giraffe image for a product and the function of which was decided towards the end of process.

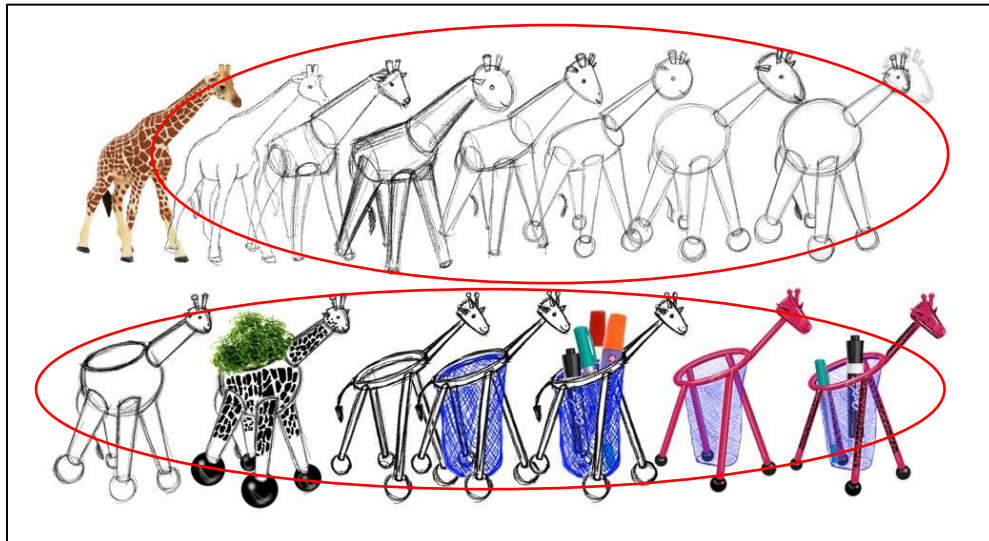


Figure 8: Giraffe shape borrowing for designing products (a planter, a stationery holder)

The focus here was on the sketches prior to deciding on the planter function and that of a stationery holder (see sketches circled in Figure 8). The sketches that show the evolving shapes: changes to proportion; manipulation of parts; twisting or tweaking of parts; modification of representation; etc.; are crucial and necessary to the act of designing. The acts for sketching-to-design in this respect, could be learnt through practiced. The aspired endeavour fulfils two main aims of Singapore D&T education, namely, (i) getting pupils to learn to sketch and (ii) equipping pupils with another language, a non-verbal language (Cross, 2007), for creating and communicating.

The act of sketching and doodling was continued to surface yet another flower holder. Figure 9 shows the continued evolvement of the giraffe shape design. The focus here again was on the many sketches (see sketches circled in Figure 9) that happened before the final product surfaced, in this case a single-stalk flower holder. Refinement of design, manipulation of design, alteration of design, adaptation of design, transformation of design, what-if of design, what-next of design, and the list goes on up till 'this-is-the-creative' design will have to be exercised and practiced quantitatively.

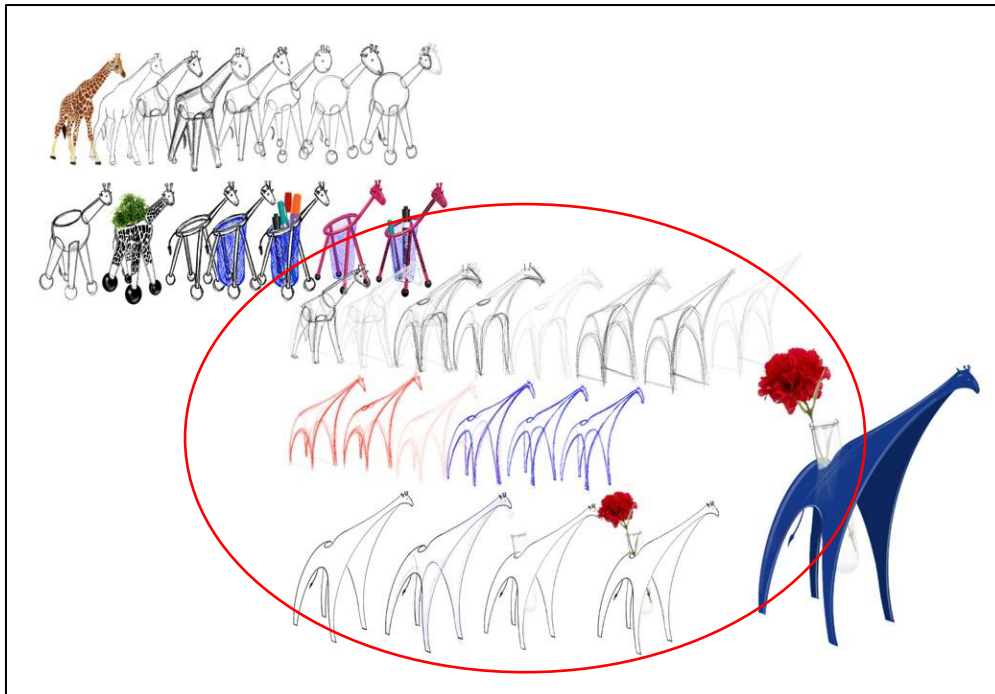


Figure 9: A continuation of shape borrowing for a single-stalk flower holder.

4.3.2 Shape borrowing to trigger a simple tea-light holder design.

A simple design exercise using shape borrowing for a tea-light holder was trailed for the training. Figure 10 shows the author's sketching-to-design process using an elephant image as design trigger. A total of 26 pages of design sketches on A3-size paper was produced. The sketching-to-design was done authentically and the flow of design sketches is shown by the arrows in Figure 10.

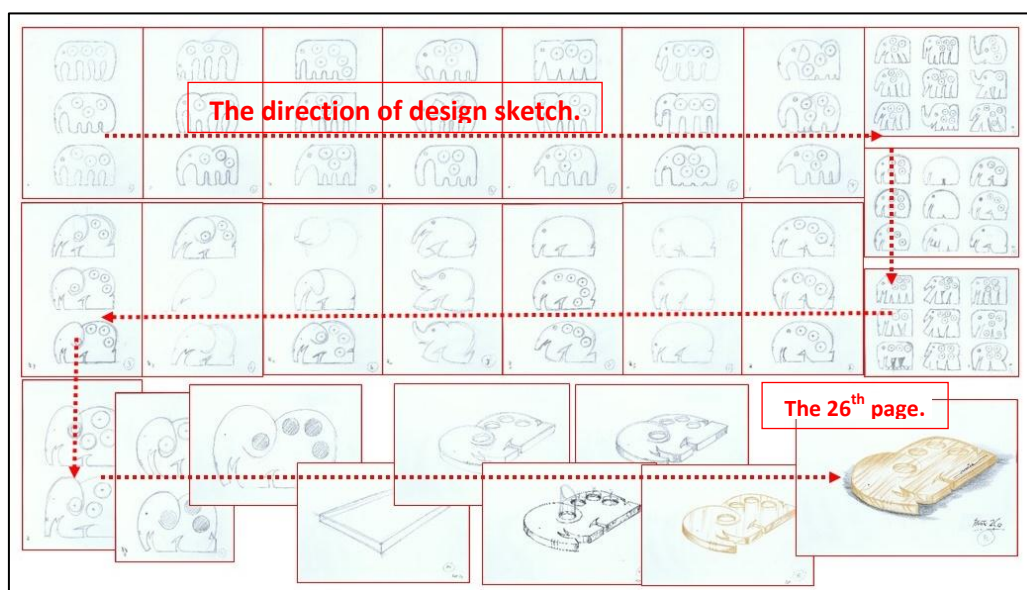


Figure 10: Design of a tea-light holder.

The primary aim was to illustrate to the training participants what it looks like to get into the groove of sketching and to sketch quantitatively.

During the training, the participants got into the act of sketching-to-design using given animal design triggers and templates. While they were engaged, they could not progress much further as they found difficulty morphing. After the author showed the 26 design sheets (Figure 10), they seemed enlightened and deliberated when they got into the act again. Judging from the voluminous sketches produced, the participants appeared to have hit the aha-moment – what a D&T teacher needs to do to inspire, motivate and enable pupils to sketch-to-design.

Is creativity difficult to achieve? Can creativity be taught? In the context of D&T education, the answer to the two questions is no and yes respectively – evident from Events 1, 2 and 3. The act of immersing oneself in the visual creative endeavour illustrated in the events is what the author advocates for a culture of building creative-self.



Figure 11: Prototypes of tea-light holders by training participants based on their design.

Figure 11 shows the completed prototypes of the in-service course participants' work after they had gone through the process of sketch to designing. This was the first attempt by the participants and the end outcome was very promising and pleasantly surprising. We could see from Figure 11 each of the prototypes is different and it is unique in itself. No two designs are the same. Such sketch to designing act would have to be exercised and practiced. This is a long haul and it is important for one to 'learn to sketch' and to be grow a habit of a 'creative-self' eventually.

5.0 Conclusion

The intention to create a 2- or 3-dimension design relies on the process of acting and trying out something, and acting and trying out intently and purposefully. The act of sketching-to-design with a quantitative thrust allows creation to emerge and to grow. Specifically to D&T, sketching-to-design allows a creative-self to exude over time. This quality of a creative-self is desirable but not lofty for D&T teachers to exemplify, and to cultivate in their D&T pupils, as proven in the three events discussed in this paper.

D&T teachers can become competent and proficient in this act of sketching-to-design quantitatively, which is likened to other procedural knowledge like biking, cooking, driving, playing racket games, singing, swimming, etc. The acquisition of this procedural knowledge of sketching-to-design needs time and practice like any other procedural knowledge, a professional obligation nonetheless.

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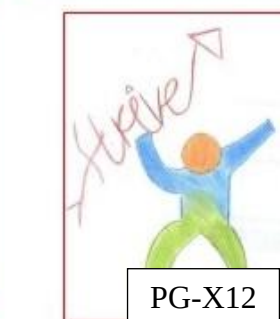
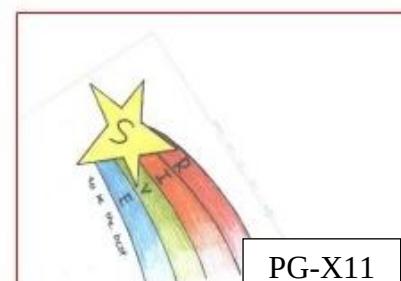
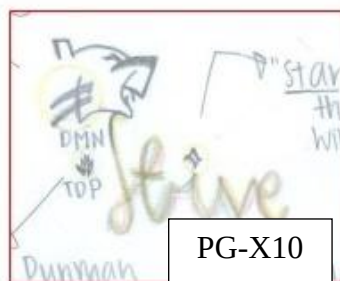
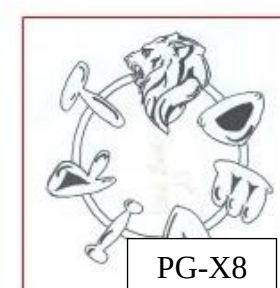
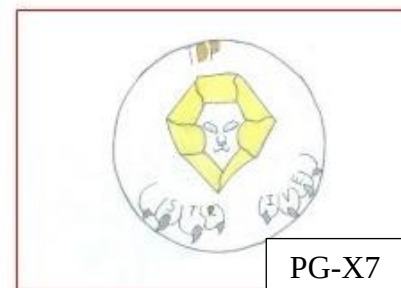
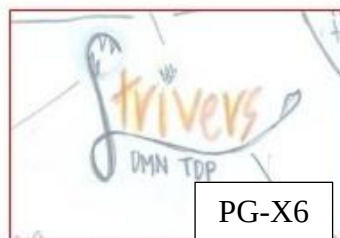
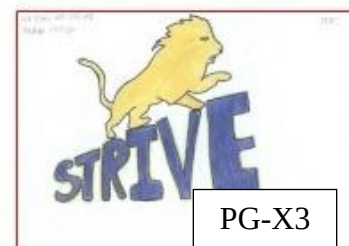
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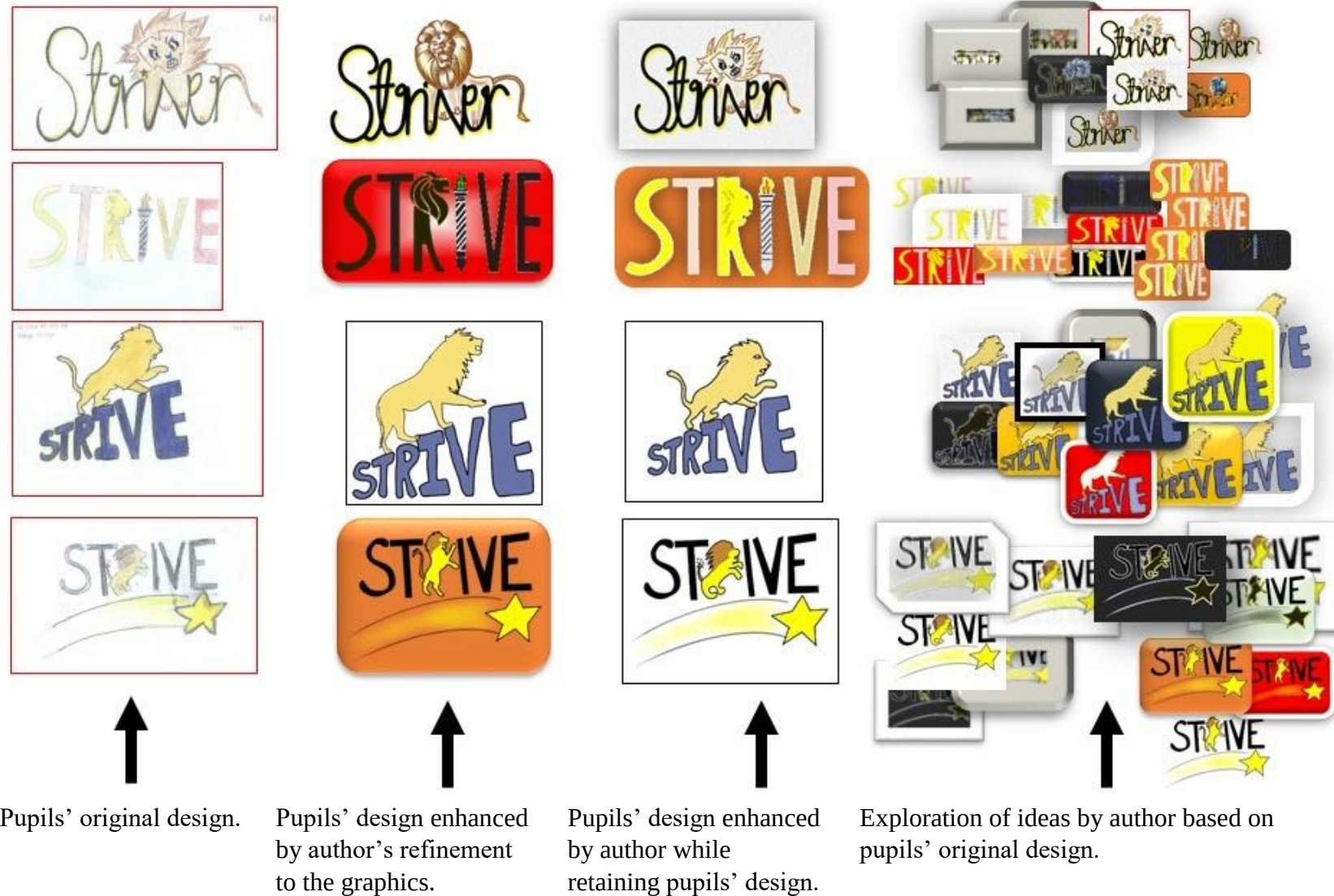
Appendices for Event 1: Collar pin logo design work by fourteen lower secondary pupils in 2016

- Appendix 1a: Logo design submitted by 14 lower secondary pupils
- Appendix 1b: Author's idea exploration based on PG-X1, PG-X2, PG-X3 and PG-X5
- Appendix 1c: Author's idea exploration based on PG-X9, PG-X12, PG-X13 and PG-X14
- Appendix 1d: Author's idea exploration based on PG-X4, PG-X7 and PG-X11
- Appendix 1e: Author's idea exploration based on PG-X6, PG-X8 and PG-X10

Appendix 1a: Logo design submitted by 14 lower secondary pupils



Appendix 1b: Author's idea exploration based on PG-X1, PG-X2, PG-X3 and PG-X5



Appendix 1c: Author's idea exploration based on PG-X9, PG-X12, PG-X13 and PG-X14



Pupils' original design.

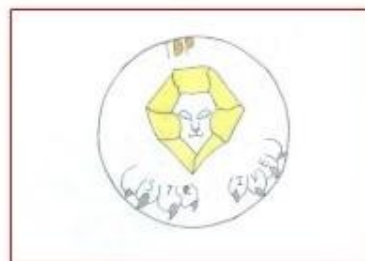
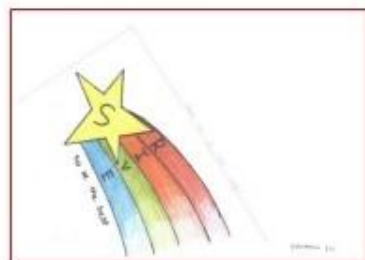


Pupils' design enhanced by author's refinement to the graphics.



Exploration of ideas by author based on pupils' original design.

Appendix 1d: Author's idea exploration based on PG-X4, PG-X7 and PG-X11



Pupils' original design.

Pupils' design enhanced by author's refinement to the graphics.



Exploration of ideas by author based on pupils' original design.

Appendix 1e: Author's idea exploration based on PG-X6, PG-X8 and PG-X10



Pupils' original design.



Pupils' design enhanced by author's refinement to the graphics.



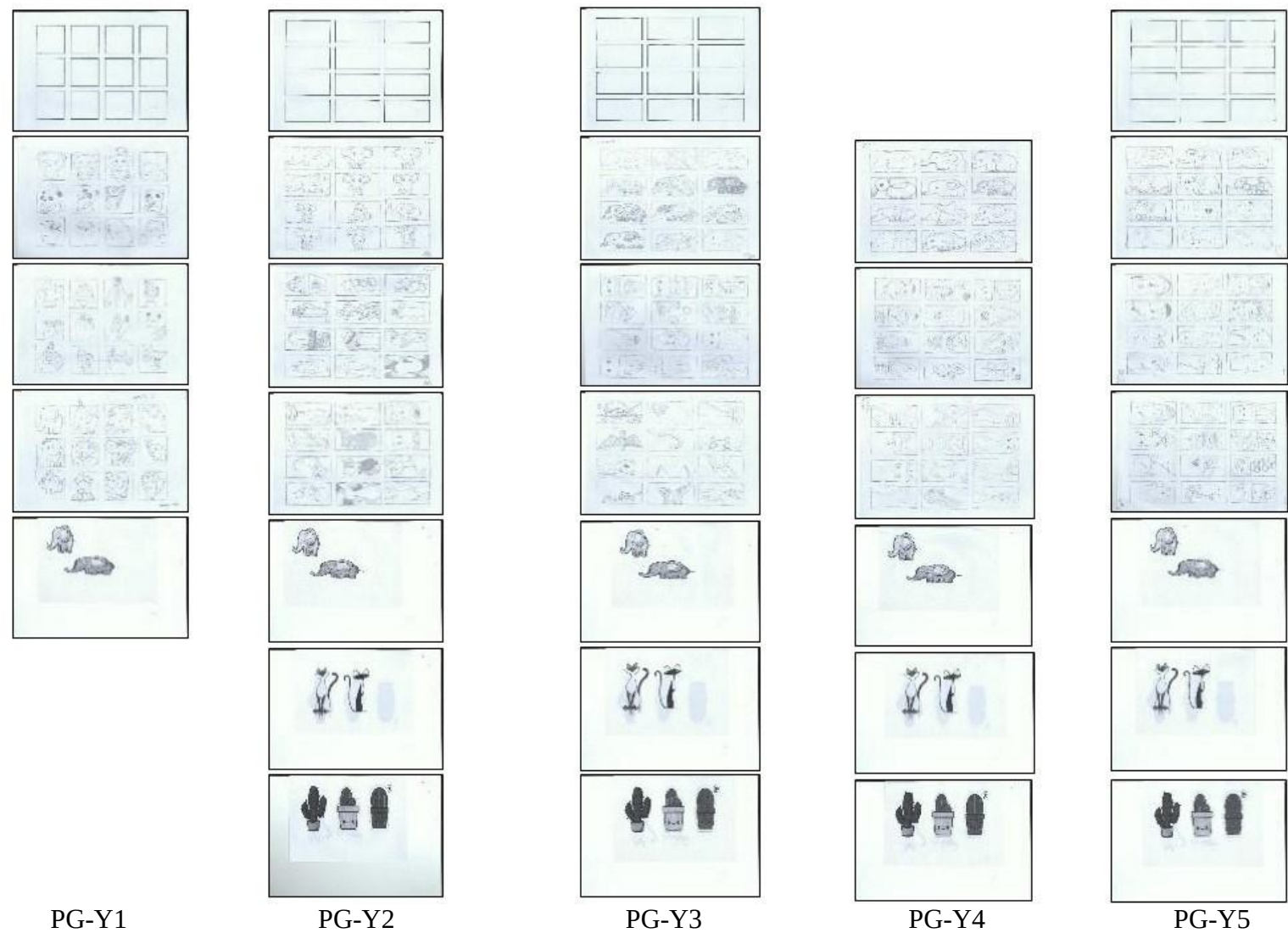
Exploration of ideas by author based on pupils' original design.

Appendices for Event 2: design journals and/or prototypes by nine lower secondary pupils in 2016 and 2017 (part 1)

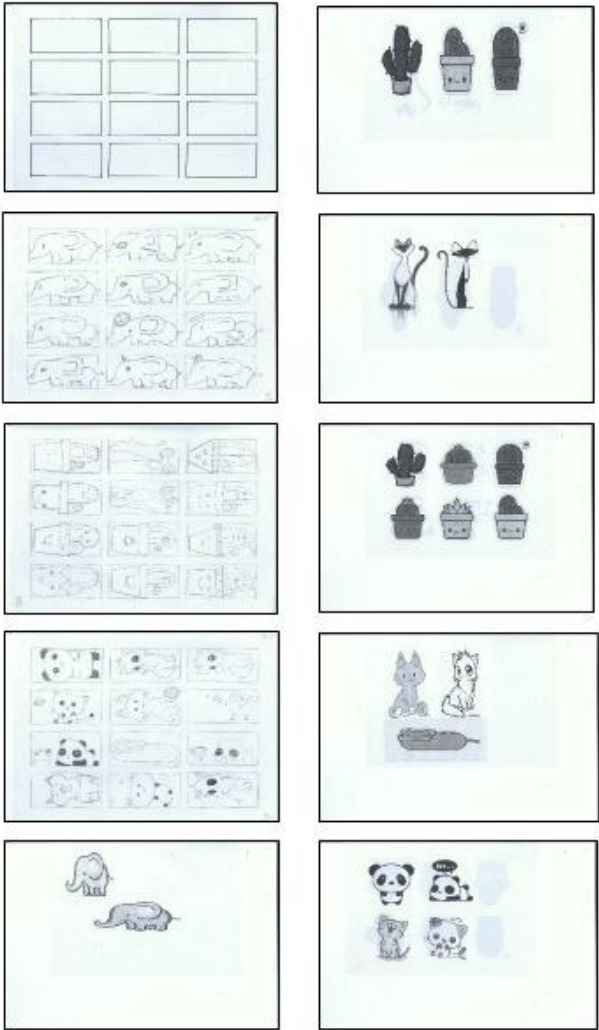
A3-size design sheets extracted from the journals by seven pupils are referenced from PG-Y1 to PG-Y7. They show the pupils' process of sketching-to-design.

- Appendices 2a & 2b: Shape borrowing design base on clip art images. Design sketches carried out using 2-dimension rectangular/square frames as underlay
- Appendix 2c: Freehand sketch exercise (straight lines; circles; ellipses). On the average, each pupil worked on two pieces of A3-size paper worth of freehand sketches
- Appendix 2d: Random line design trigger. Design sketches carried out using 2-dimension rectangular frames as underlay
- Appendix 2e: 3-dimensional design sketch. Pupils practiced and sketched their final designs using a given 3-dimension perspective crate as underlay
- Appendices 2f to 2g: 3-dimension design sketch. Pupils drew their final design ideas using a given 3-dimension perspective crate as underlay
- Appendix 2h: Colour rendered presentation drawings
- Appendices 2i to 2k: Completed prototypes

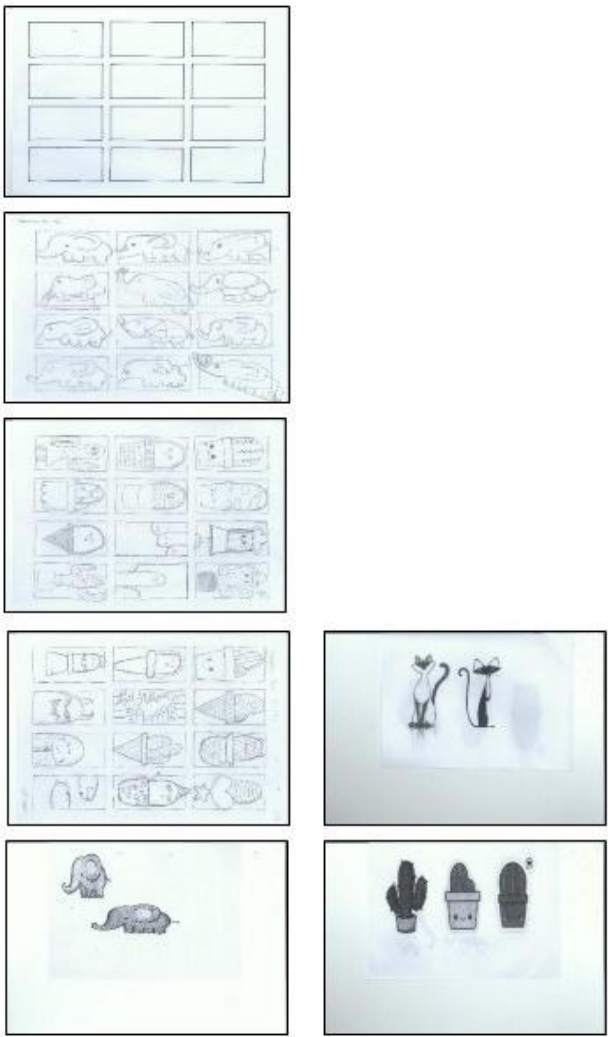
Appendix 2a: Shape borrowing design base on clip art images. Design sketches carried out using 2-dimension rectangular/square frames as underlay



Appendix 2b: Shape borrowing design base on clip art images. Design sketches carried out using 2-dimension rectangular/square frames as underlay

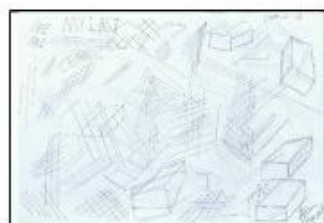


PG-Y6

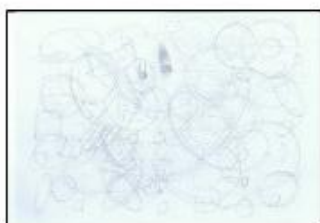


PG-Y7

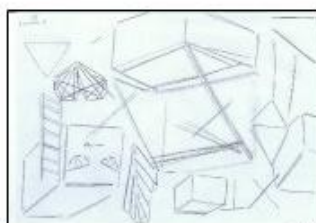
Appendix 2c: Freehand sketch exercise (straight lines; circles; ellipses). On the average, each pupil worked on two pieces of A3-size paper worth of freehand sketches



PG-Y1



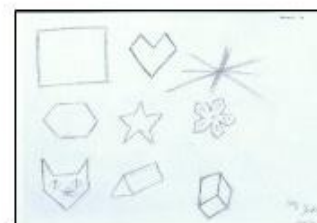
PG-Y2



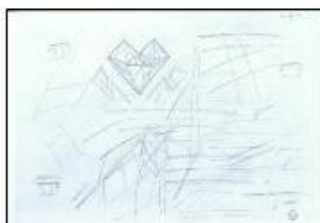
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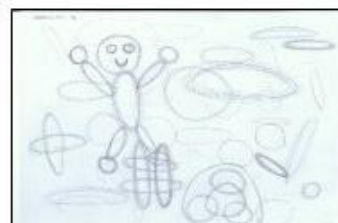
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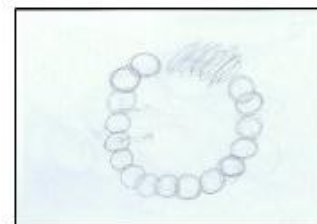
PG-Y5



PG-Y6



PG-Y7



Appendix 2d: Random line design trigger. Design sketches carried out using 2-dimension rectangular frames as underlay



PG-Y1

PG-Y2

PG-Y3

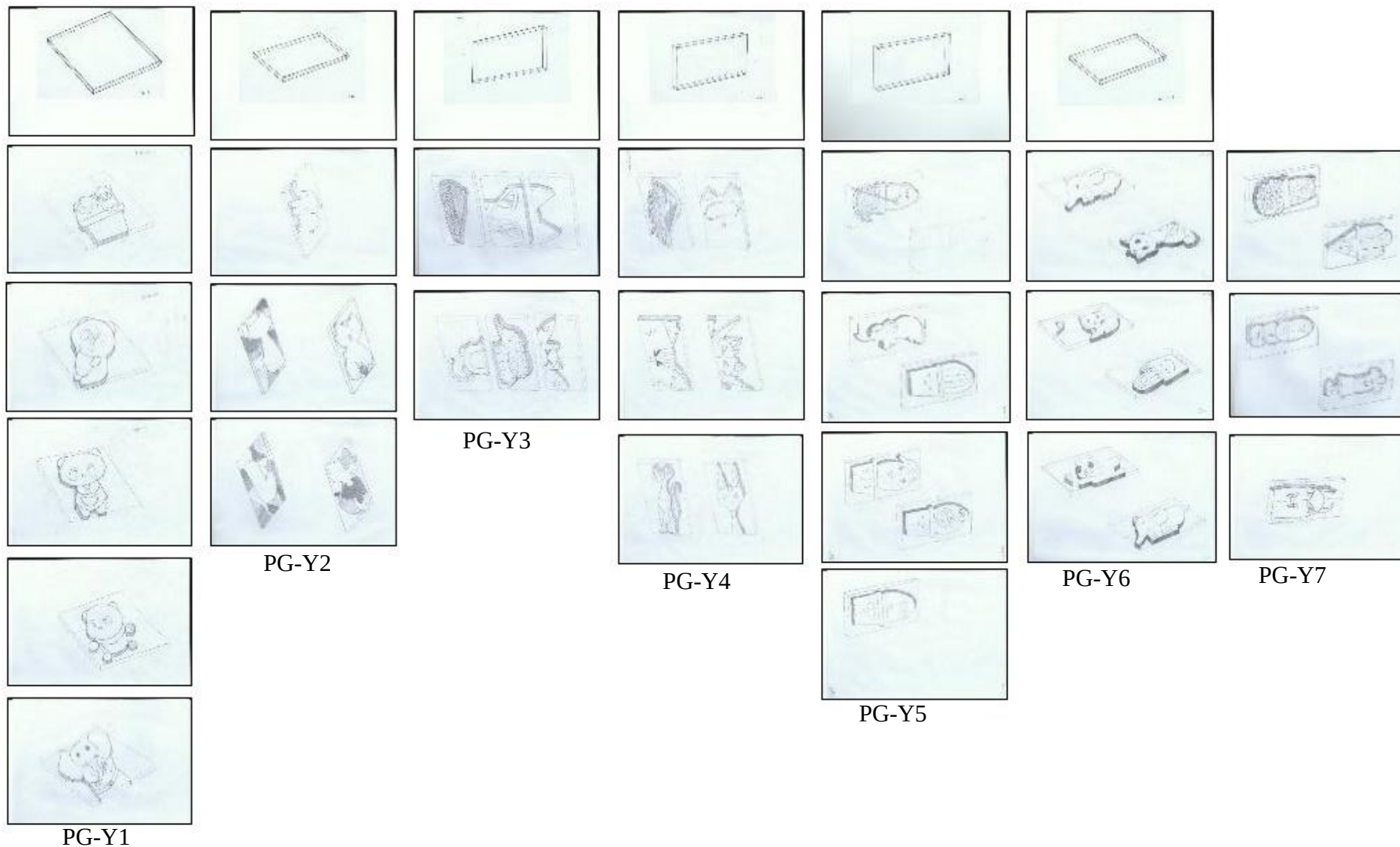
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PG-Y5

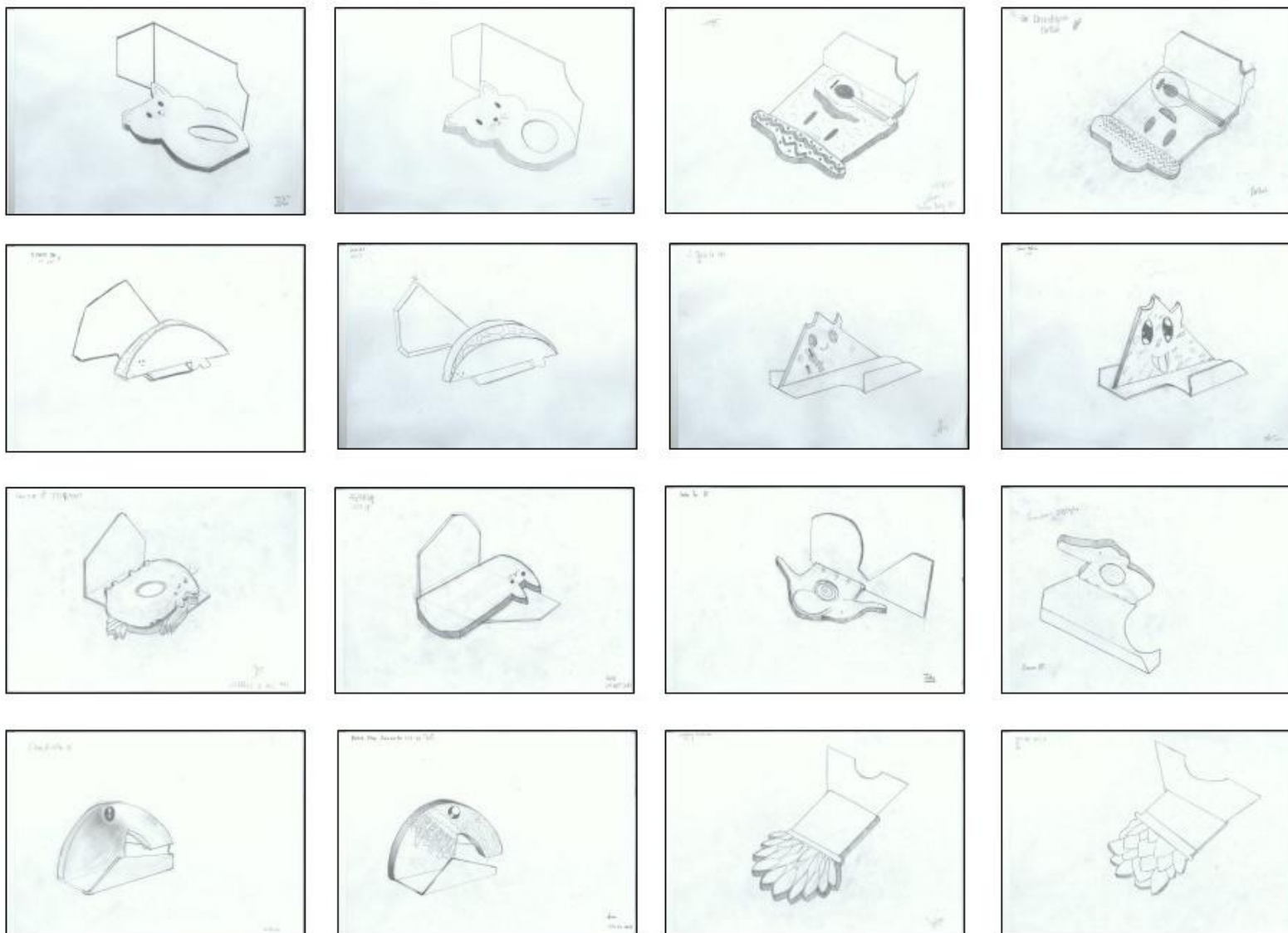
PG-Y6

PG-Y7

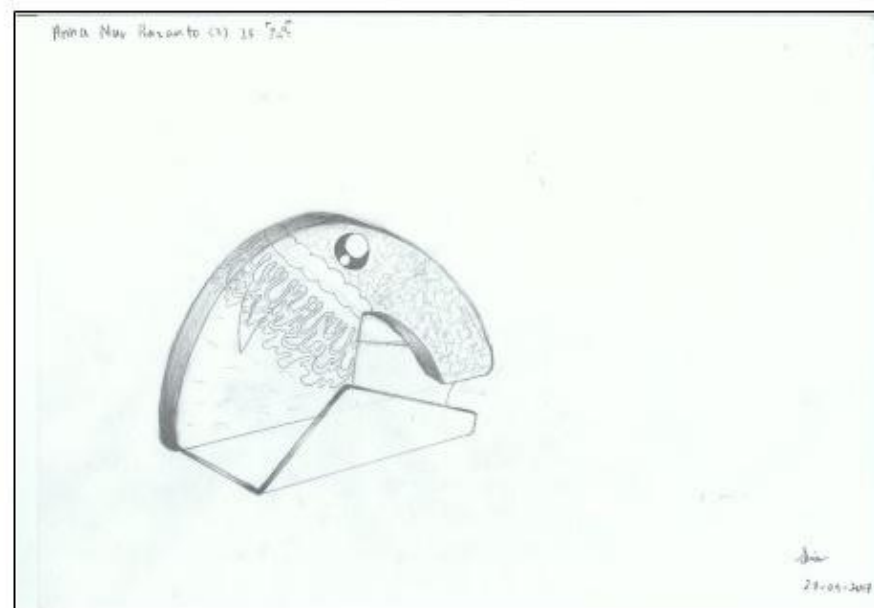
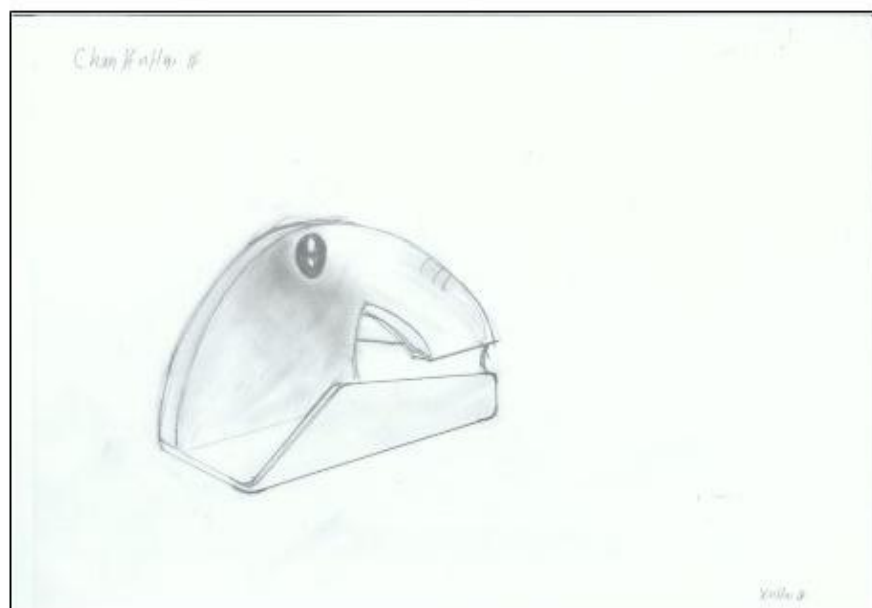
Appendix 2e: 3-dimensional design sketch. Pupils practiced and sketched their final designs using a given 3-dimension perspective crate as underlay



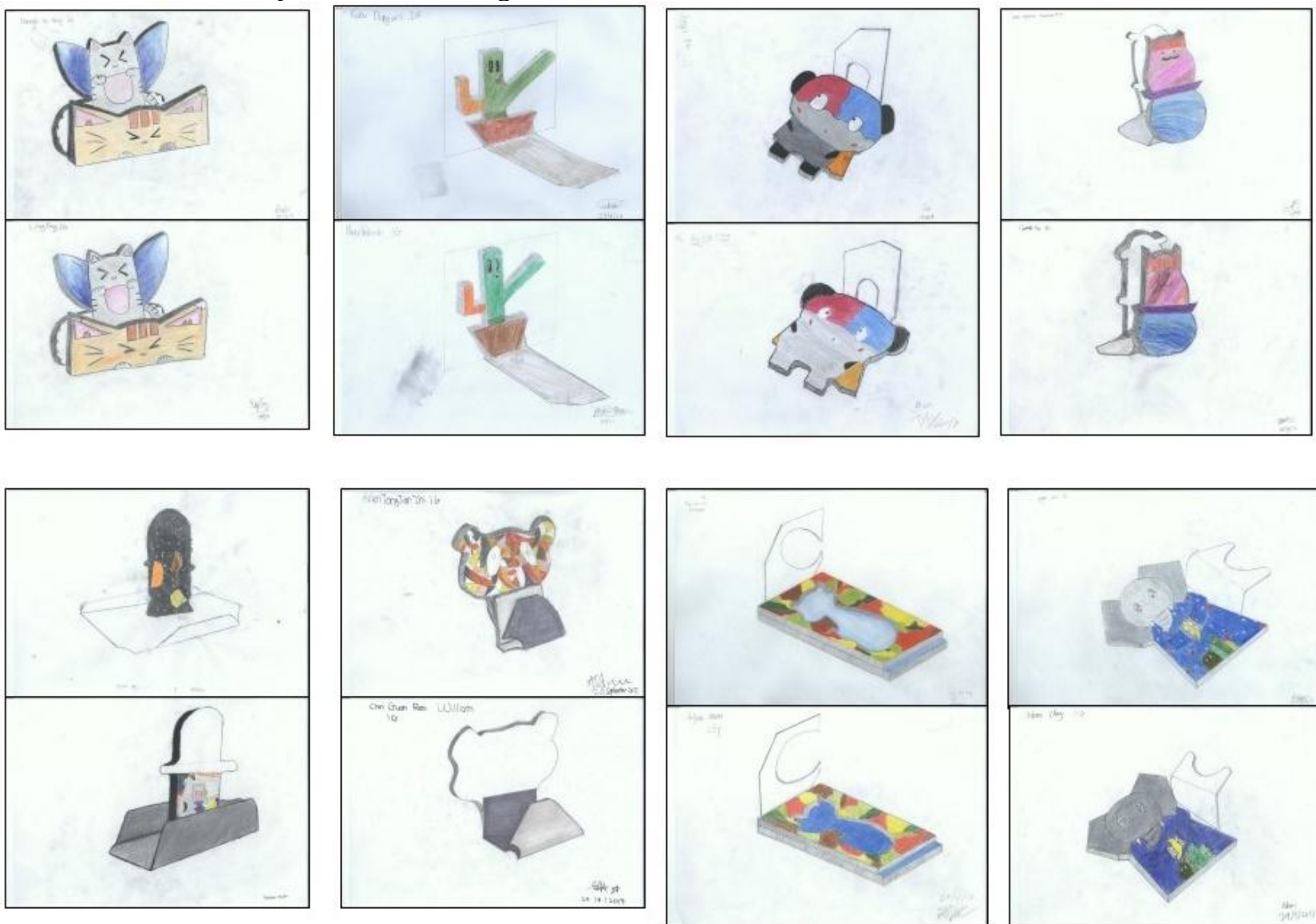
Appendix 2f: 3-dimension design sketch. Pupils drew their final design ideas using a given 3-dimension perspective crate as underlay



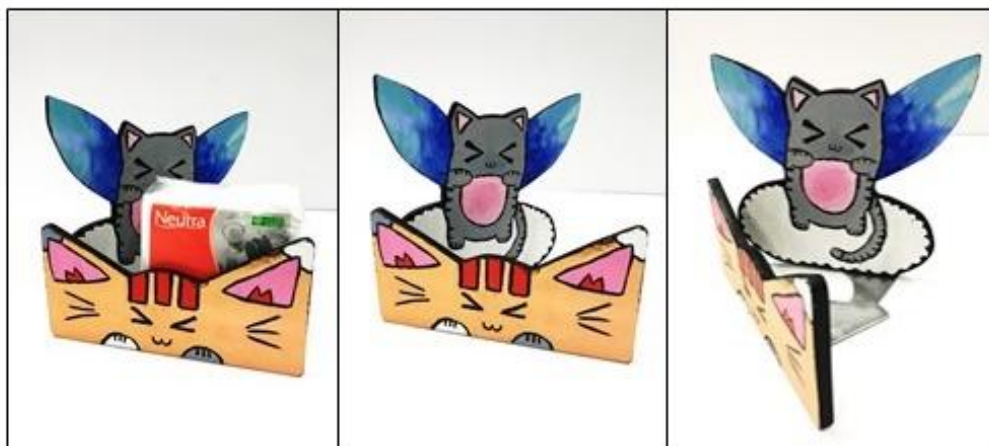
Appendix 2g: 3-dimension design sketch. Pupils drew their final design ideas using a given 3-dimension perspective crate as underlay



Appendix 2h: Colour rendered presentation drawings



Appendix 2i: Completed prototypes



Appendix 2j: Completed prototypes

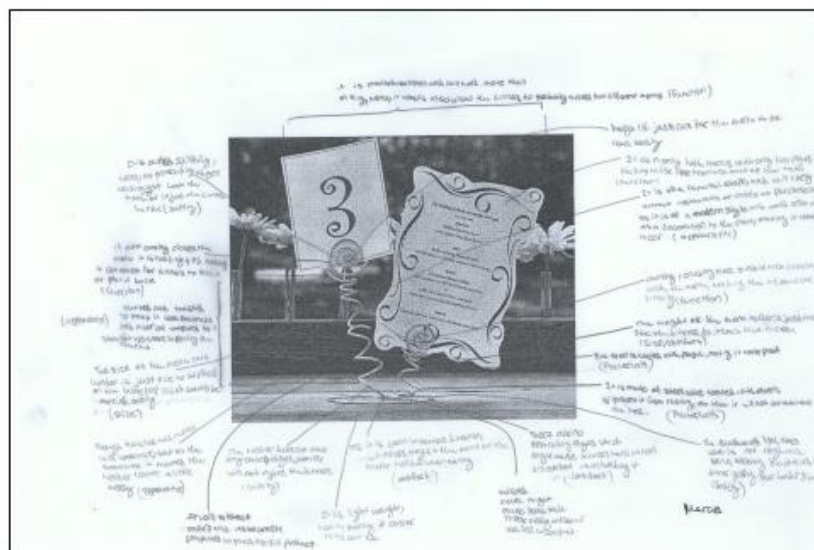
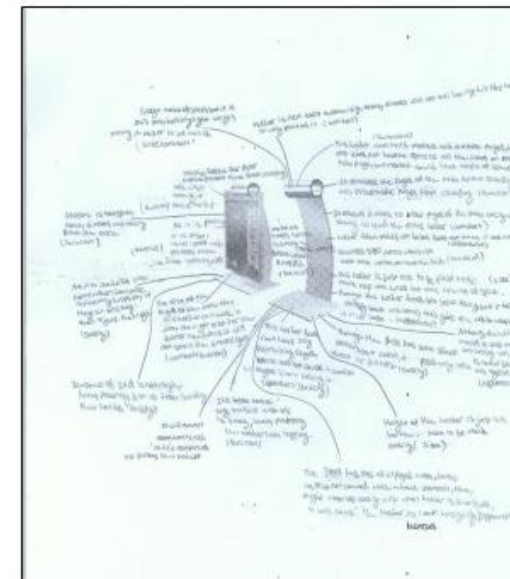
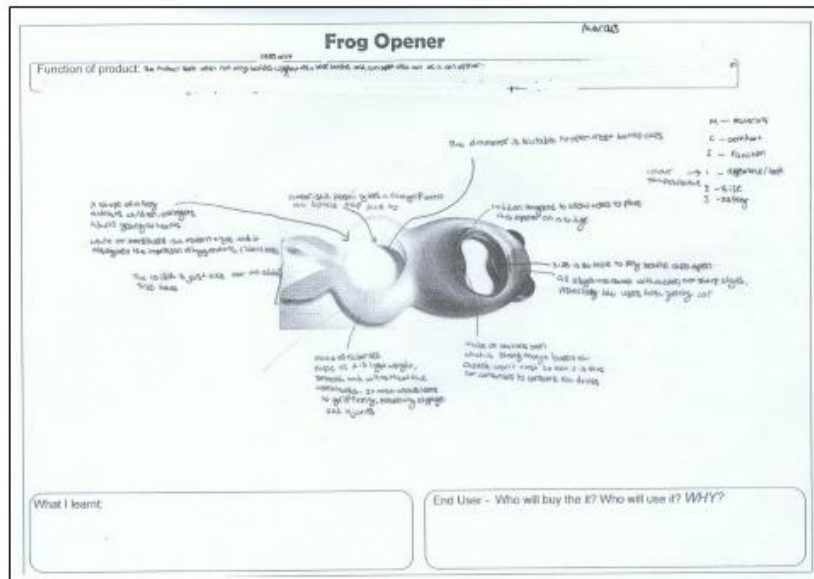


Appendices for Event 2: design journals and/or prototypes by nine lower secondary pupils in 2016 and 2017 (part 2a)

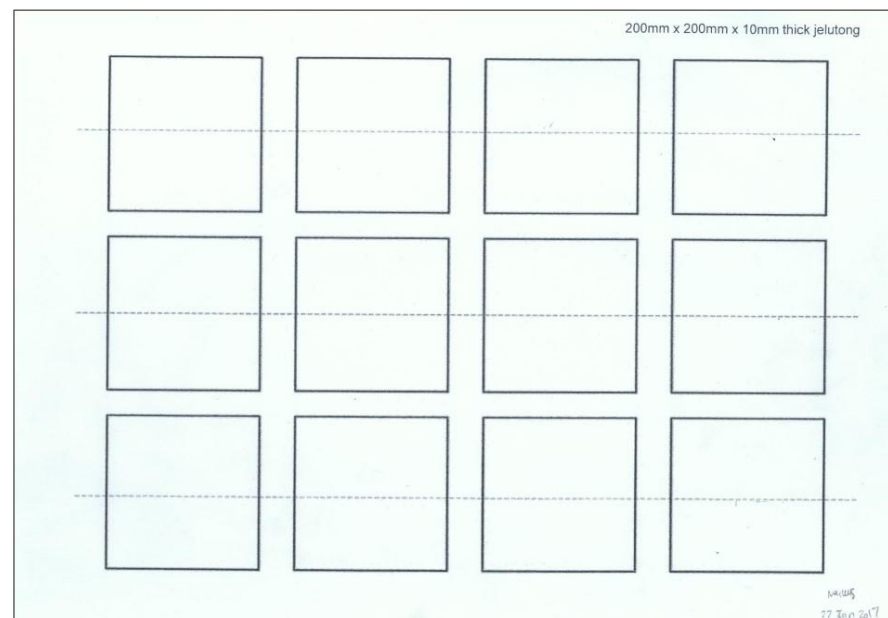
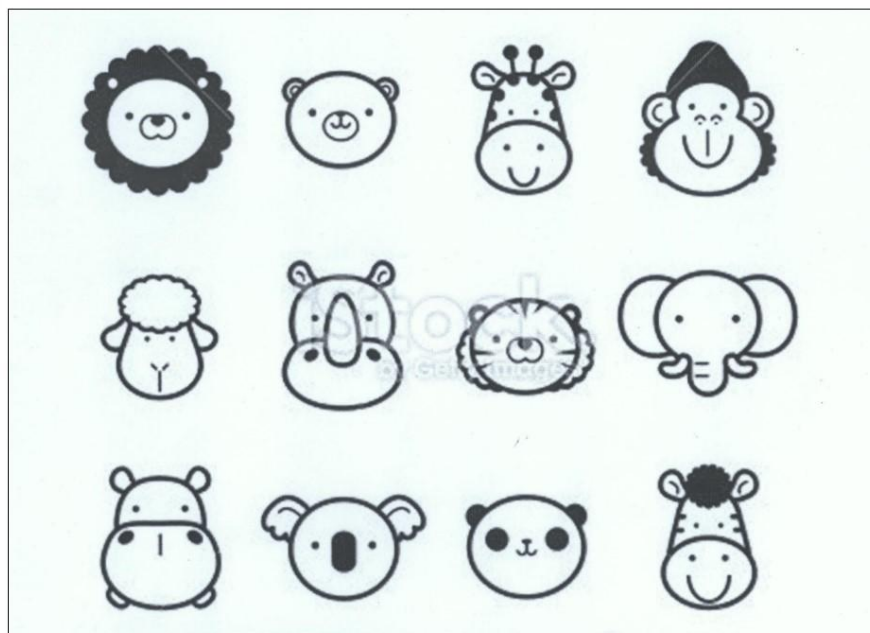
A3-size design journal by Pupil 1. It shows the pupil's process of sketching-to-design.

- Appendix 3a: Typical product analysis
- Appendix 3b: Visual images and 2-dimension square frames drawn on A3-size paper given by d&tTr for shape borrowing design and underlay use respectively
- Appendix 3c: Shape borrowing sketches. An additional page of animal shape clip arts was given by d&tTr for reference.
- Appendix 3d: 3-dimension design sketches using a given 3-dimension perspective crate as underlay
- Appendix 3e: 3-dimension design sketch using a given 3-dimension perspective crate as underlay
- Appendix 3f: Discussion on specifications and dimensions of support design
- Appendix 3g: Random line trigger design sketches using 2-dimension rectangular frames as underlay

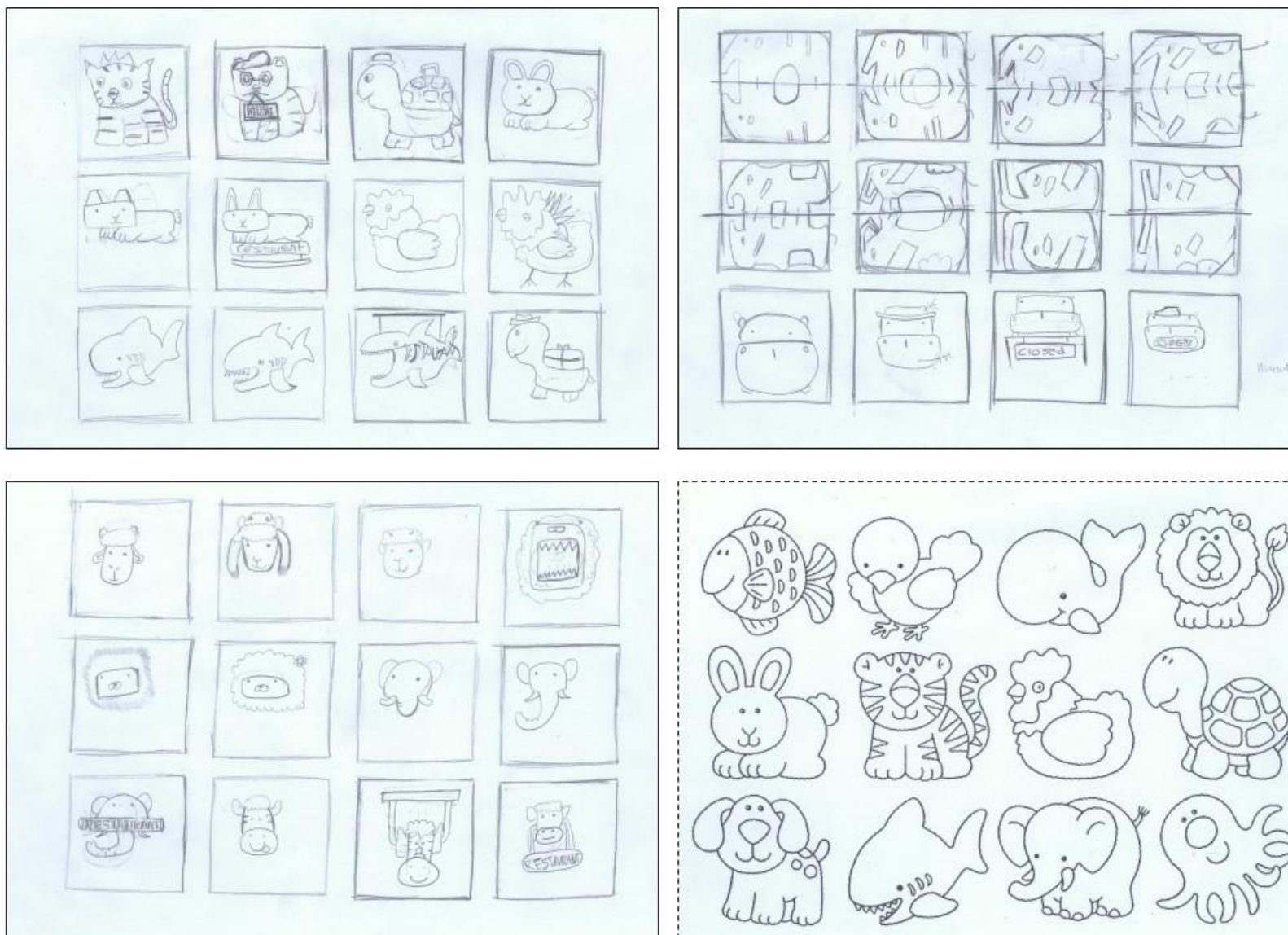
Appendix 3a: Typical product analysis



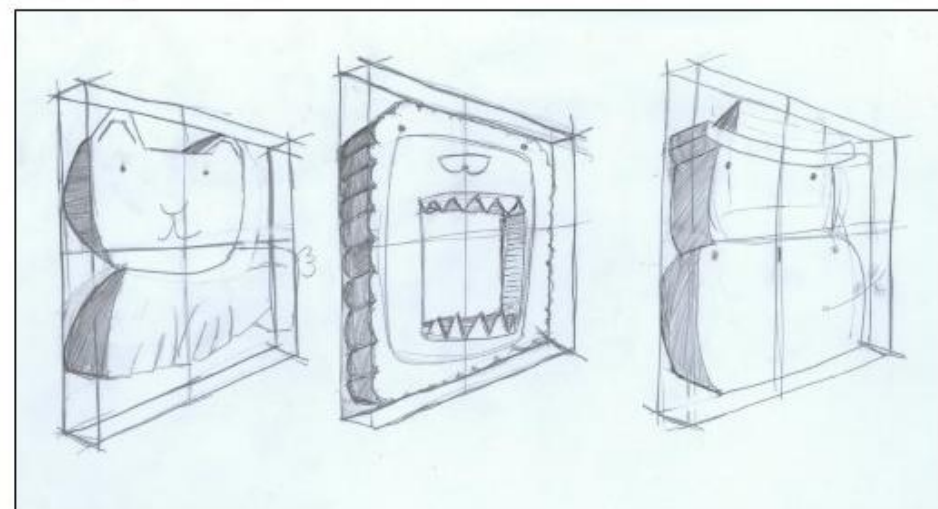
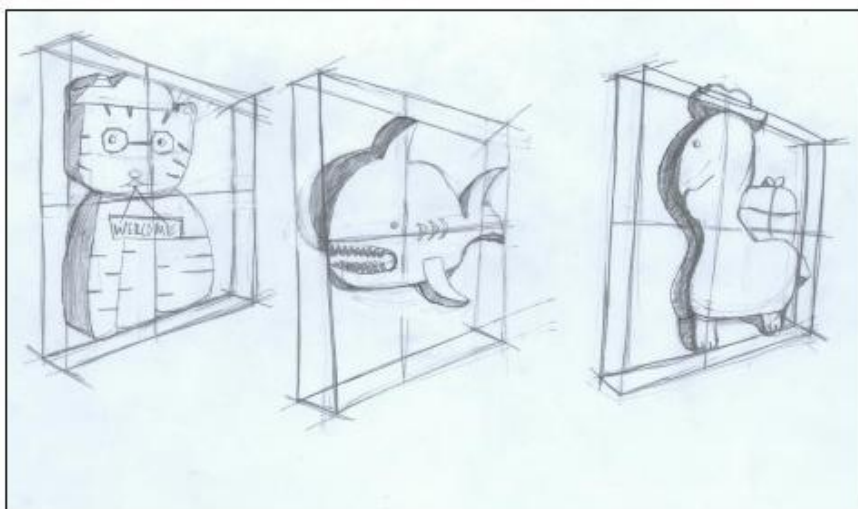
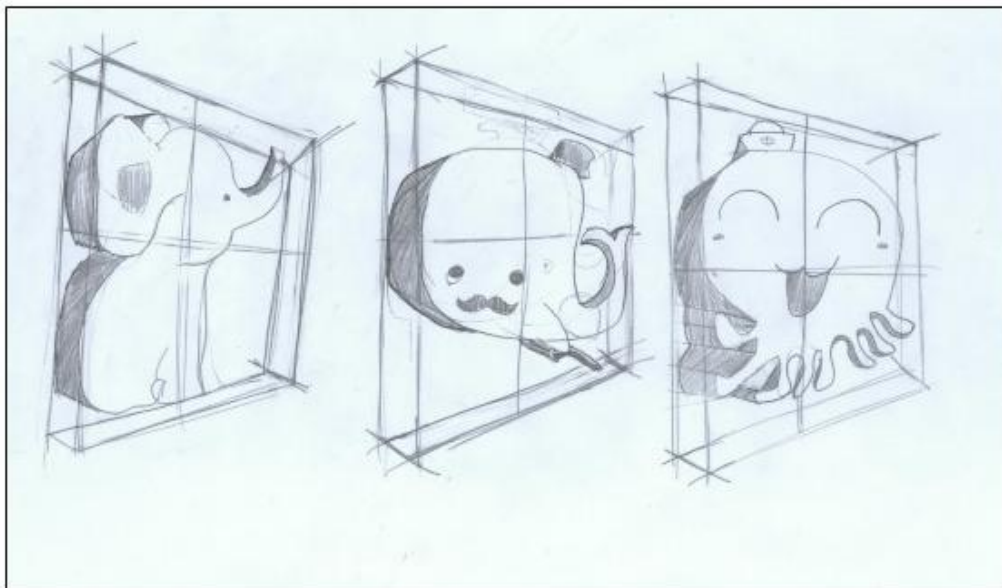
Appendix 3b: Visual images and 2-dimension square frames drawn on A3-size paper given by d&tTr for shape borrowing design and underlay use respectively



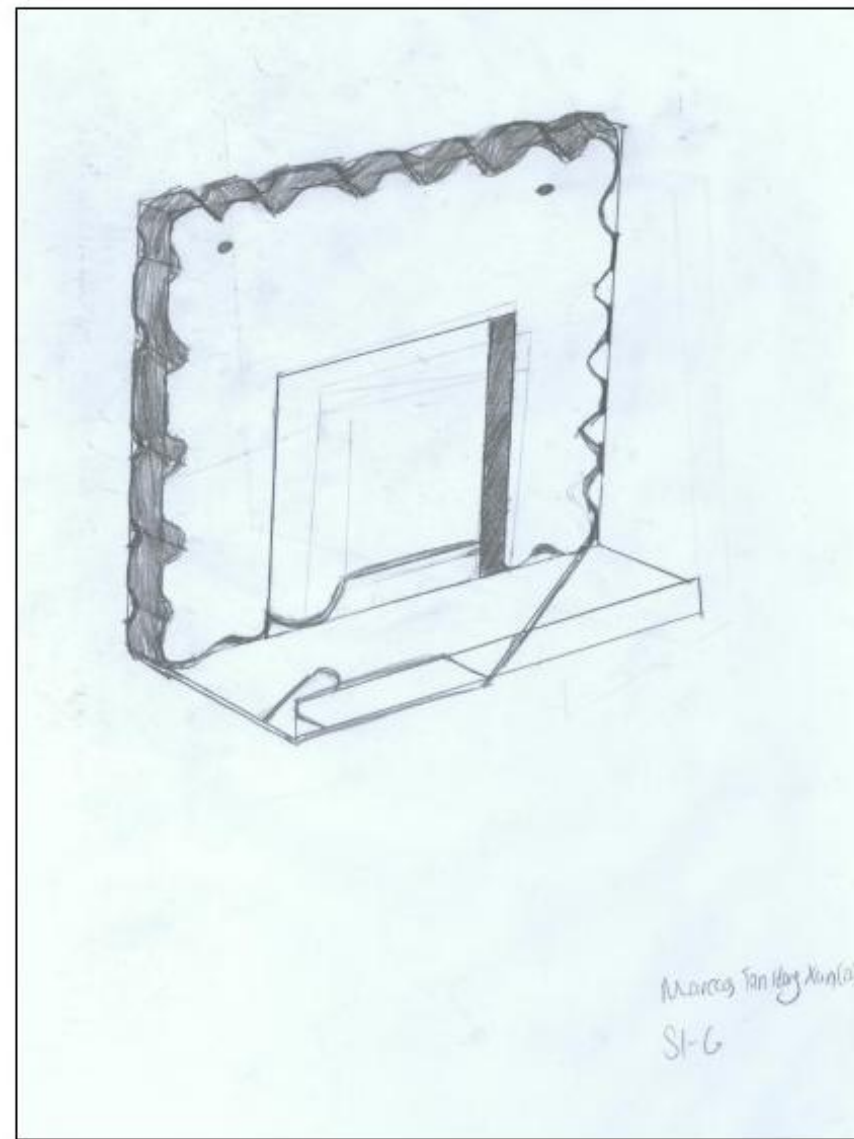
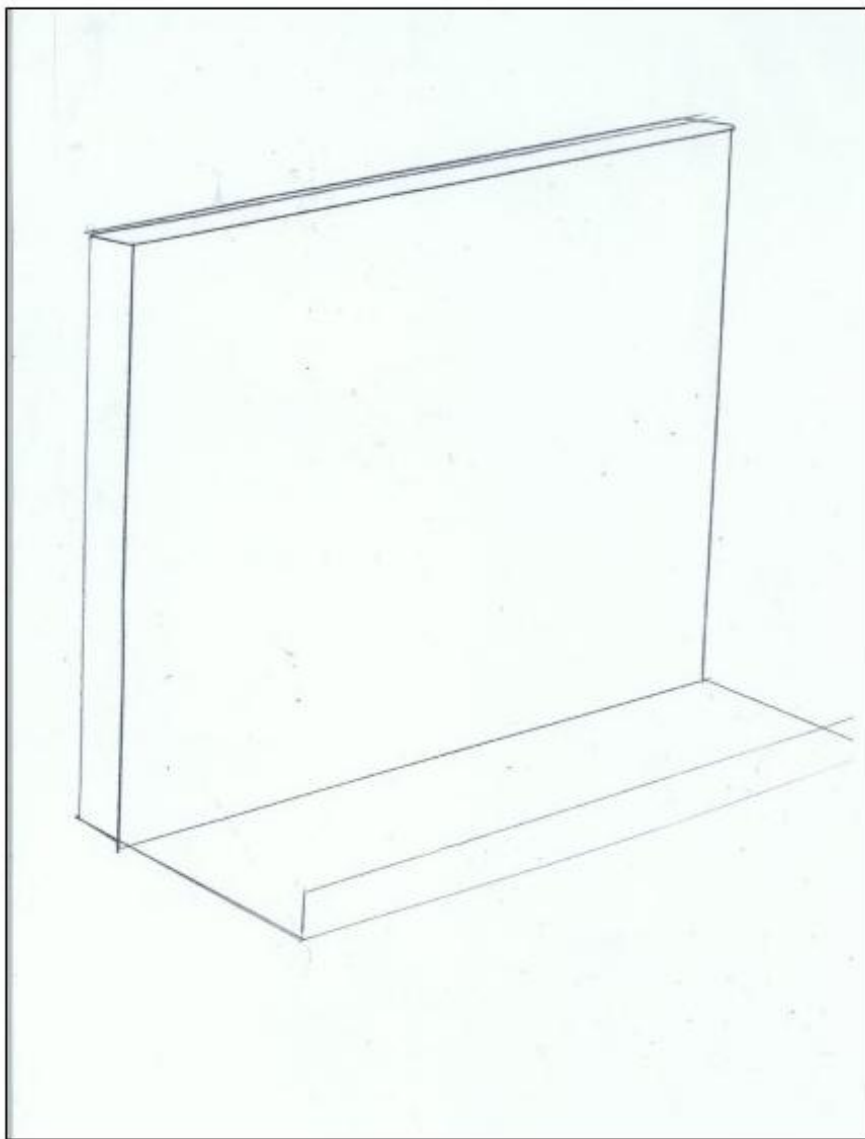
Appendix 3c: Shape borrowing sketches. An additional page of animal shape clip arts was given by d&tTr for reference.



Appendix 3d: 3-dimension design sketches using a given 3-dimension perspective crate as underlay



Appendix 3e: 3-dimension design sketch using a given 3-dimension perspective crate as underlay



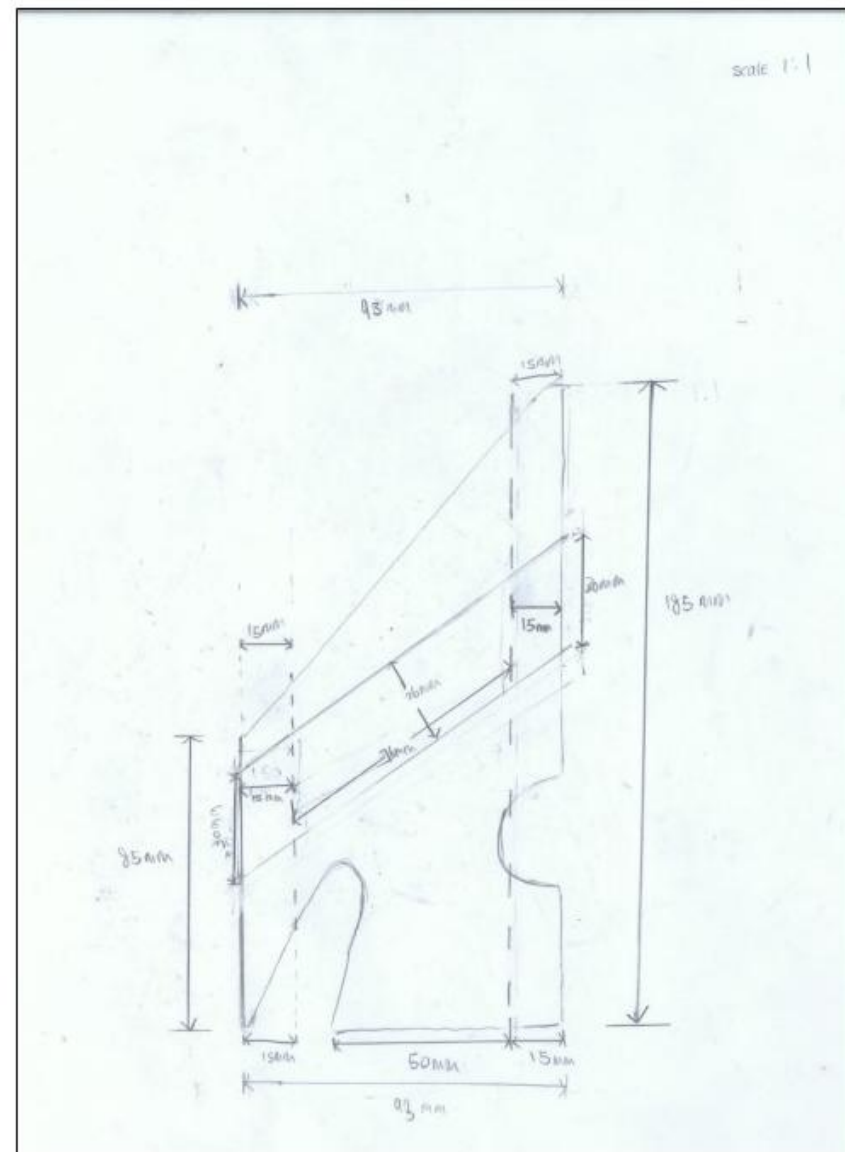
Appendix 3f: Discussion on specifications and dimensions of support design

Name: Norliss Tan Hong Xuan (26) Class: SI-C Date: _____

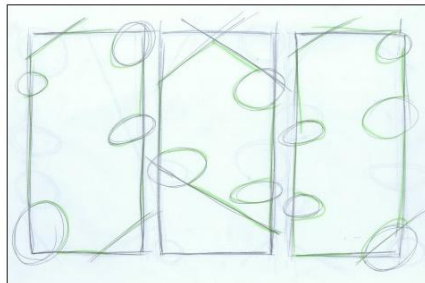
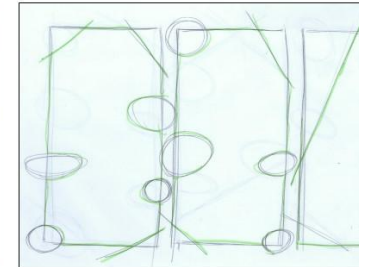
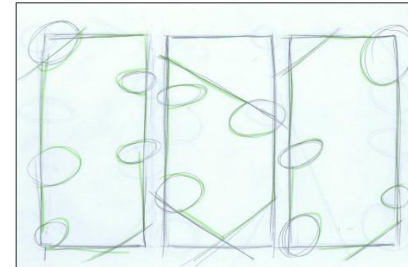
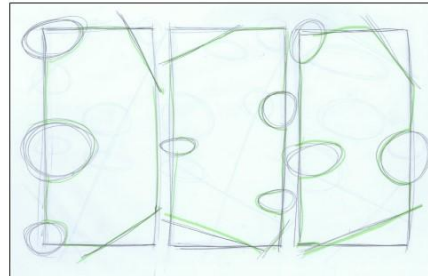
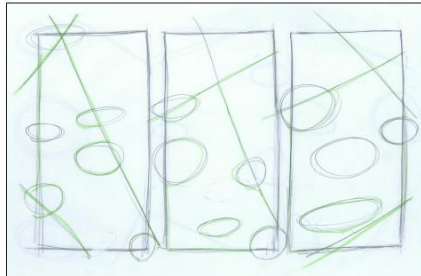
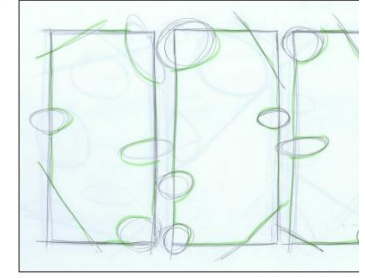
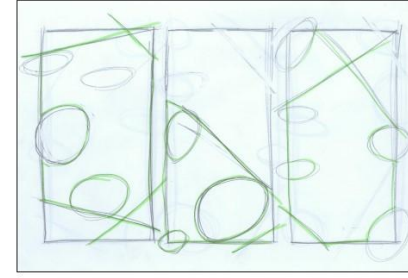
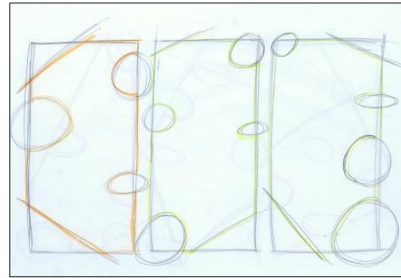
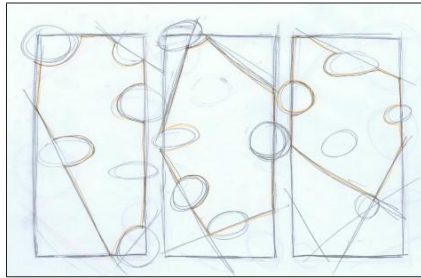
Menu Card holder – Design Specifications

No.	Design Specifications	Reasons
1.	The product must be stable when holding the menu.	This is because menu card is generally big and thin. The product needs to hold it well so the menu card will not topple over easily.
2.	The product must allow the menu card to be take out and put back easily.	So that the patrons can remove the menu card from the holder to take a closer look at the menu or pass around the table for discussion.
3.	The base of the product must not be bigger than 200mmx200mm.	So that... it will not occupy too much space on the table. Most of the space are intended for the food and condiments so it would be really inconvenient for the patrons if it is bigger than 200mm x 200mm
4.	The menu card holder ^{product} must be in a bright colour, hence, able to attract young buyers.	As it is bright in colour, it is able to decorate the restaurant and also not make the restaurant to look dull in the interior. By placing a bright coloured menu card holder ^{product} on the table, it will enable the holder to be a more fashionable and nicer as the vibrant colours menu card holder ^{product} be able to make the table stand out when placed on them. It will also attract the ^{young} diners to be more relaxed when reading the menu.
5.	The product ^{product} must be strong and durable, hence, will not break easily when dropped.	As the product is strong, hence, will not break easily, thus, will not be a problem to cause inconvenience or accidents as if it breaks, its fragments might spread everywhere or even when it cracks, it will also have sharp edges that may injure the diners.
6.	The product if made of metal must be made of stainless steel must not decay, corrode or rust easily.	As it is made of metal ^{stainless steel} , it will not decay or rust at all, it will be able to sustain the high ^{high} temperature of the food and also the restaurant and will also not be an object of attention to the diners when they see or use the product as it might look very dirty and ugly. As the product is made of metal ^{stainless steel} , there will be no off material present, and it will not likely contaminate the food or drinks of the diners.



Appendix 3g: Random line trigger design sketches using 2-dimension rectangular frames as underlay



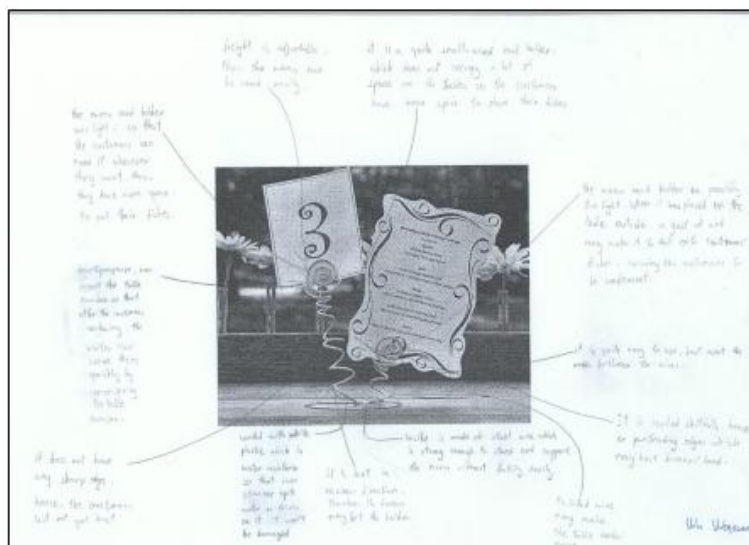
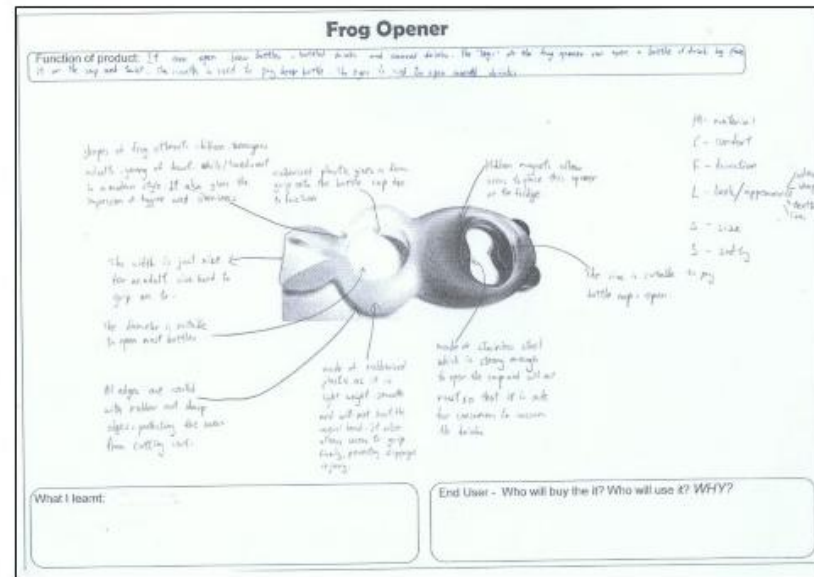
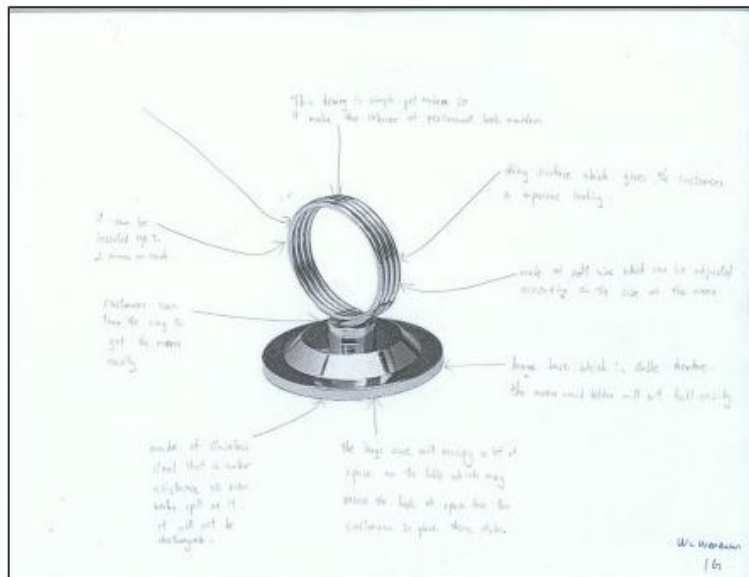
Appendices for Event 2: design journals and/or prototypes by nine lower secondary pupils in 2016 and 2017 (part 2b)

A3-size design journal by Pupil 2. It shows the pupil's process of sketching-to-design.

- Appendix 4a: Typical product analysis page
- Appendix 4b: Visual images and 2-dimension square frames drawn on A3-size paper given by d&tTr for shape borrowing design and underlay use respectively
- Appendix 4c: Shape borrowing sketches. An additional page of animal shape clip arts was given by d&tTr for reference.
- Appendix 4d: 3-dimension design sketches using a given 3-dimension perspective crate as underlay
- Appendix 4e: 3-dimension design sketch using a given 3-dimension perspective crate as underlay
- Appendix 4f: Random line trigger design sketches using 2-dimension rectangular frames as underlay

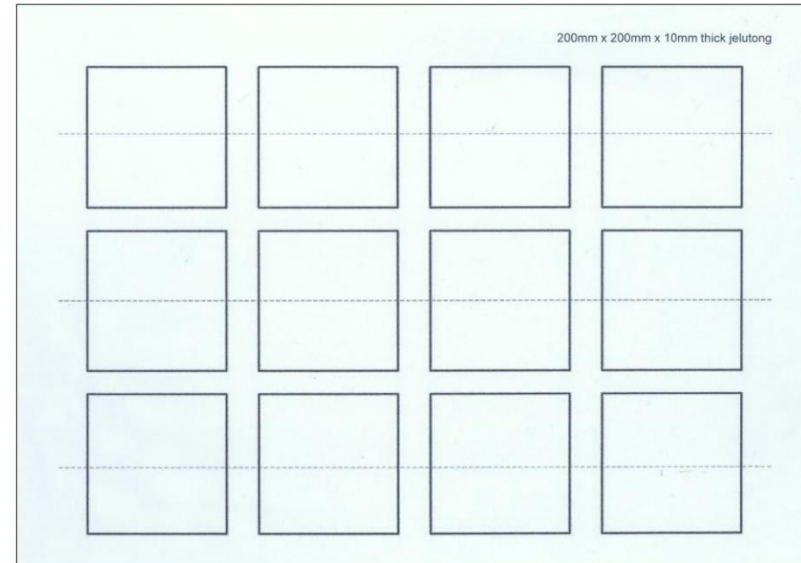
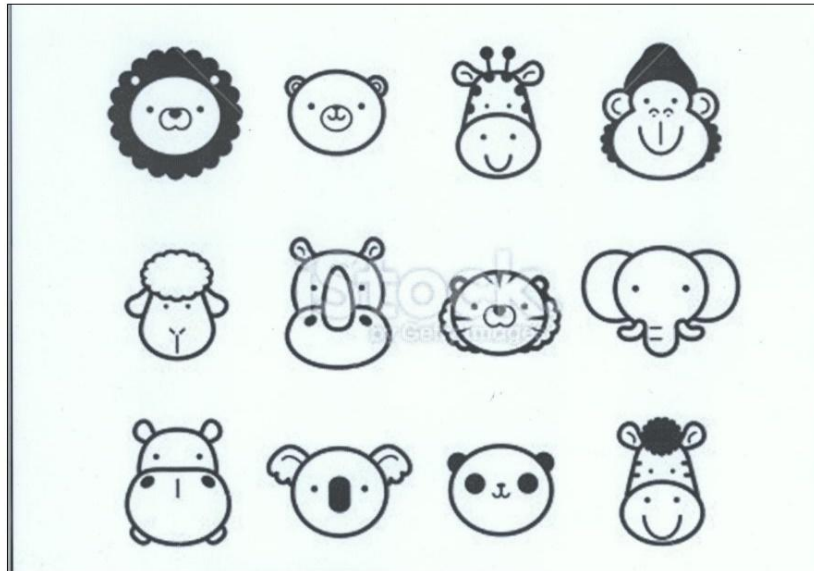
There is no Appendix 4g.

Appendix 4a: Typical product analysis page

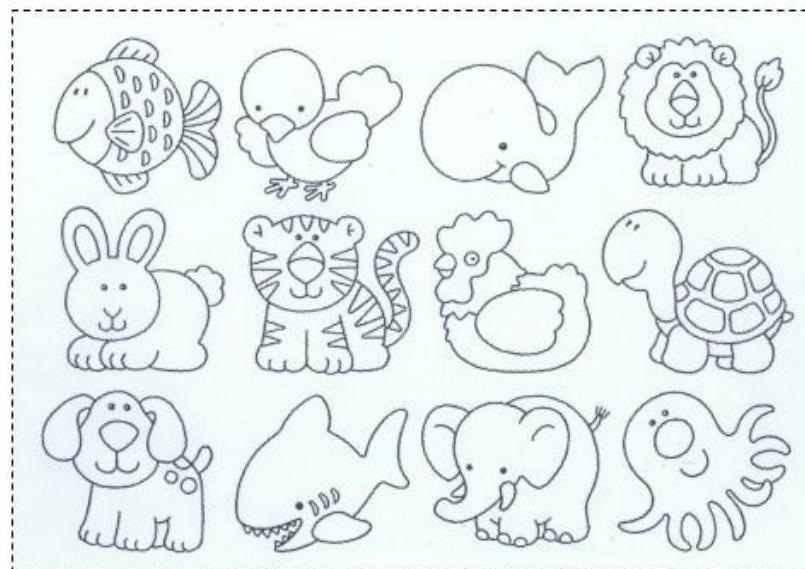
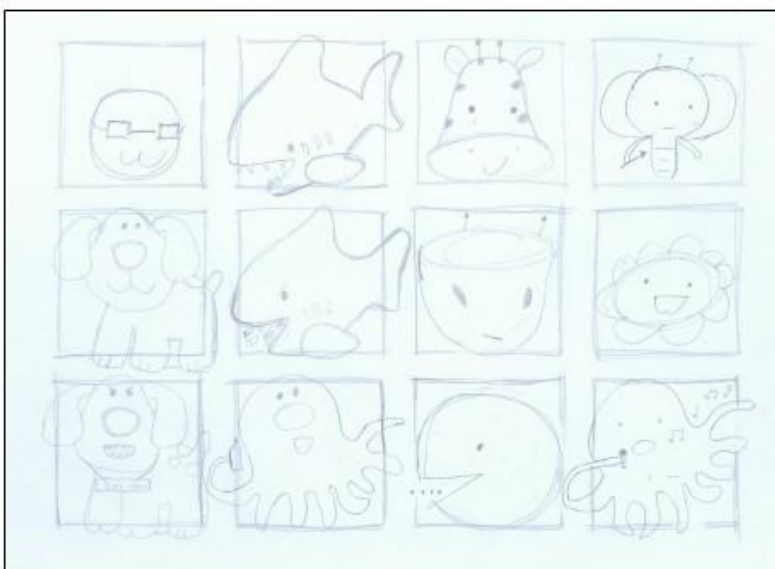
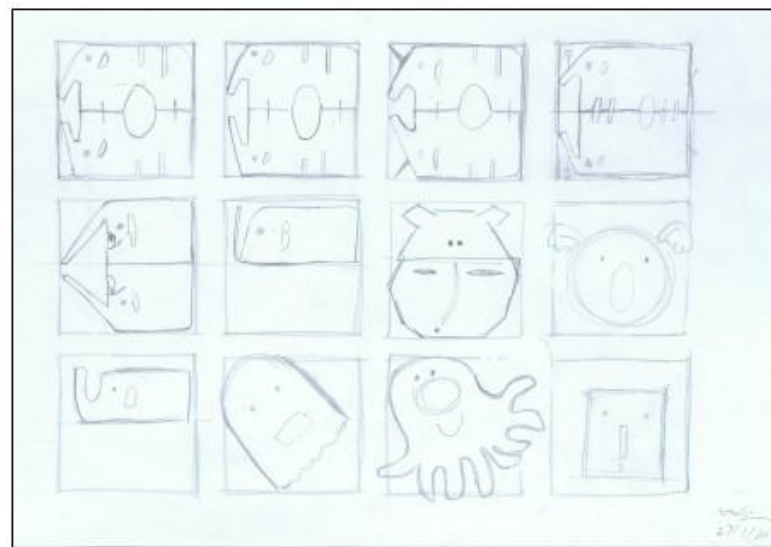
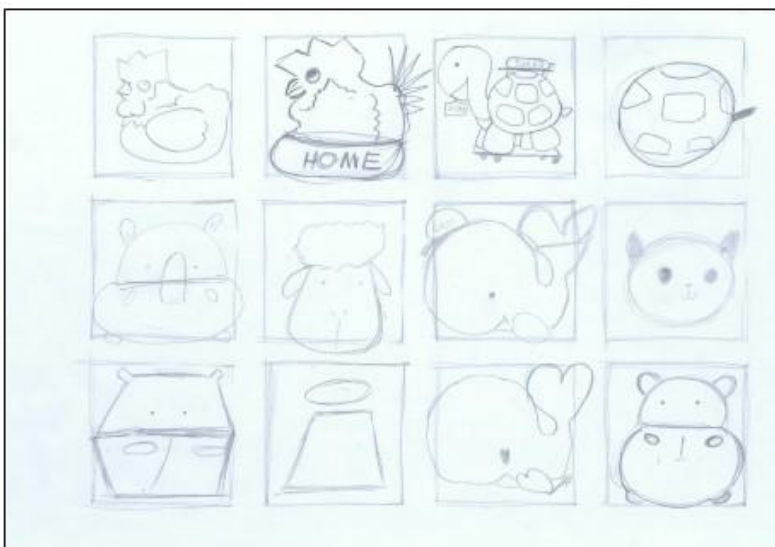


No.	Design Specifications	Reasons
1.	The product must be stable when holding the menu.	This is because menu card is generally big and thin. The product needs to hold it well so the menu card will not topple over easily.
2.	The product must allow the menu card to be take out and put back easily.	So that the patrons can remove the menu card from the holder to take a closer look at the menu or pass around the table for discussion.
3.	The base of the product must not be bigger than 200mmx200mm.	So that it will not occupy too much space on the table. Most of the space are intended for the food and condiments so it would be really inconvenient for the patrons if it is bigger than 200mm x 200mm
4.	The product will be light in weight.	So that the waiter will be able to carry it easily. So that they need to be able to place the card in another table when they table is full of menu card holder.
5.	The product will be light weight design.	So that it will give a waiter a very extraordinary experience in the restaurant when they use the menu card holder.
6.	The product's appearance has to be unique.	So that it will give a waiter a good impression when they have a glimpse of the menu card holder and willing to use it.

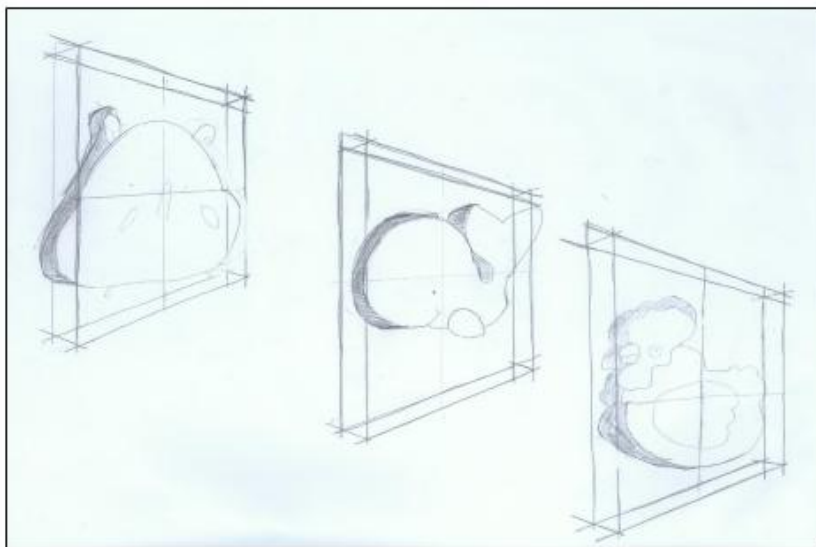
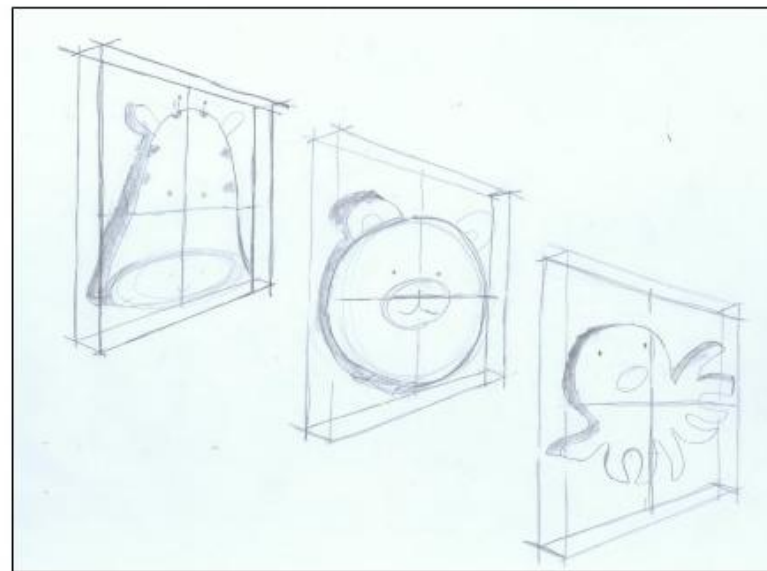
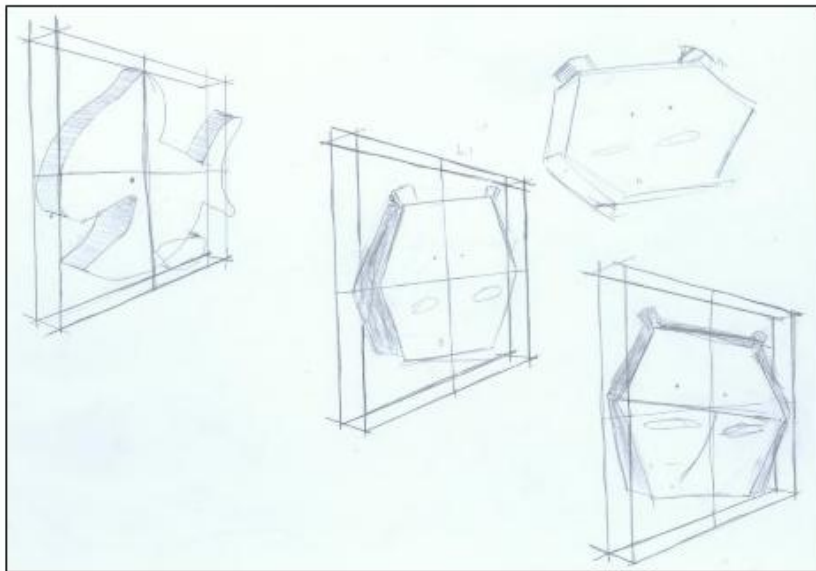
Appendix 4b: Visual images and 2-dimension square frames drawn on A3-size paper given by d&tTr for shape borrowing design and underlay use respectively



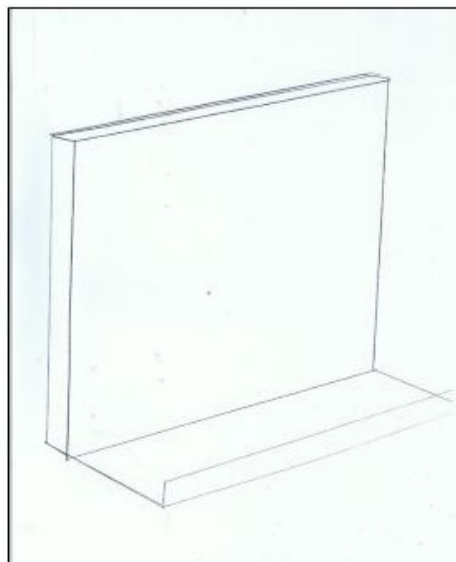
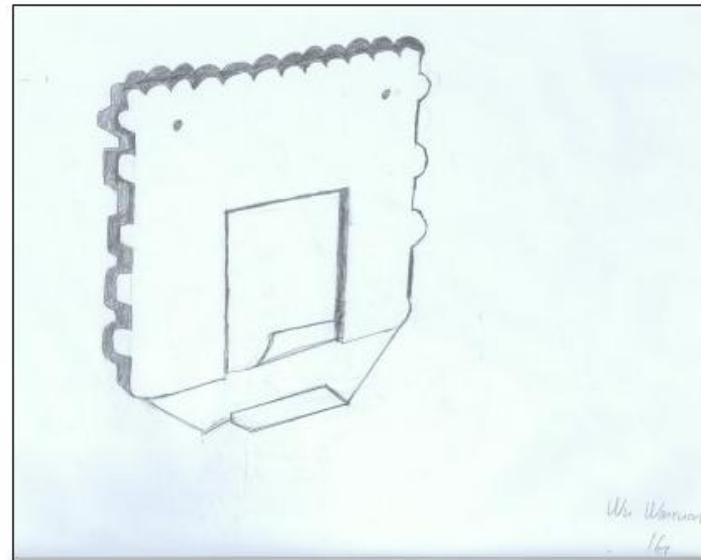
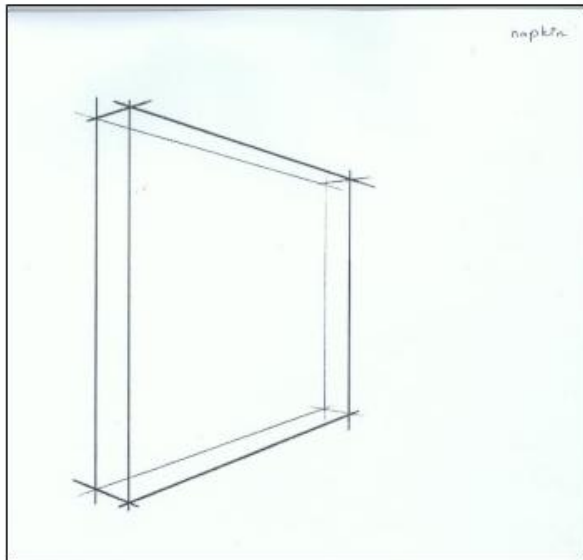
Appendix 4c: Shape borrowing sketches. An additional page of animal shape clip arts was given by d&tTr for reference.



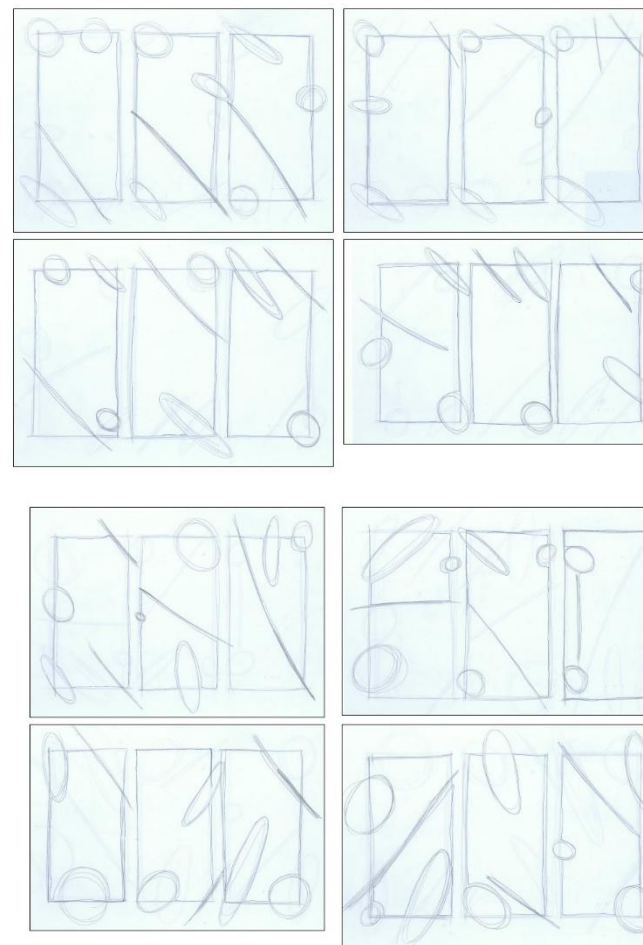
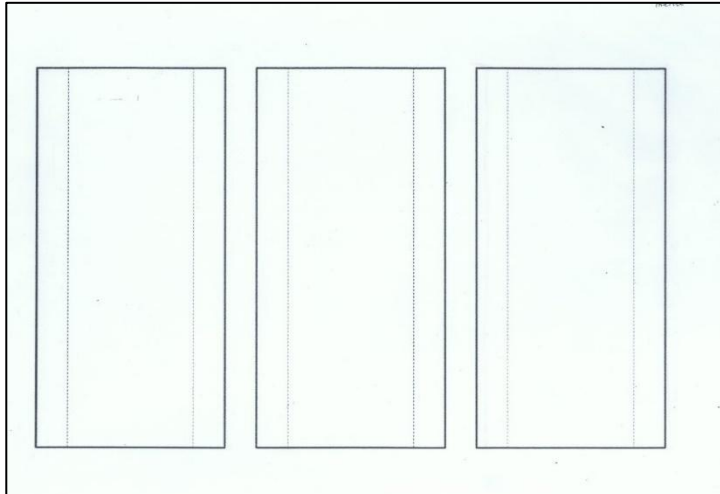
Appendix 4d: 3-dimension design sketches using a given 3-dimension perspective crate as underlay



Appendix 4e: 3-dimension design sketch using a given 3-dimension perspective crate as underlay



Appendix 4f: Random line trigger design sketches using 2-dimension rectangular frames as underlay



--- end of write-up ---

THE FIRST GENERATION TURKISH COMPOSERS AND THE BASIS OF MUSIC EDUCATION IN TURKEY

Dr. Hilmi Yazici
Selcuk University, Turkey

Abstract

Arising after the Ottoman period, as an independent national state, the new Turkish Republic created new politics on educational system based on the new ideology of the new state. During this period the politics shaped under the notion of nationalism with the renovation attempts in almost all fields besides the educational fields. Within this frame, it is seen that similar studies carried out in the field of music education. The composers of the early republican period draw attention as an important part of this process due to their contributions as music educators along with their artistic works. It can be said that these composers acted under the effect of the politicians and ideological basis of that period. One of the most important movements of this composers was to create the new concepts for music education and to establish the new music schools and conservatories of the republic. In this study, the contributions to this renovation process and the roles of this composers will be evaluated.

Keywords: Education, Music, Music Education, Politics, Ideology

The Impact and Possibility of Teaching Metacognitive Strategies on EFL Learners' Communication Performance: A pilot study

Yang Siyu
Osaka Kyoiku University

Abstract

Research regarding the effectiveness of metacognitive strategies (MSs) is still ongoing. A number of studies have examined the types of strategies learners use as well as how they are used in conjunction with other variables (e.g., proficiency, epistemological beliefs; Plonsky, 2011). However, previous research has paid relatively little attention on the effective instruction of MSs and how the instruction is related to learners' communication performance. The present pilot study addresses the following research questions:

1. Does the teaching of MSs increase their fluency in communication tasks?
2. Which of the MSs are most often used by the learners?
3. Which of the learners, high-level or low-level, is more suitable for accepting the teaching of MSs?

We conducted a debate-based strategy instruction for six weeks, situating it in the field of video assisted EFL learning (Beatty, 2010). We made a video recording of debate performance at first, and then let the learners finish their evaluation sheet while they are looking at their own video recordings. The learners were encouraged to apply what they noticed about their performance in the next debate session. The main sources of data analyses came from the video recordings.

The results suggest that MSs did affect EFL learners' fluency, especially that of the low-level learners. Implications for designing a comprehensive MSs teaching will be discussed.

Keywords: metacognitive strategies, fluency, video-assisted EFL learning, communication performance

1. Introduction

1.1 Metacognitive Strategies

Metacognition was first described by the American psychologist J. H. Flavell in the 1970s. The term was used to refer to an individual's ability to manage, monitor, and regulate the contents of his or her own memory. After purposing the term metacognition, Flavell made the first attempt to put forward a formal model of metacognition in his 1979 paper. This model includes four classes: metacognitive knowledge, metacognitive experiences, tasks or goals, and strategies or activities. And until now, with other researchers' studies, metacognitive knowledge, metacognitive experience, and metacognitive strategies (MSs) have been the three main components of metacognition.

Among these three components, MSs is an indispensable part of metacognition and also the most applicable part in learning and teaching. Canale and Swain (1980) emphasized that strategic competence originally referred only to communication strategies and could compensate for linguistic deficiencies. O'Malley and Chamot (2003) summarized metacognitive strategies as the executive skills that lead to the success of a learning activity. As sequential processes, metacognitive strategies function as a controller over cognitive activities to ensure the accomplishment of a cognitive goal. Metacognitive strategies help to regulate cognitive activities, such as planning a learning activity, selecting strategies, monitoring the learning process, evaluating the effectiveness of learning strategies and modifying learning strategies when necessary (Ridley & Weinstein 1992).

As the previous studies illustrate that metacognitive strategy plays a positive role in language learning, Wenden (1991) underlines the need for strategy training and helping learners become aware of their own language learning process. Therefore, the present research hopes to apply an effective instruction of metacognitive strategy on EFL learning and see how the instruction is related to learners' communication performance.

1.2 Metacognitive Strategies and Proficiency

Hedge (2000) agrees that the application of metacognitive strategies contributes to making learners more competent in the target language. Rahimi and Katal (2001) claimed that "when a metacognitive strategy was used as an independent variable, the result indicated that the more the students used this particular strategy, the more progress they made in their overall

language proficiency.” Yet, it is an open question whether the progress of learners at different levels is the same? Therefore, the present research hopes to see which of the learners, high-level or low-level, is more suitable for accepting the teaching of MSs.

1.3 Metacognitive Strategies and Fluency

What is expected from EFL learners nowadays is a fluent command of the language that permits smooth flow of communication. However, it is still a difficult problem. Richards et al. (1985) stressed the role of fluent oral performance as an indicator of one’s level of EFL. What’s more, since 1992, complexity, accuracy, and fluency have appeared as prominent concepts, and have been widely used as measures of EFL performance (Housen et al., 2012). The impact of metacognitive strategies on accuracy of EFL learning proved positive (Seifoori & Birjandi, 2008), while no positive impact was reported from metacognitive strategies planning on complexity (Birjandi & Seifoori, 2009). However, there have been few studies about the impact from metacognitive strategies on speaking fluency. Thus, the present research sought to investigate the impact of metacognitive strategies on the fluency of EFL learners.

2. Research Methods

This part will describe the methods used in the study, including research questions, participants, instruments and overall experimental procedures.

2.1 Research Questions

1. Does the teaching of MSs increase their fluency in communication tasks?
2. Which of the MSs are most often used by the learners?
3. Which of the learners, high-level or low-level, is more suitable for accepting the teaching of MSs?

2.2 Participants

The eight participants joined the study. Seven were seniors from department of English Education, Osaka Kyoiku University, and one was from an English education graduate program of the same university. They were considered to be at an upper-intermediate level in their English proficiency based on the reported results of their standardized test scores (e.g.,

TOEFL). They were divided into two groups of four participants. The first group had slightly higher English proficiency compared with the second group.

2.3 Instruments

Three instruments were used to explore the questions: a multimedia-assisted environment (a computer, a video camera, and a microphone), a debate worksheet, and an evaluation sheet. Multimedia-assisted environment was employed to provide definitions of a variety of strategies with the powerpoint slides (see Appendix for the list of strategies taught) and make video recordings of participants' debate performance. A debate worksheet was distributed before the debate so that the participants could take notes during the debate activity, and evaluation sheets were used to help participants to reflect on their performance.

2.4 Overall Experimental Procedures

The experiment lasted for six weeks for the first group and five weeks for the second. It was all conducted in participants' free time, once a week, within a class time period lasting for about 90 minutes.

According to Anderson (2002), the participants are expected to use a systematic MSs instruction in their reflection: learning strategies - selecting and using learning strategies - monitoring communication performance (i.e., their strategy use) - evaluating strategy use and performance.

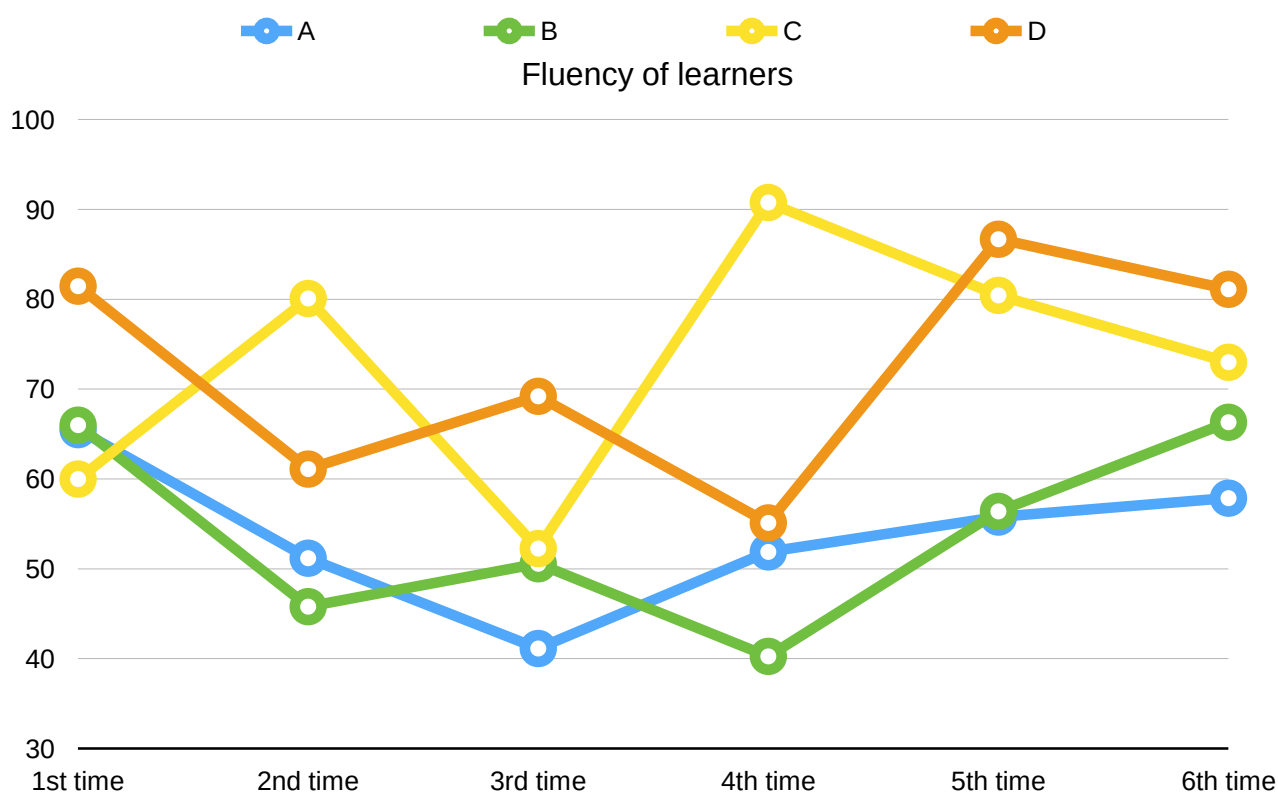
Following this, the researcher used a multimedia-assisted environment to show participants the descriptions and definitions of a variety of communication strategies, and gave them examples to help them grasp the use of strategies. The participants were encouraged to use these strategies in the following debate. Then they were engaged in the debate activity, which was video-recorded. After that, the participants completed their evaluation sheet while they were watching their own video-recorded debate performance. The participants were encouraged to apply what they noticed about their performance in the next debate session.

3. Findings of the research

Analyses of videos yielded answers to the research questions. The first research question is whether the MS instruction had positive influences on the participants' fluency in communication tasks. For this, we measured the fluency as words per minute in their debate performance. The results were summarized in Figure 1 for the higher-proficiency group and Figure 2 for the lower-proficiency group. The overall analyses showed that MSs did affect EFL learners' fluency, especially the low-level learners.

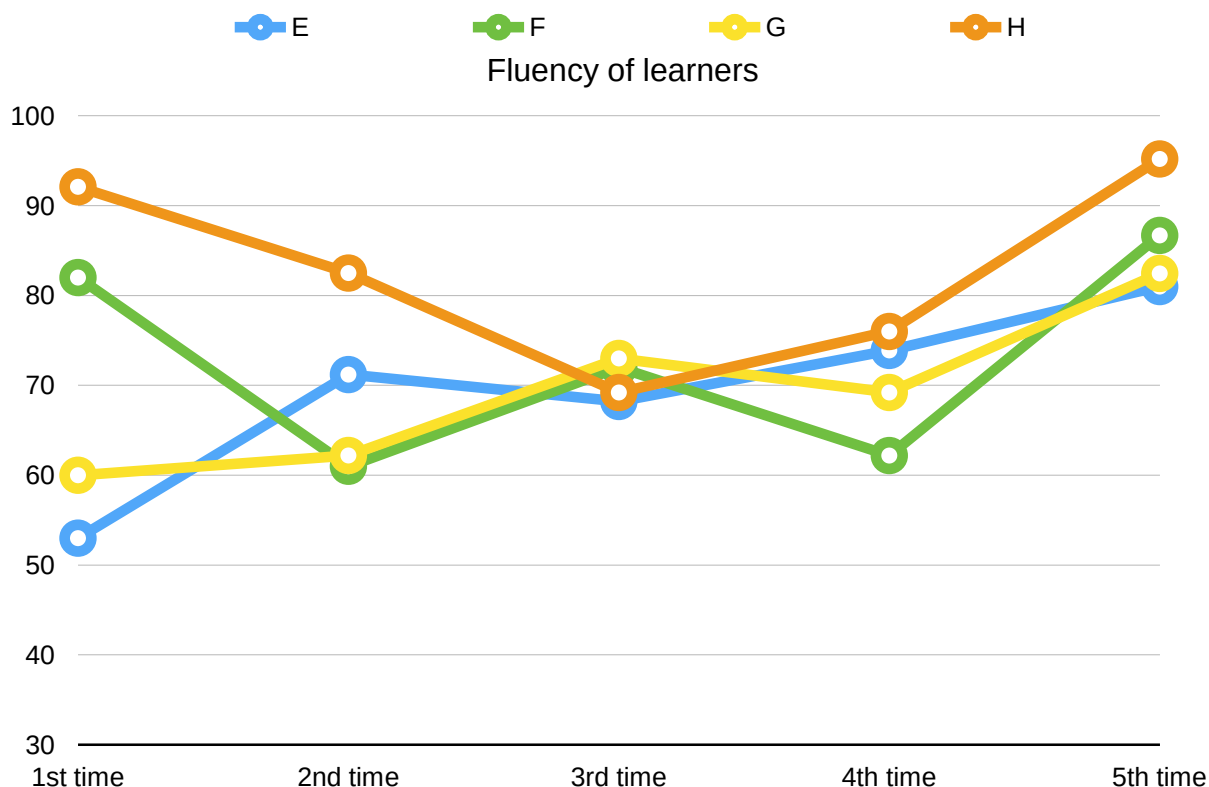
Figure 1. The first group fluency (word-per-minute) results

After the 4th instruction of strategy, the fluency of the second group, whose participants did not have high-level proficiency, showed marked improvement, whereas in the first group,



which had both high-level proficiency and low-level proficiency participants, we cannot get a consistent conclusion. With regard to the data of fluency, the results show that lower-level learners are more suitable for accepting the teaching of MSs than higher-level learners.

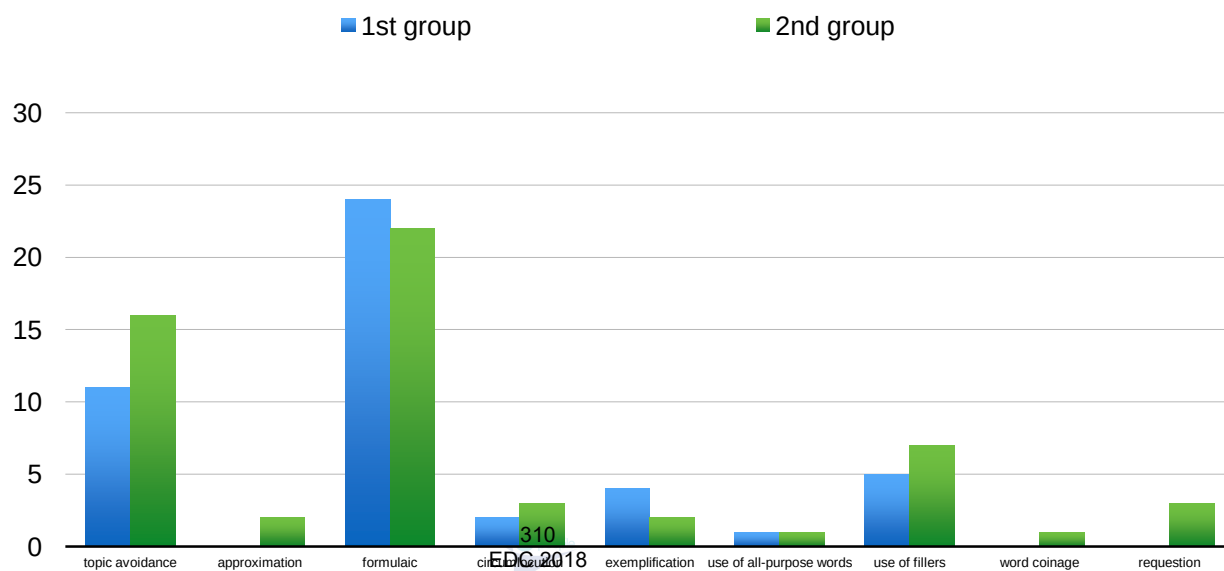
Figure 2. The second group fluency (word-per-minute) results



The second research question is whether particular MSs are used by the learners. For this, strategy usages were counted by the researcher by watching the recorded debate performance. The results were shown in Figure 3, which shows that topic avoidance and formulaic strategies are two of the most often used by EFL learners. Use of all-purpose words, word coinage, and sense of requestion appear to be the least frequently used strategies. Interesting observations can be made when comparing the two groups performances. The second group used all of the strategies in every class whereas the first group used the strategies selectively. For instance, approximation, word coinage, and requestion were not used by the first group. It is also proved that low-level students were more suitable for accepting the teaching of MSs.

Figure 3. The number of metacognitive strategy usages by group

4. Implications for Oral English Teaching



Based on the present research, we can know that the training of MSs is useful for EFL learning, especially for lower-level students. Thus, teachers who use MSs can positively impact students who have learning difficulties by helping them develop an appropriate plan for learning strategies. As students become aware of how they learn, they will use these processes to efficiently acquire new information and become more independent thinkers. We should develop much more comprehensive instruction of metacognitive strategies that can be implemented in the classroom.

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Appendix: The list of metacognitive strategies used in the present study

Approximation: using an alternative term which expresses the meaning of the target lexical item as closely as possible.

Use of all-purpose words: extending a general, empty lexical item to contexts where specific words are unknown.

Circumlocution: describing the desired lexical item or giving its definition instead of using the appropriate target language item.

Exemplification: using examples to make the meaning clear when the specific expression is not available.

Restructuring: leaving the utterance unfinished and using an alternative sentence structure to communicate the intended message or to correct the error.

Word coinage: creating a non-existing L2 word based on a supposed rule.

Self-repair: when there is a conflict between what the learner believes to be true and what he perceives to be the case, he will initiate a repair.

Literal translation: translating word for word from the native language.

Code-switching: using a L1 word with L1 pronunciation.

Fillers: using filling words to fill pauses in the speech so as to keep the conversation channel open.

Self-repetition: repeating what has just been uttered by the speaker in order to gain time for thinking

Formulaic language: using a group of words which function as a fixed speech unit.

Topic avoidance: when the learner does not talk about concepts for which the vocabulary or other meaning item is unknown.

Message abandonment: message abandonment occurs when the learner begins to talk about a concept but is unable to continue due to lack of meaning item and stops in mid-utterance.

Appeal for assistance: turning to the conversation partner for help either directly or indirectly

The Impact of the Thinking Style and Behavioral Traits of Leaders on Their Readiness to
Implement Change within Their Organizations (Excerpts from Dissertation)

Written by

Scheherazade Perkins

Abstract

This quantitative correlational study examined the impact of the thinking style and behavioral traits of leaders on their readiness to implement change within their organizations. The theoretical framework for this study included the concepts of organizational change, leadership styles, leader effectiveness, and leadership structure. The first research question addressed the impact of leaders' thinking style on their readiness to implement change, and the second research question addressed the impact of leaders' behavioral traits on the same criterion. The researcher analyzed data from a nonrandom sample of 143 leaders, recruited from 40 Texan companies, who completed two surveys: The Profile XT assessment and the OCQ-C, P, R readiness-for-change survey. The results of the multiple linear regression analysis identified two statistically significant predictors of leaders' overall readiness for change: verbal reasoning and manageability, $F(1, 140) = 5.358, p = 0.022$. The two predictors accounted for 12.9% of the variance in the overall readiness for change (9.5% came from verbal reasoning and 3.3% came from manageability). The standardized beta coefficients indicated that one-point increase in verbal reasoning scores would be associated with 0.275 points increase in overall readiness for change scores ($p = 0.001$), and one-point increase in manageability would be associated with 0.186 points increase in overall readiness for change scores ($p = 0.022$). The results may be used for leaders' recruitment, evaluation, and training to promote effective leadership for organizational change.

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Introduction

The purpose of this quantitative correlational study was to investigate to what extent a leader's thinking style and behavioral traits predicted the leader's readiness to implement change within his/her company or organization. In this doctoral study, the researcher performed a multiple linear regression analysis to examine the impact of leaders' thinking style and behavioral traits on their readiness to lead change in their organizations. This paper documents excerpts of the doctoral dissertation (Perkins, 2017). This study was initially intended to examine the characteristics of leadership teams in relation to their readiness to implement change within their organization. However, the insufficient number of leadership teams precluded statistically significant findings from data aggregated at the team level. Although some team analyses are included in the supplemental research section of this document, the primary analysis was ultimately conducted at the individual leader level.

This study examines data from 143 leaders from 40 Texas-based companies and organizations of varying sizes and across various disciplines. The study utilized two validated instruments: Profile XT psychometric assessment (Trego & Hamilton, 2008) that collected predictor variable data pertaining to leader thinking style (cognitive ability) and behavioral traits, and the Organizational Readiness for Change Questionnaire—Climate of Change, Processes, and Readiness (OCQ-C, P, R) (Bouckennooghe et al., 2009) that collected criterion variable data related to leader readiness for change.

Importance of the Study

This study is important for three key reasons. First, its findings cast light on the relationship between the attributes and behaviors of leaders and their readiness to lead

change. Second, it fills a void in the literature on the attributes of leadership and leaders' readiness for change in their organizations. Lastly, it replicates previous studies that suggest methodologies for identifying and reproducing the characteristics of organization leaders as agents of change (Bouckennooghe et al., 2009).

A review of the literature revealed a growing need for leaders to manage change within their organization and identified the inability to execute adaptive strategies needed to mitigate change as a critical leader weakness (Allen, 2011; Beer & Nohria, 2000). The ability of an organization's leadership to navigate successfully through the pitfalls of organizational transition is frequently associated with organizational sustainability and growth (Cowley, 2007; Foster & Kaplan, 2001; Hesselbarth & Schaltegger, 2014; Stensaker & Meyer, 2012). Organizations that have failed to manage the challenges of change have frequently met with stagnation, organizational decline, and eventual dissolution (Cowley, 2007). Consequently, the ability to identify leaders who can successfully lead their organizations through transition may be essential to the organization's survival.

Studies on leadership attributes, leader behaviors, and leadership effectiveness are well documented in recent literature. Fewer studies document evidence of leadership mastery within environments of transition. Prior to this study, very little research had isolated an approach for correlating leadership attributes with the successful change management and no study posed the use of psychometrics as a tool for predictively determining and replicating leader attributes that correlate with readiness for change (Bouckennooghe, Devos & Van Den Broeck, 2009).

The scarcity of information about predictive indicators of leader success in changing organizational environments accounts for the use of predominantly traditional methods for selection, placement, transplantation, training, and development of leaders, each having produced less than stellar results (Charan, Drotter, & Noel, 2011; Llopis, 2012). The costly trial and error methods have often produced leader incompatibility, unproductive conflict, and underperformance (Hamilton, 2010; O'Toole, Galbraith, & Lawler, III, 2002). Some studies suggested as much as 50% of employee turnover can be associated with poor candidate selection and hiring decisions, frequently costing between one-half to more than three times the annual salary of exiting staff members (Bressler, 2014; Silliker, 2013; Yager, 2012). Leadership development and training has yielded similar lack luster performance in producing effective leaders of change (Charan et al., 2011). Movement of leadership talent from one company to another has often met with weak results as well. Llopis (2012) revealed that smart and highly talented executives, who were successful in one company, frequently under-performed when transplanted into another. This study proposed to identify a method for increasing the probability of success for leaders who lead their organizations through transition by correlating leader attributes, specifically thinking style and leader behavioral traits, with their readiness for change.

Thinking Style

The term thinking style is one of the two predictor variables in this study and is described as an individual's "ability to use old learning applied to new experiences in order to measure the flexibility of thinking required to grasp concepts in a job or training setting" (Hamilton, 2010, p. 2). While it does not represent a person's intelligence,

thinking style does provide clues for how quickly an individual is able to process or assimilate new incoming information. Thinking style was operationalized in this study in terms of four components: verbal skills, verbal reasoning, numeric ability, and numerical reasoning. Thinking style was measured using the Profile XT psychometric assessment (Trego & Hamilton, 2008). The type of data is interval, with scores ranging from one to ten. Lower scores indicate weaker ability to process new information using prior learning. Higher scores indicate a stronger ability to process new information using prior knowledge.

Behavioral Traits

Behavioral traits represent the second set of predictor variables in this study. Behavioral traits describe the “behavioral preferences that are more natural or comfortable for an individual in the performance of their job assignment” (Hamilton, 2010, p. 12). Behavioral traits were operationalized in this study in terms of nine characteristics (operational terms): energy level, manageability, sociability, independence, objective judgment, attitude, assertiveness, decisiveness, and accommodating.

The researcher collected data for the behavioral traits using the Profile XT instrument that includes 185 agree – disagree and Likert Scale questions. This instrument has nine scales whose aggregation into an overall measure is problematic because the traits are conceptually unrelated. The type of data is interval, with scores ranging from one to ten for each behavioral trait. Lower scores indicate a lack of propensity toward a given behavior. Higher scores indicate a stronger propensity toward a given behavior.

Readiness for Change

The term readiness for change is described in this study as the propensity for navigating or moving successfully through the change process (Weiner, 2009). “When organizational readiness for change is high, organizational members are more likely to initiate change, exert greater effort, exhibit greater persistence, and display more cooperative behavior. The result is more effective implementation” (Weiner, 2009, p. 2). Gilley and Gilley (2009) seconded the idea of change readiness as a measure of motivation and preparedness and an indicator of the leader’s ability to lead change successfully.

Readiness for change, the criterion variable in this study, was measured using the Readiness for Change Survey (OCQ-C, P, R) (Bouckennooghe et al., 2009). Readiness for change was operationalized in terms of ten categories: quality of change communication, participation, attitude of top management toward change, support by supervisors, climate of change or internal context trust in leadership (trust in leadership), cohesion, politicking, emotional readiness for change, cognitive readiness for change, and intentional readiness for change (Bouckennooghe et al., 2009). The instrument collects interval data, ranging in scores from one to five. Lower scores signify weaker inclinations in one of the sub-categories, which contribute to a weaker overall readiness for change. Higher scores signify stronger inclinations in one of the sub-categories, which contribute to a stronger overall readiness for change. The focus of this study is the leader’s overall readiness for change.

Methodology

The choice of methodology for this study was quantitative. The research design selected was correlational, with a multiple linear regression analysis. The selection was based on the type of data examined and the purpose of the study. All of the data used in this study were numerical, and suitable for statistical analysis, leaving little opportunity for the data to be misstated or misinterpreted by subjective judgment. The intent of this quantitative framework was to ensure consistency in the type and method of data collected as well as compatibility with the approach taken to examine, quantify, and analyze the data (Antucheviciene, Zakarevicius, & Zavadskas, 2011; Kahlke, 2015). The compatibility and congruence between the research methods and the data is important for performing the evaluations needed to answer the research questions and affirm or refute the associated hypotheses regarding the impact of leaders' thinking style and behavioral traits on their readiness to lead change within their organizations.

Similar research studies incorporate quantitative methodologies to examine the personality attributes of leaders as revealed in psychometric testing (Klehe et al., 2012; Kline, 2003; Ones, Dilchert, Viswesvaran, & Judge, 2007). Additionally, the quantitative method was used in studies involving both instruments chosen for this study: Profile XT psychometric assessment and the Readiness for Change Survey (Bouckennooghe et al., 2009; Hamilton, 2010). The chosen methodology aligned with the following research questions and corresponding hypotheses:

RQ1: To what extent do leaders' thinking style components—verbal skills, verbal reasoning, numeric ability, and numerical reasoning—predict readiness for implementing change within their organization?

H1₀: Leaders' thinking style components are not statistically significant predictors of readiness for implementing change within their organization.

H1_a: As least one component of leaders' thinking style is a statistically significant predictor of readiness for implementing change within their organization.

RQ2: To what extent do leaders' behavioral traits—energy level, manageability, sociability, independence, objective judgment, attitude, assertiveness, decisiveness, and accommodating—predict readiness for implementing change within their organization?

H2₀: Leaders' behavioral traits are not statistically significant predictors of readiness for implementing change within their organization.

H2_a: At least one of leaders' behavioral traits is a statistically significant predictor of readiness for implementing change within their organization.

Participant Sample

The researcher collected the primary data needed for this study from a convenience sample of 143 leaders recruited from 40 companies or organizations within the Profiles International client database, which included approximately 250 Texas-based companies. The population targeted in this study, comprised of leadership team members of Texas-based organizations, was selected because of the business environment in Texas required of leaders' special abilities to successfully weather the challenges of business upheaval, environmental catastrophe, and people-related challenges and to foster organization change, growth, and sustainability (Cascos, 2014; Smith et al., 2011;). All of the participants were volunteers who were neither coerced nor compensated for their

participation in the study. The participants were individuals holding leadership positions within organizations that had experienced one or more of the following types of organizational change: business systems, processes, and tools, role refinement or realignment in support of program implementation, office mergers, work and role consolidation, acquisition by larger, market realignment, or downsizing. All leadership teams reported they were responsible for leading people as well as projects and had worked together as a team for at least six months. Each leader was required to complete the Profile XT psychometric assessment (Trego & Hamilton, 2008) and the Readiness for Change survey (Bouckennooghe, et al., 2009), housing the participant/organizational demographics. Table 1 presents the participants' distributions by age groups, minority/non-minority status, gender groups, and years-of-experience groups. Only 124 of the 143 participants voluntarily indicated their age group, with 123 indicating their years-of-experience group. Of the 141 participants who recorded their ethnicity, 82 (58.2%) identified themselves as minority and 59 (41.8%) indicated they were non-minority. All of the participants volunteered their gender: 57(39.9%) were males and 86 (60.1%) were females.

Table 1

Sample Profiles

Variables	Categories	Number of Participants (Percentage)
Age	< 40 years	26 (21.1%)
	40 – 60 years	68 (55.3%)
	> 60 years	28 (22.8%)
Minority Status	Minority	82 (58.2%)
	Non-Minority	59 (41.8%)
Gender	Male	57 (39.9%)

	Female	86 (60.1%)
Experience	< 10 years	22 (17.9%)
	10-20 years	58 (47.2%)
	> 20 years	43(35.0%)

The participants were leaders of for profit and not-for-profit companies and organizations, from a variety of industries. The forty Texas-based companies and organizations included six faith-based organizations, four public sector companies, thirteen community-based, not-for-profit organizations, eight for-profit companies, five schools, colleges or universities, and four federal government agencies. The leader demographics as well as the size and type of organization and the type and significance of the transition were documented as part of the study's descriptive statistics but were not factors in the selection of the leaders for participation in the study. Details regarding the selection and inclusion of the leader participants in the study are described in the dissertation document (Perkins, 2017).

The minimum sample size computed for a multiple linear regression analysis aligned with this variable structure was 131 participants. The study incorporated 143 leaders, well above the desired sample size of 131. The power analysis for a linear regression was conducted using G*Power to determine the sufficient sample size using an alpha of 0.05, a power of 0.80, and a medium effect size ($r = 0.30$) (Faul, Erdfelder, Buchner, & Lang, 2008).

Assumptions, Limitations, Delimitations.

Prior to the multiple linear regression (MLR), the researcher checked the required associated to the MLR (LAERD Statistics, n.d.), including continuous scale, two or more independent variables, independence of observations/residuals, linear relationship

between criterion and predictor variables, homoscedasticity, absence of multicollinearity, absence of significant outliers, normal distribution of residuals. Additionally, the researcher made several assumptions about the participating leaders and the assessment/survey process. It was assumed that the participants were candid in their responses to the survey questions. It was also presumed that the participants were unassisted during the completion of the assessment and survey instruments.

The quantitative methodology could not capture the interactions between leaders, the mindset of the leaders during conflict resolutions, and/or the synergistic behaviors that enable leaders to overcome problematic changes within their organizations. The researcher recognized qualitative research as potentially valuable but opted not to use it because the quantitative data did not support a qualitative analysis and the addition of qualitative data was time and cost prohibitive for this study. The nonrandom sample of survey respondents undercut the generalizability of study findings (Lohr, 2010). Moreover, the convenience sample of volunteer respondents may not be representative of all leaders in the 40 organizations, making generalizability of the study results even within the group of 40 organizations problematic.

The researcher had been an employee of Profiles International, Inc., from which the study sample was recruited, and a certified user of the Profile XT psychometric assessment instrument. The potential for professional bias was viewed as a possibility, outweighed by the researcher's knowledge of the Profile XT instrument. The researcher's ability to interpret its data was an advantage to this study. The potential researcher bias was neutralized through the integrity of the researcher and the quantitative research process.

Instrumentation

The researcher gathered the necessary data for the variables of interest in this quantitative correlational study using two validated instruments: The Profile XT Psychometric Assessment and the Readiness for Change Survey. Each of the instruments collected interval data. The researcher used parametric statistics (multiple linear regression) to analyze the data and assess the impact of leaders' thinking style and behavioral traits on their overall readiness for change.

Profile XT

The Profile XT (Trego & Hamilton, 2008) is a psychometric instrument that incorporates more than 25 years of scientific development and more than 600,000 participants in the development of a battery of psychometric instruments that incorporated 62 multiple choice questions to assess leader thinking style and 185 Likert-based questions to assess leader behavioral traits (Hamilton, 2010). The Profile XT has documented validity and reliability. Additional detail regarding the instrument's validity and reliability can be found in the full dissertation (Perkins, 2017).

The Readiness for Change Survey (OCQ-C, P, R)

The OCQ-C, P, R survey has also undergone an extensive validation process involving more than 3,000 participants from the public and private sector to develop a psychometrically sound 52-item assessment tool (Bouckennooghe et al., 2009). The OCQ-C, P, R survey has documented validity and reliability. Additional detail regarding the instrument's validity and reliability can be found in the full dissertation (Perkins, 2017).

This study combined the results from the two validated instruments, previously used independently. The results from this study may encourage the use of the Profile XT

psychometric instrument (Trego & Hamilton, 2008) in association with the Readiness for Change Questionnaire (Bouckennooghe et al., 2009) in future research on leadership and organizational change. Study results may provide organizations with a proactive option for assessing their leaders' readiness to lead change within their organization, rather than being limited to an after-event evaluation of effectiveness.

Summary of Literature

An extensive review of the literature was conducted in the areas of leadership, change management, and psychometrics as a prelude to this study. Excerpts of the formal literature review have been included in this document for continuity. The literature review, in its entirety, is documented in the doctoral dissertation (Perkins, 2017).

Researchers documented a variety of attributes that contribute most to effective leadership. Much of their research on leader effectiveness pointed to cognitive ability, emotional maturity, and engagement as key indicators of success (Beier & Oswald's, 2012; Cahill, 2011; Hamilton, 2010; Lee et al., 2011). Other researchers added personal attitude and emotional intelligence (the ability to manage emotions) as the recipe for success (Cahill, 2011; Oreg & Berson, 2011). Hattabaugh's (2009) doctoral research, expanded upon in this study, surfacing thinking style, comprised of verbal ability and verbal reasoning, as well as behavioral traits, composed of energy level, accommodation, decisiveness, and independence, as the indicators of leader effectiveness. Similarly, McDaniel (2009) documented interpersonal communications, thinking style, energy level, accommodation/flexibility, and independence as key attributes, particularly appropriate for leading change. Other researchers identified cognitive ability or thinking style and specific behaviors, such as assertiveness,

decisiveness, and independence as general indicators of leader effectiveness as well as signals of readiness to guide organizations through the process of transition (Cahill, 2011; Hamilton, 2010; Hattabaugh, 2009; Hayashi & Ewert, 2006; McKenzie, 2010; Mills, 2009).

Organizational readiness for change has also been the subject of considerable interest, particularly as it relates to organizational life, sustainability, and the organization's ability to adapt to changes within itself and changes within its environment (Hesselbarth & Schaltegger, 2014; Stensaker & Meyer, 2012). Cowley's (2007) qualitative study of corporate change initiatives within the Eli Lilly Company reported the reason for success or failure of the change to be leadership's ability to tap into the organization's cultural inclination for change. Organizational readiness for change, although acknowledged as an important element for organizational sustainability, has been difficult to measure proactively. Leaders of organizations have frequently resorted to an assessment of the reasons for failure via a post mortem evaluation. Leaders frequently identify these contributors to lack of organizational readiness for change long after any action taken to remedy the cause of failure is useful.

The compilation of research on the attributes, behaviors, and/or styles of successful leaders that have a propensity for leading change is minimal and the researcher found no documented research that recorded the pro-active determination of those characteristics through validated, predictive psychometric instrumentation, a key component of this study. Psychometric testing is a validated process for determining the probability of job success in a given position or job assignment and is common in the pre-employment strategies (Hamilton, 2010).

Table 2 summarizes the literature findings regarding leadership attributes prevalent among leaders of change. The most frequently documented attribute was thinking style, including cognitive ability, verbal skill, and verbal reasoning. Frequently highlighted behavioral traits among leaders of change included energy level, accommodating, assertiveness, decisiveness, and independence. Based on the recurrent theme of leader attributes in much of the literature on change readiness, this study focused on learning index or thinking style and five categories within the behavioral traits, energy level, accommodating, assertiveness, decisiveness, and independence.

Table 2

Attributes of Effective Leaders of Change by Author

Summary of Profile XT Attributes of Leaders of Change Cited in Literature Review					
Author(s)	Cahill (2011)	Adams (2009)	Hattabaugh (2009)	McDaniel (2009)	Focus of Current Study
	Hamilton (2010)	Alexander, Herald, & Muttler (2011)			
	Hattabaugh (2009)	Keith (2009)			
	Hayashi & Ewert (2006)				
	McKenzie (2010)				
	Mills (2009)				
	Wagerman, Gardner, & Mortensen (2012)				
Behavior	Thinking Style or Cognitive Ability		Thinking Style or Cognitive Ability	Interpersonal Communication	Thinking Style or Cognitive Ability
			Verbal Ability	Verbal Ability	Verbal Ability
	Assertiveness		Assertiveness	Assertiveness	Assertiveness
	Independence		Independence	Independence	Independence
			Verbal Reasoning	Verbal Reasoning	Verbal Reasoning
			Energy Level	Energy Level	Energy Level
		Accommodation	Accommodation	Accommodation	Accommodation
	Decisiveness		Decisiveness		Decisiveness

Note: The table comprises information summarized from the research of authors cited in the Literature Review

Data Analysis Procedures

This quantitative correlational study utilized multiple linear regression analysis to generate the information needed to answer the research questions. Prior to this analysis, the researcher computed descriptive statistics for the study sample and for the variables included in the regression model. The researcher subsequently performed checks of the assumptions for multiple linear regression.

The researcher used the individual respondent data to compute descriptive statistics for the interval variables used in the multiple linear regression analysis: mean, standard deviation, minimum, maximum, skewness, and kurtosis. The researcher also computed reliability coefficients (Cronbach's alphas) for the predictor and criterion scales. The hypotheses stated for both research questions were tested by computing a single multiple linear regression model using the stepwise method, which selects and ranks the predictors based on the magnitude of their impact on the criterion variable. The predictor variables were the four components of thinking style--verbal skills, verbal reasoning, numeric ability, and numerical reasoning—and the nine behavioral traits--energy level, manageability, sociability, independence, objective judgment, attitude, assertiveness, decisiveness, and accommodating—measured using the Profile XT (Trego & Hamilton, 2008). The only criterion variable used in this study was leaders' overall readiness for change, a composite measure derived from ten subscales: quality of change communication, participation, attitude of top management toward change, support by supervisors, climate of change or internal context trust in leadership (trust in leadership), cohesion, politicking, emotional readiness for change, cognitive readiness for change, and intentional readiness for change. The readiness-for-change data were collected with the

Organizational Change Questionnaire-Climate of Change, Processes, and Readiness (OCQ-C, P, R) survey (Bouckennooghe et al., 2009). The ten subscales of readiness for change were not used as predictors in this analysis because the researcher's purpose was to identify thinking style and behavioral traits that predicted the overall readiness for change.

As stated earlier, the initial focus of this study was to examine the characteristics of leadership teams in relation to their readiness to implement change within their organization. However, the 40 participating teams were insufficient to report aggregated results for a multiple regression analysis as part of the formal dissertation. Preliminary data were collected and analyzed as aggregate data for all leaders from each participating organization but were not included in published dissertation. While not a part of the formal dissertation, the aggregate data analysis for the participating teams have been included in the supplemental research section of this paper.

Descriptive Information for the Variables of Interest in the Study

The predictor variables in this study were leaders' thinking style and behavioral traits, operationalized using the scales and subscales of the Profile XT questionnaire: (1) verbal skills, (2) verbal reasoning, (3) numeric ability, and (4) numeric reasoning as well as nine behavioral traits, including (1) energy level, (2) assertiveness, (3) sociability, (4) manageability, (5) attitude, (6) decisiveness, (7) accommodating, (8) independence, and (9) objective judgment (Trego & Hamilton, 2008). The criterion variable, overall leader readiness for change, was operationalized using the ten subscales of the Readiness for Change survey: (1) quality of change, (2) leader participation, (3) leader attitudes toward organizational change, (4) leader support, (5) climate of change / trust in leadership, (6)

cohesion, (7) politicking, (8) emotional readiness for change, (9) cognitive readiness for change, and (10) intentional readiness for change (Bouckenooghe et al., 2009, p. 562).

Tables 3 through 5 display descriptive statistics for all variables of interest in this study.

Table 3

Descriptive Statistics for Thinking Style

Scale and Subscales	Mean	SD	Min	Max	Skewness	Kurtosis
Thinking style	6.028	2.021	1	10	-0.122	-0.076
Verbal skills	6.685	2.293	1	10	-0.182	-1.012
Verbal reasoning	5.902	1.994	1	10	-0.398	0.086
Numerical ability	5.972	2.289	1	10	-0.147	-0.615
Numeric reasoning	5.385	2.420	1	10	-0.019	-0.763

The values of the skewness and kurtosis statistics for the thinking style scale and its four subscales (Table 3) were approximately within the [-1, 1] range, indicating approximately normal distribution. The same is true about the distributions of the data for the nine behavioral traits (Table 4). The reliability coefficient (Cronbach's alpha) computed in this study for the overall thinking style was 0.774, lower than the 0.81 value reported by the instrument developers (Hamilton, 2010).

Table 4

Descriptive Statistics for Behavioral Traits

Variable	Mean	SD	Min	Max	Skewness	Kurtosis
Energy level	5.769	2.089	1	10	-0.253	-0.326
Assertiveness	4.685	2.040	1	9	0.102	-0.601
Sociability	4.441	2.384	1	10	0.596	-0.461
Manageability	4.042	2.038	1	9	0.439	-0.400
Attitude	4.601	2.218	1	10	0.236	-0.515
Decisiveness	5.371	2.291	1	10	-0.265	-0.525
Accommodating	4.629	2.085	1	10	0.160	-0.301
Independence	6.713	2.041	3	10	-0.255	-0.899
Objective judgment	5.000	2.310	1	10	0.142	-0.533

Table 5 provides descriptive statistics for the readiness for change scale and its ten subscales. The kurtosis statistics show somewhat peaked distributions of the data for two subscales: attitude toward change and cognitive readiness. However, these deviations from a normal bell curve were not dramatic though, less than half point above the upper limit of the [-1, 1] normal range. These deviations were not relevant to the multiple linear regression analysis, which included only the overall readiness for change scale as a predictor.

Table 5

Descriptive Statistics for Readiness for Change Variable

	Mean	SD	Min	Max	Skewness	Kurtosis
Readiness for change	3.788	0.489	2.334	4.780	-0.151	-0.127
Quality of change	3.869	0.688	1.667	5.000	-0.666	0.423
Leader participation	3.519	0.569	2.000	4.800	-0.188	-0.237
Attitude toward change	4.044	0.746	1.333	5.000	-0.893	1.387
Leader support	3.691	0.632	1.143	5.000	-0.475	1.020
Climate of change//Trust in leadership	3.613	0.705	1.333	5.000	-0.288	-0.168
Politicking	3.331	0.965	1.000	5.000	-0.391	-0.284
Cohesion	3.962	0.613	2.200	5.000	-0.431	-0.050
Emotional readiness	3.821	0.671	2.000	5.000	-0.373	0.018
Cognitive readiness	4.189	0.699	2.000	5.000	-0.952	1.471
Intentional readiness	3.788	0.489	2.334	4.780	- 0.151	-0.127

Table 6 provides the reliability coefficients computed in this study for the readiness for change scale and subscales. The results show that the overall scale of readiness for change—the only one used in the analysis as a criterion variable—had good reliability (0.862). Most subscales had acceptable reliability (coefficients ranging mostly between 0.7 and 0.8). One subscale, quality of change had very good reliability (0.882) but two subscales—trust in leadership and cohesion—had poor reliability, below the

critical level 0.6. None of the Cronbach's alphas reported by the instrument developers had been below the critical value 0.7 (Bouckennooghe et al., 2009, p. 589). The low reliability coefficients computed in this study for the trust in leadership and cohesion subscales suggest that those two subscales may need revision to improve their internal consistency when used with different populations.

Table 6

Descriptive Cronbach's Alphas for the Readiness for Change Scale and Subscales

Scales and Subscales	Reliability Coefficients
Readiness for Change	0.862
Quality of Change	0.882
Leader Participation	0.758
Attitude toward Change	0.796
Leader Support	0.736
Climate of Change/Trust in Leadership	0.510
Cohesion	0.585
Politicking	0.727
Emotional Readiness	0.760
Cognitive Readiness	0.749
Intentional Readiness	0.706

Results

Table 7 displays the summary of this multiple linear regression model. Step one of the MLR (Model 1 in Table 7) identified verbal reasoning as the strongest statistically significant predictor of the overall readiness for change, $F(1, 141) = 14.837, p < 0.001$. The adjusted R^2 value indicates that this component of thinking style accounted for 9.5% of the variance in the overall readiness for change. At step 2, the analysis identified a total of two statistically significant predictors, $F(1, 140) = 5.358, p = 0.022$. The adjusted

R^2 value at step 2 indicates that verbal skills together with the behavioral trait “manageability” accounted for 12.9% of the variance in the overall readiness for change (9.5% from verbal reasoning and 3.3% from manageability) (Table 7).

Table 7

Multiple Linear Regression: Model Summary

Model	<i>R</i>	<i>R</i> ²	Adj <i>R</i> ²	Std. Error of the Estimate	<i>R</i> ² Change	Change Statistics			Sig. <i>F</i> Change	Durbin- Watson
						<i>F</i> Change	<i>df</i> 1	<i>df</i> 2		
1	.309 ^a	0.095	0.089	0.467	0.095	14.837	1	141	0.000	
2	.359 ^b	0.129	0.116	0.460	0.033	5.358	1	140	0.022	1.301

a. Predictors: (Constant), Verbal Reasoning
b. Predictors: (Constant), Verbal Reasoning, Behavioral Trait Manageability
c. Dependent Variable: Overall Readiness for Change

Table 8 presents the MLR coefficients. At step 2, when both predictors are considered together, the standardized beta coefficients indicate that a one-point increase in verbal reasoning scores will be associated with 0.275 points increase in overall readiness for change scores ($p = 0.001$), and one-point increase in manageability will be associated with 0.186 points increase in overall readiness for change scores ($p = 0.022$). Table 9 provides Pearson’s correlation coefficients and the collinearity statistics for the MLR model.

Table 8

Multiple Linear Regression: Coefficients

Model	Unstandardized Coefficients		Std. Coeff.	95.0% Confidence Interval for B				
	B	SE		t	Sig.	Lower Bound	Upper Bound	
1	(Constant)	3.341	0.122	27.288	.000	3.099	3.583	
	Verbal Reasoning	0.076	0.020	0.309	3.852	.000	0.037	0.115
2	(Constant)	3.209	0.133	24.061	.000	2.946	3.473	
	Verbal	0.068	0.020	0.275	3.432	.001	0.029	0.106

Reasoning							
Behavioral Trait Manageability	0.045	0.019	0.186	2.315	.022	0.007	0.083

Table 9

Multiple Linear Regression: Correlations and Collinearity Statistics

		Correlations			Collinearity Statistics	
	Model	Zero-order	Partial	Partial	Tolerance	VIF
1	(Constant)					
	Verbal Reasoning	0.309	0.309	0.309	1.000	1.000
2	(Constant)					
	Verbal Reasoning	0.309	0.279	0.271	0.968	1.033
	Behavioral Trait Manageability	0.235	0.192	0.183	0.968	1.033

Design Limitations

The researcher acknowledges limitations to this research both in terms of design and analysis. The study had four design limitations: (1) The quantitative methodology could not capture the interactions between leaders, the mindset of the leaders during conflict resolutions, and/or the synergistic behaviors that enable leaders to overcome problematic changes within their organizations. (2) The study's sample size was appropriate for analysis of individual-level data but insufficient for an analysis of aggregated team-level data. The a priori sample size was 131 cases. The study incorporated 143 leaders, well above the desired sample size of 131. However, the sample included only 40 participating teams, an insufficient sample for the aggregated regression analysis by team. (3) The nonrandom sample of survey respondents undercut the generalizability of study findings. (4) The researcher had been an employee of Profiles International, Inc., from which the study sample was recruited, and a certified

user of the Profile XT psychometric assessment instrument. The researcher acknowledges the potential for professional bias.

In addition, the analysis had four limitations due to moderate violations of four assumptions associated with the multiple linear regression analysis: (1) The Durbin-Watson value computed for this study was $d = 1.301$, considerably (but not dramatically) smaller than the 2 value that indicates perfect independence of observations. (2) The scatterplots, included in the published dissertation, did not show clear linear relationships within each predictor-criterion pair of variables. (3) The plots of the standardized residual against the standardized predicted value indicated some but not dramatic variation in the distribution of variances along the line of best fit, which violated the homoscedasticity assumption. These moderate violations may have undercut the validity of the study results. Overall, the external validity of the research findings is problematic and these findings cannot be considered conclusive.

Conclusions

The results of the multiple linear regression analysis, which identified two statistically significant predictors of the overall readiness for change: one component of leaders' thinking style, verbal reasoning, and one behavioral trait, manageability, $F(1, 140) = 5.358, p = 0.022, R^2 = 0.129$. The standardized beta coefficients indicated that a one-point increase in verbal reasoning scores would be associated with 0.275 points increase in overall readiness for change scores ($p = 0.001$), and one-point increase in manageability would be associated with 0.186 points increase in overall readiness for change scores ($p = 0.022$).

Based on these findings, the researcher concluded that this study provided partial evidence in support of the alternative hypotheses stated for the two research questions:

RQ1: To what extent do leaders' thinking style components—verbal skills, verbal reasoning, numeric ability, and numerical reasoning—predict readiness for implementing change within their organization?

Conclusion 1 (H1_a): One component of leaders' thinking style, verbal reasoning, is a statistically significant predictor of readiness for implementing change within their organization.

RQ2: To what extent do leaders' behavioral traits—energy level, manageability, sociability, independence, objective judgment, attitude, assertiveness, decisiveness, and accommodating—predict readiness for implementing change within their organization?

Conclusion 2 (H2_a): One of leaders' behavioral traits, manageability, is a statistically significant predictor of readiness for implementing change within their organization.

Comparative Discussion of Findings

Diverse findings surfaced among researchers regarding cognition and leader performance. Researchers Kickul and Neuman (2000) documented the influence of cognitive ability as core to team performance in their quantitative study of more than 300 Midwestern undergraduate psychology students. Opposing findings accompanied Beier and Oswald's (2012) study, indicating the potential for lower levels of productivity with high levels of cognitive ability among leaders. While cognitive ability or thinking style was acknowledged by Hamilton (2010) as a significant indicator of leader performance, the ideal ranges of cognitive ability associated with high performance were found to vary

with job, position, and organization. Results from this study provided partial support for the relevance of thinking style to one aspect of leadership success operationalized as overall readiness for change. The only component of thinking style found in this study to be a statistically significant predictor of leaders' overall readiness for change was verbal reasoning. This finding emphasizes the paramount importance of a leader's ability to communicate the rationale for the direction in which he / she is leading the organization and the action plans to achieve that goal.

In terms of behavioral traits, the research literature identified a large number of significant correlates or predictors of leadership effectiveness or success. Several researchers associated leader effectiveness with values or servant leadership style, frequently marked by lower assertiveness (Adams, 2009; Alas et al., 2007; Keith, 2009). There is evidence that participative style superseded strong, charismatic, director leader attributes among leaders of change (Alas et al., 2007; Hwang et al., 2013; Lowder, 2009). Other studies revealed evidence of strong assertiveness among successful leaders (Hattabaugh, 2009; Hwang et al., 2013; Lowder, 2009). Adams (2009) and Keith (2009) were also among the few researchers who connected the behaviors of leadership teams with their facilitation of change within an organization, signaling values-based leadership and servant leadership, respectively, as the most effective styles. The values-based and servant leadership styles were frequently associated with a style of cooperation, accommodation, team play, and a much lower tendency toward control or assertion (Alas et al., 2007). By definition, leaders with higher accommodation scores were those willing to consider the needs of all group members (Hamilton, 2010). Wagerman et al., (2012) found independence to be an important leader attribute for managing change.

Decisiveness and assertiveness were identified among the attributes of successful leaders (Hattabaugh, 2009; Hwang et al., 2013; Lowder (2009). Findings by Alexander et al., (2011) highlighted problem solving, conflict resolution, interpersonal skills, and communication as the critical competencies for shared leadership effectiveness as well as leader engagement, ownership of the goal, and innovative environments as the ingredients required for change mastery. This study identified only one behavioral trait as a statistically significant predictor of leaders' overall readiness for change, manageability. The adherence to business process and organizational guidelines has thus emerged as the crucial attribute of leaders that predicts their ability to implement plans for organizational change or transition.

Implications

Although the limitations of this study undercut the conclusiveness and generalizability of the findings, the results contributed a valuable insight into attributes of successfulness for members of leadership team confronted with organizational change, growth, or transition in Texas-based organizations, as the researcher identified verbal reasoning and manageability as statistically significant predictors of leaders' overall readiness for change.

An important caveat is that the scope of the study was certainly limited by the instruments used to collect data from the participating leaders. The Profile XT (Trego & Hamilton, 2008) enabled the researcher to examine only four components of thinking style (verbal skills, verbal reasoning, numeric ability, and numeric reasoning) and nine behavioral traits (energy level, assertiveness, sociability, manageability, attitude, decisiveness, accommodating, independence, and objective judgment). These were the 13

potential predictors examined in this study. On the other hand, the Organizational Change Questionnaire-Climate of Change, Processes, and Readiness (OCQ-C, P, R) (Bouckennooghe et al., 2009) survey instrument provided data only for one aspect of leadership success, the overall readiness for change, which was computed in this study as an average of ten subscales (quality of change communication, participation, attitudes of top management toward organizational change, support by supervisors, climate of change or internal context trust in leadership, cohesion, and politicking, emotional readiness for change, cognitive readiness for change, and intentional readiness for change). In addition, both instruments collected only quantitative data. Consequently, this study did not collect qualitative data to help explain the quantitative results.

However, the two statistically significant predictors of leaders' overall readiness for change aligned very well and enabled the researcher to make a logical connection between leaders' ability to verbally communicate their thinking and plans for leading change in their organizations and their ability to manage the planned and communicated change. The findings of this study imply that both leader recruitment and leader training for successful organizational change have to consider these dual strengths leaders must have to be effective stewards of organization change, growth, or transition. However, the study limitations imply that the results of this study are tentative and further research is needed to build conclusive and actionable knowledge regarding predictors of leaders' readiness for organizational change.

Recommendations

This section identifies some opportunities for further research on the attributes and behaviors of leadership teams that effectively lead change in relation to some of the

limitations and delimitations of this study. Instead of studying individual leaders who are members of leadership teams, it would be much more informative to analyze data aggregated at team level. That approach would involve recruitment from a larger number of leadership teams and balanced representation of teams in terms of number of team members. A comparative study of leadership teams recruited from different states with different economic environments would be useful for investigating possible differences in sets effective leadership attributes depending on specific local conditions. Similarly, a comparative study of leadership teams recruited from different types of organizations, possibly from different industries, may be useful for investigating possible differences in sets effective leadership attributes depending on specific organization environments. Random recruitment of organizations would make study samples more representative of the targeted populations and would thus yield generalizable results. Using a mixed-methods approach with a qualitative research component would enable researcher to explain their quantitative findings. Longitudinal research throughout processes of organizational change would be useful for examining the dynamic nature of demands on leadership and leaders' changing use of knowledge and skills depending on the shifting demands. Last but not least, the scope of instrumentation for data collection can and should be expanded to capture a wider range of leader attributes and be able to examine the relative impact of different attributes on leadership effectiveness assessed with a wider range of success measures.

Supplemental Research

The initial study was conducted in response to a lack of research pertaining to the attributes and behaviors of successful leadership teams, particularly in environments of

dynamic transition. The need for this study was marked by an acknowledged leadership trend away from single leaders toward leadership teams (Wageman et al., 2008) and the lack of research on predictors of successful team leadership, particularly in times of organizational change and growth (Franken et al., 2009; Stensaker & Meyer, 2012; Wright et al., 2004). The lack of knowledge regarding the characteristics of leaders who work in teams and exhibit readiness to lead change had limited the process of leader hiring and development to trial and error, which frequently resulted in unpredictable or less than stellar performance (Charan et al., 2011; Llopis, 2012).

The initial goal of this study was to identify the characteristics common to leadership teams who exhibit a readiness to lead change within their organizations and to provide a practical method for predictively identifying and replicating those characteristics. The instruments and process for examining the aggregate data for the participating leadership teams was consistent with that used to examine results for the individual leaders. The predictor variables, leader thinking style and behavioral traits, were examined against the criterion variable, overall readiness for change. The data were examined for each of the four subscales for thinking style, the nine subscales for behavioral traits, and the ten subscales that comprise overall readiness for change. However, the primary focus of the study and the summary captured in the supplemental research section of this document was overall readiness for change. The data were compiled as an aggregate for the participating organizations, represented as an average score for the group for that variable.

The 143 leader participants were representatives of 40 organizations, well below the recommended a priori standard of 131 groups for conducting a multiple regression

analysis. This insufficient sample size precluded the inclusion of the aggregated analysis of the data for the participating teams in the published dissertation. However, a summary of the preliminary findings from the aggregated team data are included in this section.

The team analyses included an examination of the mean, standard deviation, r-squared values, and scoring range for each variable. The data were compiled from the average or mean scores, by participating organization, of the leaders' PXT scores, continuous, and the overall readiness for change scores. Preliminary data analyses ensured compliance with six statistical assumptions that support linear regression: continuous variables, linearity, no significant outliers, independence of observation, homoscedasticity, and residuals of the regression line are approximately normally distributed. The categorization and summarization of the data by organization, were organized to report the analysis of variance, indicating significant correlations between predictor and criterion variables as well as the stepwise regression analysis, indicating characteristics that contributed most to the regression equation.

Analysis of Variance

The study revealed a strong positive correlation between thinking style and overall readiness for change, significant at the .01 level, two-tailed. Thinking style received opposing reviews within the literature, suggesting that high values may have a positive influence on leader communication and reasoning (Cahill, 2011; Hamilton, 2010; Hattabaugh, 2010; Hayashi & Ewert, 2006; McKenzie, 2010; Mills, 2009) but a potentially negative influence on leader decision making, particularly in situations involving time pressures and unpredictable, dynamically changing environments (Beier & Oswald, 2012).

The study, shown in Table 10, also reflects a strong correlation between objective judgment and total readiness for change, significant to the .01 level, two-tailed. Objective judgment was not highlighted in the literature with any significant level of frequency and was not an initial area of focus for this study. However, by definition, the objective judgment attribute suggests leaders who have a willingness to use logic and reasoning over intuition.

Table 10

Correlation between Aggregate Team PXT Scale Scores and Aggregate Team Readiness for Change Scores, for Change Criterion Variables, Cohesion, Emotional Readiness, Cognitive Readiness, Intentional Readiness, and Total Readiness for Change

	Cohesion	Emotional Readiness	Cognitive Readiness	Intentional Readiness	Total Readiness
^ Thinking Style	.294**	.251**	.185*	.300**	.395**
^ Energy Level	.100	.207*	.128	.170*	.141
Assertiveness	.007	.100	.133	.232**	.061
Sociability	-.031	.110	-.070	.116	.061
Manageability	-.191*	.042	.132	.003	.123
Attitude	-.291**	-.114	-.101	.074	-.018
^ Decisiveness	.164	.191*	.216**	.257**	.151
^ Accommodating	-.149	-.339**	-.086	-.093	-.139
^ Independence	.049	.179*	-.004	.087	.011
Objective Judgment	-.132	.324**	.311**	.238**	.321**

** . Correlation is significant at the 0.01 level – 98 percent confidence (2-tailed).

* . Correlation is significant at the 0.05 level – 95 percent confidence (2-tailed).

The forty participating teams were ranked from top to bottom based on their aggregate overall readiness for change scores. The group was then divided into three subgroups, top, middle, and bottom teams, based on their overall readiness for change scores. Table 11 records the aggregate Profile XT results for the top and bottom teams, including the number of team members in the group, the mean scores, standard deviation,

standard error, the F values, as well as the recorded significance of the mean differences in the Profile XT predictor variables between top and bottom leadership teams. The significance of the variation in top team versus bottom team scores was expected, based on the criteria for selection, highest overall score in readiness for change. The most significant areas of variance for top versus bottom teams are recorded in the areas of learning index or thinking style, energy level, assertiveness, decisiveness, accommodating, and objective judgment, with top teams scoring significantly higher in learning index or thinking style, energy level, assertiveness, decisiveness, and objective judgment. Bottom teams scored significantly higher in accommodation. Four of these six predictor variables were also highlighted with frequency in the literature review and were indicated as areas of focus in this study: learning index or thinking style, energy level, decisiveness, and accommodation. Within the areas of focus, top teams score higher in three of the four categories: learning index, energy level, and decisiveness. Top teams score significantly lower in accommodation than bottom teams.

Table 11

Analysis of Variance for Profile XT Predictor Variables for Top and Bottom Scoring Teams

Profile XT Variable	Bottom versus Top Teams	N	Mean	Std. Deviation	Std. Error	ANOVA	
						F	Sig
Learning Index	Bottom	40	5.325	2.177	0.344	10.143	.002
	Top	32	6.844	1.780	0.315		
Energy Level	Bottom	40	5.675	1.913	0.303	2.291	.135
	Top	32	6.406	2.183	0.386		
Assertiveness	Bottom	40	4.600	2.023	0.320	1.834	.180
	Top	32	5.313	2.442	0.432		
Sociability	Bottom	40	4.500	2.428	0.384	.534	.467
	Top	32	4.938	2.639	0.466		
Manageability	Bottom	40	3.775	1.968	0.311	.702	.405
	Top	32	4.188	2.206	0.390		
Attitude	Bottom	40	4.700	2.267	0.358	.153	.697
	Top	32	4.469	2.747	0.486		
Decisiveness	Bottom	40	5.050	2.087	0.330	3.557	.063
	Top	32	6.031	2.321	0.410		
Accommodating	Bottom	40	4.725	1.797	0.284	3.082	.084
	Top	32	3.969	1.840	0.325		
Independence	Bottom	40	6.825	1.693	0.268	.365	.548
	Top	32	7.094	2.085	0.369		
Objective Judgment	Bottom	40	4.475	2.242	0.354	3.654	.060
	Top	32	5.531	2.436	0.431		

The results in this analysis are consistent with much of the literature. In terms of learning index or thinking style, authors varied in their findings, suggesting that high scores may have a positive influence on leader communication and reasoning (Cahill, 2011; Hamilton, 2010; Hattabaugh, 2010; Hayashi & Ewert, 2006; McKenzie, 2010; Mills, 2009) but a potentially negative influence on leader decision making, particularly in situations involving time pressures and unpredictable, dynamically changing

environments (Beier & Oswald, 2012). With regard to energy level, the research findings for Hattabaugh (2009) and McDaniel (2009) supported energy level as one of the top attributes among effective leaders. In this study, high energy top team leaders, by definition, may have a tendency toward restlessness and activity and an inclination toward juggling multiple tasks simultaneously (Hamilton, 2010). The assertiveness behavior was also highlighted by several authors as present among effective leaders, signaling the natural inclination, by definition, to take charge of people and situations (Cahill, 2011; Hamilton, 2010; Hattabaugh, 2010; Hayashi & Ewert, 2006; McKenzie, 2010; Mills, 2009). This study's findings for top teams are also consistent with several authors who recorded leader decisiveness among the top attributes of effective leaders (Cahill (2011); Hamilton (2010); Hattabaugh (2010); Hayashi & Ewert (2006); McKenzie (2010); Mills (2009; Wagerman, Gardner, and Mortensen (2012). The accommodation behavior was supported by authors who reported leader accommodation and collaboration as behaviors associated with servant leaders and successful leaders of change (Adams, 2009; Alexander, Hearld, & Mittler (2011); Keith, 2009). By definition, leaders with high accommodation scores represent those who tend to consider the needs of the group (Hamilton, 2010). In this study bottom teams score significantly higher in accommodation than top teams. The final significant variance for top teams is objective judgment, not highlighted with frequency in the literature as an important characteristic for effective leaders. By definition, scores of high objective judgment typically accompany behaviors associated with logic and reasoning over intuition or instinct (Hamilton, 2010).

Stepwise Regression

Table 12 recorded the regression step, the R, R squared, and Adjusted R squared values, the change statistics, including the significant F change value. The stepwise regression, captured in table 12, reveals a three-step result for the Profile XT predictors and criterion variable, total readiness for change, with learning index identified at step one and attitude added at step two. At the third step, learning index, attitude, and objective judgment explain approximately 29.9% of the variation for the mean in support of the total or overall readiness variable, the central focus for this study. Learning index and objective judgement are included among the attributes of top teams in this study.

Table 13 reflects the detail for the stepwise regression analysis for the aggregate team Profile XT predictor variables and the aggregate total readiness for change scores. This table details the specific Profile XT variables identified at each of the three steps, the beta coefficients, standard error, t-test values, and level of significance at each step of the regression. At the third step, attitude, learning index or thinking style, and objective judgment are listed on the regression table, with attitude listed as a negative correlate.

Table 12

Stepwise Regression for Aggregate Team Profile XT Scores and Aggregate Team Total Readiness for Change Scores

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.395 ^a	.156	.150	16.633	.156	26.074	1	141	.000
2	.457 ^b	.209	.198	16.158	.053	9.413	1	140	.003
3	.561 ^c	.314	.299	15.101	.105	21.283	1	139	.000

Table 13

Detail for Stepwise Regression for Aggregate Team Profile XT Scores and Aggregate Team Total Readiness for Change Scores

Step (Total Readiness)	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	161.131	7.103		22.684	.000
Learning Index	5.901	1.156	.395	5.106	.000
2 (Constant)	165.090	7.020		23.517	.000
Learning Index	7.735	1.272	.518	6.082	.000
Attitude	-3.264	1.064	-.261	-3.068	.003
3 (Constant)	147.553	7.582		19.460	.000
Learning Index	7.252	1.193	.485	6.077	.000
Attitude	-4.983	1.062	-.399	-4.694	.000
Objective Judgment	5.673	1.230	.359	4.613	.000

The data included in this section is deemed statistically non-conclusive. It is meant to be a stimulus for additional study. The results provide a springboard for the further exploration of leaders of change from the perspective of those who share the helm.

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Appendix A

Definition of Terms

Accommodating. Accommodating, a predictor variable in this study, is one of the nine behavioral traits, measured by the Profile XT psychometric instrument (Trego & Hamilton, 2008). Hamilton (2010) defined this term as the “degree to which one is willing to consider the needs of all group members” (p. 12).

Ambidexterity. This term describes the ability to bridge between conflicting ideas and concepts, avoiding inclinations fostered by pre-determined bias, having a tolerance for ambiguity and multiple options for problem-solving, that allows for open exchange of perspectives and thoughtful pursuit of resolution through shared vision and values (Jansen, George, Van den Bosch, & Volberda (2008).

Assertiveness. Assertiveness, a predictor variable in this study, is one of the nine behavioral traits, measured by the Profile XT psychometric instrument. This behavioral trait indicates “generalized influence often associated with expressing confidence” and characterizes a person who “tends to take charge of people and situations” (Hamilton, 2010, p. 12).

Attitude. Attitude, a predictor variable in this study, is one of the nine behavioral traits measured by the Profile XT psychometric instrument. Hamilton (2010) defined this term as “the degree to which one is willing to demonstrate trust toward others” (p. 12).

Attitude of top management toward change. This term is one of the ten subsets of the Readiness for Change criterion variable in this study, measured by the Readiness for Change Survey (OCQ-C, P, R) (Bouckennooghe et al., 2009). According to Bouckennooghe et al. (2009), instrument designers, the term is defined as “the degree to

which corporate management has a vision for the future, is actively involved in the change, and supports the change unconditionally” (p. 562).

Behavioral traits. Hamilton (2010) defined behavioral traits as the “personality characteristics and behavioral preferences that are more natural or comfortable for an individual in the performance of their job assignment” (p. 12), including work style preferences, environmental preferences, and management style preferences. Behavioral traits, the predictor variables in this study, are measured by the Profile XT instrument scores in this study. The following nine behavioral traits comprise this predictor variable: assertiveness, attitude, accommodating, decisiveness, energy level, independence, manageability, objective judgment, and sociability (Hamilton, 2010).

Climate of change or internal context trust in leadership. This term is one of the ten subsets of the Readiness for Change criterion variable in this study, measured by the Readiness for Change Survey (OCQ-C, P, R). According to Bouckennooghe et al. (2009), this term refers to “the degree to which the leadership team consistently implements policies, keeps its promises, and appropriately responds to mistakes made by staff members” (p. 562). In this study, the term has been shortened to trust in leadership.

Cognitive readiness for change. This term is one of the ten subsets of the Readiness for Change criterion variable in this study, measured by the Readiness for Change (OCQ-C, P, R) survey. According to Bouckennooghe et al. (2009), this term refers to “the degree to which the team members understand the outcome of the change will improve or simplify work, positively influence the future of the organization, enhance the relationship with clients they serve, and are subsequently willing to devote themselves to the process of the change” (p. 562).

Cohesion. This term is one of the ten subsets of the Readiness for Change criterion variable in this study, measured by the Readiness for Change (OCQ-C, P, R) survey. According to Bouckennooghe et al. (2009), cohesion is “the degree to which team members trust one another, have confidence in their abilities, minimize rivalry, and help one another” (p. 562).

Decisiveness. Decisiveness, a predictor variable in this study, is one of the nine behavioral traits, measured by the Profile XT psychometric instrument. Hamilton (2010) defined this term as the “confidence one has in accepting risk associated with making timely decisions using what information is available” (12).

Distortion scale. The distortion scale is a measurement within the Profile XT psychometric instrument. “The distortion scale evaluates the consistency of the individual’s responses in the assessment. Too many inconsistent or statistically unusual responses can lead to an unacceptable rating and raise the concern that the results may have been distorted and not be representative of the individual” (Hamilton, 2010, p. 13).

Effective leadership. For purposes of this study, effective leadership entails the demonstration of positive consistency in the execution of the eight universal leadership competencies: “communication, leadership, adaptability, relationships, task management, production, development of others, and personal development” (Hamilton, 2008, p. 1.08). Effective leaders also have the ability to inspire followership (Haney & Sirbasku, 2010).

Emotional readiness for change. This term is one of the ten subsets of the Readiness for Change criterion variable in this study, measured by the Readiness for Change (OCQ-C, P, R) survey. Bouckennooghe et al. (2009) defined this term as “the degree to which team members have a positive response to the change project and

process. Resistance or reluctance to change is low and the team generally finds change refreshing” (p. 562).

Energy level. Energy level, a predictor variable in this study, is one of the nine behavioral traits, measured by the Profile XT psychometric instrument. Hamilton (2010), instrument designer, defined this term as “the tendency toward restlessness, activity, and drive” (p. 12).

Independence. Independence, a predictor variable in this study, is one of the nine behavioral traits, measured by the Profile XT psychometric instrument. Hamilton (2010) defined this term as “the manner in which one prefers to be directed and one’s potential to accomplish tasks with minimal supervision” (p. 12).

Intentional readiness for change. This term is one of the ten subsets of the Readiness for Change criterion variable in this study, measured by the Readiness for Change (OCQ-C, P, R) survey. According to Bouckennooghe et al. (2009), this term refers to “the degree to team members are willing to personally invest in the process of the change and make a significant contribution to its success” (p. 562).

Leadership. Northouse (2015) describes leadership in terms of the ability to influence or persuade others toward the establishment of shared vision, organizational goals, and shared direction. According to Northouse, the function and focus of leadership is multi-dimensional, including envisioning and communicating common purpose, bringing together the talent and resources needed to fulfill that purpose, and creating an environment that fosters the realization and sustainability of that vision. Leadership traits include eight universal competencies: “communication, leadership, adaptability,

relationships, task management, production, development of others, and personal development” (Hamilton, 2008, 1.08).

Learning index. The learning index records a composite of Profile XT instrument scores from the verbal skill, verbal reasoning, numerical ability, and numeric reasoning questions in the psychometric assessment. The term is used interchangeably in this study with cognitive ability and thinking style to describe how an individual processes incoming information. Thinking style, learning index, or cognitive ability does not measure intelligence. Rather, it provides an indication of the speed with which an individual assimilates new information (Hamilton, 2010).

Manageability. Manageability, a predictor variable in this study, is one of the nine behavioral traits, measured by the Profile XT psychometric instrument. Hamilton (2010) defined this term as “how one reacts to the limits placed by authority and the acceptance of established procedures” (p. 12).

Numerical ability. This term describes one of the four components of learning index or the thinking style predictor variable, as measured by the Profile XT psychometric assessment. Hamilton (2010) defined the term as “numeric calculation proficiency. Ability to correctly manipulate arithmetic facts” (p. 12).

Numeric reasoning. This term describes one of the four components of learning index or the thinking style predictor, as measured by the Profile XT psychometric assessment. Hamilton (2010) defined the term as “the ability to use numbers as a basis in analysis” (p. 12).

Objective judgment. Objective judgment, a predictor variable in this study, is one of the nine behavioral traits, measured by the Profile XT psychometric instrument.

Hamilton (2010) defined this term as the “willingness one has to use either reason and logic over intuition” (p 12).

Organizational readiness for change questionnaire—climate of change, processes, and readiness, also referred to as the readiness for change questionnaire (OCQ-C, P, R). The OCQ-C, P, R questionnaire is a validated instrument for measuring readiness for change in three dimensions: climate of change, process of change, and readiness for change. The instrument includes ten sub-dimensions: “quality of change communication, participation, attitudes of top management toward organizational change, support by supervisors, climate of change or internal context trust in leadership, cohesion, and politicking, emotional readiness for change, cognitive readiness for change, and intentional readiness for change” (Bouckennooghe et al., 2009, p. 562). Climate of change or internal context trust in leadership, for the remainder of this study, is shortened to trust in leadership.

Participation. This term is one of the ten subsets of the Readiness for Change criterion variable in this study, measured by the Readiness for Change (OCQ-C, P, R) questionnaire. Bouckennooghe et al. (2009) defined participation as “the degree to which the change is discussed with those who are affected by the change. Leadership takes into account the opinions of the staff and those involved in implementing the change are consulted on the need for the change and the strategy for implementation” (p. 562).

Politicking. This term is one of the ten subsets of the Readiness for Change criterion variable in this study, measured by the Readiness for Change (OCQ-C, P, R) questionnaire. According to Bouckennooghe et al. (2009), politicking is “the degree to

which favoritism, power games, nepotism, and other unfair or unethical practices are used in the course of normal business exchange” (p. 562).

Profile XT. The Profile XT instrument (Trego & Hamilton, 2008) is a multi-dimensional psychometric instrument used to evaluate thinking style, behavioral traits, and occupational interests. The Profile XT assessment is the source of scores used to evaluate the predictor variables for the participants in this study, leaders’ thinking style and behavioral traits.

Psychometric. The term psychometric is comprised of two root words: psycho or mind and metric or measurement. The term describes a tool, instrument, or process for measuring certain attributes or qualities of an individual’s personality or behavior (Hamilton, 2010). In this study, a psychometric instrument is used to evaluate the predictor variables, leaders’ cognitive style and behavioral traits.

Quality of change communication. This term is one of the ten subsets of the Readiness for Change criterion variable in this study, measured by the Organizational Change Questionnaire–Climate of Change, Processes, and Readiness (OCQ-C, P, R). Bouckennooghe et al. (2009) defined quality of change as “the degree to which information is shared among the members of the leadership team, project managers, and staff members. Corporate management explains the need for the change and keeps the team informed of the progress of the change. Communication is two-way, clear, and frequent” (p. 562).

Readiness for change. Readiness for change, the criterion variable in this study, describes the propensity or inclination of a leader toward leading organizational transition (Weiner, 2009).

Shared leadership. Shared leadership incorporates a leadership structure that supports the mutual responsibility and accountability for results to be distributed or mutually held by two or more leaders of an organization, business unit, or company (Wageman et al., 2008).

Sociability. Sociability, a predictor variable in this study, is one of the nine behavioral traits, measured by the Profile XT psychometric instrument. Hamilton (2010) defined this term as “social presence relating to one’s desire for group associations. Engages others with ease and enjoys group settings” (p 12).

Success profile or performance model. to as the performance model, is the Profile XT graphic representation of the range of STEN or standard ten values of individuals who are deemed to be successful in a given job or position (Hamilton, 2010). The success profile is comprised of STEN ranges for each the thinking style and behavioral trait characteristics, based on the individual’s Profile XT instrument scores in each category.

Support by supervisors. This term is one of the ten subsets of the Readiness for Change criterion variable in this study, measured by the Organizational Change Questionnaire-Climate of Change, Processes, and Readiness (OCQ-C, P, R). According to Bouckennooghe et al. (2009), this term refers to “the degree to which the supervisors support implementation of the change through coaching the staff, adapting their leadership style to the change, and provided assistance when problems occur during the process” (p. 562).

Thinking style, also termed learning index or cognitive ability. Thinking style is a predictor variable in this study. The definition of thinking style is “the ability to use old

learning applied to new experiences in order to measure the flexibility of thinking required to grasp concepts in a job or training setting” (Hamilton, 2010, pp. 2-6). Thinking style, learning index, or cognitive ability does not measure an individual’s intelligence quotient. Nor does it reflect the amount of information an individual can absorb. However, it does depict the speed at which an individual can process newly acquired information (Hamilton, 2010).

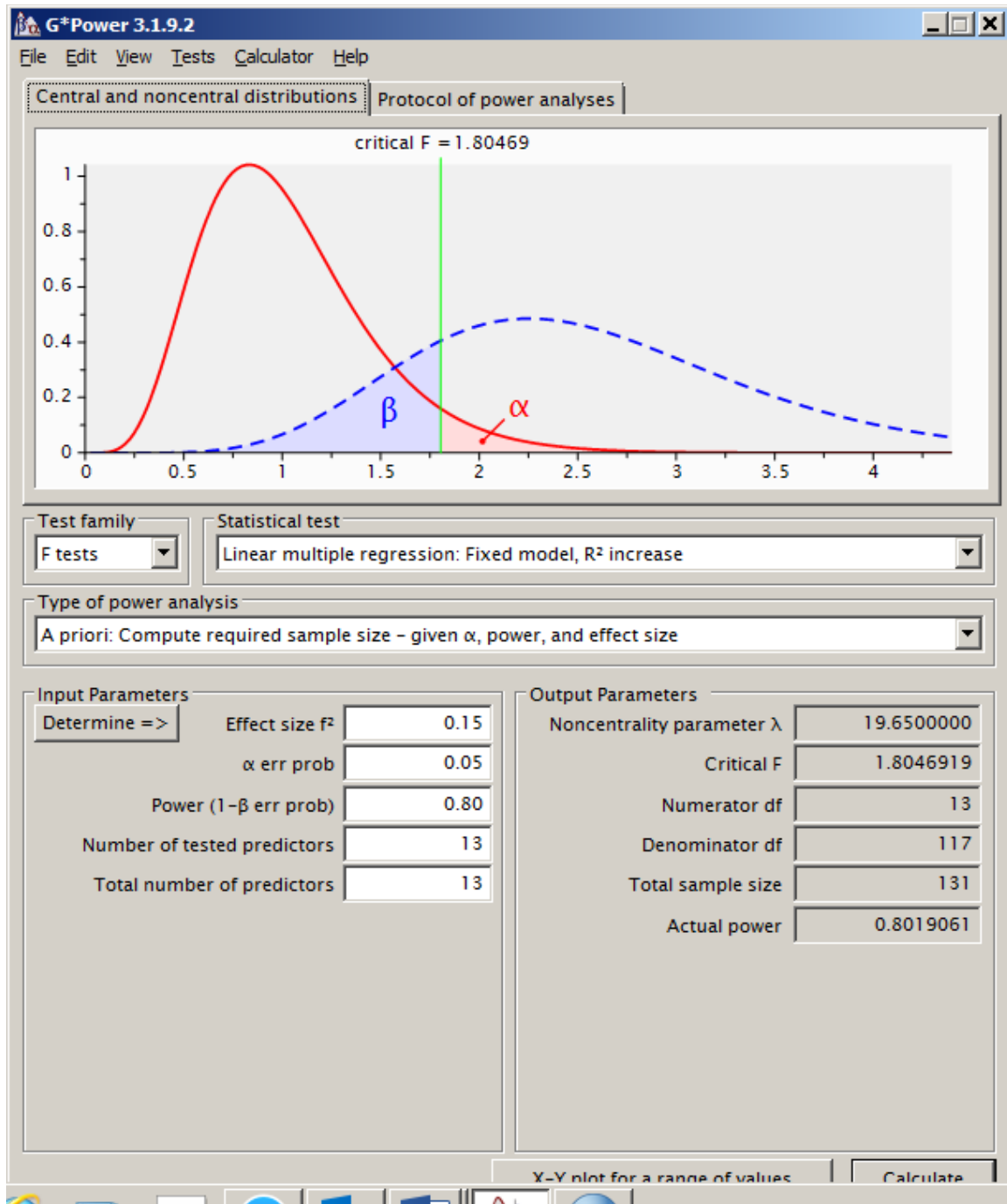
Variables in the study. A variable is a term used to describe value capable of being measured, manipulated, and interpreted to describe other entities (Cooper & Schindler, 2011). Two sets of variables are examined in this study to determine their correlation. The leaders’ thinking style and behavioral traits represent the predictor variables in the study and the leaders’ readiness for change components comprise the criterion variables.

Verbal reasoning. This term describes one of the four components of learning index or the thinking style predictor, as measured by the Profile XT psychometric assessment. Hamilton (2010) defined verbal reasoning as “fluency in the use of words as a basis in problem solving” (p. 11).

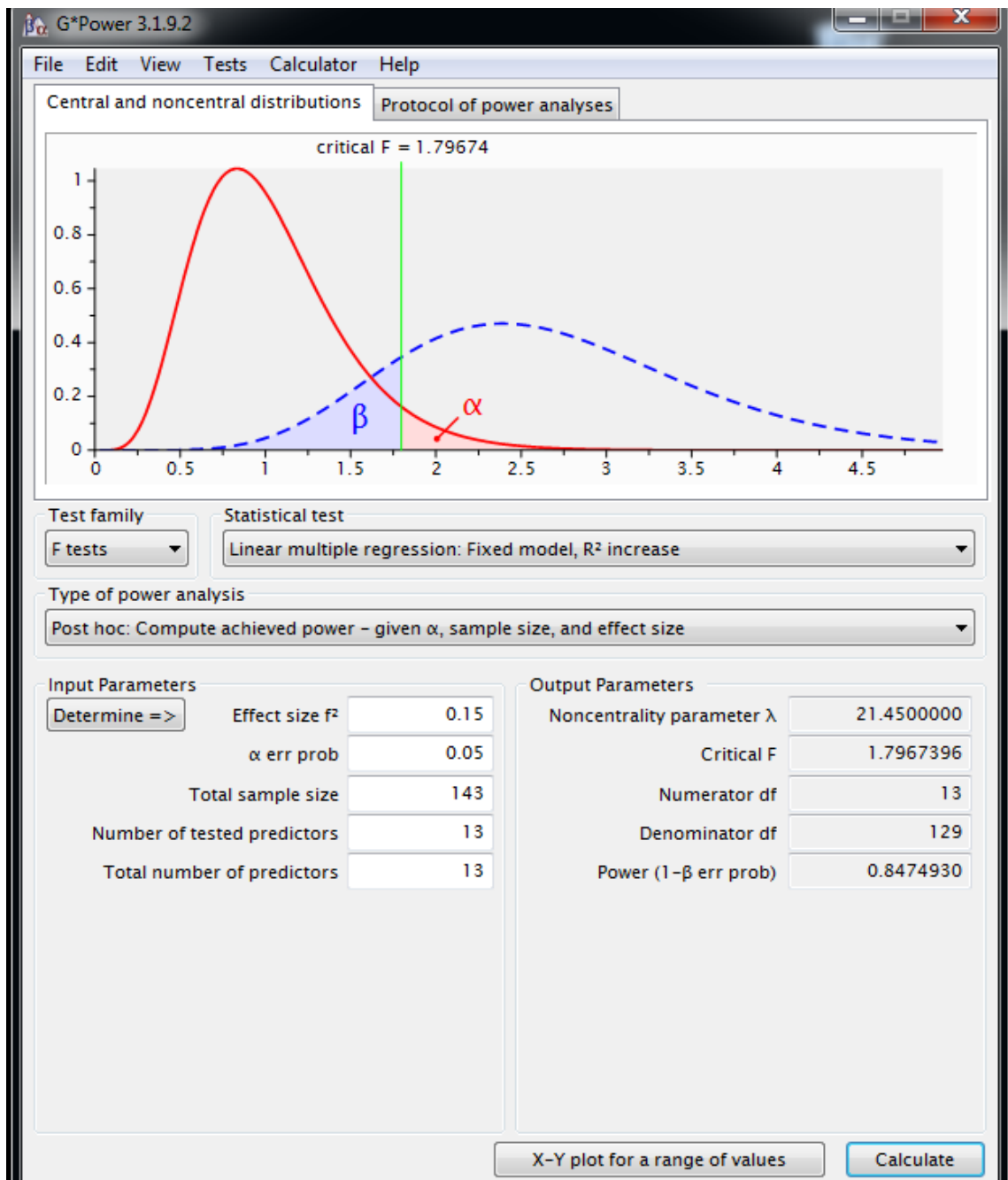
Verbal skill. This term describes one of the four components or subsets of learning index or the thinking style predictor, as measured by the Profile XT psychometric assessment. Hamilton (2010) defined verbal skills as “vocabulary proficiency. Knowledge and use of words” (p.11).

Appendix B

G*Power Computations of the Minimum Sample Size



A priori sample size for multiple linear regression with 13 predictors.



Post hoc power with actual sample size for multiple linear regression with 13 predictors

Appendix C

Team-Level Descriptive Information

Table C1

Aggregate Profile XT Team Descriptive Statistics for Leadership Teams 1 through 20 in Learning Index, Energy Level, and Assertiveness

Team	N	Learning Index		Energy Level		Assertiveness	
		Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
1	3	7.67	2.31	5.33	1.53	6.67	2.52
2	5	7.00	1.22	6.00	1.73	6.00	.71
3	3	8.33	2.08	6.33	2.52	5.33	3.51
4	3	7.67	1.53	8.67	1.53	8.33	1.15
5	5	3.60	1.67	5.80	1.92	3.00	1.41
6	1	7.00		3.00		1.00	
7	3	5.33	1.53	7.33	2.08	5.33	.58
8	3	6.00	1.73	3.00	2.65	2.33	1.15
9	4	6.50	1.91	6.75	1.50	6.50	2.52
10	3	6.67	1.53	5.00	3.00	4.00	2.00
11	4	5.25	1.50	6.50	1.91	5.25	1.26
12	4	6.50	1.29	7.00	2.16	5.25	1.50
13	4	5.75	.50	4.00	2.16	3.25	.96
14	3	5.67	.58	6.33	3.79	7.00	1.00
15	5	4.60	1.52	4.60	.55	3.60	1.14
16	2	6.50	.71	2.50	2.12	2.00	1.41
17	5	7.00	2.00	5.80	1.64	5.40	2.30
18	3	6.33	1.53	4.67	2.52	3.67	2.08
19	4	3.75	4.19	6.75	.96	4.25	2.50
20	4	6.25	.96	4.00	2.16	4.75	2.75

Table C2

Descriptive Statistics for Leadership Teams 21 through 40 in Learning Index, Energy Level and Assertiveness

Team		Learning Index		Energy Level		Assertiveness	
		Mean	Standard Deviation	Mean	Standard	Mean	Standard
21	4	8.25	2.22	4.50	2.89	4.00	.82
22	5	5.80	1.48	4.80	1.48	3.00	2.12
23	4	6.50	2.52	5.00	.82	4.00	.82
24	2	5.50	.71	7.00	1.41	4.00	0.00
25	4	3.75	1.26	5.00	2.16	4.50	1.73
26	4	4.50	1.29	6.25	1.71	4.25	1.50
27	4	5.75	.96	6.00	1.41	4.25	1.71
28	3	5.67	.58	3.67	1.53	4.00	2.00
29	3	6.33	1.15	5.67	.58	6.00	1.00
30	4	6.75	2.50	4.50	1.00	2.25	1.26
31	5	5.00	3.54	5.40	2.88	4.00	2.24
32	3	7.00	1.73	7.33	2.89	5.67	1.53
33	4	6.50	3.42	8.50	.58	5.50	1.29
34	4	7.25	2.50	6.00	1.41	5.25	2.22
35	4	5.75	1.71	7.25	1.50	5.50	2.65
36	3	5.00	1.00	7.00	1.00	4.67	1.53
37	3	8.00	1.00	8.67	1.15	6.67	.58
38	3	4.67	1.53	5.33	.58	4.00	1.73
39	3	7.33	.58	6.67	1.15	6.67	2.52
40	3	5.67	.58	5.33	1.15	5.33	.58

Table C3

Descriptive Statistics for Leadership Teams 1 through 20 in Sociability, Manageability, and Attitude

Team	N	Sociability		Manageability		Attitude	
		Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
1	3	5.33	2.52	6.67	3.21	7.00	3.46
2	5	4.60	2.79	6.00	1.00	7.00	1.58
3	3	5.33	2.52	3.67	.58	3.67	2.31
4	3	7.00	2.65	5.00	2.65	7.67	1.53
5	5	2.60	1.14	3.40	1.34	3.20	.45
6	1	1.00		6.00		5.00	
7	3	4.33	1.53	1.33	.58	1.67	1.15
8	3	2.67	1.53	7.00	1.00	7.67	1.53
9	4	6.25	3.77	3.25	2.22	3.25	1.89
10	3	4.33	3.51	4.33	3.51	4.33	3.51
11	4	4.25	.96	3.25	1.71	2.25	.96
12	4	4.50	3.32	4.25	2.63	3.75	2.06
13	4	4.25	1.50	5.50	2.38	6.00	2.16
14	3	4.67	1.53	2.67	1.15	3.33	2.08
15	5	4.00	2.24	4.60	1.34	4.00	1.58
16	2	2.50	.71	5.00	0.00	5.50	3.54
17	5	5.20	2.39	3.20	2.77	3.60	1.82
18	3	5.00	2.65	5.33	2.31	5.00	2.65
19	4	4.50	3.11	3.00	1.83	4.50	2.52
20	4	5.75	2.06	5.75	2.36	7.00	2.16

Table C4

Aggregate Profile XT Descriptive Statistics for Leadership Teams 21 through 40 in

Sociability, Manageability, and Attitude

Team	N	Sociability		Manageability		Attitude	
		Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
21	4	3.50	1.00	5.00	.82	6.50	1.29
22	5	4.60	3.78	3.40	1.67	4.40	1.14
23	4	3.00	1.83	4.25	2.63	4.75	1.71
24	2	2.00	1.41	3.50	2.12	2.00	1.41
25	4	3.00	1.63	3.75	2.22	3.75	1.89
26	4	3.75	.50	2.50	1.00	3.75	2.06
27	4	3.00	1.41	3.50	1.73	3.25	1.71
28	3	5.00	1.00	3.67	2.31	3.67	2.52
29	3	4.00	2.65	4.00	1.73	5.67	.58
30	4	4.00	1.83	3.75	2.22	4.75	4.11
31	5	3.80	3.27	5.40	1.82	4.80	1.10
32	3	4.00	1.73	3.00	2.65	4.00	1.00
33	4	5.75	1.50	3.50	1.73	3.75	2.06
34	4	7.25	1.50	4.25	1.26	6.75	1.71
35	4	3.75	1.71	2.75	1.71	4.25	2.22
36	3	4.00	4.36	3.67	1.53	3.67	1.53
37	3	6.67	3.21	4.33	3.21	5.67	1.53
38	3	4.00	1.73	2.67	2.08	4.00	1.73
39	3	6.33	4.04	3.00	1.00	4.67	2.31
40	3	5.67	2.52	3.67	.58	5.00	1.00

Table C5

Aggregate Profile XT Team Descriptive Statistics for Leadership Teams 1 through 20 in Decisiveness, Accommodating, Independence, and Objective Judgment. Standard Deviation is abbreviated as Std. Dev

Team	N	Decisiveness		Accommodating		Independence		Objective Judgment	
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev	Mean	Std. Dev.
1	3	6.33	1.15	4.33	1.53	4.67	2.08	.00	3.46
2	5	5.60	1.52	6.00	1.41	6.60	1.95	6.40	1.52
3	3	6.33	2.31	3.67	2.89	6.00	3.00	4.00	2.65
4	3	8.33	2.08	3.00	1.00	9.00	1.73	6.00	2.65
5	5	4.60	2.51	4.40	.89	6.80	1.79	4.20	.84
6	1	1.00		6.00		4.00		5.00	
7	3	6.67	1.53	1.33	.58	8.67	1.53	2.67	1.53
8	3	2.33	2.31	7.67	.58	5.33	2.08	6.33	1.15
9	4	6.50	1.91	3.50	1.91	7.25	2.36	6.00	2.00
10	3	3.67	3.79	4.67	4.04	5.67	3.06	5.00	4.36
11	4	6.50	1.00	4.50	3.11	7.50	1.91	5.75	3.77
12	4	6.50	1.91	3.00	1.63	8.25	1.26	5.50	2.38
13	4	3.25	1.50	7.00	2.31	4.25	1.89	6.75	2.99
14	3	6.67	2.31	5.00	2.00	8.33	.58	3.67	2.52
15	5	4.00	1.87	6.20	1.79	5.20	1.30	5.60	1.52
16	2	2.00	1.41	5.00	0.00	5.50	.71	6.00	1.41
17	5	5.80	1.48	3.40	2.19	7.80	1.79	5.80	2.28
18	3	4.33	3.51	5.67	3.06	5.67	2.31	6.33	3.21
19	4	5.50	1.00	4.00	1.15	7.75	1.50	3.25	2.22
20	4	4.00	2.94	5.25	2.06	5.50	1.91	5.50	3.32

Table C6

Aggregate Profile XT Team Descriptive Statistics for Leadership Teams 21 through 40 in

Decisiveness, Accommodating, Independence, and Objective Judgment

Team	N	Decisiveness		Accommodating		Independence		Objective Judgment	
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
21	4	4.00	1.83	7.50	1.73	7.25	1.50	6.00	2.16
22	5	3.80	1.92	6.00	1.00	6.20	1.30	3.60	2.30
23	4	5.50	1.00	4.50	2.65	6.75	2.63	4.75	1.26
24	2	6.50	2.12	5.00	1.41	6.50	.71	5.00	0.00
25	4	4.25	2.63	4.50	2.52	6.25	1.26	3.50	1.91
26	4	5.75	1.26	3.25	.96	7.25	3.10	4.25	2.87
27	4	5.00	.82	4.50	.58	7.00	2.45	5.25	2.50
28	3	3.67	1.15	6.33	1.53	6.00	2.00	5.33	1.53
29	3	6.33	1.53	4.33	1.15	8.00	1.00	3.67	2.31
30	4	2.75	1.50	4.75	1.26	7.00	2.58	5.00	1.63
31	5	4.80	2.86	5.00	0.00	5.60	2.07	5.00	2.35
32	3	7.33	3.06	3.00	2.00	6.67	3.51	3.33	3.21
33	4	8.75	.96	3.50	1.91	6.50	1.91	2.75	1.71
34	4	5.25	2.50	5.50	1.00	5.50	1.29	4.50	2.08
35	4	7.75	1.71	4.50	2.08	7.50	2.08	4.00	1.63
36	3	6.33	.58	4.33	3.06	6.00	2.65	5.00	3.00
37	3	8.00	0.00	3.67	2.31	8.00	1.00	5.00	4.00
38	3	5.33	1.15	3.67	1.15	8.00	1.00	7.33	.58
39	3	7.33	.58	2.67	1.53	9.33	.58	5.00	1.00
40	3	5.00	1.00	4.00	3.46	6.33	1.53	5.67	2.08

Table C7

Aggregate Readiness for Change Team Descriptive Statistics for Leadership Teams 1 through 20 in the areas of Quality of the Change, Leader Participation, and Attitude of the Supervisor. The abbreviation for Standard Deviation is Std. Dev

Team	N	Quality of the Change	Leader Participation	Attitude of Supervisor			
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
1	3	38.67	4.73	45.33	5.69	13.33	1.53
2	5	32.00	6.67	33.80	7.09	10.80	3.49
3	3	35.67	9.07	39.67	5.77	13.67	1.53
4	3	38.33	5.86	39.33	.58	14.00	1.73
5	5	29.20	5.76	28.80	4.66	11.80	.84
6	1	34.00		37.00		12.00	
7	3	30.00	2.65	23.00	6.08	5.00	1.00
8	3	39.00	4.36	37.33	3.06	12.33	.58
9	4	41.00	2.45	40.75	3.95	14.75	.50
10	3	36.00	2.65	37.67	1.53	13.00	1.73
11	4	39.25	1.89	36.50	3.51	14.75	.50
12	4	37.75	3.30	39.75	6.40	14.00	2.00
13	4	36.00	1.63	32.50	4.65	11.75	.50
14	3	20.33	4.93	28.00	3.61	9.33	.58
15	5	32.00	3.39	34.60	3.36	11.00	1.22
16	2	40.00	5.66	44.00	5.66	13.00	1.41
17	5	34.60	5.50	38.60	6.91	12.20	2.77
18	3	36.67	3.79	37.00	6.56	12.67	2.08
19	4	36.75	6.65	35.50	8.27	12.00	.82
20	4	28.25	9.00	29.00	8.91	10.00	2.71

Table C8

Team Descriptive Statistics for Leadership Teams 21 through 40 in the Aggregate
 Readiness for Change areas of Quality of the Change, Leadership Participation, and
 Attitude of the Supervisor

Team	N	Quality of the Change		Leader Participation		Attitude of Supervisor	
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
21	4	30.50	7.55	36.25	4.79	11.50	2.08
22	5	29.80	4.09	32.80	3.27	11.60	.55
23	4	35.00	8.04	39.50	5.97	12.50	2.38
24	2	42.00	1.41	45.50	3.54	13.00	0.00
25	4	29.75	5.56	31.00	5.35	11.50	2.52
26	4	36.50	2.89	39.75	3.59	13.50	.58
27	4	38.00	1.83	40.25	3.40	10.75	1.71
28	3	39.00	4.00	40.00	6.93	12.67	1.53
29	3	39.67	3.21	39.00	2.65	9.67	2.52
30	4	38.75	6.45	44.75	7.09	13.50	3.00
31	5	31.40	11.63	34.60	12.16	12.80	2.05
32	3	35.67	1.53	40.33	4.16	14.00	1.00
33	4	36.50	6.35	35.00	6.38	11.25	2.06
34	4	31.50	2.65	34.50	4.43	11.50	1.00
35	4	34.25	3.20	32.50	7.42	12.50	.58
36	3	38.00	2.65	39.67	1.53	12.33	.58
37	3	42.00	0.00	47.33	3.06	14.00	1.73
38	3	33.67	.58	37.00	2.65	12.67	1.15
39	3	35.67	3.21	36.00	1.00	11.67	2.52
40	3	34.33	3.06	35.33	6.43	12.00	1.00

Table C9

Aggregate Readiness for Change Team Descriptive Statistics for Leadership Teams 1 through 20 in Supervisor Support, Climate of Change, and Politicking. The abbreviation for Standard Deviation is Std. Dev

Team	N	Supervisor Support		Climate of Change		Politicking	
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
1	3	27.00	4.00	12.00	3.61	12.67	2.52
2	5	26.20	3.56	10.40	2.51	9.20	2.77
3	3	31.33	1.53	12.00	1.00	12.67	3.21
4	3	27.67	4.04	12.67	.58	10.00	3.00
5	5	25.40	.89	8.80	2.39	5.60	2.51
6	1	29.00		13.00		11.00	
7	3	17.33	2.52	9.00	0.00	6.67	.58
8	3	23.67	2.89	10.67	1.53	12.67	1.15
9	4	28.50	3.42	11.50	2.38	10.25	3.30
10	3	26.67	2.52	11.67	.58	10.67	1.15
11	4	28.25	1.71	12.75	.96	7.75	1.50
12	4	26.25	3.30	12.75	1.26	9.75	1.89
13	4	22.25	4.99	10.00	1.83	10.25	2.06
14	3	23.00	1.73	8.33	2.31	7.67	2.31
15	5	27.40	1.95	11.80	1.10	10.40	1.82
16	2	31.00	4.24	13.00	1.41	13.00	1.41
17	5	25.40	4.16	10.40	2.70	9.80	3.27
18	3	26.00	3.61	12.00	1.00	7.00	3.00
19	4	24.75	7.41	10.25	2.63	7.50	4.65
20	4	21.00	8.87	7.75	2.50	6.75	2.87

Table C10

Aggregate Readiness for Change Team Descriptive Statistics for Leadership Teams 21 through 40 in the areas of Supervisor Support, Climate of Change, and Politicking

Team	N	Supervisor Support		Climate of Change		Politicking	
		Mean	Std Dev	Mean	Std Dev	Mean	Std Dev
21	4	26.75	3.10	10.50	1.91	9.75	1.71
22	5	26.60	3.51	9.60	1.52	10.00	1.87
23	4	27.25	1.71	11.50	1.73	9.75	2.22
24	2	33.50	.71	10.00	1.41	13.50	2.12
25	4	25.25	.96	9.75	.96	10.50	2.65
26	4	22.75	2.99	10.50	1.29	12.25	1.50
27	4	24.50	3.32	10.25	.50	10.50	1.00
28	3	23.67	5.03	13.33	1.53	10.67	4.04
29	3	23.67	5.86	11.00	1.00	9.67	3.51
30	4	30.00	6.22	12.50	2.08	13.00	2.31
31	5	25.20	6.98	11.20	4.32	10.40	1.95
32	3	20.00	2.65	11.00	1.00	11.67	1.53
33	4	25.75	4.57	11.00	2.16	10.25	2.99
34	4	22.50	1.73	9.50	.58	12.25	2.87
35	4	28.75	.50	9.25	1.89	7.00	3.16
36	3	29.00	1.00	11.33	1.15	12.00	0.00
37	3	30.00	5.00	13.33	.58	12.00	1.00
38	3	22.33	1.53	9.67	.58	8.67	4.62
39	3	26.67	2.08	11.67	.58	9.67	1.53
40	3	25.33	4.04	10.67	1.53	11.67	.58

Table C11

Aggregate Readiness for Change Team Descriptive Statistics for Leadership Teams 1 through 20 in Cohesion, Emotional Readiness, and Cognitive Readiness

Team	N	Cohesion		Emotional Readiness		Cognitive Readiness	
		Mean	Std Dev	Mean	Std Dev	Mean	Std Dev
1	3	20.33	3.06	20.33	4.04	23.33	2.08
2	5	17.00	1.22	18.80	5.12	17.60	5.73
3	3	22.33	2.52	21.00	2.65	21.67	3.21
4	3	18.00	2.65	22.67	2.52	21.67	3.21
5	5	16.00	3.54	19.60	2.19	19.20	2.39
6	1	20.00		19.00		21.00	
7	3	22.33	2.89	20.33	3.21	18.33	1.15
8	3	19.67	2.52	19.00	1.73	20.00	1.73
9	4	22.25	2.36	23.50	1.29	22.25	3.59
10	3	19.67	.58	17.67	3.06	15.67	4.51
11	4	20.00	3.16	23.50	1.73	24.00	1.15
12	4	20.25	2.22	22.50	1.29	20.75	.50
13	4	18.00	1.41	18.25	1.50	19.25	1.89
14	3	18.67	2.31	13.00	2.00	16.67	1.53
15	5	22.20	2.95	17.20	2.05	18.00	1.58
16	2	22.00	2.83	22.50	2.12	21.50	.71
17	5	19.00	3.81	18.60	3.78	17.40	3.78
18	3	17.33	3.06	20.00	3.61	18.67	5.13
19	4	17.25	2.50	17.75	2.63	16.50	7.68
20	4	18.50	3.70	19.50	1.73	18.75	3.77

Table C12

Aggregate for Leadership Teams 21 through 40 in the areas of Cohesion, Emotional Readiness, and Cognitive Readiness

Team	<i>N</i>	Cohesion		Emotional Readiness		Cognitive Readiness	
		<i>Mean</i>	<i>Std Dev</i>	<i>Mean</i>	<i>Std Dev</i>	<i>Mean</i>	<i>Std Dev</i>
21	4	19.75	3.30	18.25	4.79	18.25	1.71
22	5	21.00	3.81	16.40	6.58	17.00	3.39
23	4	22.00	2.71	21.50	1.00	20.25	1.71
24	2	24.50	.71	22.00	1.41	24.50	.71
25	4	15.50	3.51	15.00	5.42	16.50	3.32
26	4	21.25	2.06	21.25	.50	18.00	2.71
27	4	20.50	2.65	20.25	.96	21.00	1.15
28	3	22.00	2.65	21.00	3.00	19.33	5.13
29	3	21.33	2.08	18.00	2.00	18.67	2.52
30	4	21.00	2.16	20.50	3.70	19.25	.96
31	5	20.20	1.30	18.20	4.76	18.80	4.15
32	3	21.67	4.16	19.33	.58	16.33	.58
33	4	20.25	2.87	19.50	1.91	19.00	2.16
34	4	18.00	2.71	17.00	1.15	17.50	1.00
35	4	20.50	1.00	14.75	4.57	21.75	.50
36	3	20.00	0.00	20.00	1.00	19.00	1.73
37	3	22.00	1.00	22.33	3.06	18.33	4.62
38	3	17.33	4.16	19.33	3.06	17.33	3.21
39	3	20.67	3.21	19.33	2.89	18.67	2.52
40	3	17.67	3.21	17.33	2.31	18.67	1.15

Table C13

Aggregate Readiness for Change Team Descriptive Statistics for Leadership Teams 1 through 20 in the areas of Intentional Readiness and Total Readiness

Team	N	Intentional Readiness		Total Readiness	
		Mean	Standard Deviation	Mean	Standard Deviation
1	3	10.00	0.00	223.00	28.62
2	5	8.00	2.45	183.80	35.74
3	3	8.00	3.46	218.00	32.19
4	3	9.67	.58	214.00	17.35
5	5	8.40	.89	172.80	11.30
6	1	8.00		204.00	
7	3	8.00	2.00	160.00	5.29
8	3	8.00	0.00	202.33	13.43
9	4	9.50	1.00	224.25	17.40
10	3	8.33	1.53	197.00	16.64
11	4	9.00	1.15	215.75	8.42
12	4	8.00	2.16	211.75	21.93
13	4	9.00	1.15	187.25	16.58
14	3	8.00	0.00	153.00	16.46
15	5	7.60	.89	192.20	11.97
16	2	8.50	.71	228.50	26.16
17	5	8.20	1.48	194.20	27.70
18	3	7.33	2.52	194.67	18.90
19	4	7.50	3.00	185.75	40.83
20	4	8.50	1.00	168.00	41.43

Table C14

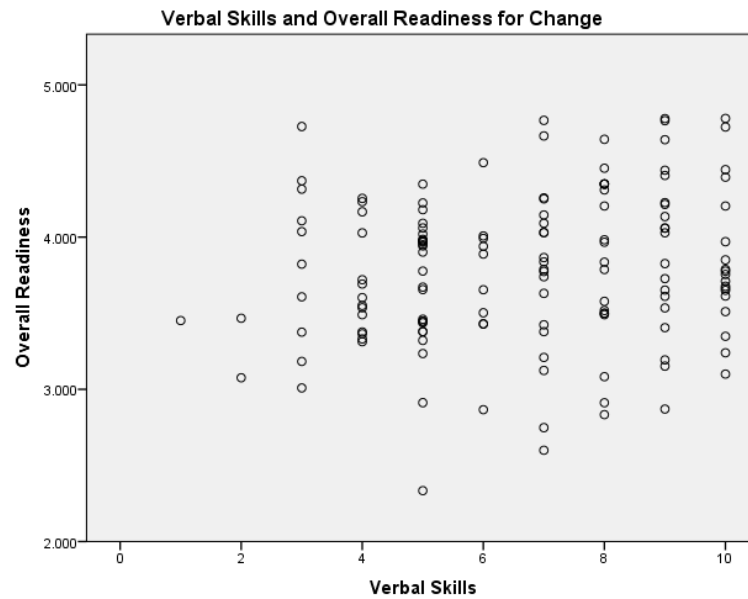
Aggregate Readiness for Change Team Descriptive Statistics for Leadership Teams 21 through 40 in Intentional Readiness and Total Readiness

<i>Team</i>	<i>N</i>	Intentional Readiness		Total Readiness	
		<i>Mean</i>	<i>Standard Deviation</i>	<i>Mean</i>	<i>Standard Deviation</i>
21	4	8.25	.50	189.75	23.43
22	5	8.20	.45	183.00	16.42
23	4	9.00	1.15	208.25	19.74
24	2	9.00	1.41	237.50	4.95
25	4	7.50	2.52	172.25	19.53
26	4	8.00	.82	203.75	7.85
27	4	8.25	.50	204.25	3.95
28	3	9.00	1.00	210.67	32.01
29	3	8.67	1.15	199.33	15.50
30	4	9.25	.96	222.50	31.33
31	5	7.40	1.95	190.20	47.87
32	3	8.33	1.53	198.33	4.93
33	4	8.50	1.00	197.00	26.96
34	4	8.00	0.00	182.25	14.13
35	4	9.50	1.00	190.75	21.30
36	3	9.00	1.00	210.33	4.04
37	3	8.67	1.15	230.00	15.52
38	3	8.67	1.15	186.67	17.95
39	3	8.00	0.00	198.00	14.73
40	3	7.33	1.15	190.33	16.86

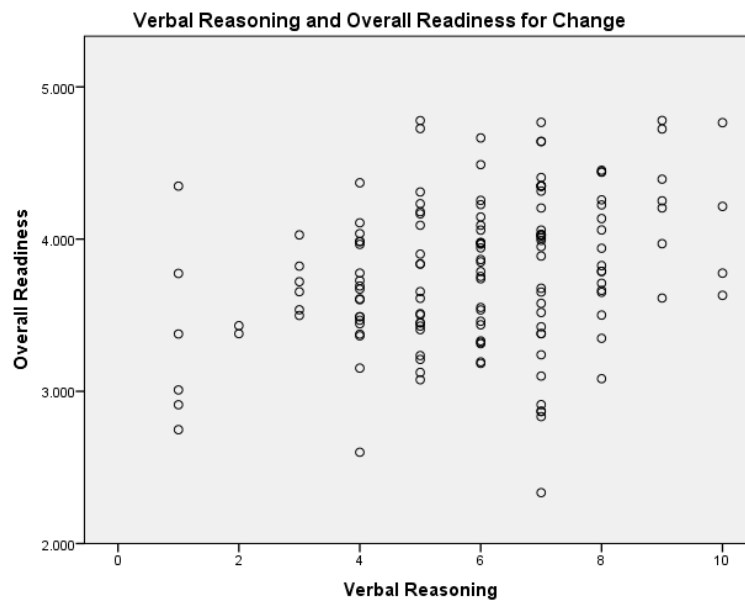
Appendix D

Scatterplots and Partial Regression Plots

Verbal Skills and Overall Readiness for Change



Verbal Reasoning and Overall Readiness for Change.

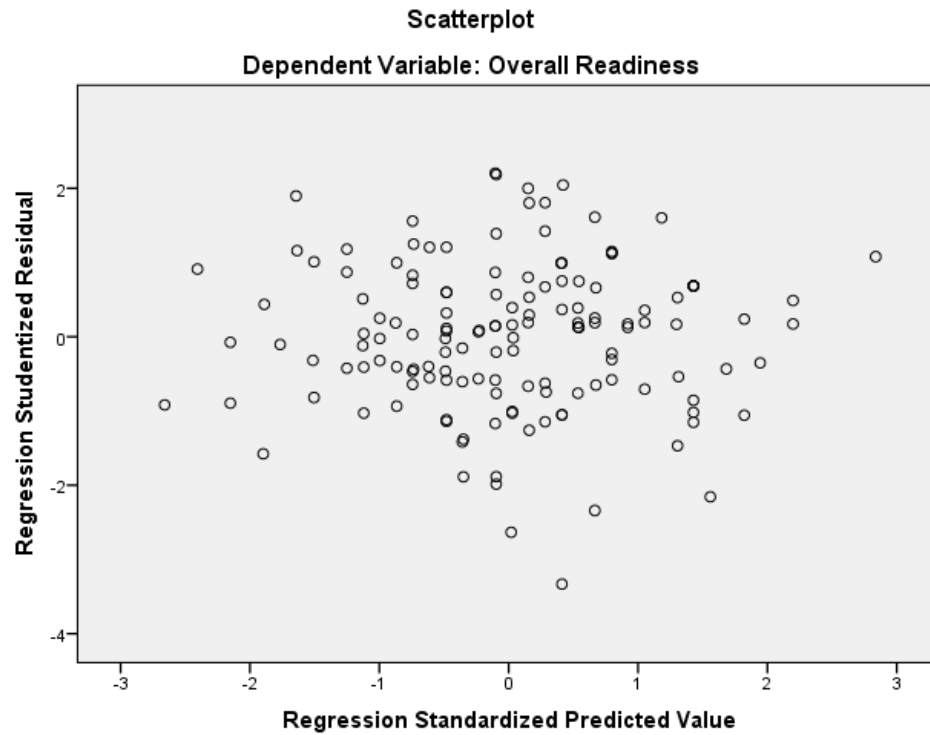


Manageability and Overall Readiness for Change



Appendix E

Studentized Residual against the Standardized Predicted Values



Dependent Variable: Overall Readiness

Appendix F Correlations

Table F1

Statistically Significant Pearson's Correlations: Behavioral Traits and Overall Quality of Change

	1	2	3	4	5	6	7	8	9	10	11	12
1	1											
2	.484**	1										
3	.220**	.448**	1									
4	.441**	.638**	.583**	1								
5					1							
6	.180*			.277**	.510**	1						
7				.229**	.165*	.472**	1					
8		.180*		.167*	-	.340**	.306**	1				
9	.248**	.303**		.275**	-	.251**	.301**	.721**	1			
10					.864**	.724**	.265**	-	-	1		
11					-	-	.579**	.483**	-	.173*	1	
12					.534**	.374**				.500**		1
13					.421**	.374**				.430**	.474**	
14		.309**			-		.355**	.598**	.298**		.386**	-
					.295**			.595**	.416**			.170*
								.235**				

**Correlation is significant at the 0.01 level (2 tailed)

*Correlation is significant at the 0.05 level (2 tailed)

Table F2

Statistically Significant Kendall's Tau-b Correlations: Behavioral Traits and Overall Quality of Change

	1	2	3	4	5	6	7	8	9	10	11	12
1	1.000											
2	.412**	1.000										
3	.175**	.350**	1.000									
4	.329**	.515**	.458**	1.000								
5					1.000							
6	.131*			.188**	.398**	1.000						
7				.163**		.356**	1.000					
8					-		.187**	1.000				
					.269**							
9	.197**	.251**		.218**	-		.222**	.576**	1.000			
					.172**							
10					.758**	.595**	.185**	-	-	1.000		
								.233**	0.116			
11					-	-		.490**	.368**	-	1.000	
					.425**	.284**				.399**		
12	.131*	.140*			.343**	.296**		-	-	.344**	-	1.000
								.508**	.220**		.404**	
13					-		.234**	.456**	.296**		.290**	-
					.224**							.132*
		.218**						.178**	.141*			

** Correlation is significant at the 0.01 level (2 tailed)

* Correlation is significant at the 0.05 level ((2 tailed)

Appendix G

Box Plots

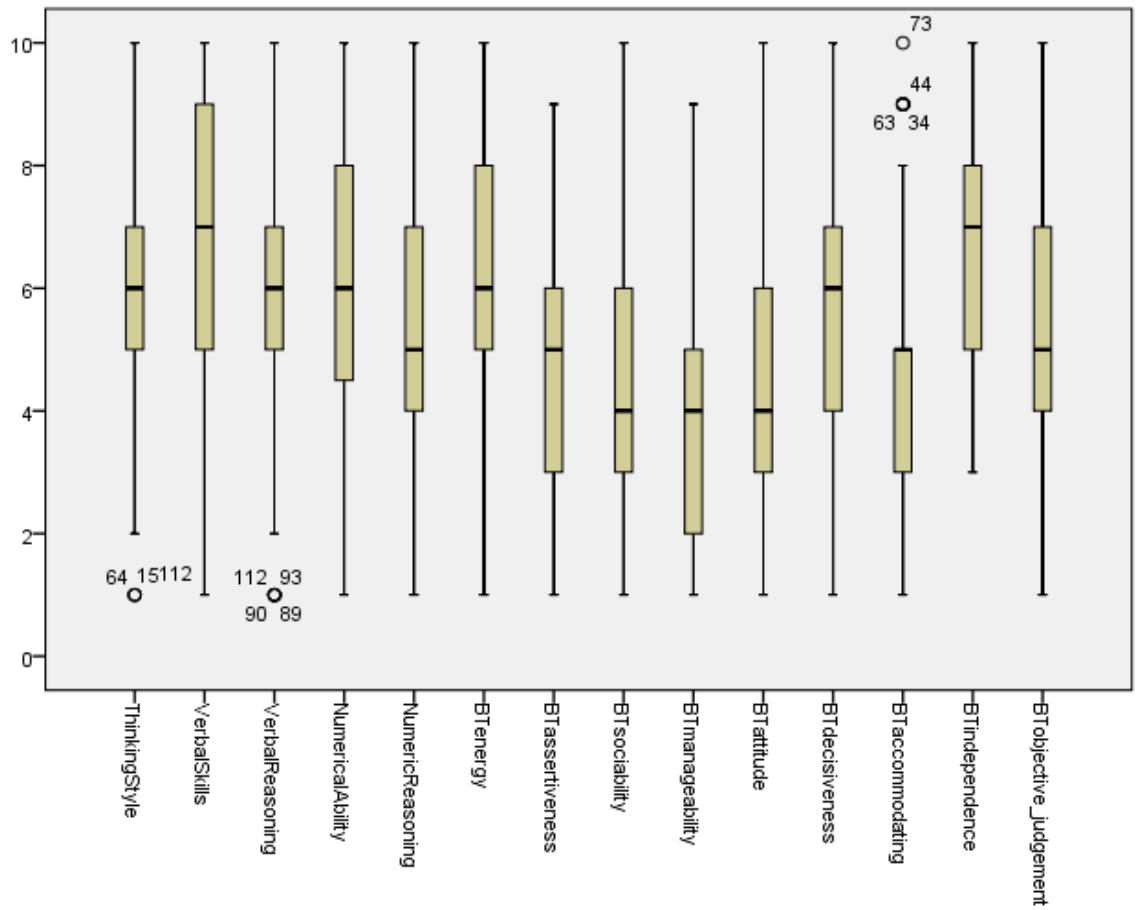


Figure G1. Box plots for thinking style and behavioral traits.

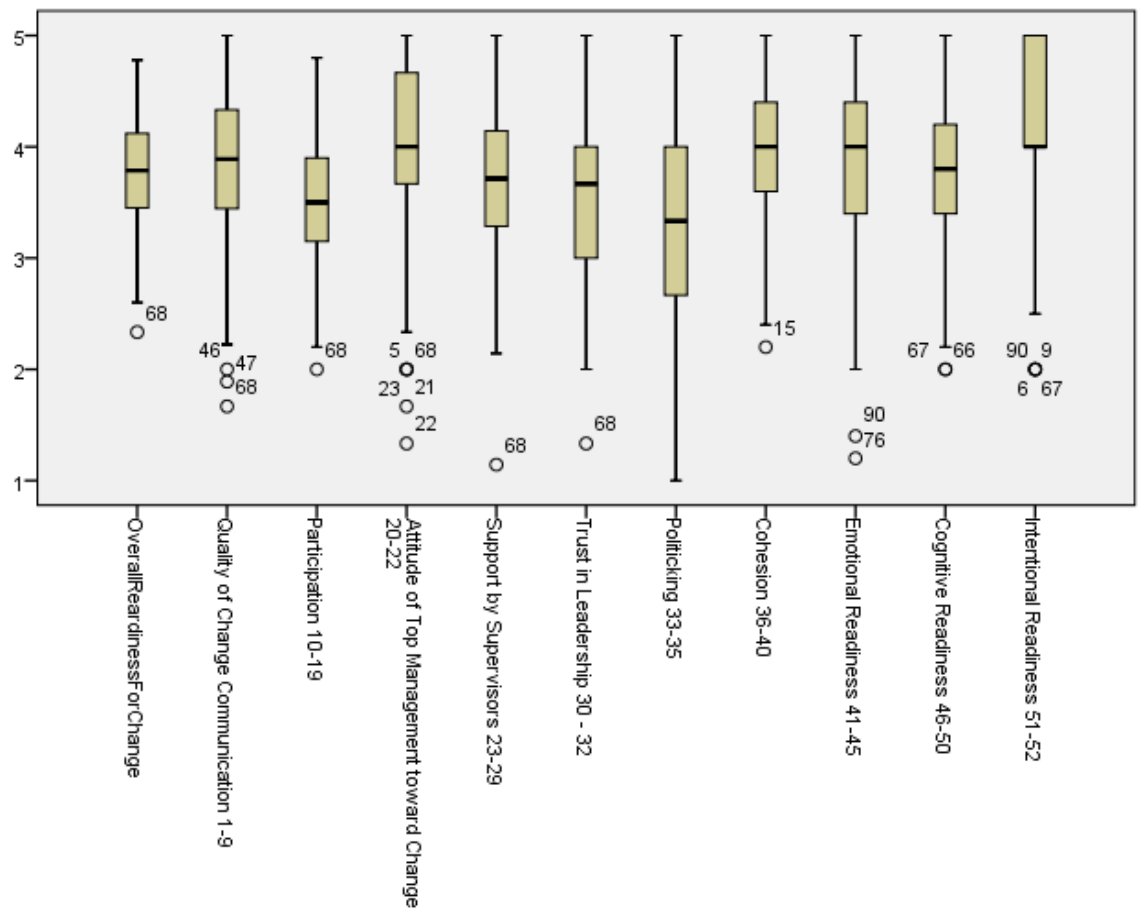


Figure G2. Readiness for change box plots (overall readiness used as a criterion in the analysis).

Table G1

Ranges of z-Scores for the Variables Identified as Having Outliers

	Zscore: Verbal Reasoning	Zscore: (BTaccommodating)	Zscore: Overall Readiness
Minimum	-2.45835	-1.74063	-2.97071
Maximum	2.05506	2.57574	2.02645

The Pedagogy of Role-Taking: The Self as a Happy Slave

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Abstract

The primary purpose of this paper is to explore upon the impact of an academic community to the development of the *self*, as the latter engages itself to the former in terms of social experiences, interactions, and role-taking. For a social thinker such as George Herbert Mead, one is not born with a *self* but develops such when one subscribes to *role-taking*. Herein, roles are referred to as a conglomeration of various behaviours which respond to different or some other sets of behaviours of *others* in its environment. Since one is presumably able to place one's feet on the shoes of others, the paper argues that the educational environment—the school, the academic institution as such—drives one to play the role of being a slave; a *happy slave* to be more exact, through inculcating upon one's mind the assumed glory of being a well-paid worker who feeds the demands of the society. Education here is sought most likely as a dumb show that rather teaches and trains the young to willingly play the role of a societal slave and projects him/her towards such where one becomes contented and 'happy' of it before s/he even becomes aware of it.

The paper will also discuss the social implications of Mead's theory via analyzing the K to 12 basic education that was recently implemented in the Philippines to further beef up the claims presented.

This paper might be helpful in branching out studies in the philosophy of education through a careful scrutiny of the Philippine educational system vis-à-vis Mead's theory.

Keywords: Role-taking, education, self, slave, happy slave, generalized other

A Prelude to the Scrutiny of the Self

As humans claim to be the highest of all animals, so do they stand superior even when it comes to philosophical, psychological, and sociological speculations present from the earliest of thinkers up to the current societies. There is an inevitable significance and throne where s/he has to be placed. Whether s/he is not the dominant race anymore—because of the unstoppable progress of the rise of artificial intelligence and rigorous scientific explorations—does not matter for present developments which could possibly surpass humankind presumably would never emerge if not of his/her gift of rationality.

Concerning the misfortunes of the conscious individual, it is in the *self* and its personality that this essay is dedicated to scrutinize, as the *self* who ought to be the master of his/her soul wears the cloak of slavery once an *other* come to *play*. The impact of social groups and classes such as the educational community, upon the development of the *self*, as the latter engages itself to the former in terms of social experiences, interactions, and role-taking, should be given light in the standpoint of George Herbert Mead¹. For Mead, one is not born with a self but develops such when one subscribes to *role-taking* which is a result of one's learned principles through active social relations in the course of unending communication and continuous process of socialization.²

The Genesis of the Self³

The nature and essence of the *self* in contrast to the Cartesian *cogito* should be understood in a more distinct and succinct way with respect to the term. Formerly, the essence of the self was understood solely as a *thing which thinks*, and the bodily nature of the self is of lesser value. Duality is presented here extremely, but it is proper to say that such duality which may comprise the self should be explained in another way.

It should not be rationality and thinking alone that ought to be regarded as significant to identify the foundation and genesis of the self. For Mead, the self only arises once an individual enables him/herself to awaken the common responses as s/he is affecting and is being affected by an *other*.⁴ The self, developmental as it is, is something exclusive only to human animals, whereas other lower life forms do not have. In this very sense there is no self so long as there is no social interaction which only human experiences can only account to. It

¹ George Herbert Mead's name reverberated with a notable impact with his contributions as a social behaviourist in the field of social psychology. As a philosopher, he was known to belong to the old tradition as that of Aristotle, Descartes, Dewey, et al.

The volume of the published work named after Mead—*Mind, Self, and Society*—which will be largely mentioned and used as a reference in this essay's elaboration of his ideas, was a product of the latter followers and admirers of his thought in the said field of expertise that he was revered to, which they intimately compiled from the series of lectures he delivered during his time. Because the said work sound very conversational in tone as it was taken from the lecture rooms and only systematized and arranged by those who came after Mead, it is also the purpose of this paper to sound conversational as it is how the writer believes the most fitting, if not the best way to express the synthesis of thoughts and ideas introduced here that rests on Mead's behaviourist and socio-philosophical paradigm.

² George Herbert Mead, *Mind, Self, and Society: from the Standpoint of a Social Behaviorist*, Volume 1. Ed. Charles W. Morris (USA: University of Chicago Press, 1962), 135.

³ The same phrase was originally from Mead where a subsection was entitled as "The Background of the Genesis of the Self". (See Mead, *Mind, Self, and Society*, 144).

⁴ See "The Self and the subjective" in Mead, *Mind, Self, and Society*.

would be also impossible to initially acquire what is called a *self* at birth.⁵ Again, the self arises only after realizing its social structure and essence that is brought about by social experiences. Given the fact that this self has to have an interaction with an other first, s/he has to internalize what is learned from his/her socialization with the community that the individual belongs to and respond to it in return.

As an individual undergoes socialization—that is, the life-long social process of learning the behaviour, cultural patterns, and expectations of the social community—s/he venture to cope with the expectations that s/he has to meet in line with the way the other also do. The first phase where one commits to is the point where one begins to communicate to the others who belong to the same community. This point is where language, as a symbol of one's ideas in mind, enters which for Mead is the *preparatory* stage⁶. The *preparatory* is where an individual learns the symbols and gestures of another. For instance, an individual or even a child think less when s/he places a glass of water on the table after drinking because s/he already learned from his/her social experience that it is how the table is used as s/he observed from the similar gesture that her mother do from time to time. To strengthen the foundation of where the *self* is built, one begins to move forward to the *play* stage. This is where role-taking occurs. One may take the example given by Mead with regard to children playing hide and seek.⁷ In this play there are two roles that have to be taken—the one being hunted and the one who is hunting. Depending upon how the child plays, it is fair to say that s/he changes roles to carry out the play. On the final stage, roles are now organized—the *game* stage.⁸ Say in a basketball game where several individuals are already involved, a single individual in such a game has to meet the standards that is set and is expected of him/her to deliver. But still, one who has a particular role must be also ready to take the role of others. In this sense one begins to take part upon the attitude of all the others, of what Mead calls the *generalized other*.⁹

As stated earlier, it is impossible to have a self apart from social experience, apart from the influence of an other, a generalized other. This generalized other provides the individual his/her unity of self.¹⁰ It is the community that is referred to as organized whose attitude is possessed and carried out by all. When an individual's attitude and ways then correspond to that of the generalized other, s/he now begins to develop a complete self. The response then to those certain gestures, attitudes, and varieties of roles that an individual partakes in and realizes shall bring the self to its fullness which shall be particularized further.

Mead distinguished in detail the difference of the 'I' from the 'me'. Albeit their variance, the 'I' and the 'me' is in a sort of mutual actuality where one cannot find itself apart from the other. The latter is portrayed as the structured set of attitudes where the former, the 'I', responds upon.¹¹ It is in the social 'me' where the conscious 'I' act in response to. The reaction or response that the 'I' does is by placing its feet on the same shoes that walks towards the attitude of others which brings about the 'me' as a result.¹² Thus, the 'me' is called out by the 'I' as it responds to such.

⁵ Ibid., 135.

⁶ Ibid., 145.

⁷ Ibid., 151.

⁸ Ibid.

⁹ Ibid., 154.

¹⁰ Ibid.

¹¹ Ibid., 175.

¹² See "The I and the Me" in Mead, *Mind, Self, and Society*, 173-178.

It is in this sophistication where the totality of the *self* is constituted by. More than the three stages that the self undergoes, a certain distinction and understanding of that distinction of the 'I' and 'me' are where its genesis and continual process is epitomized. As the individual internalizes and reflects the gestures and symbols through social experiences and interactions would s/he is able to awaken the 'me' and reply to it through conscious apprehension. In sum, these set of responses that the *I* give in to, are those that give birth to *meanings*. It should also be noted that for Mead, gestures, objects, and symbols do not carry meanings but it is the response of the self which creates them.

The Pedagogic Play

Another important area to note in understanding the *self* as promulgated by Mead is its responses to an influential and necessary engagement to a particular social institution – the educational community. Mead has not written a systematic treatise on education.¹³ However, an account of his lecture series clearly exposes his views on education, sticking to the social process that he raises. For Mead, education is a process of conveying meanings.¹⁴ As the society progressed far beyond the savage and barbaric eras, so do the intellectual pursuit of (wo)man evolved. From carved stones to slates, the contemporary civilization improved the mode of communication through also the use of language as symbols that later on bring about meanings.

But this getting of attitudes is the very process of getting consciousness of meaning. Education is the conveying of meanings, and it is in conveying meanings in novel fields. The complex attitude of adults are to be given, therefore we should find the correct process.¹⁵

Going back to Mead's theory of the self, one is identified after responding to the symbols and gestures procured by the generalized other—may it be an individual or an organized social group. Applying such in examining education at large and how it meddles to the play that an individual participates to, the former is not seen solely for its chief purpose of transmitting academic facts. The educational setting, organized as it is, contains symbols and rules whereby the *I* consciously react to. He also already stressed this principle starting from his earlier lectures on the philosophy of education, thus:

So we will view education, not only as a method of giving a body of facts to the rising generation, but we shall also consider the effect which the process of handing down has had on the [educational] material itself, as handed down from generation to generation.¹⁶

Moreover, with the unceasing modernization and civilization of the contemporary world, the academic institutions also modify its curriculum, its ways, and its functions according to the demands of the society. In effect, its training becomes boxed solely for its needs. Mead

¹³ Mead, *The Philosophy of Education*, Ed. Gert Biesta and Daniel Trohler (USA: Paradigm Publishers, 2008), 2.

¹⁴ *Ibid.*, 7.

¹⁵ *Ibid.*, 172.

¹⁶ *Ibid.*, 22-23.

argues that what these changes entailed is what he calls as *technical education*.¹⁷ The scientific discoveries brought the demise of the ancient world as people became more concerned with the new techniques of perceiving the world together with the abstract ideas that it entailed.¹⁸ The primitive lifestyle of hunting and gathering foods and carving history on stones and caves decayed as mankind thirst for new developments patently inclined on making life a bit easier. Education then again, rely its purposes and course offerings in accordance to these advancements.

The current Philippine educational system shows that this perception is obvious. The newly implemented K to 12 basic education correspond to the same movement. With the different academic tracks that are offered most specifically on the latter years of the basic education (Grades 11 to 12), just the title of an academic track and/or strand¹⁹ itself drives an individual learner to take the role of being an expert in that particular field right away and make him/her fulfil the duty of responding to it, in a way that gratifies the whole community at large. The ‘me’ then, structured and organized as it should be, comes alive. As the ‘me’ enters the scene, it is now the response of the ‘I’ that should follow for again, it is impossible for one to exist without the other as a *self* is established. And it is such response which is stimulating for the most part. Within and after the *play*, the responses create an inevitable cycle of individuals which the writer then wishes to name as *happy slaves*.

The Self as a Happy Slave

Earlier, the prominence of the ‘I’ and ‘me’ has been established and it is at such picture where the emphasis of the rise of the *self* has been stressed. The idea of conformity may confuse one’s thoughts about the notion of the *self* that is wished to be clarified. Indeed, if the ‘me’ is that which the ‘I’ respond to, at what level was one’s assurance that a response to be made satisfies the whole process? The ‘me’ as a systematized attitude or set of attitudes responded to by the ‘I’, comes to being as an individual engages in the three stages of the *self* which largely and clearly involves the influence of an other.

As supposed earlier, there is an inherent mutuality that these two distinctions comprise. The ‘I’ as the conscious part reacts in reply to the social ‘me’. The ‘I’ apprehending the social ‘me’ in the educational institution brings about the completion of a dictated personality that is inevitably produced vis-à-vis its aim. To quote Mead:

Skill is not taught. There is no direct instruction. The institutions of society have developed here, as elsewhere, through natural selection, and it appears that primitive man did not find it necessary to instruct the young in techniques. They are supposed to acquire them through the play, or pick them up gradually after they were initiated to the life of the group.²⁰

¹⁷ Ibid., 22.

¹⁸ Ibid.

¹⁹ The K to 12 basic education in the Philippines covers 13 years of basic education with the following key stages: Kindergarten to Grade 3, Grades 4 to 6, Grades 7 to 10 (Junior High School), Grades 11 and 12 (Senior High School) wherein the Senior High School serves as the catalyst for student’s mastery of a particular field they would like to commit to. With that kind of system, the SHS is particularized to different academic tracks and strands (e.g. Information and Communications Technology/ICT ; Science, Technology, Engineering, Math/STEM).

²⁰ Mead, *The Philosophy of Education*, 33.

The learners of today under the novel educational system (in the Philippines for instance) structure itself in a way that it produces new-borns of future workers who shall continue such cycle. One becomes aware of such a role through the erectile that the academe injects to the conscious *I*'s and urge them to respond in a way that they will willingly conform to such demands. As the process is continued and is granted, a personality that such community promotes emerges; a *happy slave self* is given birth. Following the Aristotelian principle that what the temporal beings' pursuit is a pursuit of *arête* (excellence) that which brings about *eudaimonia* (happiness), the personality formed is confused with such fulfilment. With the notion of having to fulfil the totality and completeness of one's natural potentials, its involvement to the academe in this sense gives the individual a thought that s/he is not mistaken for the way s/he should perform. The self is satisfied with the idea that what s/he is doing is what is *good*; is what is best, when on the other hand, s/he is not aware that the community is moulding him/her into something far from that goal – learning to take the role of a happy slave who has dreams that are not within the lines of possibilities. As Rousseau has put it, indeed, "Man is born free, but everywhere he is in chains". And as Mead affirms, "The child in primitive society has much more freedom than a child in a civilized community".²¹

The impression that the academic community has towards the development of the *self* as the latter engages to the former via an individual's direct contact and interaction with it in the sphere of the social is therefore, driving one to give life to one's personality as a societal slave who is in this sense *falsely* happy.

Conclusion

Mead's concept of role-taking may bring one to recollect the ideal republic of Plato which follows the notion of performing one's role in the society in accordance to one's unique gift—whether one is avaricious, courageous, or intellectual.²² Notwithstanding the somewhat limitless possibilities of human capacity, s/he is and will always be bound by the social experiences that necessarily define and constitute one's self and personality in this context.

The human persons' superiority over other life forms becomes vulnerable as s/he could possibly be just a part of a single *self* as the community. How an individual respond to the social constructs and ways of how the community and the society at large operate is at some degree just continuing the social process and brings it to a regress. In return, the way an individual acts in effect of the *generalized other*, which is in this sense the educational community, is predictable. The possibility of a different response, however, which does not conform to the ways of the *generalized other*, do nothing to escape the process but rather modifies it. Another community is established, produced by the individual's communication with one's self that still depends on the pedagogical instalment of what pleases the social organization. As Mead has put it:

One cannot recognize the whole community; but one is continually affecting society by his own attitude because he does bring up the attitude of the group toward himself, respond

²¹ Ibid., 34.

²² See Plato, *The Republic*, trans. B. Jowett, (Project Gutenberg: EBook #1497, 2008).

to it, and through that response changes the attitude of the group.²³

It appears almost impossible for one to escape such process of socialization in order to identify oneself as a unique, individual *self* to the very essence of the term. The individual is always affected by his/her environment. Albeit the aim towards change and better quality of living, such only becomes responses to the generalized other—the educational community at large for this matter—thus carrying out the goal of uniformity inclined on the furtherance of social order and necessities.

²³ Mead, *Mind, Self, and Society*, 180.

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Determinants and Problems in the Completion of Tertiary Education of Indigenous Peoples (IPs) of Zambales, Philippines

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ABSTRACT

The completion of tertiary education of the Indigenous Peoples (IPs) is constrained by many factors. The study aimed to identify and assess the determinants and problems affecting the completion of tertiary education of Indigenous Peoples (IPs) of Zambales, Philippines. The 343 respondents were Aytas found in the province of Zambales, Philippines who were enrolled in different colleges and universities for second semester of the academic year 2016 to 2017.

Majority of the respondents belong to the ethno-linguistic group of Aeta Sambal. Results showed that the strongly agreed determinants perceived by the Aeta respondents were self and family, and the most frequently met problems were the access and utilization of technology and media.

The completion of tertiary education of the Aetas considering their personal and family's perception is an opportunity to show their cultural skills and talents. In addition, they believe that education will free them from ignorance and poverty. Non-completion of tertiary education of the Aetas is attributed to absence of access to new technology and multimedia since they live in far-flung areas where electricity and internet networks are absent. Despite the knowledge of most Aetas on the vitality of education to their lives, limited technology would perhaps bring undesirable effect on their studies in tertiary education. In addition, the differences in religious and cultural beliefs, availability of financial assistance and socio-economic status of the Aytas family limit completion for tertiary education.

Keywords: Determinants, Problems, Tertiary Education, Indigenous Peoples, Ayta

INTRODUCTION

The Philippines comprises of more than 7, 601 islands. These islands are categorized into three main geographical divisions from north to south, namely Luzon, Visayas, and Mindanao. The three islands are blessed with several ethnic groups. According to United Nation Development Program (2010), Philippines is a culturally diverse country with an estimated 14-17 million Indigenous Peoples (IPs) belonging to 110 ethno-linguistic groups and mainly concentrated in Luzon. Aytas in the province of Zambales are among the IPs in Luzon. They are divided into four ethno-linguistic groups identified as Ayta Abellen, Ayta Ambala, Ayta Mag-Indi, and Ayta Sambal. Despite the Philippine governments' recognition to this diversity and mandates to promote and protect the welfare of IPs, Aeta remains the disadvantaged peoples in terms of finishing tertiary education. United Nation Development Program (2010) reported that IPs make up fully-one third of the world's poorest peoples, suffer disproportionately in areas like health and education. UNESCO (2014) noted that IPs faces multiple barriers to education and are being left behind in terms of educational development and transformation. World Conference on Indigenous Peoples (2014) conveyed that Indigenous learners tend to have less access to education, have to contend with poorer quality education, and do not enjoy the same benefits from education as non-indigenous learner.

Education is extremely important to indigenous children, youth and adults. Through education enables IPs to exercise and enjoy economic, social and cultural, and strengthens their ability to exercise civil right in order to influence political policy processes for improved protection of human rights.

Champagne (2009) stated that education is the primary means of ensuring indigenous peoples' individual and collective development. It is a precondition for indigenous people's ability to realize their rights to self-determination, including their right to pursue their own economic, social and cultural development. To Perso (2012), education is the primary means of IPs self-determination.

Records show that the academic performances of IPs are relatively low due to no specific design for Indigenous Peoples education (National Commission on Indigenous People, 2012). Student performance is naturally considered a critical aspect to education. To Andaya (2016), performance of students in any academic task has always been of special importance to the government, educators, parents and society at large. It has been the concern of the educational system to improve the existence of this IPs. The provision of good foundation in education for the Indigenous Peoples is one of the means to uplift their status in life. Reyes (2014) stated that the government has always shown the concern and interest to elevate the quality of life of the Filipino irrespective of their ethnic origin. The fundamental law of the Philippines highly supported the advancement and improvement of the Indigenous Peoples' privileges and rights. The World Conference on Indigenous Peoples (2014) stated that efforts should be made to ensure that indigenous peoples have access to education that is culturally and linguistically appropriate and that does not aim at or result in unwanted assimilation. Cognizant to this, section 1 of Article XIV of the 1987 Philippine Constitution points out that the State shall protect and promote the right of all citizens to quality education at all levels and shall take appropriate steps to make such education accessible to all.

Education has proven its role in the maintenance of life and culture of the society. It is quite unimaginable to visualize the world without the integrative influence of education on

just about every aspects of human life. World Conference on Indigenous Peoples (2014) stated that Indigenous Peoples must be supported and empowered leading to the development of quality education. However, tertiary education is a crucial decision in the life of young people because it affects all aspects of their life and future (Soroush et. al., 2015).

The aim of the study therefore is to determine the problems and challenges which hamper the studies of Indigenous Peoples, and the factors that abet IPs to finish tertiary education.

RESEARCH METHODOLOGY

This study used descriptive survey method of research. It was conducted in five campuses of one university and five colleges in the province of Zambales, Philippines.

Frequency and percentage distribution was employed to determine the frequency counts and percentage distribution of the number of respondents. The researcher used the purposive sampling technique in choosing respondents.

The respondents of this study are students who also belong to the different ethno-linguistic groups of Aetas found in the province of Zambales, Philippines. Table 1 below provides the distribution of respondents per group. This is consistent with the 2016 data from National Commission of Indigenous Peoples (NCIP) and 2017 data from National commission for Culture and the Arts which indicated that the ethno-linguistic group Aeta Sambal constitutes the highest population of IPs in Zambales.

Table 1. Distribution of the Respondents as to Ethno linguistic Group

Ethno Linguistic Group	Frequency	Percent
Ayta Abellen	8	2.33
Ayta Ambala	5	1.46
Ayta Sambal	319	93.00
Ayta Mag-Indi	11	3.21
Total	343	100.00

A questionnaire was prepared and used to gather data. It consisted of two parts. The first part focused on the 20 indicators of determinants in the completion of tertiary education of IPs, while the second part included 30 items of problems met during this completion.

The questionnaire consisted of tThe Likert scale of class intervals was also utilized. The class intervals and its corresponding descriptive values as shown in Table 2 were used for the interpretation of the computed mean.

Table 2. Likert Scale for Interpretation of the Computed Mean

Arbitrary Values	Statistical Limits	Verbal Description for Determinants	Verbal Description for Problems Met
5	4.20-5.00	Strongly Agree	Always a Problem

4	3.40-4.19	Agree	Often a Problem
3	2.60-3.39	Moderately Agree	Sometimes a Problem
2	1.80-2.59	Disagree	Seldom a Problem
1	1.00-1.79	Strongly Disagree	Never a Problem

RESULTS AND DISCUSSION

Perception of the Respondents on the Determinants in Terms of Self

Table 3 shows the assessment of the respondents on determinants of completion of tertiary education in terms of self.

Table 3. Perception of the Respondents on the Determinants of Completion of Tertiary Education in Terms of Self

Indicator No	Self	WM	Qualitative Interpretation	Rank
1	A chance and a venue to face other individual and group with a clear sense of identity	4.36	Strongly Agree	6
2	An opportunity to show maturity on the challenges and difficulties of college life	4.45	Strongly Agree	2
3	An occasion to stay conscious of being inheritor of a unique culture and heritage	4.20	Strongly Agree	7
4	An opportunity to share IP student's view during class discussions and activities	4.01	Agree	9
5	An opportunity for the IP student to satisfy his/her esteem need and need of belongingness	3.45	Agree	10
6	An opportunity to show IP student's personal skill and talent	4.52	Strongly Agree	1
7	An opportunity to show IP student's determination and perseverance to succeed	4.42	Strongly Agree	3
8	An opportunity to be in other place and meet other people	4.40	Strongly Agree	4
9	View college education as an absolute necessity	4.39	Strongly Agree	5
10	Focus on the goal and long term target	4.06	Agree	8
	Overall Weighted Mean	4.23	Strongly Agree	

Indicator 6 stated as “An opportunity to show IP student's personal skill and talent” with a weighted mean of 4.52 (rank 1); indicator 2 stated as “An opportunity to show

maturity on the challenges and difficulties of college life” with a weighted mean of 4.45 (rank 2); and indicator 7 stated as “An opportunity to show IP student’s determination and perseverance to succeed” with a weighted mean of 4.42 (ranked 3¹). These three indicators were the topmost of the ten indicators of the aspects of self – related determinants in the completion of tertiary education. The respondents of the present study perceived to have found the satisfying effect in them of pursuing higher level of education.

Indicator 8 stated as “An opportunity to be in other place and meet other people” obtained a weighted mean of 4.40 (rank 4); indicator 9 stated as “View college education as an absolute necessity” with a weighted mean of 4.39 (rank 5); indicator 1 stated as “A chance and a venue to face other individual and group with a clear sense of identity” with a weighted mean of 4.36 (rank 6); and indicator 3 stated as “An occasion to stay conscious of being inheritor of a unique culture and heritage” obtained a weighted mean of 4.20 (rank 7). The computed weighted mean of indicators 8, 9, 1 and 3 obtained a descriptive equivalent of Strongly Agree (SA) respectively. The other strongly agreed indicators include the opportunity to be and to know other people, establish clear sense of identity as indigenous people and to show how proud they are as inheritor of a unique Aeta culture and heritage. With this finding, the IP students manifest self-determination. According to Jean (2010), self-determination as a theory argues that people are motivated based on fundamental psychological needs, when fully satisfied, individuals are intrinsically motivated. The respondents of the present study perceived to have found the satisfying effect in them of pursuing higher level of education.

Indicator 10 stated as “Focus on the goal and long term target” obtained a weighted mean of 4.08 and (rank 8); indicator 4 stated as “An opportunity to share IP student’s view during class discussions and activities” with a weighted mean of 4.01 (rank 9); and indicator 5 stated as “An opportunity for the IP student to satisfy his/her esteem need and need of belongingness” obtained a weighted mean of 3.45 (rank 10).

The computed weighted mean of indicators 10, 4 and 5 obtained a descriptive equivalent of Agree (A) respectively.

With these findings, the IPs students manifest self-determination. They believed that through education their knowledge, talents and skills will be enhance and improve making them more proficient, more mature, and emotionally stable to combat the challenges and difficulties in life. Parallel to this finding, Brick (2009) have found that tertiary institutions are complex places of learning with a distinctive culture, where new students face several challenges at the early stages to acclimatize themselves with a new ethnicity. Devlin (2009) confirmed that some of the factors new students are confronted with in the transition include adapting to tertiary learning systems, learning in an independent manner and familiarizing themselves with the supportive mediums used by institutions. Bourke, Burden & Moore (2014) on the other hand revealed that the social activities of Indigenous support centers were an enabling factor in students’ studies.

The computed overall weighted mean of their assessment was (4.23) interpreted as Strongly Agree (SA).

Table 4. Perception of the Respondents on the Determinants of Completion of Tertiary Education in Terms of Family

Indicator No	Family	WM	Qualitative Interpretation	Rank
1	The IP family accept the student's decision to pursue college education	3.60	Agree	10
2	The other IP members of the family have finished college and/or pursue college degree	4.35	Strongly Agree	3
3	The family provides financial support for IP college education	4.25	Strongly Agree	6.5
4	The IP family provides moral support for IP college education	4.22	Strongly Agree	8
5	The IP family believe that education will free them from ignorance and poverty	4.47	Strongly Agree	1
6	The parents regularly check/monitor IP youth performance in school	4.20	Strongly Agree	9
7	The involvement of parents in the planning policy and school procedures are evident	4.25	Strongly Agree	6.5
8	The family members work hard to support financially the IP student	4.28	Strongly Agree	4
9	The IP youth join and lead schools extra and co-activities	4.42	Strongly Agree	2
10	The parents' time for IP youth academic related activities is available	4.26	Strongly Agree	5
	Overall Weighted Mean	4.23	Strongly Agree	

Table 4 shows the assessment of the respondents on determinants of completion of tertiary education in terms of family.

Indicator 5 stated as “The IPs family believe that education will free them from ignorance and poverty” with a weighted mean of 4.47 (rank 1); indicator 9 stated as “The IP youth join and lead schools extra and co-activities” with a weighted mean of 4.42 (rank 2) and indicator 2, stated as “The other IP members of the family have finished college and/or pursue college degree” obtained a weighted mean of 4.35 and (rank 3) These three indicators were the topmost among the ten indicators. The Aetas family strongly believed that finishing tertiary education will improved their standard of living and they will be free from poverty and ignorance. Moreover, IP family's support and approval joining tertiary school activities boost the morale of IPs to finished tertiary education. Metitoba (2013), noted the importance of the role of parents in the lives of IPs through providing protection and encouragement in performing school task. Parallel to Perso (2012), parents must take an active role in the education of their children and assist them in their learning. Problems should be addressed so that tertiary education will be assured.

Indicator 8 stated as “The family members work hard to support financially the IP student” with a weighted mean of 4.28 (rank 4); indicator 10 stated as “The parents' time for IP youth academic related activities is available” with a weighted mean of 4.26 (rank 5); indicator 3 stated as “The family provides financial support for IP college education” with a weighted mean of 4.25 (rank 6.5); Indicator 7 stated as “The involvement of parents in the planning policy and school procedures are evident” with a weighted mean of 4.25 (rank 6.5) and indicator 4 stated as “The IP family provides moral support for IP college education”

with a weighted mean of 4.22 (rank 7); indicator 6 stated as, “The parents regularly checked/monitor IP youth performance in school” with a weighted mean of 4.20 (rank 8). All indicators interpreted as strongly agree. Result revealed that family collaboration with the school upkeep to the success of IPs education. Moreover, monitoring IPs in school by parents will provide information on the status of IPs schools’ performance. UNICEF (2009) reported that parent and teachers have to work together because this is a channel to articulate their needs and a forum for the exchange of educational views. Universities Australia (2011) pointed out that parent involvement and collaboration with the school are opportunities to participate in the educational process of their children. It is a means to pool the parents' strength in supporting the school development and a network for the parents to meet and exchange their views on the education of their children. Parents have to support children in ways they know so as to ensure the completion of their children in tertiary education since according to Bourke, et al. (2014), the lack of domestic support from partners and family were an inhibiting factor in their tertiary education. Wenger (2010) stated that IP family has to continue to focus of their child’s development, taking care of social and cultural capital, overcoming isolation and exclusion.

The computed overall weighted mean of their assessment was (4.23) interpreted as Strongly Agree (SA).

Table 5. Perception on the Problems Met in the Completion of Tertiary Education in Terms of Religious and Cultural Beliefs

Indicator No	Religious and Cultural Beliefs	WM	DE	Rank
1	Devotion of much time to religious ceremonies and conviction to religious beliefs than going to school	3.24	Sometimes a Problem	3
2	Devotion of much time on prayers for the ‘anito’ and performance of ritual dances	3.12	Sometimes a Problem	4
3	Deity will help provide everything and the needs of the indigenous people	2.63	Sometimes a Problem	10
4	Strong belief in learning more in doing real life activities than what can be learned at school	3.35	Sometimes a Problem	2
5	Firm belief that it is more important to establish a family at a young age rather than pursue education	3.52	Often a Problem	1
6	Preparation in ICC rites and rituals demand time from IP students even in school days	2.80	Sometimes a Problem	7
7	Participation in all tribal rites and ritual affects attendance in classes as advised by the ICC elders	2.71	Sometimes a Problem	8
8	Engaging actively in rituals during planting and harvest season	2.81	Sometimes a Problem	6
9	The conduct of the rites and rituals require individual participation from the youngest to the eldest members of the ICC	2.83	Sometimes a Problem	5
10	Singing and playing the instrument to accompany the conduct of rites and rituals ask/demand time to learn and to master	2.66	Sometimes a Problem	9

	Overall Weighted Mean	2.97	Sometimes a Problem	
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Table 5 shows the problems met in the completion of tertiary education of the respondents in terms of religious and other beliefs.

Indicator 5, stated as “Firm belief that it is more important to establish a family at a young age rather than pursue education” obtained a rating of 3.52 (rank 1), perceived as Often a Problem.. Result revealed that IPs cultural practice of getting married at a young age is a priority rather than pursuing tertiary education especially to male IPs. This cultural practice of IPs hinders the completion of tertiary education. Reyes (2014) on the other hand revealed that some identified beliefs and practices of the Ifugao impede their economic and educational development. Parallel to this result, Rich (2012) concluded that many religious beliefs prioritize the establishing and nurturing a family than attending formal schooling. Bourke, Burden & Moore (2014) found in their study that marriage customs and practices can be linked to religious convictions, socio-economic status, family structure and education of siblings.

Other perceived concerns were the strong belief in learning more in doing real life activities, devotion of much time to religious ceremonies and religious faiths, hence education may be second priority. In the study of Buckingham (2011), affiliation to a certain religion, religious beliefs and views certainly could influence and control many aspects in individual or group’s life. These can also influence parental relationship, parents and siblings and with other groups. Sparkes (2009) have found that devotion and dedication to religion and deities can be linked to diversities of beliefs in different phases, aspects, rituals, and orientations of life. Indicator 2 stated as “Devotion of much time on prayers for the ‘anito’ and performance of ritual dances” obtained a weighted mean of 3.12 (rank 4); indicator 9 stated as “The conduct of the rites and rituals require individual participation from the youngest to the eldest members of the ICC” with a weighted mean of 2.83 (rank 5); indicator 8 stated as “Engaging actively in rituals during planting and harvest season” 2.81 (rank 6); indicator 6 stated as “Preparation in ICC rites and rituals demand time from IP students even in school days” with a weighted mean of 2.80 (rank 7); indicator 7 stated as “Participation in all tribal rites and ritual affects attendance in classes as advised by the ICC elders” with a weighted mean of 2.71 (rank 8); indicator 10 stated as “Singing and playing the instrument to accompany the conduct of rites and rituals ask/demand time to learn and to master” with a weighted mean of 2.66 (rank 9); and indicator 3 stated as “Deity will help provide everything and the needs of the indigenous people” obtained a weighted mean of 2.63 (rank 10).

The computed weighted mean of indicators 2, 9, 8, 6, 7, 10 and 3 obtained a descriptive equivalent of Sometimes a Problem (SP) respectively. The Aeta student respondents of Zambales perceived that their strong belief and devotion to their deity/deities; participation to religious ceremonies and intricate rites and rituals; respect to anitos, expression of faith through singing and playing the instrument, the belief that leaning is practical and can be learned informally, and deity will give all the provisions the indigenous people needs were perceived sometimes a problem in their pursuit of tertiary education. These particular findings could also mean that the Aeta students show respect, devotion and commitment on their religious beliefs and cultural practices but in some extent and instances that manifesting and showing those would bring some consequences that may affect their

studies. This finding is consistent with Reyes (2014). Reyes' study concluded that the Ifugaos' 'unquestioning obedience to their beliefs and practices affect their attitude toward education. UNESCO (2010) discovered that groups' cultural rites and rituals, activities and ceremonies were among the cited factors that stimulate traditional, national and ethnic appreciation. World Bank (2009) found that the perception of the value of education was another factor hindering girls of ethnic minorities in accessing higher education, and it was associated with cultural practices (rites and rituals), and expectations of educational outcomes.

The computed overall weighted mean of their assessment was (2.97) interpreted as Sometimes a Problem (SP).

Table 6 shows the problems met in the completion of tertiary education of the respondents in terms of financial assistance and socio – economic status.

Table 6. Perception on the Problems Met in the Completion of Tertiary Education In Terms of Financial Assistance and Socio-Economic Status

Indicator No	Financial Assistance/Economic Status	WM	DE	Rank
1	The scholarship grant/aid requirements are too difficult to produce and most of the time are unavailable	3.13	Sometimes a Problem	6
2	The time of waiting for the approval of the scholarship grant/aid takes time	3.18	Sometimes a Problem	5
3	Financial grants in the local level are categorized as financial aids not scholarship	2.96	Sometimes a Problem	7
4	Lack of comprehensive mechanism in monitoring the needs of the IPs at school	2.85	Sometimes a Problem	9
5	The financial aid/program of the school lack comprehensive procedure to go about the IP needs.	2.81	Sometimes a Problem	10
6	Majority of ICC members are famers and belong to marginalized sector.	2.95	Sometimes a Problem	8
7	The income available is just enough to satisfy the household's basic needs	3.57	Often a Problem	3
8	The parents' work and/or livelihood is seasonal making the income irregular	3.82	Often a Problem	2
9	The inadequate financial resource to pay the initial payments for enrolment	3.84	Often a Problem	1
10	The ICC is far from the school premises	3.31	Sometimes a Problem	4
	Overall Weighted Mean	3.24	Sometimes a Problem	

Indicator 9 stated as "The inadequate financial resource to pay the initial payments for enrolment" obtained a weighted mean of 3.84 (rank 1); indicator 8 stated as "The parents' work and/or livelihood is seasonal making the income irregular" with a weighted mean of 3.84 (rank 2); and indicator 7 stated as "The income available is just enough to satisfy the household's basic needs" obtained a weighted mean of 3.57 (rank 3). The computed weighted

mean of indicators 8, 9 and 7 obtained a descriptive equivalent of Often a Problem (OP) respectively. These were the top three among the ten indicators.

Result implies that the IP student respondents are experiencing financial difficulties and constraints. According to De Vera (2007), Indigenous Peoples (IP) in the Philippines remains as the most marginalized sector of society. IPs should use their limited income properly to have extra money or saving for their children's education. The study of Indigenous Higher Education Advisory Council (2008) revealed that financial hardship remains on the top of the list as the main barrier to Indigenous educational achievement. Rich (2012) have found that parent who have lower levels of income are most likely to have lower educational performance. De Vera (2007) revealed that most of the Indigenous Peoples in the country depend on traditional agriculture utilizing available upland areas. Furthermore, most Indigenous Communities do not have legal recognition over their traditional lands, thus limiting their ability to freely conduct their livelihood activities and are denied access to other natural resources in their communities. Rich (2012) have found that parent who have lower levels of income most likely have lower educational performance.

Indicator 10 stated as "The ICC is far from the school premises" obtained a weighted mean of 3.31 (rank 4); indicator 2 stated as "The time of waiting for the approval of the scholarship grant/aid takes time" with a weighted mean of 3.18 (rank 5); indicator 1 stated as "The scholarship grant/aid requirements are too difficult to produce and most of the time are unavailable" with a weighted mean of 3.13 (rank 6); indicator 3 stated as "Financial grants in the local level are categorized as financial aids not scholarship" with a weighted mean of 2.96 (rank 7); indicator 6 stated as "Majority of ICC members are famers and belong to marginalized sector" with a weighted mean of 2.95 (rank 8); indicator 4 stated as "Lack of comprehensive mechanism in monitoring the needs of the IPs at school" with a weighted mean of 2.85 (rank 9); and indicator 5 stated as "The financial aid/program of the school lack comprehensive procedure to go about the IP needs" with a weighted mean of 2.81 (rank 10). The computed weighted mean of indicators 10, 2, 1, 3, 6, 4 and 5 obtained a descriptive equivalent of Sometimes a Problem (SP) respectively. The Overall weighted mean of their assessment was (2.80) interpreted as Sometimes a Problem (SP).

The IPs perceived that solving these problems might help IPs to pursue tertiary education. The Indigenous Higher Education Advisory Council (2008) have reported that although the situation varies between universities and colleges, and despite a growing number of Indigenous-specific scholarships, bursaries and grants designed to relieve financial burdens to Indigenous students, a worryingly large number of scholarships remain untaken.

The Overall weighted mean of their assessment was (2.80) interpreted as Sometimes a Problem (SP).

Table 7. Perception on the Problems Met in the Completion of Tertiary Education in Terms of Technology and Media

Indicator No	Technology and Media	WM	DE	Rank
1	Electricity services in ICC is limited	2.69	Sometimes a Problem	10
2	Electronic gadget is used most of time for gaming	2.75	Sometimes a Problem	9

3	Electronic gadget appropriate for classroom use are lacking or are limited	2.84	Sometimes a Problem	8
4	Electronic gadget like smartphones and tablets are too costly for the IPs	3.21	Sometimes a Problem	7
5	Computer unit or laptop and Wi-Fi that can help IP student to conduct online researcher is difficult to access and/or unavailable	3.59	Often a Problem	4
6	Computer unit and printer that can help prepare and accomplish requirements for a certain subject is limited and/or unavailable	3.85	Often a Problem	3
7	The location of the ICC is weak for internet connection	3.37	Sometimes a Problem	6
8	The location of the ICC is dead spot for internet connection	3.53	Often a Problem	5
9	Access and manipulation of new technology for educational purposes is limited and inadequate	4.10	Often a Problem	1
10	Promotion and awareness campaigns by mass media of the distinct/unique culture and rights of IPs are minimal	4.05	Often a Problem	2
Overall Weighted Mean		3.40	Often a Problem	

Table 7 shows the problems met in the completion of tertiary education of the respondents in terms of technology and media.

Indicator 9 stated as “Access and manipulation of new technology for educational purposes is limited and inadequate” obtained a weighted mean of 4.10 (rank 1); indicator 10 stated as “Promotion and awareness campaigns by mass media of the distinct/unique culture and rights of IPs are minimal” with a weighted mean of 4.05 (rank 2); and indicator 6 stated as “Computer unit and printer that can help prepare and accomplish requirements for a certain subject is limited and/or unavailable” with a weighted mean of 3.85 (rank 3). The computed weighted mean of indicators 9, 10, and 6 obtained a descriptive equivalent of Often a Problem (OP) respectively. These were the top three among the ten indicators on Technologies and Media related problems met by the IPs.

The Aeta respondents believed that absence of access to new technology and multimedia in their communities greatly affects their tertiary studies. Most of the IPs are living in far-flung areas where electricity and networks are absent. Despite the knowledge of most IPs on the vitality of education to their lives, limited technology would perhaps bring undesirable effect on their studies in tertiary education that could hinder the completion of tertiary education. Providing the students to use those tools in their education aside from using those for entertainment or social activities may bring positive impact on their education. The finding of the study of Greenhow & Burton (2009) confirmed that students’ usage of technology and media resources, keeps creating a vision of continual technology integration in their classrooms but adequacy and availability are issues to be considered and addressed. As stated by Davidson (2011) there is no doubt that the technology inside the classroom has an effect on the study habits and practices of students today. According to Ntui (2014) students who have access in their home to new methods and tools of education through computers, interactive learning may have also different and more potential to absorb those technologies while used in the school educational system. In the study of Bourke,

Burden, & Moore (2014), financial factors were found to be an issue for students concerns about their ability to satisfy and accomplish school requirements. According to the study of Jean (2010) low socio-economic status and having parents who may not have regular income may further hinder student' opportunity to succeed in academia due to the lack of funds to avail necessary tools, devices and gadgets to deal with subject requirements. Tarantino, McDonough & Hua (2013) on the other hand have found that students who use information technology for academics have a higher likelihood of contributing and participating in active, academic collaboration with other students.

The overall weighted mean of their assessment was (3.40) interpreted as Sometimes a Problem.

CONCLUSION

Based on the findings, the researcher concluded that:

1. Aeta respondents thought that self is not an issue to pursue and finished tertiary education. Instead, they believed that motivating and helping themselves to combat self-issues problem would abet them to complete tertiary education. Another aspect that helps IPs in the completion of tertiary education is family. They are assertive that their family would serve as inspiration, boost their morale, and support them morally, spiritually and financially throughout their studies for their parents' believed that through education will free them from poverty and ignorance.
2. Problems of Aeta in pursuing tertiary education are the lack of access to technology and media. Since most of them are under privileged, Aeta cannot afford to purchase computer such as desktop, laptop or 4G cellphones to help them in doing researches and other related school activities. Aside from that, majority of the Aeta are leaving in far-flung areas where internet connection and electricity are not available. Some other problems that Aeta confronted in the completion of tertiary education are religious and cultural beliefs and having financial aid from the public and private sector.

RECOMMENDATION

In the light of the foregoing findings and conclusions of the study, the following recommendations were advanced:

1. Local Government Units in Zambales, Philippines should addressed the problems of Aeta like: (a) providing electricity since most of them are leaving in a far-flung areas where electricity is limited, and (b) providing livelihood trainings to sustain basic needs.
2. Concerned Agencies like National Commission on Indigenous Peoples (NCIP), Higher Educational Institutions (HEI's) and other agencies in the Province may consider investing some of its resources for indigenous services like: (a) Clear scholarship program/financial aid have to be formulated and well disseminated for easy access of IP students, (b) Indigenous support centers to monitor the academic and non-academic performance of the IP students, (c) Free Technology services like internet connection, broadband, and wifi connection for research utilization, and (d)

technical support services to facilitate self-starting initiatives by IPs and their communities in the field of education.

3. Families of IP students may be reoriented by the schools they are enrolled in on the benefits that their children can derive from education which are being enjoyed by the non-indigenous learners.

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