A Refereed Journal Publication of
Leyte Normal University, Philippines

Volume 2, Issue 1, December 2018
ISSN: 2619-7162 (print)

Journal of Education & Society

Office Address:

2nd Floor Graduate Library,
Research and Development Office,
Leyte Normal University
Paterno St., Tacloban City, 6500
Philippines

Email Address: rdo@lnu.edu.ph
Telephone No.: 832-3169

LNU IGP

Journal of Education and Society

EDITORIAL BOARD

LNU VISION

A leading university of education and diverse disciplines attuned to local and global development needs.

LNU MISSION

To produce top performing professionals equipped to engage on knowledge and technology production so necessary to develop a sustainable society.

EDITORIAL POLICY

Journal of Education and Society (JES) is the Peer-Reviewed journal of the Leyte Normal University published annually. JES envisions itself as a space of conversation in the teaching and learning of all disciplines and the interactions within and among communities (i.e., teachers, learners, professionals, indigenous peoples). We see the journal as an avenue to engage in knowledge production, expansion, and exchange, where ideas are proposed, and where long-held assumptions are contested.

JES subthemes are mainly the following: teaching & learning, policy & implementation, critical literacy, development of pedagogies, instructional materials (IMs), IMs support materials, measurement and evaluation, K to 12 educations, higher education, special education, professional education, education technology, tech-voc education, online education, distance education alternative education, indigenous people (IP) education. Researchers, scholars, and educators are invited to submit research and theoretical papers to the journal for consideration.

To guide your manuscript preparation, here are the journal's ***Guidelines for Authors*:**

1. Articles should be original and must not be under consideration for any other publication.
2. Articles should be as long as 4,000 to 6,000 words from Introduction to Conclusion. Longer articles will be returned to the authors for trimming.
3. The parts of the paper are as follows:
   - Title
   - Abstract of 150-200 words
   - Keywords of 5-10 words
   - Introduction which includes background, problem and purpose of study (1-2 pages)
   - Literature Review citing journals and books but more of journal articles, which should be at least 20 and 50% of which were published within the last 10 years (3-6 pages)
   - Theoretical/Conceptual Framework (1 page)
   - Research Questions
   - Methodology

Design
Sampling
Data Collection and Instruments
Data Analysis
Ethical Considerations
Reflexivity (applies to qualitative research only)
Results and Discussion
Conclusion
Acknowledgement (optional)
References

4. In keeping with the spirit of the different areas in education, our journal seeks to bring research knowledge to a broader audience from various disciplines.
5. Manuscripts should be double-spaced except for notes and list of references, which should be single-spaced. Articles must be typed in Times New Roman, size 12, and with one-inch margin on all sides in an A4 paper.
6. All theoretical manuscript must have the following:

- Title
- Abstract
- Introduction
- 3 to 6 major sections
- Conclusion

7. Notes, tables, graphs, photographs, illustrations, and figures should be kept at a minimum.
8. References and in-text citations should strictly follow the American Psychological Association (APA) 6th edition.
9. The journal follows a double-blind refereeing system. As such, all references to the author's identity must be removed in the article, notes, and list of references.
10. Authors are responsible for securing all the necessary permits for any part of the article copyrighted to someone else. Articles, once published, are copyrighted to the Leyte Normal University. A Form for Transfer of Copyright will be required of the author to sign. It is understood that corresponding author has secured prior approval from co-authors about the copyright transfer.
11. **Manuscripts should be submitted in doc or docx files as email attachment to jes@lnu.edu.ph** or register at www.lnu.edu.ph/lnujournals/index.php/jes**. . Then make a NEW SUBMISSION.**

TABLE OF CONTENTS

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018

Journal of Education and Society

Research Article | A Refereed Journal

Students' Motivation toward Science Learning and Achievement in Biological Sciences in a Self-Regulated Learning Environment

Maricel Aguila-Gomez*

ABSTRACT

Motivation plays a vital role in students' learning and academic performance, particularly in Science learning achievement. It is a challenge for a teacher to keep students motivated as they go through the entire learning process. The excellent choice of teaching strategy is one of the ways that can make the students motivated to engage in the different learning activities and in turn, increase their academic performance. This quasi-experimental study used one group pretest-posttest to determine the effectiveness of self-regulating learning method and to correlate students' motivation towards Science learning and achievement in Biological Sciences. The participants of the study were 39 students from one intact group. Teacher-made Biological Science test and Student Motivation towards Science Learning questionnaire were used to determine students' achievement and motivation towards Science learning, respectively. Results revealed that although there was no correlation between student's motivation and achievement, self-regulated learning method improved students' learning in Biological Sciences and sustained students' motivation in the entire duration of the study. Findings of the study may provide teachers inputs on how to teach Biological Science effectively and other subjects by which the method can be applied.

Keywords: *self-regulated learning, Science achievement, student motivation, Biological Sciences, academic achievement, quasi-experimental, one group pretest-posttest design*

Introduction

Choosing specific teaching methods that best achieve course objectives is one of the critical decisions a teacher faces. In higher education, particularly college teaching, the lecture is the most common method of instruction (Scerbo, Warm, Dember, & Grasha, 1992). Teaching in most Asian countries is traditionally dominated by a teacher-centered method (Zhenhui 2001; Wang & Farmer 2008). Griffin and Cashin (1989) estimated that 75% of college courses include lecture as a method of instruction. Adib-Hajbaghery (2011) mentioned that some researches (e.g., Benjamin,2002; John et al., 2007; Rahmani, 2007; & Saville, 2009) pointed out that traditional lecture is still the most popular instructional method in the universities as a frequent and easy way to deliver enormous amounts of information to students. However, studies are pointing out the weaknesses of the lecture method of teaching. Charlton (2006) in his research concluded that lecture method used as the only teaching method made most of the students bored very quickly, eventually losing their enthusiasm and interest in what the instructor has to say. The passivity that goes with such kind of teaching method creates less opportunity to develop critical thinking among students. Coral (2003) pointed out that traditional strategies of teaching were not sufficient to produce meaningful understanding. Also, the lecture method is found to discourage creativity and decrease effectiveness for skill acquisition, (Buckley, 2003; Zahed & Williams, 1996). With these kinds of reported effects of lecture, more active teaching approaches and strategies are often encouraged to make learning more effective among students.

One of the active teaching strategies is self-regulated learning (SRL) method. SRL is appropriate for college students for they have great control of their schedule, and how they approach their studying and learning (Pintrich,

Corresponding Author: *Maricel Aguila-Gomez*
Leyte Normal University, Tacloban City
E-mail: maricelaguilagomez@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

2000). Self-regulated learning deals on "how individuals set learning goals and then control, monitor, and regulate their behaviors in response to specific environmental conditions to meet those goals" (Garner, 2009, p. 409). Paris and Paris (2001) mentioned that SRL "emphasizes autonomy and control by the individual who monitors, directs, and regulates actions toward goals of information acquisition, expanding expertise, and self-improvement" (p. 89). Zimmerman and Martinez-Pons (1986) reported that students who used more significant SRL strategies were high academic achievers and high academic achievers optimized motivational, metacognitive, and environmental resources such as seeking peer/adult help to achieve their goals Likewise, studies of Schunk (1989) and Zimmerman and Martinez-Pons (1992) reported that learners' use of self-regulation strategies sustains efforts and promotes academic achievement.

In developing self-regulated learners, motivation is an essential aspect of a student's learning. Motivation, as mentioned in the paper of Pintrich and Schunk (1996), refers to "the process whereby goal-directed activity is instigated and sustained" (p. 5). It is a common idea that if students are not motivated, they will not be able to learn effectively and achieve the learning goal. Tuan, Chin, and Shieh (2005) mentioned several studies emphasizing the essential roles of motivation, such as motivation plays a vital role in students' conceptual change processes (Lee, 1989; Lee & Brophy, 1996; Pintrich et al., 1993), critical thinking, learning strategies (Garcia & Pintrich 1992; Kuyper et al. 2000; Wolters, 1999), and science learning achievement (Napier & Riley, 1985). Also, it was reported that students' attitude and motivation are two of the most important factors to predict students' Science achievement (Reynolds & Walberg, 1992).

With the constant challenge of deciding what teaching method to use and keeping students to be motivated for effective learning to take place, the researcher found it particularly desirable to study how a more active tea ching method such as SRL model can affect students' achievement and motivation towards learning Science.

Literature Review

Self-Regulation and Self-Regulated Learning

The study of self-regulation and SRL as exciting topics for research on academic learning has gone a long way since the time of the publication of Albert Bandura's (1986) Social Foundations of Thought and Action. Bandura's work on social cognitive theory heavily influenced and helped shape the direction and development of self-regulation (Dinsmore et al., 2008). Self-regulation, as defined by Zimmerman (2000), is "self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals" (p. 14). It emphasizes the reciprocal determinism of personal, behavioral, and environmental factors. At first, it focused on behavioral and emotional regulation (e.g., Bandura, 1982, 1989) and later on, motivation became an additional regulatory area. Dinsmore et al. further mentioned that the increased focus of self-regulation on academic settings is believed to have directly contributed to the emergence of self-regulated learning (SRL) in the 1980s and gained prominence in the 1990s. As distinguished from self-regulation, SRL focuses on academic learning (Lajoie, 2008). Malpass et al. (1999) mentioned that in most definitions of SRL, the critical feature is the systematic use of metacognitive, motivational, and/or behavioral strategies.

There are already various researches conducted on different aspects of SRL. At present, conducting studies on SRL among college students is supported by the idea that SRL is appropriate for college students for they have great control of their schedule, and how they approach studying and learning (Pintrich, 1995).

*__Corresponding Author__: *Maricel Aguila-Gomez*
Leyte Normal University, Tacloban City
E-mail: maricelaguilagomez@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

SRL Models

This study employed Zimmerman's Social Cognitive Model of Self-Regulation, which is grounded on the social cognitive theory of Bandura. The social cognitive theory explains that self-regulation emphasizes the reciprocal determinism of personal, behavioral, and environmental factors (Bandura, 1986; Zimmerman, 1989). These three factors also referred to as determinants, exert regulatory influence controlling covert (i.e., personal), behavior, and environmental processes. In the social cognitive framework, self-regulated learning occurs when the learner uses specific methods to strategically regulate behavior and the immediate learning environment (Zimmerman, 1989). This framework also assumes that SRL is changing, depending on the physical and social contexts in which learning is taking place and the varying degrees of triadic influences of each factor surrounding the learner.

SRL Strategies

Different strategies can develop self-regulatory skills. Montalvo and Torres (2004), from their review of the book on Self-Regulated Learning: From Teaching to Self-Reflective Practice by Schunk and Zimmerman (1998), identified strategies that emerged to be shared among the different interventions and programs for developing self-regulated learning. These include direct teaching of strategy, modeling, guided and independent practice using strategies, feedback, self-observation, social support, and its withdrawal at the moment when the student has reached a certain degree of responsible participation and self-reflection.

In this study, students were given the autonomy to choose their strategy on how to demonstrate their understanding of the concepts of the specific lesson. Social support from teacher and peers were provided. Teachers at first guided students, then later making them autonomous as they continue in the performance of the task. This prepares the students for the responsibility of initiating, applying, and evaluating strategies as it is being transferred from the teacher to the student (Montalvo & Torres, 2004).

Giving elaborative feedback and giving students the chance to self-evaluate their learning are also important. Feedback from teachers and peers and self-evaluation give students an idea regarding their performance and may be used to make necessary adjustments in the current and succeeding efforts. In providing feedback, the level of goal achievement and criteria or standards to which performance will be based must be clear to the students (Montalvo & Torres, 2004). In this study, giving feedback to the performance of the students was done every session.

Self-monitoring is also an essential aspect of any intervention for developing SRL. It is a critical element of self-regulation (Montalvo and Torres, 2004). Self-monitoring depends on the establishment of goals and feedback from others and oneself. Establishing short-term realistic and specific goals will guide students in the progress of their work. Self-monitoring can also be achieved by keeping a record of specific aspects related to academic tasks such as time to finish a particular learning activity.

Another important strategy that is said to promote self-regulated learning is the use of the metacognitive approach. Metacognition is essential to self-regulated learning (Kriewaldt, 2001) which involve controlling and monitoring one's thought processes and knowledge that are central to self-regulated thinking (Mcwhaw & Abrami, 2001). The use of metacognition is said to be a strong predictor of academic success and problem-solving ability (Coutinho, 2006).

Young and Konstantinos (2002) have mentioned several studies indicating the relation of SRL to certain aspects of learning. These studies include: SRL is highly related to quality learning, performance, and positive

*__Corresponding Author__: *Maricel Aguila-Gomez*
Leyte Normal University, Tacloban City
E-mail: maricelaguilagomez@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

academic outcomes (Ames, 1984; Borkowski & Kurtz, 1987; Corno, 1986, 1989; Covington, 1987; Dweck, 1986; Paris & Oka, 1986; Patrick, 1998; Wang & Peverly, 1986; Zimmerman, 1989; Zimmerman & Martinez-Pons, 1986, 1990); high academic achievers were more likely to use SRL strategies such as goal-setting, selecting strategies, and monitoring performance than low-achieving students (Das, Naglieri, & Murphy, 1995; Naglieri, & Das, 1990); students who were reported to use more significant SRL strategies were also high academic achievers and high academic achievers optimized motivational, metacognitive, and environmental resources such as seeking peer/adult help to achieve their goals (Zimmerman & Martinez-Pons, 1986). Mcwhaw and Abrami (2001) also mentioned studies (i.e., Pintrich, 1989; Pokay & Blumenfeld, 1990; Schiefele, 1992) in which results showed that students, who have a high interest in a topic, use more self-regulated learning strategies than students with a low topic interest. Likewise, studies of Schunk (1989) and Zimmerman and Martinez-Pons (1992) reported that learners' use of self-regulation strategies sustains efforts and promotes academic achievement.

Students' Motivation toward Science Learning (SMTSL)

There are several studies conducted regarding students' motivation toward science learning. Cobb (2003) revealed that in some researches (e.g., Garcia & Pintrich, 1994; Deci & Ryan, 1985; Pintrich & Schunk, 1996), motivation plays a vital role in a student's academic performance; thus, students' motivational tendencies are positively related to students' self-regulation of learning. From these findings, students' learning goals, self-efficacy, learning strategies, and perception of Science learning values were identified as essential domains in students' science learning motivation (Tuan et al., 2005). Also, Brophy (1998) and Pintrich and Schunk (1996) revealed that individual's goals toward tasks, task value, and the learning environment dominate students' learning motivation.

The motivation of students towards learning can be measured by several questionnaires (Chen, 2002). Tuan et al. (2005) develop a questionnaire to investigate students' learning motivation specifically for Science learning. This instrument is composed of 35 items that are designed to measure six motivation factors, namely: self-efficacy, active learning strategies, Science learning value, performance goal, achievement goal, and learning environment stimulation.

In the study conducted by Tuan et al. (2005), results of the correlation between SMTSL questionnaire on Science attitude scores and Science achievement revealed that all scales have a significant relationship. In the same study, it was further shown that among the six motivation scales, self-efficacy, and active learning strategies have a higher correlation with achievement scores, with self-efficacy having the highest relationship with students' Science achievement. Learning environment stimulation has a higher correlation with science attitude.

In addition, Pintrich & Schunk (1996) reported in their study that students' motivation has a moderate and significant correlation with students' Science achievement. The significant relationship of students' motivation, with both their previous and current science achievement scores in the study, indicates the stability of motivation with students' achievement. Thus, Science achievement is often used as indirect evidence of students' motivation.

From the literature presented, the studies were conducted by foreign authors among students abroad. There was a shortage of research investigating the effect of SRL method of teaching among students in the local setting. Hence, this study was conducted to add to literature the influence of SRL method to achievement and motivation towards Science learning among Filipino college students in the local setting in one full semester.

*__Corresponding Author__: *Maricel Aguila-Gomez*
Leyte Normal University, Tacloban City
E-mail: maricelaguilagomez@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018

Journal of Education and Society

Conceptual Framework

Figure 1 shows the conceptual framework of the study. In this framework, the independent variable is the teaching strategy, SRL model. The dependent variables are the students' achievement in Biological Science and students' motivation towards Science Learning

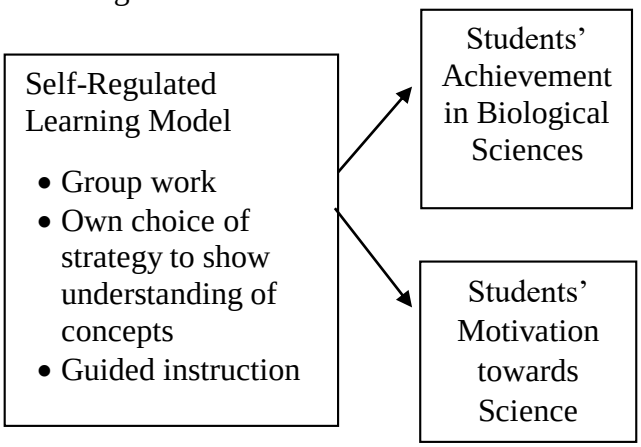

Figure 1. *Students' achievement in Biological Sciences and students' motivation towards Science learning as influenced by SRL method.*

Research Questions

This study sought to answer the following questions:

1. What are the mean pretest, posttest, and mean gain scores in Biological Sciences test of students exposed to SRL method?
2. What are the SMTSL results of the students exposed to the SRL method?
3. Are there significant differences between the mean pretest and posttest scores in Biological Sciences test of students exposed to SRL method?
4. Are there significant differences among students exposed to SRL method in their SM TSL results?
5. Is there a significant relationship between SMTSL results and students' achievement in Biological Sciences?

Methodology

Research Design

This study employed a quasi-experimental research design particularly one group pretest-posttest design. In the pretest-posttest design, an intact group was measured or observed twice. The first measurement serves as the pretest and the second as the posttest (Frankael and Wallen, 2007). The variables investi gated in the study were teaching method (SRL method), students' achievement in Biological Science, and SMTSL results.

Sampling

An intact group of one section was used, and all students were taken as participants. It was composed of 39 first-year college students enrolled in the Bachelor of Secondary Education (BSED) program in a teacher training state university.

Research Instruments

The research made use of researcher-made materials and one adapted instrument. All researcher-made materials underwent the validation. It was shown to the researcher's colleagues who have been teaching Biology for five years or more for critiquing and comments particularly in terms of content validity.

Teacher-made test. Students' achievement in Biological Science was measured using a 75-item researcher-made multiple choice test. This test was used to determine students' understanding of concepts in Biological Science. This was given as both pretest and posttest. Table of specifications was used to determine the distribution and appropriateness of the test questions. The test was tried out to BSEd Science majors who had taken Biological Sciences in their first year. The reliability coefficient was computed using the Kuder-

*Corresponding Author: Maricel Aguila-Gomez
Leyte Normal University, Tacloban City
E-mail: maricelaguilagomez@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

Richardson formula (KR20), and the value was found to be 0.919.

Course Reader. The course reader is designed by the researcher as a resource material for Biological Science for the students. The course reader primarily contains all the topics and content that were based on the objectives stated in the course syllabus and served as an easy reference for learning Biological Science.

Course Teaching Manual. The researcher designed this as a guide in teaching lessons in Biological Science using SRL strategies. This teaching manual contains the objectives, time allotment, lesson procedure, evaluation, and assignment for each lesson. The sequence and time allotment for the lessons were based on the Biological Science syllabus. The lesson was designed in such a manner that students were given the autonomy to choose their strategy in showing their understanding of the concepts of specific lessons as guided by the objectives for each learning session.

Students' Motivation towards Science Learning (SMTSL) Questionnaire

Students' motivation towards Science learning was measured using Students' Motivation towards Science Learning (SMTSL) questionnaire developed by Tuan et al. (2005). This instrument is composed of 35 items that are designed to measure six motivation factors, namely: self-efficacy, active learning strategies, Science learning value, performance goal, achievement goal, and learning environment stimulation. In every item, students rate themselves on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

This questionnaire has been identified to have good construct validity and also criterion-related validity (Tuan et al., 2005). However, this was also pilot tested in the local setting to establish its reliability among Filipino students. The questionnaire was presented to a university psychometrician, some teachers who were teaching measurement and evaluation, and some students for their comments. Cronbach's alpha with a result of 0.715 was also computed to determine its reliability.

Preparing the Classes for the Study

The researcher handled the class for two reasons. First, training another teacher on the rationale and implementation of the various teaching strategies to be used in the study would take a considerable time. Second, the correct execution of the SRL model must be ensured. The researcher controlled teacher-bias by sticking to what was prescribed in the study.

During the orientation period of two meetings, the students were informed that the class was part of a research study and the data will be held confidential. The students were also told that the course was to be conducted using self-regulated learning model of teaching. The following essential things regarding the conduct of the class were discussed among the students in the experimental group during the orientation period:

(a) Throughout the course, they were given the freedom to show their understanding of the concepts as guided by the learning objectives for each lesson;

(b) Importance of self-regulation strategies, such as analyzing the learning task, setting of learning goals, choosing appropriate strategies to master the material and to show their understanding of the concepts, and monitoring their performance;

(c) The strategy that they were familiar with and used to exhibit their knowledge of the previous science classes that they had before could be used as they went through the lessons for the entire semester;

(d) They had to work by pair or in a group that was randomly chosen by the teacher;

(e) Rubrics were used in rating their learning outputs. The rubrics were presented to the students for comments. They were asked if there were clarifications and suggestions on the criteria to be used in rating their learning

*__Corresponding Author__: *Maricel Aguila-Gomez*
Leyte Normal University, Tacloban City
E-mail: maricelaguilagomez@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

outputs. The rubrics beforehand had been presented to the same group of experts who evaluated the questionnaires for validity.

(f) Notebooks for the reflective journal were used in recording 22 reflective questions.

(g) They were required to keep their outputs inside an envelope to help them monitor their class performance.

Subject Matter Content

All the topics included in the course Biological Sciences were taught for the entire semester following the syllabus of the course. The sequence of the lesson was based on the course syllabus. The topics included for the study were Introduction to Biology, Chemical and Cellular Bases of Life, Taxonomy and Plants, and Human Body Systems.

Lesson Strategies

The conduct of the class was based on the teaching manual developed by the researcher. Each class session was conducted for one hour and thirty minutes. During the conduct of the lesson, students were given autonomy to choose their strategy on how they were going to present their understanding of the concepts of the specific lesson for that session. They were instructed to read in advance the course reader and were given the objectives for the next lesson as their guide. In the class, they worked in groups of five or more in which the researcher randomly chose the members. Using rubrics, each group rated the learning outputs presented except the output of their group. Feedback on the learning outputs was also given to the groups.

After the lesson was completed, the students give an oral synthesis of what they learned about the lesson. Also, the researcher orally gave specific short feedback after all presentations were made. The evaluation in the form of the quiz was administered. The objectives for the next lesson were also presented before the class ended.

Data Analysis

Students' responses to SMTSL questionnaire were scored based on the scoring manual designed by Pintrich et al. (1991). Scores on each of the subscale were determined by computing the mean of the responses on the items that made up each category.

Also, descriptive analysis was used, aided by the use of frequency and mean. For inferential analyses, t-test for dependent (paired) samples was used to determine if there are significant differences in the mean scores and the SMTSL results among the students. Pearson's Product-Moment Correlation Coefficient (Pearson's r) was utilized to determine the correlation of SMTSL res ults in students' achievement. The significance of all inferential statistics was set at alpha 0.05.

Ethical Consideration

During the orientation period, the students were briefed that the class was part of a research study and will be conducted in a natural classroom setting using self-regulated learning model of teaching. Informed consent was sought from the students. They were informed that their performance in class serves as the source of data for the study but will be reported collectively and pseudonyms will be used if there is a need to name participants to maintain confidentiality.

Results and Discussion

Students' Achievement

The data in Table 1 presents the mean pretest and posttest scores. As shown in the table, there was an increase in mean scores.

Table 1. *Pretest, Posttest, and Mean Gain Scores of Students*

Variable	Mean	S.D.
Pretest Score	31.54	5.23
Post test Score	44.97	8.66
Mean Gain Score	13.44	7.08

*__Corresponding Author__: *Maricel Aguila-Gomez*
Leyte Normal University, Tacloban City
E-mail: maricelaguilagomez@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

The mean pretest score was 31.54, and the posttest increased to 44.97. The mean gain score was 13.44. The results suggest that SRL method increased the students' level of knowledge and, in turn, students' achievement in Biological Science. This positive result is similar to what was reported by the studies of Schunk (1989) and Zimmerman and Martinez-Pons (1992) that learners' use of self-regulation strategies sustains efforts and promotes academic achievement. In addition, the positive performance of the students may indicate the good interaction of the personal, behavioral, and environmental factors as mentioned in Bandura's Social Cognitive theory.

Standard deviation values increased from 5.23 to 8.66 for the mean pretest score and mean posttest scores, respectively. The increase in standard deviation in the mean posttest score may suggest that the pretest scores posted by the students in both groups were more homogeneous than the posttest scores.

The data in Table 2 shows the t-test result of the pretest and posttest score.

Table 2. *Paired Samples t-test on the Mean Pretest and Posttest Scores of Students*

t-value	df	p-value
11.849*	38	<0.001

*Significance at $p < 0.05$

The t-test result, showing the p-value of <0.001, indicates that there is a significant difference between the mean pretest and posttest scores in Biological Science test of the students who were exposed to SRL method. This may suggest that the SRL method was effective in increasing students' learning and, in turn, students' achievement in Biological Science.

Students' Motivation towards Science Learning

The data presented in Table 3 shows the mean SMTSL results of the students. Reflected on the table are the scores on the six (6) motivation factors. From the table, it is revealed that there is an increase in the total mean motivation score. This suggests that SRL method increased students' motivation to learn Science, which in this case, Biological Science. Students who are exposed to the SRL method became more engaged in the different motivation factors; thus, they became more motivated towards learning Biological Science as they went through the learning process in the entire duration of the study.

Table 3
Mean STMSL Scores of Students

Factors	Pretest Score		Posttest Score	
	Mean	S.D.	Mean	S.D.
Motivation Score	24.44	1.66	25.02	1.68
	4.07	0.28	4.17	0.28
Self-Efficacy	3.9	0.6	4.06	0.52
Active Learning Strategy	4.3	0.41	4.3	0.53
Science Learning Value	4.42	0.44	4.51	0.45
Performance Goal	3.24	0.64	3.38	0.82
Achievement Goal	4.36	0.66	4.46	0.51
Learning Environment Stimulation	4.22	0.48	4.31	0.49

Examining the six (6) motivation factors, only Active Learning Strategy has an equal total mean score of 4.3 for both pretest and posttest. The other five (5) factors have increased their posttest mean scores. This result may suggest that as students, who were exposed to SRL method, went through the learning process, and they became more confident in their ability to perform specific Science learning tasks given to them. They also have increased their use of a variety of strategies to construct new knowledge based on what they have previously learned. As they underwent the process of accomplishing the

*__Corresponding Author__: *Maricel Aguila-Gomez*
Leyte Normal University, Tacloban City
E-mail: maricelaguilagomez@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

learning tasks, the students saw higher values of the activities they participated in. Also, as they performed different activities, it seemed that they became more motivated to give their best output among the other groups and even seemed to be more satisfied with the outcomes. The students in the SRL method were exposed to a learning environment that allowed them to think and make use of various learning strategies. The challenge involved in thinking as to what appropriate strategy to use to achieve the learning goals may have increased their engagement in the different motivation factors which, in turn, directed the students to be more motivated in learning Biological Science.

It is further shown that Science Leaning Value was the most significant motivating factor and Performance Goal was the least motivating factor for the students exposed to the SRL method. This may indicate that the students exposed to SRL were strongly motivated by their increased perception of the value of what they were learning as they went through the learning process and were least motivated by competing with other students in the classroom.

The increase in self-efficacy corroborates the findings of Brophy (1998) and Pintrich and Schunk (1996) that self-efficacy is one of those factors that dominate students' motivation towards learning Science. This result is also in agreement with Tuan et al. (2005) who pointed out that students' self-efficacy and learning strategy are two of the essential domains in student Science learning motivation.

It is further shown from the table that standard deviation values were 1.66 in the pretest and 1.68 in the posttest. The standard deviation values in the posttest may indicate that the motivation scores in the pretest were more homogeneous than those in the posttest. In addition, it can be gleaned from the table that values ranged from 4.07 and 4.17 in the pretest and posttest, respectively. These reported mean values were nearer the highest scale value 5, which corresponds to "strongly agree."

Table 4 shows the t-test results of the motivation scores of the students. From the table, the p-value of 0.006 indicates that there was a significant difference between the mean pretest and posttest motivation scores. This result suggests that SRL method increased students' motivation towards Science learning.

Table 4. *Paired-sample t-test on the Mean SMTSL Scores of Students*

Factors	t-value (df=38)	p-value
Motivation Score	2.943*	0.006
Self-Efficacy	1.855	0.071
Active Learning Strategy	0.043	0.966
Science Learning Value	1.132	0.265
Performance Goal	1.375	0.177
Achievement Goal	1.066	0.293
Learning Environment Stimulation	1.129	0.266

*Significance at $p < 0.05$

However, all motivation factors showed p-values greater than 0.05. This means that there were no significant differences in the mean scores among all motivation factors before and after being exposed to the SRL method. Although there were noted increases in the mean posttest scores of the five (5) motivation factors, results still showed that there were no significant differences in students' engagement in each of the motivation factors.

The increase in mean posttest score in Biological Science test and the increase in students' mean posttest motivation score suggest that students' motivation was an important factor in students' achievement. This is similar to what Reynolds and Walberg (1992) and Singh et al. (2002) previously reported that students' attitude and motivation are two of the most critical factors that determine Science achievement. This is also in agreement to other researches (e.g., Garcia &

*Corresponding Author: Maricel Aguila-Gomez
Leyte Normal University, Tacloban City
E-mail: maricelaguilagomez@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

Pintrich, 1994; Deci & Ryan, 1985; Pintrich & Schunk, 1996) cited by Cobb (2003) who found that motivation plays a vital role in a students' academic performance.

Correlations between SMTSL Scores and Achievement Scores of Students

Table 5 shows the relationship between students' motivation score and achievement score in Biological Science.

Table 5. *Pearson's Correlations between SMTSL Scores and Achievement Scores of Students*

Scale	Achievement Scores	
	r	Sig (2-tailed)
Motivation Score	0.08	0.62
Self-Efficacy	-0.03	0.86
Active Learning Strategy	-0.03	0.88
Science Learning Value	-0.05	0.75
Performance Goal	0.07	0.68
Achievement Goal	0.19	0.26
Learning Environment Stimulation	0.08	0.62

Results reveal that student's motivation towards Science learning and students' achievement scores gained positive correlation. However, the significant value was 0.62. This indicates that despite the significant increases in the mean achievement and mean motivation scores, students' performance in Biological Science was not significantly related to students' motivation toward Science. In addition, all motivation factors had significant values higher than 0.05; thus, all motivation factors had no significant relationship with students' achievement in Biological Science. These present findings are in contrast to what was reported in the study of Tuan et al. (2005) using SMTSL questionnaire, which revealed that students' motivation has a moderate and significant correlation with students' Science attitude and Science achievement.

The result of the present study that there is no significant relationship between students' motivation and students' achievement, however, may not indicate that the students were not motivated. As shown in Table 3, mean posttest motivation scores increased, suggesting that students were motivated towards Science before and after being exposed to the SRL method.

Conclusion

Self-regulated learning method increased both students' achievement in Biological Science and motivation towards Science learning. There were significant differences in the mean achievement score and mean motivation score. However, students' achievement in Biological Science and their motivation towards Science learning were not significantly correlated.

The significant increase in students' achievement scores and motivation towards Science learning scores implies that SRL method is effective in improving students' achievement and motivation towards learning Science. Therefore, this active method is one of the effective teaching strategies to be used to facilitate college students to have high academic performance.

References

Adib-Hajbaghery, M.(2011). Traditional lectures, Socratic method, and student lectures: Which one do the students prefer?. *WebmedCentral*. 1-9. Retrieved from WebCentral.com

Bandura, A.(1986). Social foundations of thought and action (pp. 5-107). Prentice Hall.: Englewood Cliffs, NJ. Retrieved September 18, 2012, from http://goo.gl/MLAFaj.

Brophy, J. (1998). Motivating students to learn. Madison, WI: McGraw Hill.

Charlton B.G.(2006). Lectures are an effective teaching method because they exploit human evolved 'human nature' to

*Corresponding Author: Maricel Aguila-Gomez
Leyte Normal University, Tacloban City
E-mail: maricelaguilagomez@gmail.com

improve learning. Editorial. *Medical Hypotheses*. *67*, 1261-1265.

Chen, C.S.(2002).Self-regulated learning strategies and achievement in an introduction to Information systems course. *Information Technology, Learning, & performance Journal*,*20*(1). 11-23.

Cobb, R. Jr. (2003). *The relationship between self-regulated learning behaviors and academic performance in web-based courses*. (Doctoral Dissertation) Virginia Polytechnic Institute and State University.

Coral, R. H. (2003). *Metacognitive learning cycle model: Effects on students' learning in Genetics.* (Doctoral Dissertation) University of the Philippines-Los Banos, Laguna.

Coutinho, S. A. (2006). The relationship between the need for cognition, metacognition, and intellectual task performance. *Educational Research & Reviews, 1*(5), 162-164.

Dinsmore, D.L., Alex&er, P.A., & Loughlin, S.M.(2008). Focusing the conceptual lens on metacognition, self-regulation, & self-regulated Learning. *Educational Psychology Review*, *20*, 391–409.doi:10.1007/s10648-008-9083-6.

Garner, J. K. (2009). Conceptualizing the relations between executive functions and self-regulated learning. *The Journal of Psychology*, *143* (4), 405–426.

Griffin, R. W., & Cashin, W. E. (1989). The lecture & discussion method for management education: Pros & cons. *Journal of Management Development, 8*, 25–32.

Lajoie, S. P.(2008).Metacognition, self-regulation, and self-regulated learning: A rose by any other name? *Educational Psychology Review*. *20*,469–475. doi: 10.1007/ s10648-008-9088-1.

Kriewaldt, J. (2001).*A thinking geography curriculum*.29(4). Retrieved from http://www.gtav.asn.au/interaction/issues/v29n4_dec01/metacognition.htm.

Mcwhaw, K. & Abrami, P.C. (2001). Student goal orientation and interest: Effects on students' use of self-regulated learning strategies. *Contemporary Educational Psychology, 26*, 311–329. doi:10.1006/ceps.2000.1054.

Montalvo, F.T, & Torres, M.C.G.(2004).Self-regulated learning: Current and future directions. *Electronic Journal of Research in Educational Psychology, 2*(1), 1-34.

Paris, S.G., & Paris, A.H. (2001). Classroom Applications of Research on Self-Regulated Learning. *Educational Psychologist, 36*(2), 89–101.

Perry, N. E. & Winne, P. H. Learning from learning kits: gStudy traces of students' self-regulated engagements with computerized content. *Educational Psychology Review, 18*(3), 11-228.

Pintrich, P.R., & Schunk, D.H. (1996). *Motivation in education: Theory, research, and applications* (2nd ed.). Englewood Cliffs, NJ: Merrill Company.

Puustinen, M., & Pulkinnen, L. (2001). Models of self-regulated learning: A review. *Scandinavian Journal of Educational Research, 45*(3), 270-286.

Reynolds, A.J., & Walberg, H.J. (1992). A structural model of science achievement and attitude: An extension to high school. *Journal of Educational Psychology*, 84(3), 371–382.

Schunk, D. (1989). Social cognitive theory and self-regulated learning. In B. Zimmerman & D. Schunk (Eds.), Self-regulated learning and academic achievement: Theory, research, and practice (pp. 83-110). New York: Springer-Verlag.

Tuan, H.L., Chin, C.C. & S, S. H. (2005).The development of a questionnaire to measure students' motivation towards science learning. *International Journal of Science Education, 27*(6), 639-654.

Wang, V., & Farmer, L. (2008). Adult teaching methods in China and Bloom's Taxonomy. *International Journal for the Scholarship of Teaching & Learning*, *2*(2).

*__Corresponding Author__: *Maricel Aguila-Gomez*
Leyte Normal University, Tacloban City
E-mail: maricelaguilagomez@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

Wolters, C. A.(1999). The relationship between high school students' motivational regulation and their use of learning strategies, effort, and classroom performance. *Learning and Individual Differences*, 3 (3), 281-299.

Young, S.H., & Konstantinos, V.(2002). Elementary in-service teachers' self-regulated learning strategies related to their academic achievements — *Journal of Instructional Psychology*, *29*(3), 147.

Zafar, I., (2008). Item Analysis Assumption. Measure of exam internal consistency(reliability) Kuder Richardson 20 (KR20). Retrieved from http://www.google.com.ph/url?sa=t&rct=j&q=FACT%20SHEET%2024B%20%20Title%3A%20Item%20Analysis%20Assumptions%20%20Measure%20of%20exam%20internal%20consistency%20(reliability)%20Kuder-Richardson

Zhenhui, R. (2001). Matching teaching styles with learning styles in east Asian contexts. *The Internet TESL Journal*, *7*(7). Retrieved from http://iteslj.org/Techniques/Zhenhui-TeachingStyles.html.

Zimmerman, B. J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology*. *81*(3), 329-339.

Zimmerman, B. & Martinez-Pons, M. (1992). Perceptions of efficacy and strategy use in self-regulated learning. In D.H. Schunk & J. Meece (Eds.), Student perceptions in the classroom: Causes and consequences (pp. 185-207). Hillsdale, NJ: Erlbaum.

Zimmerman, B. J. (1995). Self-regulation involves more than metacognition; A social cognitive perspective. *Educational Psychologist*, *30*(34), 217-221.

Zimmerman, B. J. (2000). Attaining self-regulation: A social-cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), Handbook of self-regulation (pp. 13–41). San Diego, CA: Academic Press.

**Corresponding Author*: *Maricel Aguila-Gomez*
Leyte Normal University, Tacloban City
E-mail: maricelaguilagomez@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018

Journal of Education and Society

Research Article **A Refereed Journal**

Stories Unfold of Grade 7 Science Teachers on Instructional Materials: An Assessment

Maria Lourdes G. Tan*
Vinella F. Espina*
Las Johansen B. Caluza*

ABSTRACT

Common sentiments of teachers in the field with the implementation of the K to 12 Curriculum are limited instructional materials. One of the responses to face these challenges is to use localized and contextualized materials for teaching based on the needs of students and teachers. This descriptive single case study anchored on Kolb's theory of experiential learning highlights the role of instructional materials in student's retention of knowledge. An in-depth, focused group discussion was used to assess the needs of Grade 7 science teachers of Northern Tacloban City National High School purposely selected as participants. Findings revealed that teachers need multimedia in the form of animated video with corresponding worksheets where they can answer questions based on the video seen, this helped for a more in-depth understanding of concepts, skills, and processes of the subject. The result of the study paves the way to develop an instructional kit in making learning more interactive and enjoyable to students.

***Keywords*:** *context-based, teaching materials, Grade 7 science, animated videos, worksheets*

Introduction

Science education has faced challenges and interrelated problems throughout the world over the past 20 years. Problems include overload, isolated facts, lack of transfer, lack of relevance, inadequate emphasis, and misconceptions (Özay Köse & Cam-Tosun, 2013). Many learning theories, models, and interventions has been developed using different approaches to improve the quality of science teaching-learning process as well as learning outcomes. Currently, the Philippines has also one major educational innovation which is the implementation of K to 12 curricula. Part of the implementation is the use of modules as instructional materials in science and other subjects which poses problems and challenges to both teachers and students. As mentioned in the study of Sañosa (2013), the use of modules in teaching Grade 7 science, particularly in Eastern Visayas, makes it easier for the teachers to prepare for teaching and for students to comprehend since the materials are well chosen, relevant, localized, exciting, and within the understanding of the students. However, she added that despite the training conducted by DepEd on the K to 12 curricula, some teachers commented that the Grade 7 science modules were complicated in terms of required teaching competencies. Another findings that Gutierrez (2014) revealed in which students experienced difficulty in understanding biological concepts in the said modules.

The findings, as mentioned above, mean that despite the learning interventions and innovations, students still find it challenging to grasp science concepts, skills, and its relevance to their daily lives. As what Schwartz (2006) pointed out that if we compare our educational system to a ladder, unfortunately, many students do not see the connection between the successive rumps. They do not know the relevance of what they are learning in their daily living. He added that they jump or fall off the land before they reach the top and all they take from the experiences is distaste for science.

One primary possible solution to address these challenges is the use of context-based approach. A context in its related words "contextus" expresses "coherence," "connection," or "relationship" which provides

**Corresponding Authors*: *Maria Lourdes G. Tan, Vinella F. Espina, and Las Johansen B.Caluza*
Leyte Normal University, Tacloban City
E-mail: marialourdestan@gmail.com
vinella18espina@gmail.com,
lasjohansencaluza@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

a coherent structural meaning for something new that is set within a broader perspective (Gilbert, 2006). Context-based science education was designed to consider its significance and relevance to all students (Hooreman, 2008). The context-based approach in teaching science includes personal, social, economic, environmental, technological, and industrial application for science. The contexts are generally selected by their relevance to the students' everyday life. For example, ideas about Newton's law of motion in the context of traveling by bicycle or ideas about organic chemistry are introduced through research about the development of medicines (Bennett, Grasel, Parchmann, & Waddington, 2005a).

The real beauty of context-based innovation is its integration in the instructional materials used to teach the different subjects. In other countries, particularly the UK, Germany, and the Netherlands; science teachers designed the curriculum materials. Teacher involvement makes the curriculum materials well-suited to classroom practice (Bennett & Lubben, 2006). Further, Fullan (1994) added that teachers would be more willing to accept the innovation since they have been part of it.

Along with this point of view, with the development of context-based Grade seven science teaching materials, students of Northern Tacloban City National High School will be able to see the connection and relevance of science lessons to their daily lives based on their needs and interest since science concepts, and activities, are integrated into the instructional materials.

Review of Related Literature

Bennett, Lubben & Hogarth (2007) defined context-based approaches in science teaching, where using contexts and application of science as starting point for the development of scientific ideas. It has been used widely in other countries: United Kingdom, USA, Germany, Israel, and Netherlands. (Bennett & Holman, 2003; Gilbert, 2006; Pilot & Bulte, 2006). The aims of context-based learning include: motivation, uptake of science subjects, learning of science ideas, and produce literature citizens scientifically. It has two particular features which enhance the understanding of scientific concepts. First is the motivational aspect approach, which explains that if students can see the point of what they are studying, they will engage with the materials and will learn more effectively. Second is a "drip-feed" approach, which is the revisiting of ideas at different points which provides more opportunities for students to enhance their understanding of scientific concepts (Bennett & Holman, 2003). Strategies employing student-centered, active learning approaches stimulates interest and motivation, such as small-group discussions, group, and individual problem-solving tasks, investigations and role-play exercises.

Along this line of thought, making comparisons of students' performances are done. Specifically, different science disciplines employed context-based and traditional approach cited the following advantages over the other: (a) gives students significant degree of autonomy over the learning activity (Bennett, Campbell, Hogarth, & Lubben,2005b); (b) develop levels of understanding of chemical ideas (Bennett & Lubben, 2006); (c) succeeded in increasing students' interest (Holman & Pilling, 2004); (d) enhance students' motivation, retention, and achievement (Murphy & Whitelegg, 2006); (e) better understanding of chemistry (Gutwill-Wise, 2001); (f) increase students' achievement and acquisition of students' scientific process skills in Biology (Özay Köse & Cam-Tosun, 2013); (g) relate physics learning to problem commonly encountered by the students and be able to create abilities that will give answer and solution to social problem (Koopman, 2010).

The emphasis of this research is the integration of a context-based approach in the instructional material's development and utilization, based on both teachers' and students' needs and interest. Teachers play a semi-structured role in the design of

*__Corresponding Authors__: *Maria Lourdes G. Tan, Vinella F. Espina, and Las Johansen B.Caluza*
Leyte Normal University, Tacloban City
E-mail: marialourdestan@gmail.com
vinella18espina@gmail.com,
lasjohansencaluza@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

instructional materials since they have direct contact with the students (Hoogveld, Paas, & Jochems, 2005). Furthermore, teachers' involvement in the design of curriculum materials to the actual teaching practice results in the sense of ownership (Borko, Jacobs, & Koellner, 2010). As a support to this statement, Nentwig, Parchmann, Grasel, & Ralle's (2007) initial evaluation indicates positive effects and examines context-based learning in two areas: (a) the teaching and learning situation in the classroom and (b) the professional development of the participating teachers.

The review above of the literature showed the scarcity of the studies that give comprehensive process and its assessment in the development and utilization of context-based instructional materials. Thus, it became necessary to explore the possibility of this concern to ensure its usability and effectiveness in the field.

Theoretical Framework

The development of context-based science teaching materials on Kolb's Theory of Experiential Learning which highlights the role of instructional materials in student's retention of knowledge. Representing theory into a four-stage learning cycle: concrete experience, reflective observation, abstract conceptualization, and active experimentation. Reflective observation and abstract conceptualization stages require the development of learning activities and materials that could back-up and complement student's actual learning experience and knowledge retention (Kolb, 1984).

Presently under the K to 12 curriculum, learning modules are the first instructional material in teaching science and other subjects ass cited in the study of Larawan (2013), rooting use of modules is rooted in B.F. Skinner's operant conditioning theory which explains that programmed instructional materials help teachers carry-out efficient teaching and learning process among his students. It further explained that reinforcement is a better way to modify a person's behavior. This research resulted in varied approaches and instructional materials in hastening the development of knowledge and skills of students (Mercado, 2007).

Context-based instructional materials such as self-pacing use student-centered active learning approach (Bennett, Campbell, Hogarth, & Lubben, 2005b) is related to the theory of constructivism. In a related study by Alesandrini & Larson (2002) constructivists see learning as a process of actively exploring new information and constructing meaning from information by linking it to previous knowledge and experience. They further explained that in the constructivist paradigm, the role of the teacher is not to lecture or provide structured activities that lead students to mastery of some teacher-imposed goals. However, instead, teachers function as a facilitator, which means that in the theory of constructivist, teacher acts as a facilitator that guides the students to complete their tasks or learning activities as reflected in the module.

Context-based approaches integrated into the instructional materials emphasizes on the enhancement of science inquiry skills, higher order thinking skills, problem-solving, and decision-making ability (Bennett & Holmann, 2002; Gilbert, 2006; Schwartz, 2006). The acquisition of science concepts and skills will be appreciated more by students through the use of interactive instructional materials and activities wherein students can visualize the concepts and activities in the module. Visualizing science education is best explained by two theoretical perspectives: (a) dual coding theory (DCT) which provides essential insights on the role of visual perceptions to enhance memory retention, learning, and understanding (Sadoski & A Paivio, 2001); and (b) visual imagery hypothesis (VIT) allows one to process information more efficiently than verbal ones. In here, the visualization of objects and activities provide the necessary information and concepts to facilitate the application of

*__Corresponding Authors__: *Maria Lourdes G. Tan, Vinella F. Espina, and Las Johansen B.Caluza*
Leyte Normal University, Tacloban City
E-mail: marialourdestan@gmail.com
vinella18espina@gmail.com,
lasjohansencaluza@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

knowledge and skills for problem-solving (Tversky, 2001).

Research Questions

Specifically, this study seeks to answer the following questions:

1. What are the emerging issues encountered by the Grade 7 science teachers in terms of instructional materials used in the classroom?
2. How do they respond to the emerging issues in the utilization of instructional materials used in the classroom?
3. What are the needs of the Grade 7 science teachers in terms of instructional materials?
4. Based on the findings, what emerging inputs from the study serve as a basis for the development of a contextualized-based material?

Methodology

Research Design

This study utilized the single descriptive case study paradigm. It pointed out a detailed description in the lived experiences of Grade 7 science teachers in terms of the challenges encountered, in the use of instructional materials. Its focus also includes response to problems and suggested solutions in the utilization of the instructional materials used in the classroom.

The research participants of this study are three Grade 7 science teachers of Northern Tacloban City National High School, purposely selected as the participants since they were both teaching Grade 7 science in which two teachers were major in Biological Science and the other one's major is Physical Science. The researchers based his judgment when choosing participants of the study (Patton, 2002). This research involves identifying and selecting an individual that is most knowledgeable in the subject and has direct contact with students as well (Creswell & Plano Clark, 2006).

Research Instrument

The study utilized the use of the researcher-made interview instrument used to extract the responses of the participant in terms of (a) the challenges encountered in the utilization of instructional materials used in the classroom; (b) how they respond to solve the problems; and (c) suggested solutions in addressing those challenges.

The in-depth interview guide was submitted for validation before it was filed for actual use. Dividing it into two parts: Part I – aimed to gather information on the participant's data such as name, the name of the school, and prime field; Part II was about instructional materials utilization and its related problems.

Data Collection Procedures

The researcher requested the participants to answer the questionnaire. A semi-structured interview was conducted to further validate the response. The researcher gave a consent form to the participants and explained the purpose of the study. Then, the researcher, together with each participant, set a date and place for a face-to-face interview. This way, the researcher elicited more in-depth responses and clarified the information when the participant did not understand the question (Olsen & Muise, 2009). The researcher transcribed the audio recorded interviews and proceeded to qualitative content analysis using specific themes as the unit for analysis.

Data Analysis

Data gathered was analyzed using Colaizzi's phenomenological method of data analysis. Shosha (2012) explained the following Colaizzi's seven steps: (1) each transcript must be read and reread in order to obtain a general sense about the whole content. (2) Significant statements from the transcript

*__Corresponding Authors__: *Maria Lourdes G. Tan, Vinella F. Espina, and Las Johansen B.Caluza*
Leyte Normal University, Tacloban City
E-mail: marialourdestan@gmail.com
vinella18espina@gmail.com,
lasjohansencaluza@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

that pertain to the phenomenon under study were extracted and recorded. (3) Formulating meanings from these significant statements. (4) Sorting the formulated meanings into categories clusters of theme, and themes. (5) The findings of the study were integrated into an exhaustive description of the phenomenon under investigation. (6) The description of the fundamental structure of the phenomenon. (7) Validation of the findings was sought from the research participants to compare the researchers' detailed results with their experiences.

Research Reflexivity

The challenges encountered by the Grade 7 science teacher with the use of learning materials varies. It bridged the gap between the performances of the students and the existing learning material used by the teachers. It also emphasized the teachers need on instructional materials in order to improve the students' performance.

Results and Discussions

Data collected were processed in response to the research questions which were grouped and synthesized into themes:

Theme 1: Challenges/Problems Encountered.

Theme 1A. Lack of knowledge in the multimedia utilization

Significant Statement 1. *"I do not know how to use the "laptop" to make power point because I have no training."*
Significant Statement 2. *"I do not know how to operate the projector."*

Theme 1B. The misconception of science concepts

Significant Statement 1. *"I found out that there are some concepts that were a misconception of the lesson because there are some topics taught in elementary, which is wrong."*
Significant Statement 2. *"The students could not give the meaning of the science terms from their lessons in the elementary."*

Theme 1C. No relevance to daily lives

Significant Statement 1. *"Students do not see the importance why they have to study the circulatory system."*
Significant Statement 2. *"Students do not see the connections of the science lessons to their daily lives."*

Using the existing instructional materials provided by Department of Education (DepEd), the participants encountered various challenges and problems: lack of knowledge and skills in multimedia utilization, misconception, lack of connectivity of the science lesson with topics in the current level, and lack of relevance to daily lives. As what Schwartz (2006) mentioned, using the traditional teaching of chalk-board and book, it is common for students to retain misconceptions. This idea is supported in the study of Onwu & Kyle (2011) that science education failed to be relevant in meeting the needs of learners and society, which they called as "crisis of relevance" and "a crisis of misalignment."

Theme 2: Coping mechanisms towards challenges encountered. Theme 2A. Discuss basic science concepts

Significant Statement 1. *"I go back to the basics, the foundation of the subject to give students an idea of the topic."*
Significant Statement 2. *"I explained again so that they can understand since Grade 7 science is a little bit complicated."*

Theme 2B. Use available materials within the school premises and community

Significant Statement 1. *"I used my LCD projector to have multimedia instructions to my students."*
Significant Statement 2. *"I borrowed readymade researches from other schools like*

*Corresponding Authors: Maria Lourdes G. Tan, Vinella F. Espina, and Las Johansen B.Caluza
Leyte Normal University, Tacloban City
E-mail: marialourdestan@gmail.com
vinella18espina@gmail.com,
lasjohansencaluza@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

*Abuyog Community College and Leyte Normal and let my students see it as a model."*Passionate as a science teacher, the participants respond to the challenges through discussing basic science concepts and connect past lessons to the current one. They made use of available materials in the school and community to perform some activities in the module. Concerning this, K to 12 curricula also emphasizes the localization and contextualization of teachers and their instructional materials. As stipulated in Section 16 of Republic Act no. 10533, "The Implementing Rules and Regulations," particularly section 5:

> *…. The curriculum shall be contextualized and global; (e) The curriculum shall use pedagogical approaches that are constructivist, inquiry-based, reflective, collaborative and integrative; (f) The curriculum shall use spiral progression approach to ensure mastery of knowledge and skills after each level; and (h) The curriculum shall be flexible enough to enable and allow schools to localize, indigenize, and enhance the same based on their respective educational and social contexts; 10.3. Production and Development of Materials. The production and development of the locally produced teaching and learning materials shall be encouraged. The approval of these materials shall be devolved to the regional and division education unit following national policies and standards*

At this point, the question arises: "Would the instructional approaches emphasize the use of localized materials in the community enough to improve learner's performance more than traditional teaching approaches?", "Is it enough to give linkage and relevance of scientific concepts to learner's daily life?"

Theme 3: Instructional material needs.Theme 3A. Additional school learning materials

Significant Statement 1. *"We want to conduct a science experiment, but we lack science apparatus and chemicals."*
Significant Statement 2*. "The practice exercises and worksheets in the module after each activity are limited."*

Theme 3B. Training on the utilization of multimedia for teaching

Significant Statement 1. *"I need the training to operate multimedia equipment."*
Significant Statement 2. *"It is my great desire to learn how to make power point since what I know is to type only."*

Theme 3C. Use of instructional video or animated videos for teaching especially to science concepts which involve processes (e.g., photosynthesis, blood circulation process)

Significant Statement 1. *"I look for a video clip because students learn more body processes like digestion easily using videos."*
Significant Statement 2. *"Teaching science processes with my students is more enjoyable with the use of the video."*As a response to the aforementioned concern, the participants suggested solutions which they think is useful to enhance the performance of the students through provision of needed laboratory materials, additional school learning materials or modules – learners' and teachers' copy, enrich activities emphasizing the development of higher order thinking skills, training on the utilization of multimedia for teaching and filling up school forms, use of instructional videos using animation for teaching, especially science topics that involves processes like digestion, excretion, blood circulation. This will make the lesson more interesting since it has connection and relevance to their daily

**Corresponding Authors: Maria Lourdes G. Tan, Vinella F. Espina, and Las Johansen B.Caluza*
Leyte Normal University, Tacloban City
E-mail: marialourdestan@gmail.com
vinella18espina@gmail.com,
lasjohansencaluza@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

lives. Connecting scientific concepts with learners' daily living entails the notion of "context-based" teaching (Bennett & Holman, 2003; Gilbert, 2006). Context-based approach embeds scientific content in factual context (real-life situation) which shows learners the application of scientific concepts and methods in real-life (Gilbert, 2006). Some studies (George & Lubben, 2002; Lubben, Campbell, & Dlamini, 1996; Suela, Cyril, & Said, 2010) explained that most learners like to relate science and scientific principles to their daily lives.

Theme 4: Contextualized-based material.

Significant Statement 1. *"I make use of available materials like egg of chicken for our topic about cell."*
Significant Statement 2. *"During our discussion I used as an example local plants available in our school like guava."*

Summing up based on the aforementioned three themes, the main suggested instructional materials of teacher participants is the used of context-based video. The said video is embedded with worksheets instruction in teaching science concepts and skills. As mentioned in the study of Choi & Johnson (2005), context-based video instruction was more memorable than the traditional text-based education, since learners were more motivated and had a longer attention span in context-based video instruction than conventional text-based instruction.

The above perspective implies that context-based videos have the potential to enhance learner's motivation and retention of knowledge and skills.

Conclusion and Recommendations

The responses of teacher participants pave the way for the possibility and potential to enhance learner's retention and motivation through the development of context-based video with worksheets instruction based on student's needs and interest. They believed that context-based approach is regarded as appropriate to achieve this objective since it involves: real-world context, engaging experience, and making use of available materials and resources in the community. These informed the learners to see the connectivity and relevance of science concepts, principles, and skills to their daily lives. Contextualized teaching is the best learning environment for the teaching-learning process, thus improving student's performance in science.

Results of the study serve as a window for teachers and school administrators to conduct an in-depth interview with the Grade 7 science students concerned. It also allowed them to contribute decisions about the context which they consider suitable for video learning with corresponding worksheets based on their needs and interest. The findings point out also to conduct a thorough study of specific topics in Grade 7 Earth Science, Biology, Chemistry, and Physics that students considered difficult to learn. The students can relate much if characters, setting, and storyline in the animated videos and worksheets depict the real scenario in the school and community site. Consider also Grade 7 science teachers of another school as participants to have results that are more conclusive. Moreover, conduct in-service training and seminars to teachers and pre-service teachers on the context-based approach integrated into the instructional materials development and utilization.

References

Alesandrini, K. & Larson, L. (2002). *Teachers bridge to constructivism*. Washington DC: Heldref.

Bennett, J., & Holman, J., (2003). Context-based approaches to the teaching of chemistry: what are they and what are their effects? In J. K. Gilbert, O. De Jong, R. Justi, D. F. Treagust, & J. H. Van Driel, (Eds.), *Chemical Education: Towards Research-BasedPractice* (pp. 165-185).Kluwer Academic Publishers, New York, Boston, Dordrecht, London, Moscow. .

*Corresponding Authors: Maria Lourdes G. Tan, Vinella F. Espina, and Las Johansen B.Caluza
Leyte Normal University, Tacloban City
E-mail: marialourdestan@gmail.com
vinella18espina@gmail.com,
lasjohansencaluza@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

Bennett, J., Gräsel, C., Parchmann, I., & Waddington, D. (2005a). Context-based and conventional approaches to teaching chemistry: Comparing teachers' views. *International Journal of Science Education*, *27*(13), 1521–1547.

Bennett, J., Campbell, B., Hogarth, S., & Lubben, F. (2005b). A systematic review of the effects of context-based and STS approaches in science teaching. In C. Kasanda, L. Muhammed, S. Akpo, & E. Ngololo (Eds.), *Proceedings of the 13th Annual Conference of the Southern African Association for Research in Mathematics, Science and Technology Education* (pp.53-58).Windhoek, Namibia.

Bennett, J., & Lubben, F. (2006). Context-based chemistry: The Salters approach. *International Journal of Science Education*, *28*(9), 999-1015.

Bennett,J., Lubben, F., & Hogarth, S. (2007). Bringing science to life: A synthesis of the research evidence on the effects of context-based and STS approaches to science teaching. *Science Education*, 91(3), 347-370.

Borko, H., Jacobs, J., & Koellner, K. (2010). Contemporary approaches to teacher professional development. In P. Peterson, E. Baker, & B. McGaw (Eds.), *International encyclopedia of education* (3rd ed.). (pp.548-556). Elsevier.

Choi, H. J., & Johnson, S. D. (2005). The effect of context-based video instruction on learning and motivation in online courses. *The American Journal of Distance Education*, *19*(4), 215–227.

Creswell J., & Plano Clark V. (2006). *Designing and conducting mixed method research* (3rd ed.). SAGE.

Fullan, M. (1994). *The new meaning of educational change* (3rd ed.). London, United Kingdom: Continuum Press.George, J., & Lubben, F. (2002). Facilitating teachers' professional growth through the involvement in creating context-based materials in science. *International Journal of Educational Development*, *22*(6), 659-672.

Gilbert, J. K. (2006). Context-based chemistry education on the nature of "context" in chemical education. *International Journal of Science Education*, *28*(9), 957-976.

GutWill-Wise, J.P. (2001). The İmpact of active and context-based learning in introductory chemistry courses: An early evaluation of the modular approach. *Journal of Chemical Education*, *78*(5), 684–690.

Gutierrez, A.F. (2014). Development and effectiveness of an educational card game as supplementary material in understanding selected topics in biology.CBE-Life SciencesEducation, 13(1), 76-82. Retrieved on February 17,2016 from https://www.lifescied.org/doi/pdf/10.1187/cbe.13-05-0093.

Holman, J., & Pilling, G.,(2004). Thermodynamics in context: A case study of contextualized teaching for undergraduates. *Journal of Chemical Education*, *81*(3), 373–375.

Hoogveld, A.W.M., Paas, F., & Jochems, W.M.G. (2005). Training higher education teachers for instructional design of competency-based education: Product-oriented versus process-oriented worked examples. *Teaching and Teacher Education: An International Journal of Research and Studies*, *21*(3), 287-297.

Hooreman, R.W. (2008). *Synchronous coaching of trainee teachers: An experimental approach*. Eindhoven: Technische Universiteit Eindhoven. doi: 10.6100/IR634679.

Kolb, D. A. (1984). *Experiential Learning: Experience as the source of learning and development* (Vol. 1). Englewood Cliffs, NJ: Prentice-Hall.

Koopman, M. (2010). *Students' goal orientations, information processing strategies and knowledge development*

*__Corresponding Authors__: *Maria Lourdes G. Tan, Vinella F. Espina, and Las Johansen B.Caluza*
Leyte Normal University, Tacloban City
E-mail: marialourdestan@gmail.com
vinella18espina@gmail.com,
lasjohansencaluza@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

incompetence-based prevocationas secondary education. Technische Universiteit Eindhoven.

Larawan, L. (2013). Acceptability of teacher-made modules in production management. *International Journal of Managerial Studies and Research, 2*(1), 10-22.

Lubben, F., Campbell, B., & Dlamini, B. (1996). Contextualizing science teaching in Swaziland: Some learner reactions. *International Journal of Science Education*, *18*(3), 311-320.

Mercado, Jr., R. B. (2007). *Effectiveness of Modularized Instruction in Entrepreneurship* (Unpublished Thesis). Bulacan State University, Malolos City.

Murphy, P., & Whitelegg, E., (2006). *Girls in the Physics classroom: A review of the research on the participation of girls in Physics*. Institute of Physics Report, The Open University.

Nentwig, P. M., Parchmann, I., Grasel, C., & Ralle, B., (2007). Chemie in kontext: Situating learning in relevant contexts while systematically developing basic chemical concepts. *Journal of Chemical Education*, *84*(9), 1439-1444.

Olson, K. & Muise, J. (2009). *Face to face interview*. Recreation Tourism Research Institute. Retrieved from: dl.ueb.edu.vn/bitstream/1247/10044/1/ Face to Face interviews. Pdf

Onwu, G.O.M., & Kyle, W, C. (2011). Increasing the socio-cultural relevance of science education for sustainable development. *African Journal of Research in Mathematics, Science and Technology Education*, *15*(3), 5-26.

Özay Köse E., & Çam Tosun F., (2013). Context-based learning' effects on achievement and scientific process skills in Biology teaching. *Iğdır University J. Inst. Science & Technology 3*(4), 33-41.

Patton, M, Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). United Kingdom: Sage .

Pilot, A., & Bulte, A. (2006). Why do you need to know context based education? *International Journal of Science Education*, *28*(9), 953- 956.

Rose, D. E. (2012). Context-based learning. In N. Seel (Ed.), *Encyclopedia of the sciences of learning* (pp. 799–802). New York: Springer US.

Rees, R.B. (2015). Beginning teachers' perceptions of their novice year in teaching. *All Graduate Thesis and Dissertation.* Paper 4229. Retrieved from:http://digitalcommons.uso.edu/cgi/viewcontent.cgi?article=5261&context=etd.

Sadoski, M., & Paivio, A. (2001). *Imagery and text: A dual coding theory of reading and writing*. Mahwah, NJ: Lawrence Erlbaum Associates.

Sañosa, M. (2013). Implementation of K to 12 Curriculum Program among Grade 7 Science Teachers in Eastern Visayas. *Journal of Society and Technology*, *3*, 37-44.

Schwartz, A. T. (2006). Contextualized chemistry education: The American experience. *International Journal of Science Education*, *28*(9), 977- 998.

Shosha, G. A. (2012). Employment of Colaizzi's strategy in descriptive phenomenology: A reflection of a researcher. *European Scientific Journal*, *8*(27), 31-43.

Suela, K., Cyril, J., & Said, H. (2010). The contexts Albanian learners prefer to use in mathematics and in relationship to contemporary matters in Albania. *Proceedings of the 18th annual meeting of the Southern African Association for Research in Mathematics, Science, and Technology Education*.

Tversky, B. (2001). Spatial schemas in depictions. In M Gattis (Ed.), *Spatial schemas and abstract thought*, (pp. 71-111). Cambridge, Mass: MIT Press.

**Corresponding Authors*: *Maria Lourdes G. Tan, Vinella F. Espina, and Las Johansen B.Caluza*
Leyte Normal University, Tacloban City
E-mail: marialourdestan@gmail.com
vinella18espina@gmail.com,
lasjohansencaluza@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018

Journal of Education and Society

Research Article **A Refereed Journal**

Rereading Virtue In Zarathustra's Of The Virtue That Makes Small And Of The Chairs Of Virtue

Jan Gresil S. Kahambing*

ABSTRACT

From the 'rhetorical-oratorical' backdrop of *Thus Spoke Zarathustra* which denotes a prescriptive calling, this paper re-reads the aphorisms that concern the virtues. The book will serve as the main text of the study, aptly because it is regarded as one of Nietzsche's more mature writings. The paper particularly aims to hermeneutically expose the two aphorisms, namely: *Of the Virtue that Makes Small* in Book III, and *Of the Chairs of Virtue* in Book I. It thus confines the study into a particular focus apart from *Of Joys and Passions* which mainly discusses the 'nature' of virtue. Later, the aphorism *The Child with the Mirror*, which can be found in Book II, will be re-read too as a rejoinder between the two aphorisms of Books I and III. A specific vantage point in this study connotes that there is a seminal thread that connects books III, I, and II – precisely in this order – on the account of what virtue means.

Keywords: *Zarathustra, virtue, Nietzsche, hermeneutics, rhetorical-oratorical method*

Introduction

R. J. Hollingdale, the translator of the *Thus Spoke Zarathustra* edition (henceforth, Z) that this study uses as its main text, speaks of the underlying *excess* that assails the reader into thinking of the book as having a major *fault.* And that is what this re-reading wants to maintain as much as possible. In other words, this paper does not intend to oversimplify Nietzsche in a sense that would capture his thoughts both in the contextual understanding of the text and the authorial intention that is presupposed in a hermeneutical (Gadamerian) reading. To reduce the 'rhetorical-oratorical' exclamatory mode of expression, which brings to mind 'the eruption of words, metaphors, figures and word-play suggests an eruption of feeling (Nietzsche, 1969)' in the text, to a personal perceptional writing that can be presupposed in the method of hermeneutics would be to betray the very excess that Nietzsche originally expresses himself in the text.

From the superabundance of emotive expressions that such a textual backdrop illustrates, there is a wide spectrum of realities that Nietzsche wants to convey. Nietzsche writes, for instance, in his unpublished notes:

> As soon as you feel yourself *against me* you have ceased to understand my position and consequently my arguments! You have to be the victim of the *same passion*! I want to awaken the greatest mistrust of myself: I speak only of things I have *experienced* and do not offer only events in the head. One must want to experience the great problems with one's body and one's soul. I have at all times written my writings with my whole heart and soul: I do not know what purely intellectual problems are. You know these things as thoughts, but your thoughts are not your experiences, they are an echo and after-effect of your experiences: as when your room trembles when a carriage goes past. I, however, am sitting in the carriage, and often I am the carriage itself (Nietzsche, 1969, Introduction, 2).

The study then takes over from this manner of speaking about one's experiences. The 'carriage' that Nietzsche presents as

Corresponding Author: *Jan Gresil S. Kahambing*
Leyte Normal University, Tacloban City
https://orcid.org/0000-0002-4258-0563

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

himself becomes the invitation – or a calling – for something that evokes action. From a wide array of provocations, a specific point, rather than an over-all thematic conceptualization in the form of 'thoughts,' can be brought to fore. In ancient times, the coinage of the term arête also suggests a call to action – and the term, later on, served as a mainstay of a comprehensive understanding of virtue.

This paper thus aims to reread two of Zarathustra's aphorisms that concern the virtues. More particularly, the paper aims to hermeneutically expose the two aphorisms, namely, *Of the Virtue that Makes Small* and *Of the Chairs of Virtue*. Although the aphorism *Of Joys and Passions* speaks of the *nature* of virtue (Z, I, 5), the focal point resides in the particular nuances of virtue that are portrayed in the two mentioned aphorisms. In *Of Joys and Passions,* Zarathustra speaks of passions as the root of virtues: "Once you had passions and called them evil. But now you have only your virtues: they grew from out your passions (Z, I, 5)." The tone is generic and it understands virtue as a commonality that resides in the human turmoil of mixed *affects* which, in Zarathustra's words, is caressed and even called by name. One can then follow from this aphorism to proceed with the other two, as it proclaims: "And behold! Now you have its name in common with the people and have become of the people and the herd with your virtue! (Z, I, 5)."

This paper starts first with Book III, on *Of the Virtue that Makes Small,* where after being back on firm land, Zarathustra was again assailed by the feeling of nausea for humanity. Then it goes back to an aphorism on Book I, on *Of the Chairs of Virtue,* where Zarathustra addresses his band of disciples about 'negative virtue' or 'the virtue which consists in *not doing wrong* and which has as its reward 'peace of soul' (Z, Introduction, 7). Later, the first aphorism in book II, on *The Child with the Mirror,* where Zarathustra is dramatic and mostly invokes an action, is reread as a rejoinder for the two previous aphorisms. In this specific order, one can surmise a vantage point that sees virtue in a new light.

Significance of the Study

This study is significant in three aspects. First, it provides a focus on Nietzsche's understanding of virtue on the aphorisms mentioned. Second, it implicitly provides a critique of an armchair-focused pedagogy and an educational system that produces disciplines of blind obedience. And third, it casts light on the *via negativa* mode of viewing virtue as a vital topic of contemporary values education in the light of Nietzsche's reading.

Review of Related Literature and Studies

A number of studies that follow a rereading on the account of Nietzsche and his works essentially reveal the lack of particular focus on the aphorisms explicated in this study. Roberts (1995), for instance, does a rereading of Nietzsche but in generic terms of 'growth, movement, and agency.' There are other re-readings of Nietzsche's works as well but not on the particular aphorisms mentioned. Ostas in her 'Rereading Nietzsche in Theory' (2005) focuses on a particular book on Nietzsche but with a special emphasis on early works such as *The Birth of Tragedy*. Morrisson (2014), additionally, does a rereading of Nietzsche's works but is also focused on *On the Genealogy of Morals.*

Concerning a rereading of *Thus Spoke Zarathustra,* Snaza (2014) thinks that it is an important opus for reimagining humanities today, particularly in the relation between politics and language. In this light, Beiner (2018, p. 14) says in his 'Rereading Nietzsche and Heidegger in an Age of Resurgent Fascism' that 'we are urged to put lots of energy into despising what perhaps doesn't meet Nietzsche's standards of grandeur yet almost certainly deserves more respect than it receives from him or those swayed by his rhetoric.' As such, rereadings of *Thus Spoke Zarathustra* were done in an 'existential vein'

*__Corresponding Author__: *Jan Gresil S. Kahambing*
Leyte Normal University, Tacloban City
https://orcid.org/0000-0002-4258-0563

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

(Magnus, 1978), or presenting it within the license of Nietzsche's perspectivism (cf. Conant, 2005, 2006; Kahambing, 2017; Olson, 2001; Soysal, 2007), or Nietzsche studies on the *Übermensch* (Superman) in an eternal vow (Kahambing, 2014) or in Scandinavia (Sabo, 2000). A manner of rereading is also done by Nietzsche, as exposed by Zuckert (1985), but the exposition sees Nietzsche's reading as a form of critique or through casting suspicions, as for example in his reading of Plato.

Some of the recent readings emphasize Zarathustra in literary responses such as music and art (Ziolkowski, 2012). This is done more particularly by Cauchi (2009) who focused on the Promethean pretensions and Romantic dialectics in Nietzsche's Zarathustra. Stegmaier & Anderson (2009) made some notes of Zarathustra's ambivalence in terms of doctrine. The sense of ambivalence in Zarathustra is also expounded by Owen (2013) in connection to Weber and Foucault. In the accounting of values, Oliver (2016) in part reads Zarathustra in relation to the 'Feminine.' What these readings tell us reflects much Del Caro in his uncanny 'Zarathustra is Dead, Long Live Zarathustra!' (2011) who said that "*Zarathustra* is an open book, one of the most open books of all time, for all its riddles and hermetic qualities" (p. 93).

Methodology

As the introduction unambiguously projects, the study does a hermeneutical exposition of the two aphorisms in *Thus Spoke Zarathustra*, namely: *Of the Virtue that Makes Small* in Book III, and *Of the Chairs of Virtue* in Book I, including *The Child with the Mirror* in Book II. The method, however, does a rearrangement of the aphorisms and does not follow a linear reading i.e. Books I-III. It should also be noted that even if this method does not conform to a linear progression, it neither shifts nor resembles recent spectrality studies on literature (Blanco & Peeren, 2013), and, for example, its relation to Nietzsche in Trent's *Nietzsche's Ghost* (1994), or Maleuvre's 'Gide, Nietzsche, and the Ghost of Philosophy' (2000).

Rereading in this study means to *retain* as much as possible the 'rhetorical-oratorical' backdrop of the text, often conveyed with emotive expressions and often warrants misunderstanding, as Nietzsche does. As such, the sentences, phraseology, and syntax do not strictly adhere to the formalities of academic writing. As said in the introduction, the rereading method of this study does not intend to simplify Nietzsche, much less explain the aphorism in plain prose.

As a limitation, the study is confined only to the aphorisms, albeit it can serve as a seminal work for a thematic analysis on the two texts with a different focal contextualization. It relies on R.J. Hollingdale's translation rather than on Walter Kaufmann's and other new translations such that of Judith Norman and Aaron Ridley. This is because the author deems Hollingdale's translation as more receptive to the emotive expressions of the text.

Results and Discussion

Of the Virtue that Makes Small (Z, III, 5)

'Behold a river that flows back to its source through many meanderings (Nietzsche, 1969, p. 187)!' Zarathustra, after his restless wanderings, was more eager to see what has happened to men. And thus he saw a row of new houses in marvel and asked what it means to have them small as if they were houses for dolls. A silly child, he says, must have put them out of the toy-box, and so he wanted another child to put it back again. "Everything has become smaller (Z, p. 187)." And Zarathustra will have to stoop just to check the small houses, which incidentally made him miss his cave in his mountains. But Zarathustra never meant the houses only, nor only the small men, but to the virtue that made them small all throughout the days when he has been gone.

"I go among this people and keep my eyes open: they do not forgive me that I am not

*__Corresponding Author__: *Jan Gresil S. Kahambing*
Leyte Normal University, Tacloban City
https://orcid.org/0000-0002-4258-0563

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

envious of their virtues." Virtues – is it not that these men are persuasive enough, being sweet-talkers and all? Their virtues seem to insist on Zarathustra as if they have some force that collectivizes them together and thus wants him to be affected also by their contagion.

But Zarathustra does not understand their *small virtues*, and even these small people themselves. They force him to be with them, prickling and pecking on him as if to hide something that they are afraid of, something they consider fragile among themselves. They would like to lure and commend him to small virtue. Their manners of commendations are annoying, always causing vexations and blustering among them. Their words are always hoarse and meaningless – all talk but without thinking. It would seem that for Zarathustra, they are like hens in a farmyard that chuckle and backbite and swarm over a topic that is too clichéd. The small people annoyingly project their precious small virtues. An inserting point here is that 'small' could also mean particles and thus many or much. Their virtues then connect to the idea of particularization, for reducing a huge building into a series of small houses, for powdering a rock into small grains of sand – for it would seem to Zarathustra that these people have become grains of sand. And what does this gloomy cloud offer to them? It is not rain; it isn't rain that will drive their sands away with stormy waters; it is not rain that will come to rail their lusts and vices; it is not rain who will warn their pick-pockets; it isn't rain but lightning!

Their virtues are all too many, part of this and that, all *huiusmodi* phrases, as Meno who was deeply perplexed whenever Socrates asks him what virtue really is. The small men were too timid and kind to one another, with their small talks which make them happy in a small duration of time – tick-tock – and they point to nothing but empty words. They praise, but only to be praised back and thus give but only want to be given more. These small people who have nothing but words and no action, who by some have only their *will* but remains to be *willing*, they are *limping*; this does not help them move on and grow as this makes for a hindrance that reduces them to become smaller and smaller. These people haven't moved on from history yet; they are declining and are always looking back with a stiff neck while they walk forward. It is rare for them to have genuine actors; most are bad ones who could not even make up for who they really are because their actions don't show consistency. Their eyes tell lies and their feet as well; their words and deeds are inconsistent. That attitude itself is a sign of little manliness, which is supposed to be acting on one's word – which is supposed to draw out the woman from the passionate vexations of a girl. Further, Zarathustra found their worst hypocrisy: "that even those who command affect the virtues of those who obey." No initiative is found in these small men; one still needs to act first before the idiots go along – 'I serve, you serve, we serve.' They magnetize themselves all together but no one acts until one has to, as if they can't stand up on their own – such little manliness. But they knew well how to speak modestly, in wheedling tones all honey is their speech. Why so? Because they want to gratify by being gratified back, they want to insist for one to submit, to make one be ashamed of himself for them who dictate who one should be and thus lets one forget one's true identity – it is this very virtue that makes one small. These virtues make them smaller and smaller because only from small happiness do they live. And so what are their virtues?-**Cowardice, Submission, and Mediocrity**

But what do these three really mean? They are all clever virtues, to begin with, and so they hide in words so as not to provoke their true transparent intentions – not to harm and be harmed so they do good almost as *un*-autonomously as everyone. They have a monotonous accent that never raises up their true voice – all words are hoarse to be heard. What why do they make them small exactly? In avoiding activity, in avoiding laborious work, in avoiding virtue and in being contented with gossip and talk, they lost the opportunity to grow. With their cleverness they avoid pain, they avoid sweat, they avoid bruises and

*__Corresponding Author__: *Jan Gresil S. Kahambing*
Leyte Normal University, Tacloban City
https://orcid.org/0000-0002-4258-0563

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

wholesome activity – they avoid virtue by their "virtues." But these clever virtues has clever fingers that do not know how to fold themselves into fists – they cannot fight reality and thus resort to temerity and cowardice! How will one know how to live in the open harmonious meaning of life if one keeps on living as 'hedgehogs' at night, always defensive of one's spines and always rolling out underground? They've lost their opportunity to climb life, and for the sake of their rolling around, they already dug a pit for themselves. Because they can't accept that life is difficult, that it is always in chaos and always hoping to find the dancing star in them, they find themselves secure in the middle line – oh that meanest golden mean that virtue was! Can one call meekness virtue if one allows oneself to be bullied? Can one call amiability virtue if one doesn't fight one's fight? Can one call humility and docility and timidity and bashfulness virtue if all that one gets is dog food! Yes, they call dogs man's best friend because friends for them are like allies and petty accomplices who never question or rebel against them. They call it dogs that are tamed and trained not to bite their masters. But Zarathustra bites them even if they made of him a cockerel apart from his eagle. But further, they wanted to make every one of them as domestic animals! There is no manliness, just animalistic characters as chickens and pigs waiting for themselves to be slaughtered! 'I please you, you please me; no cock-fighting between all animal slaves; you have no right to do so' – that is their motto for a pleasant life. But how can man become a superman if one has become an animal instead? How can he fly if he comfortably ties himself to the ground? How can he overcome if there is no overcoming among themselves?

Slaves – these small men who have no identity at all are nothing but effects which can never further cause another; they are getting smaller and smaller; slaves of themselves and their pride. But what is it that they protect and not allow to be angry with them? Who is their boss who can easily reduce their dignity into lice that craw and stupidly submit to? It is their god. It is their godly pride that conjures their identity formation. They would not fight each other because each one reveals another's weakness and folly. Instead, they praise one another to be transparent in the background, continuously praising and building their own identity formations. It is their bossy pride that is too precious, ever to be worshipped in their clasped hands, their vain image that never knows sweat or risk! 'We have a god!' so they cry, but it is also a small god with their small virtues. These small men know nothing of honor and frankness. These small men lost the sense of creativity, of thinking out-of-the-box, out of their house for dolls! These small men kick out those who disobey their virtue, their inner bosses who do not want to grow where they imprison themselves in their daily comforts and systematized habits. These small men are like the tarantulas who are the preachers of equity, but equity which makes them unanimously small! Nietzsche parallelized this to the people in his time who has high regard for socialism, the doctrines of Marx and Engels, who like a sand timer, convert the masses of people to be in equal footings – equal small men! But they are not the ears for Zarathustra's words: he is godless. And anyone who renounces all submissions and let oneself rise above false contentment and slavishness is an equal of Zarathustra. Zarathustra never settles with mediocrity or false security – he cooks every chance in his pot and only when it is quite cooked does he welcome it as his food. To reaffirm life is to take risks, to take every chance to make yourself your own food to live. He never settles for less, as if less is for nibblers and those who remain to be nibblers. He never talks 'It is given' but 'it is taken,' for life is not to accept that one is ontologically less, but to transcend from it as to overcome it. And if one has not done anything from it, if one will only bury one's talents to the ground, it will be taken more and more. For those who have not toiled the earth, they sat in vain with nothing. The task then is to overcome that nothingness, that nihilism in the guise of the virtue that makes small. "Oh that you would put from you all *half* willing, and decide upon lethargy as you do

*__Corresponding Author__: *Jan Gresil S. Kahambing*
Leyte Normal University, Tacloban City
https://orcid.org/0000-0002-4258-0563

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

upon action!" (Nietzsche, 1969, p. 191) And so further one must do what he wills, as long as it may be first a *can*-will! "Always love your neighbor as yourselves – but first be such as love themselves – such as love with great love, such as love with great contempt! Thus speaks Zarathustra the Godless." But their hour is coming to an end and they have nothing to lose except their acts of smallness – poor roots who never risked to grow in hard rocks and thus poor soil also for it became useless. Alas, because of too much restlessness of themselves and not knowing fully what they truly are, they have become weary. Their weariness is absolute, for the fall of their Babel is the greatest of all falls. They wanted to further blaze into nothingness than to be watered to life again. With much aridness and emptiness, they will soon burn at the proper time of extreme heat – oh great noontide!

Thus spoke the Godless Zarathustra.

Of the Chairs of Virtue (Z, I, 2)

While speaking of the virtue that makes small, we have here a contradiction of virtue itself, a restful virtue that finds its niche in a chair. But this other kind of virtue also finds similarity in the mediocre, slavish, and leveling attitude of the small men. It is contradictory then for virtue to be accorded with sleep and Zarathustra finds this contradiction in the wise man with his chair – his chair of virtue. "Sleeping is no mean art: you need to stay awake all day to do it," says the wise man (Nietzsche, 1969, p. 56). Nietzsche goes on with the discourse of sleep, which further elaborates on the 'chairs' of discourse itself – of mere descriptions. For one may not assume a king's power to let the army stop and rest at noon for a siesta – it is their perfect vulnerability to enemies. All the times of the day, as the wise chairs of authority would suggest, would be to toil and seek virtue, so that night will come to rest peacefully. But does it really want to rest, as though the fig tree would blossom not on the dreamy fashion of night? Likewise, if philosophy would have established the very solution, its restlessness would be mitigated by a false rest. "But insofar as philosophy has understood the idea of thinking itself through its separation from the world of appearances, Nietzsche can say that the whole of Metaphysics, of philosophy since Plato, has been a dream… The problem is rather that today's philosophy is a dream in which one can no longer believe, a dream that forces us to wake up" (Haase, 2008, p. 7). There is thus a dichotomy when actually there should be not, for the resource to the Primal unity of the Apollonian dreams and the Dionysian celebration (Nietzsche, 1927) becomes imperative again. Whether to wake up or not, that is not the case, for "He, the lord of virtues, does not like to be summoned" (Nietzsche, 1969, p. 57), rather "he comes to me on soft soles, the dearest of thieves, and steals my thoughts from me: I stand as silent as this chair. But I do not stand for long: already I am lying down" (Z, p. 57). Behold! The name of the lord of virtues is sleep!

To sleep well is to harmonize honor, but even to the "crooked authorities"? Does it not imply to neglect the evil lurking in the laws? "But one sleeps badly without a good name and a small treasure" (Z, p. 57) – this is the pride of the chair, of authority. Thinking that reputation is all there is, one rests on doing nothing for the sake of scarring nothing of one's 'dignity' – or self-made appearance? The wise men in their chairs of virtue preach the overcoming of ten truths (gossips?) a day and ten waves of laughter. Such 'wise' words are meant to tire oneself to perfect sleep, but it actually is an invitation for a perfect slumber! "Peace with God and with your neighbor: thus good sleep will have it. And peace too with your neighbor's devil. Otherwise, he will haunt you at night" (Z, p. 57). For "sleep is itself a worker, a partner of the daily toil… sleep works of itself, but it works on existing material; it creates nothing; it is skilled in combining and exemplifying" (Sertillanges, 1987, p. 85). But is it not thus that sleep is also a poison in itself? It hoards in the appearances one created in the day and thus works on it by night. But this sleep too is contagious (Z, p. 58). Zarathustra understands very well the inactive 'wiseness' –

*__Corresponding Author__: *Jan Gresil S. Kahambing*
Leyte Normal University, Tacloban City
https://orcid.org/0000-0002-4258-0563

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

the ivory tower disposition – of all the men who sit in their chairs and yet preaches virtue: incidentally, isn't this the same 'all talk, no deed' mentality of the small men? This proves a good critique of the degenerate educational 'practitioners' in academia as sleep's modern-day writing slaves and paper zombies: "To all of these lauded wise men of the academic chairs, wisdom meant sleep without dreams: they knew no better meaning of life" (Z, p. 58). Ah, the life on a chair – it has all the following words inscribed on it: 'Those who cannot do, teach.'

But is the chair a dead-end? When at the point of the chaotic world which demands an active pessimism, "a violent force of destruction, a refusal of this world precisely because it is stubbornly resistant to their realization" (Reginster, 2006, p. 29), another call supersedes us, his voice too loud for all wildernesses:

O Man! Attend!
What does deep midnight's voice contend?
'I slept my sleep,
'And now awake at dreaming's end:
'This world is deep,
'Deeper than day can comprehend,
'Deep is its woe,
'Joy- deeper than heart's agony:
'Woe says: Fade! Go!
'But all joy wants eternity,
'Wants deep, deep, deep eternity'

Sing for this then, oh Higher men, to overcome the weakness of modern man. Let this be the lullaby for sleep, for only in these words can one stimulate a beautiful nightmare, gentle, soothsaying, and yet disturbing. Let it juxtapose the sleeping virtues on a device for waking up. For when all one knows is how to sleep emptily, how can one call forth the world – how can one toil the deep earth?

Never mind the Ego – the ego is a sleepyhead! Zarathustra is a singer, and he will wake this hubris up in its pacified dreams. Zarathustra will attend as he has no time for sleep; he only knows how to sing a lullaby of waking up. "Blessed are these drowsy men: for they shall soon drop off."

Thus spoke the wakeful Zarathustra.

The Child with the Mirror (Z, II, 1)

Speaking and speaking with noble words but the recipient's ears are not for Zarathustra is like talking to the small men. They have their own prejudices and imageries; they cannot dispel their gods in them, thinking they're self-sufficient. "This, indeed, is the most difficult thing: to close the open hand out of love and to preserve one's modesty as a giver" (Nietzsche, 1969, p. 107). It is thus the hardest when one cannot give to someone one's abundance; it is painful (Z, p. 107). Yet it is further painful for one to give but even one's gift itself rejects one's generosity and returns back by itself. Years of pain had given Zarathustra impatience; it is now time to give again.

But oh then that a child came to him with a mirror in his hand and says, "Look at yourself in the mirror!" (Nietzsche, 1969) And in it was the devil! "My doctrine is in danger, weeds want to be called wheat! My enemies have grown powerful and have distorted the meaning of my doctrine so that my dearest ones are ashamed of the gifts I give them" (Nietzsche, 1969, p. 107). Nietzsche too was weary of the bad reputation that gave up on him. But his conviction motivated him to work beyond himself, of his bad image, to seek his friends again (Z, p. 107). He did not fight the devil in the mirror; else he will become the devil himself (Nietzsche, BGE, 1997). Instead, he reversed the gaze of the abyss (Nietzsche, 1997) and in its reversal demands an authentic *ressentiment* (Nietzsche, GM, 1996, p. 22), "the necessary orientation outwards rather than inwards to the self."

Behold, Zarathustra sprang up not gasping as to seek help, but to "like a seer and a singer whom the spirit has moved (Z, p. 107)." "My impatient love overflows in torrents down towards morning and evening.

*__Corresponding Author__: *Jan Gresil S. Kahambing*
Leyte Normal University, Tacloban City
https://orcid.org/0000-0002-4258-0563

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

My soul streams into the valleys out of silent mountains and storms of grief. I have belonged to solitude too long: thus I have forgotten how to be silent. (Z, p. 108).” When the world has never changed much because of its addiction to stillness and sleep, that ever boastful claim to remain in ivory towers because of rigorous and strictly empirical sciences – he wanted to give it bliss again like a storm wind. For him, the small men and wise men are like old-tongues. But the earth needed a creator, wild wisdom, a restlessness of love that is overflowing – a flash of lightning that wants to cast hail showers into the depths. This lightning is the superman!

But this wisdom never rests on negligence and avoidance of reality. The baby wisdom seeks the realization of the earth, an understanding of its meaning; even its cruel meaning. He would rather act thus than be silent; he wanted to speak of it, to friends and enemies (Z, p. 108). The lioness wisdom will transform now; it will now metamorph to a child! At rush, Zarathustra seeks the acceptance of his friends’ hearts, to let the rocky wilderness and deserted locus of the camel transform towards a grassland of gentle love. “Now she runs madly through the cruel desert and seeks for the soft grassland”, for upon it “she would like to bed her dearest one (Z, p. 108).”

Thus spoke the transfigured Zarathustra.

Recapitulation

A specific point can be gleaned from the arrangement of aphorisms provided: an understanding of virtue that is focused on the meaning between the lines from the *excessive* mode of expression in the text. In Book III, there is a crucial question: ‘why are the houses small?’ Are they small because the men are small so they built small houses? Or are the houses small that the men also became small? The domain of the personal-political dichotomy can be surmised here. Does virtue reside in the structure or in the individual? The crucial point of the aphorism is that virtue is structural and it shapes the individual more than it shapes the structure. Virtue is, therefore, a collective emanation from a political standpoint – it forms the values of the community, which for the aphorism *Of Joys and Passions* refers to the virtues of the *herd.* Within the herd, one has no right to question and engage in confrontations. Within the herd, one must not overcome but one must stick to the ‘values’ of the community. But these values are thematic nonsense crafted to level the individual in uniformity – even Zarathustra *stoops* at the houses. The values, which appear to be virtues, are themes formed by mere words appearing as deeds – in this manner, themes during celebrations are presented in sophistry but without habituation, as if the act of doing the theme is a one-time show, that is, only for the occasion. The term ‘small’ meant the falseness of humility, mediocrity, the role of victimization, meekness, and avoidance of truth-telling (or, to use Foucault’s term, *Parrhesia*). Following from this, the aphorism in Book I exposes the negativity of virtue: the call to action makes the caller exempted. The chair of virtue makes one wise since wisdom in this aphorism means being virtuous with doing nothing. Wise is he who does not do anything to stain one’s reputation. Wise is he who enjoys overworking for the day – with the illusive sidelines of appearing to know 10 chatter truths and 10 fake waves of laughter – to enjoy the endpoint of sleep. Sleep assumes the finality of the virtue that virtue serves sleep as its master. In this sense, one does anything *to sleep* and *for sleep.* Zarathustra in this sense becomes the lightning that he preaches – he heralds the lightning that is the *Superman* (the overcoming of man). In Book II, one only needs to let virtue look itself in the mirror. And what better metaphor can present this mirror if not the child, which for Zarathustra is the image of creativity and life-affirmation? The child *with* the mirror calls for virtue to scrutinize itself. Perhaps only in this converging point of the child with the mirror and the men of virtues can they realize that the houses and the chairs are making them ‘humble’ and ‘wise’ but in the derogatory senses of the term.

*__Corresponding Author__: *Jan Gresil S. Kahambing*
Leyte Normal University, Tacloban City
https://orcid.org/0000-0002-4258-0563

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

References

Adib-Hajbaghery, M.(2011). Traditional Beiner, R. (2018). *Re-reading Nietzsche and Heidegger in an age of resurgent Fascism*. Text of the 2016-2017 Desmond Morton Research Excellence Award Public Lecture delivered at the University of Toronto Mississauga on January 30th, 2018.

Blanco, M. & Peeren, E. (2013). Introduction. In M. Blanco, & E. Peeren, (Eds.), *The Spectralities Reader: Ghosts and Haunting in Contemporary Cultural Theory* (pp. 1-27). London: Bloomsbury.

Cauchi, F. (2009). Nietzsche's Zarathustra: Promethean pretensions and Romantic dialectics. *Romanticism*, *15*(3), 254-264.

Conant, J. (2005). The Dialectic of Perspectivism I. *Sats – Nordic Journal of Philosophy*, 6(2), 5-50.

Conant, J. (2006). The Dialectic of Perspectivism II. *Sats – Nordic Journal of Philosophy* 7(1), 6-57.

Del Caro, A. (2011). Zarathustra Is Dead, Long Live Zarathustra!. *Journal of Nietzsche Studies*, *41*(1), 83-93.

Haase, U. (2008). *Starting with Nietzsche*. London: Continuum International Publishing Group.

Kahambing, J. G. (2014). Man of the future: The superman in the eternal vow. *The Thomasian Philosopher*, *30*(1), 190-216.

Kahambing, J. G. (2017). The future of Nietzsche's perspectivism as political consensus. *Recoletos Multidisciplinary Research Journal*, *5*(2). https://doi.org/10.32871/rmrj1705.02.05

Magnus, B. (1978). *Nietzsche's existential imperative* (Studies in Phenomenology and Existential Philosophy). Indiana University Press.

Maleuvre, D. (2000). Gide, Nietzsche, and the ghost of philosophy. *Mosaic: An Interdisciplinary Critical Journal*, *33*(1), 77-94.

Maleuvre, D. (2000). Gide, Nietzsche, and the ghost of philosophy. *Mosaic: An Interdisciplinary Critical Journal*, *33*(1), 77-94.

Morrisson, I. (2014). Ascetic slaves: Rereading Nietzsche's *On the Genealogy of Morals. Journal of Nietzsche Studies*, *45*(3), 230-257. doi: 10.1353/nie.2014.0041

Nietzsche, F. (1927). *The Birth of Tragedy*. (C. P. Fadiman, Trans.) New York: Modern Library.

Nietzsche, F. (1969). *Thus Spoke Zarathustra*. (R. Hollingdale, Trans.) England: Penguin Books.

Nietzsche, F. (1996). *On the Genealogy of Morals*. (D. Smith, Trans.) New York: Oxford University Press.

Nietzsche, F. (1997). *Beyond Good and Evil*. (H. Zimmern, Trans.) New York: Dover.

Oliver, K. (2016). *Womanizing Nietzsche: Philosophy's Relation to the" feminine"*. Routledge.

Olson, N. (2001). Perspectivism and truth in Nietzsche's philosophy: A critical look at the apparent contradiction. Retrieved from http://www.stolaf.edu/depts/philosophy/reed/2001/perspectivism.html

Ostas, M. (2005). Rereading Nietzsche in theory: Aesthetics and the movement of genealogy in the early work. *International Studies in Philosophy*, *37*(1), 65-80.

Owen, D. (2013). *Maturity and modernity: Nietzsche, Weber, Foucault and the ambivalence of reason*. Routledge.

Reginster, B. (2006). *The Affirmation of Life*. Cambridge, England: Harvard University Press.

Roberts, M. (1995). Rereading Marx and Nietzsche. *Rethinking Marxism: A Journal of Economics, Culture & Society*, *8*(1), 100-111.

Sabo, A.G. (2000). *The Übermensch comes to Scandinavia: Rereading Hamsun and Dinesen in the light of Nietzsche's philosophy* (Doctoral Dissertation). University of Washington).

**Corresponding Author*: *Jan Gresil S. Kahambing*
Leyte Normal University, Tacloban City
https://orcid.org/0000-0002-4258-0563

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

Sertillanges, A. (1987). *The intellectual life*. (M. Ryan, Trans.) Washington: Catholic University of America Press.

Soysal, S. (2007). *Nietzsche's perspectivist eepistemology: Epistemological implications of will to power* (Doctoral thesis). Middle East Technical University, Cankaya/Ankara, Turkey.

Snaza, N. (2014). The human animal *Nach* Nietzsche: Re-reading Zarathustra's interspecies community. *Angelaki: Journal of the Theoretical Humanities, 18*(4), 81-100.

Stegmaier, W., & Anderson, L. M. (2009). After Montinari: On Nietzsche Philology. *Journal of Nietzsche Studies*, 5-19.

Trent, L. (1994). *Nietzsche's Ghost.* Cyborg Productions.

Ziolkowski, T. (2012). Zarathustra's Reincarnations: Literary Responses to Nietzsche's Work. *Modern Language Review*, *107*(1), 211-229.

Zuckert, C. (1985). Nietzsche's rereading of Plato. *Political Theory*, *13*(2), 213-238.

*__Corresponding Author__: *Jan Gresil S. Kahambing*
Leyte Normal University, Tacloban City
https://orcid.org/0000-0002-4258-0563

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018

Journal of Education and Society

Research Article | A Refereed Journal

Principal Component Analysis: A Revalidation of the Mathematics Persistence Scale

Vanessa A. Marmita*
Melet B. Mariano*
Eric M. Masela*

ABSTRACT

A reliable and valid instrument on mathematical persistence, appropriate for Filipino students, can address gaps in mathematics education especially that there is a relationship between persistence and problem solving. This paper addressed the purpose of providing additional data concerning the reliability and validity of Mathematics Persistence Scale (MPS) in the Philippine setting. An instrument used by Stoll in his study in 2015, which looked into different components relevant to mathematical persistence in education, was revalidated considering Filipino participants. The questionnaires were distributed to randomly selected 194 senior high school students. Factor structure extraction was done making use of the principal components method with varimax rotation. Four factors were extracted specifically labeled as; Effortful Math, Understanding Math Concepts, Innate Math Persistence and Math Confidence. MPS has good internal consistency with Cronbach's alpha in the range of .508 to .860. Based on the findings, the same factor structure was extracted and is consistent with what this instrument is supposed to measure. Therefore, this MPS can also be administered among Filipino students in evaluating their level of persistence and can also be a reliable basis to further establish interventions to improve mathematics learning.

Keywords: *persistence; mathematics persistence scale; reliability; validity; principal component analysis*

Introduction

Mathematics is commonly perceived to be difficult and abstract, in the sense that there could be a lot of solutions, making it vague (Stoll, 2015). This challenge is not only true internationally but also among Filipino students. There are evidences showing that students have mathematical anxieties and hard time coping with their mathematical tasks (Klados, Pandria, Micheloyannis, Margulies, & Bamidis, 2015). Yet its practical use in the day to day must not also be disregarded. The skill we learn from mathematics can be a means to find solutions for future problems (Ogena & Tan, as cited in SEI-DOST & MATHTED, 2011). In addition, a country's economic development relies heavily on its progress in science and engineering, promoting the development of mathematically empowered Filipino students (Pascua; Ogena & Tan, as cited in SEI-DOST & MATHTED, 2011).

Persistence is doing something even if it is hard (Merriam Dictionary, 2018). It is more about the acceptance to fail, learning from the experience and trying again (LieffBenderly, as cited in Stoll, 2015). The nature of true problem solving, as outlined by Schoenfeld in 1992, requires persistence in mathematics (Stoll, 2015). There is a significant relationship between persistence and mathematical problem solving (Breen, Cleary, & O'Shea, 2010; Stoll, 2015). Thus students who are persistent are more willing to seek challenges and pursue learning mathematics. There are studies regarding attitude towards mathematics and performance yet only a few have included other factors such as persistence in between (Liu, & Koirala, 2009).

Furthermore, continued strategies in education are seeking towards increased academic persistence to improve performance and college readiness (Nagaoka et al., 2013; Reason, 2009). Different materials are developed to attain this goal. But emphasis on

**Corresponding Author*: *Vanessa A. Marmita[1]*
Melet B. Marian[2], Eric M. Masela[2]
Leyte Normal University[1], Tacloban City
De La Salle University, Manila[2]

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

the validity and reliability must be taken into consideration. Existing instruments should still undergo revalidation, replication, and retesting as these factors may be affected contextually, as this is being influenced by culture difference in countries which also exists among islands in the Philippines (Fredricks, & McColskey, 2012; Lai, 2013). Principal component analysis (PCA) identifies the underlying structure which may exist in a particular scale. It further explains a latent variable with items belonging to the same clusters or constructs, which can be a basis for the scale's construct validity. Internal consistency or the inter-rater reliability of the scale can be gauged and compared whether it is consistent among respondents. This is a preliminary initiative for scales like mathematics persistence to be appropriate among its participants.

The New York City Transfer School Common Core Institute (2016) stated from their paper that these tools designed to identify and build student's persistence in doing challenging math tasks help them not only to be confident in their ability to learn but also having the drive to learn more. With this influence to mathematics teaching and learning, the need of testing the validity and reliability of an instrument in mathematics persistence considering high school students in the Philippines was perceived, which led to the conception of this paper. Results in this paper will contribute to strengthening the scale's purpose of measuring the mathematics persistence among Filipino students and thus aiding educators and administrators for an intervention promoting optimum mathematics learning and developing in them the skill of pursuing tasks despite difficulties.

Literature Review

Common core state standards in mathematics recognize the significance of persistence to mathematical problem solving and even considers it a 21st century skill (Common Core Initiative, as cited in Stoll, 2015). It is one of the key factors to attain different professions or careers (Kooken, Welsh, McCoach, Johnston-Wilder, & Lee, 2016). This has even been a highlight in a study whose findings showed that students who were not able to meet their career goals are less persistent which has an impact to social concerns or being involved to harmful behaviors (Barnett, 2011). Measuring non-cognitive factors like persistence can be done through a self-report instrument, getting informant (such as a parent, or teacher), school records, and observation. However, it can also increase the indicators of persistence, which may include extraneous factors (US Department of Education, as cited in Stoll, 2015). This has also been argued by Bandura that a number of factors would affect an individual's physical and emotional state, making it more difficult to come up with an instrument for non-cognitive factors (Usher, & Pajares, 2009). Different scales contain different underlying components which is necessary to further model and explain latent variables or variables which cannot be explicitly identified. Researchers recommend that studies involving a latent variable and focused on identifying its variation base from a set of factors must conduct factor analysis on existing instruments (Fredricks, & McColskey, 2012). Analyses of data using the same instruments, contributing to the strength of measures, can be referred to as construct validity. Also, internal consistency can identify the inter-rater reliabilities of scores from the assessed materials. Some of the standard reliability measures are Cronbach's Alpha and factor analysis (Veenman, 2011). Malaysian researchers also insisted for these procedures, as it is a common mistake that standard instruments validated in the United Stated can already be used by anybody. Underlying factors are affected contextually, thus existing instruments must be validated across different groups of participants. One reason is on differences of culture among populations and countries like the Philippines (Lai 2013). Aside from the fact mathematics education is also affected by these differences (Martin, 2009).

The principal component analysis (PCA), which is one type of factor analysis, is

*__Corresponding Author__: *Vanessa A. Marmita*[1]
Melet B. Marian[2], *Eric M. Masela*[2]
Leyte Normal University[1], *Tacloban City*
De La Salle University, Manila[2]

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

commonly used to identify underlying structure, done to establish the validity of the instrument and also for cross-validations (Bro, & Smilde, 2014). In a study of Kooken et al. (2016), they have used this methodology, to identify cluster of items whose patterns of responses will belong to the factors which were included in their study. The same methodology was also part of the study which developed and validated the Bandura's items assessing self-efficacy of middle school mathematics students (Usher, & Pajares, 2009). Another replication study was also done to validate and improve their identified measurement instrument. Their study also found a comparable result with its original measures yet still with recommendations of implementing to larger participants (Fisher, Elrod, & Mehta, 2011). A similar study also conducted the reinvestigation in the construct validity of an instrument—the Phlegm pattern questionnaire—considering a new set of data and confirming the feasibility of its use to a different set of population (Kim, H., Ku, B., Kim, J.Y., Park, Y-J., & Park, Y-B, 2016). Different instruments can then be revalidated, replicated, and improved with the different circumstances that it will be used in studying a body of knowledge. Validation reporting and testing on psychometric research instruments use is already emphasized in researches. Although a study showed that it has also been evident since 2007 among the research studies included in the Journal of American Society for Information Science and Technology (Kim, 2009).

Persistence has been associated in terms of perseverance, tenacity, and grit. In a study, relationships between academic tenacity and performance were determined using a self-report grit scale (Duckworth et al, as cited in Stoll, 2015). Findings showed that students with a higher grit score obtained higher levels of education. It further implies that in terms of education those who are more persistent tend to be on course. This can also be supported by a study with findings showing that students with avoidance on goals are less persistent in doing mathematics tasks which are hard, leading to lower mathematics scores (Mohsenpour, Hejazi, & Kiamanesh, 2006). Consistent to another study which found that students who are average and above average are also the ones who persisted longer, especially when faced with more difficult problem solving items, implying that they are also the ones who get higher mathematics scores (Montague, & Applegate, 2000). But intelligence can still be compensated by hard work and determination (Moutafi et al, as cited in Stoll, 2015). Many studies have involved student's attitude towards mathematics and their achievement but only a few are investigating factors which may lie between them such as self-efficacy and persistence (Liu, & Koirala, 2009).

On the other hand, underlying factors which promote persistence are academic mindsets, effortful control, and learning strategies. Academic mindset is defined as the student's background and self-image as learners. It includes their beliefs and attitudes towards what they are learning. These insights about self can serve as guide for teachers and researchers to determine a student's ability to persist. It also suggested promoting growth mindset in terms of learning, rather than being fixed (US Department of Education, as cited in Stoll, 2015, p.6). Students must be seen as lifelong learners where their success is determined by their work ethic rather than intelligence. The effortful control is referred to as motivation which can be intrinsic or extrinsic in nature. These extrinsic influences may come from social and cultural factors, like families, school, and communities (Ellington, & Frederick, 2010). Thus completing tasks depends on the student's motivation on accomplishing it (Thom & Pirie; Schwartz, as cited in Stoll, 2015). To demonstrate persistence, effortful control is also combined with the willpower, ability to avoid disturbances and manage emotional stress, keeping the task going despite hardships and less entertaining (Leon, Medina-Garrido, & Núñez, 2017). Also, this factor on effortful math is considered to be the first factor in the persistence scale of Stoll (2015). Another study on the development and validation of a motivational persistence scale identified

*__Corresponding Author__: *Vanessa A. Marmita[1]*
Melet B. Marian[2], Eric M. Masela[2]
Leyte Normal University[1], Tacloban City
De La Salle University, Manila[2]

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

underlying factors which are also rooted from a student's goals or purposes. The researchers termed these purposes as long-term, current and recurrence of unattained purposes (Constantin, Holman, & Hojbotă, 2011).

Issues on low persistence and academic completion rates have driven different proponents to reconsider the delivery in math courses (Burdman, Rutschow & Schneider as cited in Ngo, & Kosiewicz, 2017). This is not only evident internationally but there are also evidences showing these academic issues in the Philippines (Andaya, 2014). There are institutions which included additional courses, termed as developmental mathematics education, with the belief that it will improve the persistence of students. Yet there are still limited studies to have an in-depth explanation about this (Wolfle, 2012). Although some academic issues can be explained by student's academic preparation, the idea of having a clear understanding of their non-cognitive skills and strengthening it, cannot be eliminated. Practitioners and policy-makers are also exploring alternative models of delivery that accelerate student progress, contextualize curriculum and instruction, or provide additional support to students (Rutschow & Schneider, as cited in Stoll, 2015). Consistent with this, the Department of Education in the Philippines also had paradigm shift, adding two years in high school, referred as senior high school and implemented the K to 12 curriculum, catering the needs of students and quality education (RA 10533, 2013). But it should also be noted that educators must be aware of the student's mathematics achievement and engagement, which is related to his/her persistence, as these factors decline in secondary education (Leon et al., 2017).

These studies emphasizing the importance of persistence, ways of measuring it and initiatives of including it to support student's performance, establishes strong basis of revalidating a mathematics persistence scale, strengthening its validity and reliability, considering it to be context specific to Filipino participants. These have highlighted the essence the topic investigated. Thus, making the conduct of this study relevant.

Theoretical Framework

Different theories will support the importance of mathematics persistence and establishing a valid and reliable scale. One of these theories is the expectancy theory, which pertains to the beliefs of an individual in accomplishing and doing a task (Zerpa, Hachey, van Barneveld, & Simon, 2011). A student has a personal perspective on how well he/she can do a task, perceive its importance, enjoyment and benefits, and being reflected in his/her output. These tasks can also be drawn from a students' goals where Asian students like Filipinos are known for adopting multiple goals contributing to increase in achievement and motivation (Dela Rosa, & Bernardo, 2013). Another framework also on student's mathematics identity development or an individual's perception on how he/she does mathematics showed the roles of interest and external recognition and not merely contributed by competence and performance (Cribbs, Hazari, Sonnert, & Sadler, 2015). This still goes back to the personal beliefs of the student.

Research Questions

This study aimed to provide additional data on the reliability and validity of the Mathematics persistence scale (MPS) with Filipino participants. It sought to answer the following:

1. What are the different factor structures underlying MPS?
2. What is the difference in the identified factor structure compared to a previous study of Stoll?
3. What is the level of reliability of the MPS?
4. What is the difference in the level of reliability compared to a previous study of Stoll?

*__Corresponding Author__: *Vanessa A. Marmita[1]*
Melet B. Marian[2], Eric M. Masela[2]
Leyte Normal University[1], Tacloban City
De La Salle University, Manila[2]

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

Methodology

Research Design

This study is quantitative in nature making use of a correlational research design, which factor analysis in general underlies. It used quantitative data collection and analysis with the goal of exploring relationships among variables in the study. Items on the scale are considered to be individual variables, drawing relationships among them and clustering them into components.

Data Collection and Instruments

Public senior high schools from Valenzuela City and Bataan were considered in this study, taking into account that these schools are some of the high schools which offers the different academic strands implemented in the Philippines. From the targeted schools, a random selection was made to which sections from Grades 11 and 12 were given the scale. Approval from respective principals and school heads was sought for the conduct of the study. Two sections were selected among the schools for each grade level. There was a total of 194 students who participated in the survey, 75 of which were grade 11 and 119 were grade 12. The final sample size with a ratio of over 13 cases per variable satisfied the condition that the number of observations must be at least five times the variables or items to be analyzed (Hair, Black, Babin, & Anderson, 2009). The administration of the scale took a maximum of 10 minutes for the 15-item questionnaire, using a 5-point Likert scale (with 1 – Strongly Disagree, 2 – Disagree, 3 – Neutral, 4 – Agree, and 5 – Strongly Agree), which was adopted from the Mathematics persistence questionnaire of Stoll (2015).

Data Analysis

Responses were tallied and consolidated for data analysis. Principal component analysis was performed to extract the underlying structure in the gathered dataset. This method was used to verify the construct validity of the new set of participants with different culture compared with that included by Stoll (2015). Extracted factors were rotated by varimax rotation. The resulting factors were also compared with the previous study and comparisons regarding the similarities and differences were also analyzed. Finally, the reliability of items in each factor was examined by Cronbach's α and the likelihood of items for deletion were also considered.

Ethical Considerations

Ethical considerations for conducting research were highly regarded. Standard protocols and procedures were followed in the data gathering and its implementation. A letter of consent for their participation, was given to the schools and the students. Participation was voluntary and the participants had the option to refrain or exclude themselves from participating in this study. Confidentiality and anonymity were ensured in the responses of the participants and results were collated with no individual response used against the participating student nor the school.

Results and Discussion

Initially, the factorability of the 15 items in the Mathematics persistence scale was examined. First, it was observed that all the items correlated at least .3 with at least one other item, suggesting reasonable factorability. Second, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .795, above the commonly recommended value of .6, and Bartlett's test of sphericity was significant $\left(\chi^2(105) = 918.33, p < .05\right)$. Lastly, the communalities were all above .3 (see Table 1), further confirming that each item shared some common variance with other items. These overall indicators implied that factor analysis was deemed suitable with all items, leading no item deleted with possibilities of being grouped in particular components.

*__Corresponding Author__: *Vanessa A. Marmita[1]*
Melet B. Marian[2], Eric M. Masela[2]
Leyte Normal University[1], Tacloban City
De La Salle University, Manila[2]

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018

Table 1
Factor loading results of the Principal Component Analysis

Item No.	Component 1 Effortful Math	2 Understanding Math Concepts	3 Math Persistence	4 Math Confidence	Communalities
15	.822				.751
12	.804				.677
4	.762				.612
2	.735				.552
8	.701			.334	.607
11	.689				.554
13		.878			.777
3		.786			.640
14		.705	.377		.651
5			.724		.599
6			.663		.576
1			.661		.460
7				.719	.585
10		-.318		.680	.618
9				.623	.483

Note: Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 6 iterations.

Factors were extracted by the principal components method and rotated by varimax rotation. Initial eigen values indicated that the first four factors explained 24%, 14%, 12% and 10% of the variance respectively, explaining more than half of its cumulative variation. Factor structures of the PCA results and the previous model from the study of Stoll (2015) are compared in Table 2. Underlying items in each factor were similar to the study of Stoll (2015) and so their factor labels were retained. The least factor loading was on Mathematics confidence which may be because students seem to have false impression of their own levels of persistence and confidence compared to what they actually have (Breen et al., 2010). All items had factor loadings of greater than .4, which indicates that these are significant loadings. Items 8, 14 and 10 can be considered to have cross loadings since a loading of .3 is a marginal significant loading. But the higher loading is significantly high and these items are also consistent with the study of Stoll, belonging to the same factor, and so the items were retained. Only items 9 and 1 were placed on a different construct but the transfer made the innate Math persistence factor to be valid since originally it only has two items which violated the guidelines of factor analysis in considering factors (Hair et. al., 2009).

Table 2
Comparison of factor structure between this study and a previous study

Factor structure of this study		Factor structure of the previous study	
Factor 1	15, 12, 4, 2, 8, 11	2, 12, 8, 11, 4, 5, 9	Factor 1 (Effortful Math)
Factor 3	5, 6, 1	5, 6	Factor 2 (Innate Math Persistence)
Factor 4	7, 10, 9	7, 10, 1	Factor 3 (Math Confidence)
Factor 2	13, 3, 14	13, 14, 3	Factor 4 (Understanding Math Concepts

Internal Consistency

The overall internal consistency of the Mathematics Persistence scale is .750 which means that the entire questionnaire has a good internal consistency in the items. Factor Cronbach's of each item are presented in Table 3. All the extracted factors have moderately good internal consistency ranging from .508 to .860 and thus reliable. The derived reliability from this dataset is also consistent with the original version with Cronbach's alpha that ranges from .54 to .84. (Schommer-Aikins et al., as cited in Stoll, 2015, p. 10). Although the resulting Cronbach's alpha has a lower range of .508 in the Math Confidence factor, this indicates that this factor must still be tested to a wider range of respondents and review the items in this factor to verify its reliability and validity, considering that this factor has also the lowest loadings in the PCA. It can be noted that the reliability of Factor 3 increases when item #1 is deleted. But both factor reliability and the item when deleted yields a .6 Cronbach's alpha when rounded to 1 significant figure. It is consistent with the item's high factor loading which was .661, and so the item was still retained. Yet further investigations can be done to verify whether the item really belongs to that particular factor or if it can be deleted from the scale.

**Corresponding Author*: *Vanessa A. Marmita[1]*
Melet B. Marian[2], Eric M. Masela[2]
Leyte Normal University[1], Tacloban City
De La Salle University, Manila[2]

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

Table 3
Internal consistency of factors

Cronbach's α	Item	Cronbach's α if item is deleted
Factor 1 .860	15	.822
	12	.824
	4	.841
	2	.848
	8	.839
	11	.843
Factor 2 .774	13	.600
	3	.754
	14	.722
Factor 3 .568	5	.336
	6	.408
	1	.614
Factor 4 .508	7	.339
	10	.387
	9	.486

Conclusion

Based on the findings, items and constructs of this scale does not deviate with what this instrument is supposed to measure. Consistent results from the previous study were obtained extracting four factors labeled as effortful Math, understanding Math concepts, innate Math persistence and Math confidence. In general, the Mathematics persistence scale has been validated and tested among Filipino participants with good construct validity and internal consistency for evaluating the level of persistence in an individual.

Identifying students' level of persistence can give educator's better ideas in assisting better opportunities for students to portray persistence especially in solving mathematics problems and succeed in their educational undertaking (Stoll, 2015). In spite of the confirmation of the similar factor structure model of the previous study, this is still an exploratory study based on the survey research method and data-driven aspects. Further testing can still be done to a wider scope of schools and larger number of participants as well as considering confirmatory factor analysis.

Acknowledgement

The researchers would like to express their utmost gratitude to their participants, mentors, families, relatives and peers especially to the Almighty God for making this paper possible. Special credit is also due to Dr. Antriman Orleans of De La Salle University – Manila, requiring this study for a coursework and so is the conception to this paper. Extended thanks is also given to everybody, who in one way or another have contributed to the success of this academic endeavor.

References

Andaya, O. J. F. (2014). Factors that affect mathematics achievements of students of Philippine Normal University-Isabela Campus. *Researchers World*, *5*(4), 83-91.

Barnett, E. A. (2011). Validation experiences and persistence among community college students. *The Review of Higher Education*, *34*(2), 193-230.

Breen, S., Cleary, J. & O'Shea, A. (2010). *Measuring students' persistence on unfamiliar Mathematical tasks. Proceedings of the British Society for Research into Learning Mathematics*, *30*(3), 19-24.

Bro, R., & Smilde, A. K. (2014). Principal component analysis. *Analytical Methods*, *6*(9), 2812-2831.

Constantin, T., Holman, A., & Hojbotă, M. A. (2011). Development and validation of a motivational persistence scale. *Psihologija*, *45*(2), 99-120.

Cribbs, J. D., Hazari, Z., Sonnert, G., & Sadler, P. M. (2015). Establishing an explanatory model for mathematics identity. *Child Development, 86*(4), 1048–1062. doi:10.1111/cdev.12363

Dela Rosa, E. D., & Bernardo, A. B. I. (2013). Testing multiple goals theory in an Asian context: Filipino University students' motivation and academic achievement. *International Journal of School & Educational Psychology*, *1*(1), 47-57. doi:10.1080/21683603.2013.782594

**Corresponding Author*: *Vanessa A. Marmita[1]*
Melet B. Marian[2], Eric M. Masela[2]
Leyte Normal University[1], Tacloban City
De La Salle University, Manila[2]

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

Ellington, R. M., & Frederick, R. (2010). Black high achieving undergraduate Mathematics majors discuss success and persistence in mathematics. *Negro Educational Review*, *61*(1-4), 61-84.

Fisher, C. M., Elrod, C. C., & Mehta, R. (2011). A replication to validate and improve a measurement instrument for Deming's 14 Points. *International Journal of Quality & Reliability Management*, *28*(3), 328-358.

Fredricks, J. A., & McColskey, W. (2012). The measurement of student engagement: A comparative analysis of various methods and student self-report instruments. In S. Christenson, A. Reschly, C. Wylie, (Eds.), *Handbook of Research on Student Engagement* (pp. 763–782). Springer. doi:10.1007/978-1-4614-2018-7_37

Hair, J., Black, W., Babin, B., & Anderson, R. (2009). Exploratory factor analysis. In Hair, J., Black, W., Babin, B., & Anderson, R. (Eds.), *Multivariate Data Analysis: A Global Perspective* (7th Edition) (pp. 89-150). Upper Saddle River: Prentice Hall.

Kim, H., Ku, B., Kim, J.Y., Park, Y-J., & Park, Y-B. (2016). Confirmatory and exploratory factor analysis for validating the Phlegm Pattern Questionnaire for healthy subjects. *Evidence-Based Complementary and Alternative Medicine, 2016,* 1-8. http://dx.doi.org/10.1155/2016/2696019

Kim, Y.-M. (2009). Validation of psychometric research instruments: The case of information science. *Journal of the American Society for Information Science and Technology*, *60*(6), *1178–1191*. doi:10.1002/asi.21066

Klados, M. A., Pandria, N., Micheloyannis, S., Margulies, D., & Bamidis, P. D. (2015). Math anxiety: Brain cortical network changes in anticipation of doing mathematics. *International Journal of Psychophysiology*, *122*, 24-31. doi.org/10.1016/j.ijpsycho.2017.05.003

Kooken, J., Welsh, M. E., McCoach, D. B., Johnston-Wilder, S., & Lee, C. (2016). Development and validation of the mathematical Resilience Scale. *Measurement and Evaluation in Counseling and Development*, *49*(3), 217–242. doi:10.1177/0748175615596782

Lai P. (2013). Validating instruments of measure: Is it really necessary?. *Malaysian Family Physician*, *8*(1), 2–4.

Leon, J., Medina-Garrido, E., & Núñez, J. L. (2017). Teaching quality in math class: The development of a scale and the analysis of its relationship with engagement and achievement. *Frontiers in Psychology, 28.* doi:10.3389/fpsyg.2017.00895

Liu, X., & Koirala, H. (2009). The effect of mathematics self-efficacy on mathematics achievement of high school students. *NERA Conference Proceedings 2009*. 30. Retrieved from: https://opencommons.uconn.edu/nera_2009/30.

Martin, D. B. (2009). Researching race in mathematics education. *Teachers College Record*, *111*(2), 295-338.

Mohsenpour, M., Hejazi, E., & Kiamanesh, A. R. (2006). The role of self-efficacy, achievement goals, learning strategies and persistence in math achievement of 11 Grade high schools students in Tehran. *Journal of Educational Innovations*, *5*(16), 9-35.

Montague, M., & Applegate, B. (2000). Middle school students' perceptions, persistence, and performance in mathematical problem solving. *Learning Disability Quarterly*, *23*(3), 215–227. doi:10.2307/1511165

Nagaoka, J., Farrington, C. A., Roderick, M., Allensworth, E., Keyes, T. S., Johnson, D. W., & Beechum, N. O. (2013). Readiness for college: The role of noncognitive factors and

**Corresponding Author*: *Vanessa A. Marmita[1]*
Melet B. Marian[2], Eric M. Masela[2]
Leyte Normal University[1], Tacloban City
De La Salle University, Manila[2]

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

context. *Voices in Urban Education*, *38*, 45-52.

New York City Transfer School Common Core Institute. (2016). *Strengthening persistence in math and beyond:* Retrieved from: http://www.eskolta.org/catalog/files/COPHS% 20NQCHS%2011-28-2016.pdf.

Ngo, F. & Kosiewicz, H. (2017). How extending time in developmental math impacts student persistence and success: Evidence from a regression discontinuity in community colleges. *The Review of Higher Education*, *40*(2), 267-306. doi.org/10.1353/rhe.2017.0004

Persistent. (2018) *In Merriam-Webster's online dictionary*. Retrieved from: https://www.merriam-webster.com/dictionary/persistent.

Reason, R. D. (2009). An examination of persistence research through the lens of a comprehensive conceptual framework. *Journal of College Student Development*, *50*(6), 659-682.

Republic Act No. 10533: The enhanced Basic Education Act of 2013. (2013, May 15). Philippines. Retrieved from: http://www.officialgazette.gov.ph/2013/05/15/republic-act-no-10533/

SEI-DOST & MATHTED, (2011). *Mathematics framework for Philippine basic education.* Manila: Sei-Dost & Mathted.

Stoll, D. (2015). *The effects of constructs related to Mathematical persistence on Student performance during problem solving* (Master's theses). 627.

Usher, E. L., & Pajares, F. (2009). Sources of self-efficacy in mathematics: A validation study. *Contemporary Educational Psychology*, *34*(1), 89-101.

Veenman, M. V. (2011). Alternative assessment of strategy use with self-report instruments: A discussion. *Metacognition and Learning*, *6*(2), 205-211.

Wolfle, J. D. (2012). Success and persistence of developmental mathematics students based on age and ethnicity. *The Community College Enterprise*, *18*(2), 39.

Zerpa, C., Hachey, K., van Barneveld, C., & Simon, M. (2011). Modeling student motivation and students' ability estimates from a large-scale assessment of mathematics. *Sage Open*, *1*(2), 1-9. doi: 10.1177/2158244011421803.

*__Corresponding Author__: *Vanessa A. Marmita[1]*
Melet B. Marian[2], Eric M. Masela[2]
Leyte Normal University[1], Tacloban City
De La Salle University, Manila[2]

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018

Journal of Education and Society

Research Article | A Refereed Journal

The Good, The Best, The New, And The Beautiful: Pattern Notation of High Frequency Adnominals Used in Philippine Blogs on Food, Travel, and Fashion

Voltaire Q. Oyzon*
Rhodora Bande*
Hermabeth Bendulo*

ABSTRACT

Adnominals are present in everyday communication and play a relevant role in discourse at all domains within the verbal communicative contexts. However, quite a number of students or second language learners and speakers of the English language tend to manifest deficiency in the use of adnominals in real communication setting. This study is aimed at providing a linguistic description on the use of adnominals in the essays or blog articles in three domains: food, fashion, and travel. This study employs linguistic corpus analysis on authentic texts, i.e., blog entries from the internet by Filipino bloggers whose first language is any of the Philippine languages. Results poses potential input and an effective instructional strategy in ESL or EFL classes.

Keywords: *corpus linguistics analysis; adnominals; high frequency words; blogging; ESL/EFL instruction*

Introduction

Adnominals, which refers to terms that modify nouns, are present in everyday communication and play a relevant role in discourse at all domains within the verbal communicative contexts. However, quite a number of students or second language learners and speakers of the English language tend to manifest deficiency in the use of adnominals in real communication setting. Too often, speakers produce inaccurate and too wordy adnominals instead of one that really describes what is supposed to be described. Boleda, Walde, & Badia (2012), confirm that most English as a Foreign Language (EFL) learners are not able to use adnominals properly. In their review of studies relating to semantic classes, they revealed that verbs have been widely studied, nouns have been studied at a lesser extent, but with very limited studies concerning adnominals. In addition, other researchers held the same finding on the dearth of studies about adnominals, citing that the literature on adnominals is scarcer than literature on nouns and verbs, in traditional lexical semantics and computational linguistics (Bouillon & Viegas, 1999).

Adnominals take core functions in a sentence and these words pose a vital appeal in various genres (Piereni, 2009). This word classification portrays distinct features as used in specific fields and communicative transaction types. This contention conforms to Cao and Fang (2009) and Mazdayasna and Firousi (2013), who both affirm that the variations of adnominal use seem to be a quiet reliable indicator to classify different text categories in a meaningful way. Mazdayasna and Firousi further asserted that attributive adnominals show a sense of objectivity, while predicative adnominals show more subjectivity. Thus, it is therefore expected that writers may vary in their use of adnominals as influenced or as suitably preferred in a specific genre and domain.

Literature Review

In Philippine-type languages, adnominals or, better modifiers behave differently. Nolasco (2015) proposes the term "modifier" rather than adjective because modifiers and adverbs are similar in form." Meaning, "attributive adjectives can also modify a verb," which is a deviation from the English adverb. Consider the following

Corresponding Author: *Voltaire Q. Oyzon[1], Rhodora Bande[2], Hermabeth Bendulo[3]*
Leyte Normal University[1], Visayas State University[2], Southern Leyte State University – Tomas Oppus[3]
E-mail: v.oyzon@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

examples from Nolasco (2015) using the form *mabilis*:

(1) Siya ay mabilis na lumakad para hindi mahuli sa klase.

`He walked fast so he won't be late for class.'

(2) Kung lumakad siya ay mabilis.

`He's fast when it comes to walking

Another interesting behavior of modifiers in Waray is that word categories in Waray is variable (Oyzon, n. d.). Meaning, roots shifts in their morphosyntactic functions. Consider the following examples below:

(3) Pula an dagat. *Red is the sea*
Red abs. sea

Pred. S

(4) Hubas an pula nga dagat. *The red sea is low tide.*
Low tide abs.red LNK sea
Pred. S

(5) An pula an nakúha. *The red one was the one that was picked.*
Abs. red Abs intr.get
Pred. S

(6) Ginpapula niya an dagat. *He/She lets the sea becomes red.*
gin-pa-red erg. abs.sea
trans.R-cause.RED
Pred. A S

(7) Nagpula an dagat. *The sea turned red*
Na-g-red abs. sea
Pred. S.

Notice that in (3) pula is an attributive modifier functioning as a predicate. Nouns and modifiers, when they function as predicate are restrained to take only the intransitive argument structure. If it takes the Transitivity- Modality affixes it will change its argument structure to transitive, intentional mode as in (6) with affix *gin-*. If it will take *nag-* as in (7) it is now intransitive but an intentional mode is maintained. *Pula* as used in (4) is a modifier of the head of NP *dagat* because it is preceded by particle *an* and is immediately followed by the linker *nga*. *Pula* in (5) is a noun because it is preceded by *an* and is functioning as a predicate and is not followed by *nga*. Therefore, word category such as modifier is not absolute, but rather variable (Oyzon, n.d.).

This study employs linguistic corpus analysis on authentic texts, i.e., blog entries from the internet by Filipino bloggers whose first language is any of the Philippine languages. Linguistic corpus "is a digestive approach for deriving a set of abstract rules, from a text, for governing a natural language." It is "a collection of linguistic data, either written texts or a transcription of recorded speech, which can be used as a starting-point of linguistic description or as a means of verifying hypotheses about a language (corpus linguistics)" (UCLA Library, 2017). The News on the Web Corpus (NOW Corpus, n. d.) can provide information such as "what is happening with the English language this week--not just 10 or 20 years ago. For example, see the frequency of words since 2010, as well as new words and phrases from the last few years."

A corpus basically can generate the following data (NOW Corpus, n.d.):

1. Frequency lists

This type of data can be used for materials development and for teaching ESP -- English for Specific Purposes. Rather than having students look at English vocabulary in its entirety, they can focus on specific areas, like Medical English or Legal English, and find the words that are much more common in that genre than in others. Likewise, linguists can use the data from a certain "slice" of English as they are extracting data for experiments and surveys.

2. Collocates

Collocates provide information on word meaning and usage, following the idea that "you can tell a lot about a word by the words

*__Corresponding Author__: *Voltaire Q. Oyzon[1], Rhodora Bande[2], Hermabeth Bendulo[3]*
Leyte Normal University[1], Visayas State University[2], Southern Leyte State University – Tomas Oppus[3]
E-mail: v.oyzon@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

that it hangs out with". Collocates are grouped by part of speech and then sorted by frequency. Collocations are characterizations of a word in terms of the other words that it typically co-occurs with (Biber, 1996). "The grammatical associations of the target word (other words that the target word frequently co-occurs with) describe structural preferences, for example, whether a particular adnominal typically occurs with attributive or predicative functions, or whether a particular verb typically occurs with transitive or intransitive functions."

3. N-grams

These would mainly be useful for (computational and corpus) linguists. Let's take the example of the ten or, so most common three-word strings with *point* in the middle position in Table 1 below (with the frequency of the string indicated as well):

Table 1. *Three-word string n-gram pattern of the English lexicon "point"*

(6093 tokens) *the point of*; 3309 *the point where*; 2646 *to point out*; 2558 *the point is*; 2304 *the point that*; 2118 *a point of*; 1324 *this point in*; 1126 *a point where*; 814 *no point in*; 814 *some point in*; 594 *starting point for*

Corpus linguists use n-grams to look for patterns in language. By looking at the immediate contexts of a word and how often they occur, we can begin to identify and categorize the different uses of a word. For example, in Waray (a language spoken in Samar, Leyte, and Biliran), the word "maupay" may be described to occur in this syntactical environment ***maupay + linker + n*** and ***maupay + v*** (see more discussion on *Analysis* portion below).

Research Questions

This study investigates these two research questions:

(1) What is pattern notation of high frequency adnominals "good," "best, " and "new" as used in Philippine blogs on food, travel, and fashion?

(2) What are its pedagogic implications to English language teaching in the Philippines context, particularly among Waray speakers learning the English language as L2?

Methodology

This study is aimed at providing a linguistic description on the use of adnominals in the essays or blog articles in three domains: food, fashion, and travel. These domains are considered interesting authentic language platforms that is noteworthy to be studied since the number of netizens in this age of technology is rapidly increasing, and a large amount of time is spent in communication through the different social networking sites like Facebook, Twitter, Instagram, and the blogosphere. Furthermore, this study describes the syntactical environments where these adnominals occur by providing pattern notations.

Research Design

This study employed a corpus-based approach that aimed to generate a linguistic description on the use of adnominals contained in blogs in three domains: food, fashion, and travel. Both quantitative and qualitative methodologies were employed in the treatment of the software-generated data. Qualitative method was employed in the Frequency List, which resulted to the identification of the top three frequently used adjectives in each domain. Qualitative method was employed in treating the data that resulted to the generated pattern notation and in the further discussion on the semantic possibility of substituting the used adjectives with their synonyms. The names of the writers are withheld to protect their privacy.

Data Sources and Delimitations

The primary data were the blog entries of Filipino bloggers in the area of food, fashion, and travel posted in the internet. The blogs collected were uploaded into the 3Ns Corpora.

*__Corresponding Author__: *Voltaire Q. Oyzon[1], Rhodora Bande[2], Hermabeth Bendulo[3]*
Leyte Normal University[1], Visayas State University[2], Southern Leyte State University – Tomas Oppus[3]
E-mail: v.oyzon@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018

Journal of Education and Society

Project corpora at [corporaproject.org]. Each area (fashion blog, food blog, travel blog) had a separate corpus. The corpus for English (travel) had 53,580 words; English (food), 53, 307 words; and English (fashion), 53,114 words as shown on Figure 1 below.

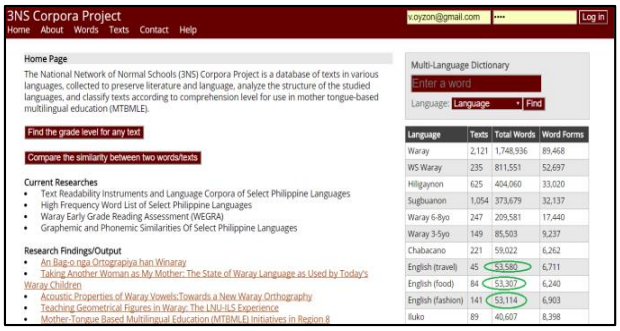

Figure 1. Screenshot of the database corporaproject.org

Criteria were set for the data collection:

1. Only blog articles written by Filipino authors were uploaded into the corpora. This piece of information was obtained from the blogs' "About Me" sections.
2. Priority was given to essays coming from blogs with their own domain names, such as: www.domain.com, www.domain.net, or www.domain.ph. However, in order to meet the targeted number of words, blogs coming from free webhosting sites such as Blogspot and Wordpress were later included (www.domain.blogspot.com and www.do main.wordpress.com).

One delimitation posed in this study is the possibly questionable representativeness and sampling due to domain constraints (Chomsky cited in Leech 1991), since corpus is limited to blogs about food, travel, and fashion, which are only part of the scope within lifestyle journalism (Hanusch, 2012). The very small size of the corpus—compared to millions, ideally—may have affected the high frequency list. Because of this limitation to three domains and because gender among bloggers was also not considered, these two could be some of the confounding variables in this study.

Analysis

Once the corpus had generated the high frequency word list and the top 3 English adnominals per area (fashion blog, food blog, travel blog) were extracted, analysis and description of the syntactical environment was done for each adnominal with the aid of the computer. For example, in Waray, the word "maupay" may be described syntactically to occur in these five patterns:

(1) modifier + linker+ n, and
(2) modifier + v
(3) modifier + determiner
(4) modifier + particle
(5) modifier + demonstrative pronoun

In other words, in (1) modifiers in Waray when followed by a noun (**n**) is always mediated through a linker (nga). However, in (2) if a modifier is followed by a verb (**v**), no linker is required. (3) A modifier in Waray may also be followed by a determiner (an/it'); (4) a modifier may also be followed by a particle like *na, pa, la, man*, etc., and (5) a modifier may be followed by demonstrative pronoun such as *hini, hadto, ini, didto, dida, etc.*

Furthermore, patterns of usage of synonyms of the word similar to our example, *maupay*, as shown in Table 2 below, may also be compared.

Table 2. *Sample Pattern Notations of Waray lexicon "maupay" based on frequency in the 3NS corpora.*

maupay + linker+ n	**Frequency:** Highest	**maupay + v**	**Frequency: 2nd** highest
Maupay nga adlaw		*Maupay kumaon*	
Maupay nga ani		*Maupay pamation*	
Maupay nga kalingkod		*Maupay kumita kun gab-i*	

**Corresponding Author: Voltaire Q. Oyzon[1], Rhodora Bande[2], Hermabeth Bendulo[3]*
Leyte Normal University[1], Visayas State University[2], Southern Leyte State University – Tomas Oppus[3]
E-mail: v.oyzon@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

Linguistic results such as these have implications to language teaching. It is very interesting, therefore, to second language learners of English, like us, to see what patterns are there for English by studying the adnominals in a corpus.

Results and Discussion

Through the 3Ns Corpora Project Software, the top three high frequently used adnominals in Philippine blogs on food, travel, and fashion were generated. Table 3 below shows that *good*, *new*, *best*, and *beautiful* are the descriptive words most frequently used by Filipino bloggers. Good appears 234 times in 160,001 total words; *best*, 184 times in 160,001 total words; *new*, 156 times in 160,001 total words; and *beautiful*, 38 times in 53,580 words found in travel blogs.

Table 3. *Top Three Adnominals Used in Blogs on Food, Travel, and Fashion*

Food	Travel	Fashion
Good	Good	Good
New	Best	New
Best	Beautiful	Best

The *food* and *fashion* blogs have the same set of top three adnominals; two of these three are also part of the top three adnominals for the *travel* blogs. Notice that these words – good, best, new, and beautiful – indicate attractiveness; hence, they can be utilized in referring to positive concepts or in building a favorable image for a particular brand. Blogs are often used as communication tools for marketing products (Halvorsen, Hoffman, Coste-Maniere, & Stankeviciute, 2013); therefore, it is not surprising that bloggers make use of these descriptive words in order to sell a concept, an idea, or a product.

Considering that these blog posts were written by bloggers whose first language is any of the Philippine languages, we looked at the syntactic patterns employed by the writers in their essays. Koosha and Jafarpour (2006) asserted that collocations differentiate the non-native-speaker from the native-speaker's language production.

With the identified frequency of the adnominals, these were subjected to collocation analysis, in which the terms are characterized by the other words that they typically co-occur with (Biber, 1996). The process describes "the grammatical associations of the target word (other words that the target word frequently co-occurs with), and this generated 9 structural patterns for the adnominal *good* (Table 4), 15 for *best*, (Table 5) and 9 for *new* (Table 6), and 14 for *beautiful* (Table 7).

Table 4. Pattern notations of the adnominal ***good.***

1. good + noun	*good time, good thing, good piece, good look, good choice, good note, good challenge, good manners, good way, good substitute, good hands, good opportunity, good combination*
2. good + adnominal + noun	*good solid piece, good scalp care, good personal hygiene, good quality sunglasses, good seven-hour sleep, good lighting, good shepherd convent*
3. good + adnominal + adnominal + noun	*good old sunny days, good extra (sic) virgin olive oil, good old college days*
4. good + noun + prepositional phrase	*good set of pearls, good spread of whites, good selection of men's magazines, good balance of men's magazines, good balance of comfort and style*
5. good + conjunction	*is good but lacks street lights, is good but like many things, good but could use, good but I'm getting used, was good but a taste of, good but one of the patties, good though*
6. good + prepositional phrase	*good for the health, good for the tummy, good for the heart, good for the peanut butter*
7. qualifier + good	*so good, very good, super good, quite good, more good, very very good, so so good*
8. qualifier + good + adverb	*quite good too, so good too, very good too*
9. determiner + good + noun	*the good food, a good choice, a good source, this good food, the good service, our good friends*

*__Corresponding Author__: *Voltaire Q. Oyzon[1], Rhodora Bande[2], Hermabeth Bendulo[3]*
Leyte Normal University[1], Visayas State University[2], Southern Leyte State University – Tomas Oppus[3]
E-mail: v.oyzon@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018

Journal of Education and Society

Table 5.
*Pattern notations of the adnominal **best**.*

1. best + noun	*best undergarments, best option, best assets, best season, best way, best workplace, best dishes, best seller*
2. best + prepositional phrase	*best of the best, best for yourself, best of indoor and outdoor worlds, best for you, best of all*
3. best + adnominal + noun	*best bristle formula, best customer service, best home coming dress, best post-christmas gift, best make up artist , best well-prepared dishes*
4. best + noun + prepositional phrase	*best parts of my body, best part of your body,*
5. best + conjunction	*best and*
6. determiner + adnominal + best + noun	*an all-time best seller*
7. qualifier + determiner + best	*only the best*
8. determiner + best + noun	*the best option, the best place, his best seller, the best experience, the best decision, the best sites*
9. determiner + best+ adnominal + noun	*their best selling dishes, the best restaurant cheesecakes*
10. determiner + best	*my best, the best time, their best, the best*
11. determiner + best + prepositional phrase	*the best in a crowd, the best of us*
12. verb + best	*will be best*
13. best + prepositional phrase + best adnominal + noun	*best of the best luxury sneakers*
14. best + infinitive phrase	*best to make an appointment*
15. best + adnominals + noun + prepositional phrase	*best located hotels (sic) in Boracay*

Table 6.
*Pattern notations of the adnominal **new.***

1. determiner + new + noun	*the new collection, a new segment, a new branch, a new addition, a new turn, my new watch, a new pack, a new buzz, this new hairstyle, my new house, their new collection, a new perspective, a new approach, a new dish*
2. new + noun	*new things, new heights, new ways, new variant, new offerings, new restaurant*
3. new + noun + prepositional phrase	*new set of tips, new pair of wide-legged trousers, new avenues of design and creativity, new feed on Instagram, new line of rice dish*
4. new + adnominal + noun	*new gym clothes, new legwear trend, new designer dresses, new vegetarian dishes*
6. determiner + new + adnominal + noun	*my new BUCKETFEET PH kicks, the new MySmart app, this new 25mm watch, the new price sensitivity, a new elevated flavor, a new much-awaited catch*
7. determiner + adnominal + new + noun	*an innovative new ink*
8. new + conjunction + adnominal + noun	*new and used jewelry, new and highly- regarded restaurants, new and healthy recipes*
9. determiner + new + proper name/name of a product	*the new Head and Shoulders, my new BUCKETFEET PH kicks, the new MySmart app, a new pair of Lee jeans, new Reichstag building*

Table 7.
*Pattern notations of the adnominal **beautiful***

1. preposition + beautiful + noun	*of beautiful window, for beautiful views, of beautiful photos*
2. preposition +beautiful + adnominal + noun	*of beautiful natural attractions*
3. preposition + noun phrase + beautiful	*Of all things beautiful*
4. preposition + determiner + beautiful + noun	*for a beautiful example*
5. beautiful + but	*beautiful but, beautiful and*
6. beautiful + adnominal + noun	*beautiful tropical island, beautiful natural attractions*
7. determiner + beautiful + noun	*these beautiful islands, the beautiful island, a beautiful example, the beautiful architecture, their beautiful land , a beautiful sunset*
8. determiner + beautiful + adnominal + noun	*a beautiful coastal area, a beautiful national park, some beautiful glaciers, this beautiful secret beach the beautiful peggy guggenheim museum*
9. degree (adv) + beautiful + adnominal + noun	*most beautiful natural sights*
10. degree (adv) + beautiful + nouns	*most beautiful views, most beautiful building amazingly beautiful city*
11. degree (adv) + beautiful	*most beautiful*
12. beautiful + infinitive phrase	*beautiful to offer*
13. quantifier + beautiful + noun	*two beautiful Georgian*
14. how + beautiful + conjunction + noun	*how beautiful and divine how beautiful and different*

Discussion

Overgeneralization

The adnominals *good*, *new*, *best*, and *beautiful* are considered 'common words' which are familiar to every reader/listener; thus, easy for people to understand. In the context of the usage of these adnominals in the blogs, it is perfectly reasonable that these are used because blog articles are meant to have the same function with that of advertisements. This finding substantiates Ke and Wang's (2013) most frequently used adjectives which include *good, beautiful, real, best, perfect, and pure*, and with that of Crystal's (1991) list which include *new, crisp, good, better, best, fine, free, etc.* However, Ringbom (1998) argues that higher frequencies of common words and lower frequencies of fairly rarely used words are expected among non-native speakers due to their limited vocabulary.

*Corresponding Author: Voltaire Q. Oyzon[1], Rhodora Bande[2], Hermabeth Bendulo[3]
Leyte Normal University[1], Visayas State University[2], Southern Leyte State University – Tomas Oppus[3]
E-mail: v.oyzon@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

In a pedagogical context, Hussein (1999) presented a phenonomenon of *'overgeneralization strategy'*. This phenomenon is likewise recognized by and Takac and Lukac (2013) as the overuse of common words, and which is characterized by learner's avoidance of acquisition of specific terms, and an option for considering specific terminology subsumed in generic terms.

Semantic Compatibility Test on Adnominal Collocates

The postulate of Rubenstein & Goodenough (1965) states that "words which are similar in meaning occur in similar contexts" and that of Schu¨tze and Pedersen (1997) "words with similar meanings will occur with similar neighbors," led to the study's analysis on the semantic compatibility of the synonymous words of a given adnominal. The adnominal *good* has its synonymous terms which includes *decent*, *respectable*, *moral*, *upright*, *virtuous*, *noble*, *worthy*, and *blameless*. The word *decent* and *responsible*, following the *adnominal + noun* pattern only appears once in the corpus for *English (travel)*, and twice in the corpus for *English (food)*. The adnominal *respectable* also occurs once in the corpus for *English (fashion)*. All these identified synonyms bear semantic relevance to the adnominal *good*.

On the other hand, further relating collocation or the patterned structures to semantics, it could be seen that words may have more specific meaning in particular collocations; thus, it could be expected that among a set of synonyms of a given adnominal, there are those which may not qualify in the patterned collocates. Other synonyms of good including *moral*, *upright*, *virtuo*us, *noble*, *worthy*, and *blameless* have no occurrence in the corpora, indicating semantic divergence in their usage with the modifier *good*. In other words, one cannot say: *moral accommodation*, *upright accommodation*, *virtuous accommodation* but, *respectable accommodation* (is possible but rare).Furthermore, *moral*, *upright*, *virtuous*, *noble*, *worthy*, and *blameless* may be used as a substitute as in the phrase *good community*. So, one may say: *decent community*, *respectable community*, *moral community*, *upright community*, *virtuous community*, *noble community*, *worthy community*, *blameless community*.

From the foregoing, what rules, therefore, can we deduce we may ask pedagogically? Perhaps, we can conclude that *good* as an adnominal may be followed by a noun that is inanimate or animate. However, its synonyms like *moral*, *upright*, *virtuous*, *noble*, *worthy*, and *blameless* may only be followed by animate objects. Therefore, we can refine the pattern notation for this modifiers into: good + noun (animate/inanimate), decent + noun (animate/inanimate), respectable + noun (animate/inanimate), (synonyms) + noun (animate).

Also, from this refined notation, we can see that the words *good* and *decent* have wider semantic scope than those of their synonyms. Pedagogically, we ask: Can these synonymous modifiers take the word *for* as collocate? As in the sentence: "Well, good *for* me I got this beautiful photo capturing their beautiful smiles."

Well, moral *for* me I got this beautiful photo capturing their beautiful smiles."
Well, upright *for* me I got this beautiful photo capturing their beautiful smiles."
Well, virtuous *for* me I got this beautiful photo capturing their beautiful smiles."
Well, noble *for* me I got this beautiful photo capturing their beautiful smiles."
Well, worthy *for* me I got this beautiful photo capturing their beautiful smiles."
Well, blameless *for* me I got this beautiful photo capturing their beautiful smiles."

Pedagogically, we ask: Can the modifiers (synonyms) take the word *but* as

*__Corresponding Author__: *Voltaire Q. Oyzon[1], Rhodora Bande[2], Hermabeth Bendulo[3]*
Leyte Normal University[1], Visayas State University[2], Southern Leyte State University – Tomas Oppus[3]
E-mail: v.oyzon@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

collocate? As in the sentence: "Road infrastructure in Camotes is good, but it lacks street lights."

Road infrastructure in Camotes is moral, *but* it lacks street lights."
Road infrastructure in Camotes is upright, *but* it lacks street lights."
Road infrastructure in Camotes is virtuous, *but* it lacks street lights."
Road infrastructure in Camotes is noble, *but* it lacks street lights."
Road infrastructure in Camotes is worthy, *but* it lacks street lights."
Road infrastructure in Camotes is blameless, *but* it lacks street lights."

The above illustrated semantic compatibility test poses potential pedagogical input and an effective instructional strategy in EFL classes. This means, EFL teachers can now study the areas where L2 learners will probably encounter difficulty, thereby formulating new strategies on how to improve the learner's use of the language (such as but not limited to the use of linguistic corpus and, comparative analysis of marked/unmarked linguistic features and, comparative usage of synonyms as demonstrated in our analysis in this study), then make informed decisions in the revision of their teaching strategies, methods, and teaching approaches.

Conclusion

Generally, the patterns identified conform to the standard or acceptable syntactic patterns as prescribed in English grammar. However, it is interesting to note that one particular pattern which is comprising of the *qualifier + good*, yielding utterances like *so good*, *super good*, *more good*, *very very good*, and *so so good* seems to be reflecting a typical Fiino expression. The qualifiers *so*, *super*, and *more* which are added to *good* seem unlikely in a native English speaker's utterances. Likewise, the duplication of qualifiers added to good (*very very good, so so good*) increases the projection of Filipino's modification structure in their first language. For instance, *maupay-upayan nga balay* (Waray), *magandang-maganda ang iyong umaga* (Tagalog), and *init init pa ang kape* (Cebuano). This structure could somehow justify the "major major controversy" of Venus Raj's answer in the Miss Universe 2010 Pageant. This linguistic occurrence, as posited by Fakhouri (1995) relates to the cultural and linguistic differences between the source language (SL) and the target language (TL).

Drawing from the data and discussions above, it is therefore apparent that the bloggers' first language (L1) interferes in the production of utterances in the second language (L2). This observation has been supported by previous researches which argue that "Learners of L2, such as English, tend to think first in their L1 before they write or speak in English, and that the surface structure of many of the interlanguage strings produced by the L2 learners are identical or very similar to the usual or normative sentence structures of the learners' first language (L1) (Bennui, 2008; Bhela, 1999; Chan, 2004; Chan, 2010; Dechert, 1983 ; Ellis, 1997; Thompson-Panos & Thomas-Ruzic, 1983). Selinker (1972) termed this linguistic phenomenon as *language transfer*, which is described as one of the systematic language production errors. This language transfer involves items and rules in the learner's version of the new language being directly traceable to the native language.

However, in a study by Bylund & Athanasopoulos (2017), they suggest that learning a foreign language rewires your brain. In other words, as we learn, new neural connections are formed (Singh, 2016). Bylund & Athanasopoulos added that, "[L]anguage differences have psycho-physical effects in the bilingual mind: For example, Swedish and English speakers prefer to mark the duration of events by referring to physical distances – a short break, a long party. But Greek and

*__Corresponding Author__: *Voltaire Q. Oyzon[1], Rhodora Bande[2], Hermabeth Bendulo[3]*
Leyte Normal University[1], Visayas State University[2], Southern Leyte State University – Tomas Oppus[3]
E-mail: v.oyzon@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

Spanish speakers tend to mark time by referring to physical quantities – a small break, a big party. Speakers of English and Swedish see time as a horizontal line, as distance travelled. But Spanish and Greek speakers see it as quantity, as volume taking up space" (p. 1.).

The prevalence of phrases such as *very very good* and *so so good* are indication that "bilingual *or, multilingual* minds can possess two *or, more* distinct *modes or, ways of thinking (*Miles, Tan, Noble, Lumsden, & Macrae, 2011, emphasis added). In other words, this phenomenon shows that most of these Filipino bloggers, who usually speak one or, two Philippine-type languages and English are not that flexible enough to perceive dimensions of English (L2) that they weren't aware of before because it is not marked in their L1.

References

Bennui, P. (2008). A study of L1 interference in the writing of Thai EFL students. *Malaysian Journal of ELT Research*, *4*(1), 72-102. Retrieved from http://journals.melta.org.my/index.php/majer/article/view/204.

Bhela, B. (1999). Native language interference in learning a second language: Exploratory case studies of native language interference with target language usage. *International Education Journal*, *1*(1), 22-31.

Biber, D. (1996). Investigating language use through corpus-based analyses of association patterns. *International Journal of Corpus Linguistics*, *1*(2),171-197.doi:10.1075/ijcl.1.2.02bib.

Boleda, G. & Walde, S., Badia, T. 2012. Modeling Regular Polysemy: A Study on the Semantic Classification of Catalan Adjectives. Computational Linguistics. 38 (3). Retrieved from https://www.cs.upc.edu/~gboleda/pubs/boleda-schulte-badia-final.pdf

Bouillon, P. & Viegas, E. 1999. The Description of Adjectives for Natural Language Processing: Theoretical and Applied Perspectives. Semantic Scholar. Retrieved from https://www.semanticscholar.org/paper/The-Description-of-Adjectives-for-Natural-Language-Bouillon Viegas/fbde46deb4cd86d5328e766732774efd368b5dff.

Bylund, E., & Athanasopoulos, P. (2017). The Whorfian Time Warp: Representing duration through the language hourglass. *Journal of Experimental Psychology General*, *146*(7), 911-916. doi: *10.1037/xge0000314.*

Cao, J. & Fan, A. 2009. Investigating Variations in Adjective Use across Different Text Categories. Research in Computing Science 41, 207-216. Retrieved from https://www.cicling.org/2009/RCS-41/207-216.pdf

Chan, A.Y.W. (2004). Syntactic transfer: Evidence from the interlanguage of Hong Kong Chinese ESL learners. *The Modern Language Journal*, *88*(1), 56-74. doi: 10.1111/j.0026-7902.2004.00218.x.

Chan, A. Y. W. (2010), Toward a taxonomy of written errors: Investigation into the written errors of Hong Kong Cantonese ESL learners. *TESOL Quarterly*, 44(2), 295–319. doi:10.5054/tq.2010.219941.

Crystal, D. (1991). *Making sense of English usage.* London, United Kingdom: Chambers Harrap.

Dechert, H. W. (1983). How a story is done in a second language. In C. Faerch & G. Kasper (Eds.), *Strategies in interlanguage communication* (pp. 175-195). London: Longman.

Ellis, R. (1997). *Second language acquisition.* Oxford: Oxford University Press.

Fakhouri, S. (1995). *Collocation in Interpretation from English and Arabic* (Masters thesis). Yarmouk University, Jordan.

Hanusch, F. (2012). Broadening the focus. *Journalism Practice*, *6*(1), 2-11, doi: 10.1080/17512786.2011.622895.

**Corresponding Author*: *Voltaire Q. Oyzon[1], Rhodora Bande[2], Hermabeth Bendulo[3]*
Leyte Normal University[1], Visayas State University[2], Southern Leyte State University – Tomas Oppus[3]
E-mail: v.oyzon@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

Halvorsen, K., Hoffman, J., Coste-Maniere, I., & Stankeviciute, R. (2013). Can fashion blogs function as a marketing tool to influence consumer behavior? Evidence from Norway. *Journal of Global Fashion Marketing*, *4*(3), 221-224.doi:10.1080/20932685.2013.790707.

Hussein, Riyad Fayez (1990). Collocations: The missing link in vocabulary acquisition amongst EFL learners. Fisiak, Jack, ed. Papers and studies in contrastive linguistics, Volume 26. The Polish-English contrastive project: 123-136.

Ke, Q., & Wang, W. (2013). The adjective frequency in advertising English slogans. *Theory and Practice in Language Studies*, 3(2), 275-284. doi:10.4304/tpls.3.2.275-284.

Koosha, M., & Jafarpour, A. (2006). Data-driven Learning and Teaching Collocation of Prepositions: The Case of Iranian EFL Adult Learners. Asian EFL Journal, 8(4):192-209.

Leech, G. (1991), The state of the art in corpus linguistics. In Aijmer, K. & Altenberg, B. (Eds.), *English corpus linguistics*. London: Longman.

Mazdayasna, G. & Firouzi, M. 2013. A corpus based study of adjectives in literary and technical texts. *Sheikhbahaee EFL Journal, 2, (1).* Retrieved from https://pdfs.semanticscholar.org/c0a8/899618423de7c475ee7f5050f647217c4157.pdf

Miles, L. K., Tan, L., Noble, G. D., Lumsden, J., & Macrae, N. (2011). Can a mind have two time lines? Exploring space–time mapping in Mandarin and English speakers. *Psychonomic Bulletin & Review*, *18*(3), 598-604. doi:10.3758/s13423-011-0068-y.

News on the Web Corpus (NOW Corpus). (n.d.). Retrieved from http://corpus.byu.edu/now/.

Nolasco, R. M. D. (2015). *Grammar notes on the national language.* Retrieved from https://dokumen.tips/documents/grammar-notes-on-the-philippine language.html

Oyzon, Voltaire Q. (n.d.). *Communicative functions of Waray lexical items: A linguistic contribution to Waray lexicography* (Unpublished doctoral thesis). Leyte Normal University, Philippines.

Pierini, P. 2009. Adjectives in Tourism English on the Web: A Corpus-Based Study. Círculo de Lingüística Aplicada a la Comunicación 40, 93-116. Retrieved from https://revistas.ucm.es/index.php/CLAC/article/download/41886/39904

Ringbom, Hakan. (1998). Vocabulary frequencies in advanced learner English: A cross-linguistic approach. In S. Granger (Ed.), *Learner English on Computer* (pp. 41-52). London: Longman.

Selinker, L. (1972). Interlanguage. *International Review of Applied Linguistics in Language Teaching*, *10*(3), 209-241. doi: 10.1515/iral.1972.10.1-4.209.

Singh, N. (2016). The biliterate learning environment: Insights from brain and behavior. A paper read during *the 5th International Conference on Language and Education: Sustainable Development Through Multilingual Education*, The Landmark Bangkok, Bangkok, Thailand. Retrieved from https://lc.mahidol.ac.th/mleconf/2016/Documents/ Presented Files/PLENARY%20III%20-%20Nandini%20Singh.pdf3.

Schütze, H., & Pedersen, J. O. (1997). A cooccurrence-based thesaurus and two applications to information retrieval. *Information Processing & Management,33(3),307-318.* doi:10.1016/s03064573(96)00068-4.

Takač, V.P., & Lukač, M.(2013). How word choice matters: An analysis of adjective-noun collocations in a corpus of learner essays. *Jezikoslovlji*, *14*(2-3), 385-402.

**Corresponding Author*: *Voltaire Q. Oyzon[1], Rhodora Bande[2], Hermabeth Bendulo[3]*
Leyte Normal University[1], Visayas State University[2], Southern Leyte State University – Tomas Oppus[3]
E-mail: v.oyzon@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018

Journal of Education and Society

Thompson-Panos, K., & Thomas-Ruzic, M. (1983), The least you should know about Arabic: Implications for the ESL writing instructor. *TESOL Quarterly*, *17*(4), 609–623. doi:10.2307/3586616.

UCLA Library (2017, January 24). *Linguistic Corpora*. Retrieved from http://guides.library.ucla.edu/c.php?g=180293&p=1189870.

*__Corresponding Author__: *Maricel Aguila-Gomez*
Leyte Normal University, Tacloban City
E-mail: maricelaguilagomez@gmail.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018

Journal of Education and Society

Research Article | A Refereed Journal

The Effects of Stress Management Intervention on Freshman Students' Academic Stress and Coping Strategies

Glenda T. De Guia*

ABSTRACT

This study examined the effects of DEAL-Based intervention on freshman students' academic stress and coping strategies. A longitudinal design was adopted using quantitative method on the 91 freshman students of Northern Samar. A total of 754 freshman students from the clustered state universities and colleges in the province of Northern Samar were included in the pretest. Among those who participated in the pretest only 296 qualified the inclusion criteria, only 96 students attended the intervention program, and only 91 freshman students completed the post-intervention tests. Academic stress and coping strategies were measured by students stress inventory, and brief coping orientation of problem experienced (Brief COPE). MANOVA was used to determine the significant difference between the pretest and posttest on academic stress and the three coping strategies of the respondents. ANOVA repeated measures was used to determine the significance and the effect of the intervention across 5-time interval pretest and posttest assessments. DEAL-based intervention is very effective in lessening the academic stress of the students including those with severe academic stress. The intervention has positive effects on the coping strategies of the respondents.

Keywords: *Academic stress, coping strategies, DEAL-based intervention.*

Introduction

Mental health problem comes in many forms, severity, duration, and degree. It can affect anyone regardless of age, gender, ethnicity, and socio economic status (WHO, 2013). In the Philippines, one in five people suffer from a mental health problem. Between 17 to 20 percent of Filipino adults experience psychiatric disorders, and 10 to 15 percent of Filipino children, age 5 to 15 suffer from mental health problems. According to the National Statistics Office (NSO), mental health illnesses are the third most common forms of morbidity for Filipinos. Furthermore, a 2010 national census found 1.4 million people with identified disabilities showed that mental disability accounts for 14 percent of all disabilities. In the same NSO study, 88 cases of mental health problems were reported for every 100,000 Filipinos. Suicide is the second leading cause of death globally among people 15 to 29 years of age, according to the 2014 global report on preventing suicide by the World Health Organization (WHO, 2014). In the Philippines, the estimated number of suicides in 2012 was 2558 (550 female, 2009 male), according to the same report.

According to Ronald Del Castillo (as cited in Bueno, 2018), a clinical psychologist and an associate professor at the University of the Philippines College of Public Health, said that entering college education poses an increased risk for developing mental health problems. The formative years play a crucial role in shaping an individual's mental health. Issues may only surface through a confluence of stressors appearing at a particular time. All these frequently appear when one enters university. College students are exposed to a considerable amount of stress, which necessitate successful and constantly changing coping strategy (Bueno, 2018).

A rich body of research indicates that university students are exposed to so many stressors on a daily basis. Amongst other things, Lewin and Mawoyo (2014) pointed out that university students are under pressure to perform academically; adapt to the higher education environment, and manage finances. They study also suggest that university students

Corresponding Author: *Glenda T. De Guia*
University of Eastern Philippines
Catarman, Northern Samar
E-mail: g.deguia@yahoo.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

often view stress as a negative experience, tend to adopt ineffective coping strategies, and struggle to access resources that could assist them in managing challenges. The study also found that when stress is perceived negatively, and the required coping strategies and supportive resources are lacking, students may become impaired.

College students, especially freshmen are prone to stress due to the transitional nature of college life. They have to adjust to being away from their family for the first time, maintain a high academic performance, and adjust to a new social environment. The change in school curriculum by the implementation of the K to 12 program also added burden and caused stress among the students.

In order to prevent this severe stress which may lead to any psychological conflict among freshman students, effective stress management programs should be implemented and be part of the curriculum as mandated by the newly approved mental health law. Self-care strategies using a combination of stress management techniques could be learned by students as part of their curriculum. Being able to manage and control stress is a useful skill not only for life as a student, but also for life beyond university. A thorough understanding of what stress and depression mean and how to respond to these conditions could reduce the stigma attached to them. It will make the students aware and will lead to come forward and seek medical treatment. Hence, this study using the DEAL based intervention was conducted to determine the effect of this intervention on the freshman students' academic stress and coping strategies.

Most interventions required a substantial amount of time and resources, which makes it difficult for schools to implement. This study adopted the DEAL model as stress management intervention because this consumes minimal amount of time and money. It does not require rigorous training and manpower as well as simple to be implemented and could easily be integrated in the academic schedule.

The DEAL model is a four (4) hour educational workshop which consist of four components which are detection of stressors, evaluation of stressors, action towards stressors and learning from stressors through self-reflection. The four guiding principles of the model are set to teach students to detect problems early and have a positive perception towards the problem; teach students to appraise problems positively and appropriately, teach students to cope with problems positively; and teach students to learn from problems for future self-improvement.

Literature Review

Transition from pre-university to university life needs a period of adjustment as it has many challenges and difficulties. Through early detection of symptoms, students would be able to seek assistance from administrators or university counsellors who could help prevent and minimize the effects of mental, emotional and physical morbidity. Academic demands in universities are very challenging. Social life along with school demands cause stress and depression among freshmen. Limited stress is beneficial and can lead to excellent performance. However, uncontrolled stress can lead to exhaustion, depression and several other sickness. In fact, college students are prone to episodic stress. These stressors include internal and external pressures exerted by the environment to thrive and to succeed, overcome financial difficulties, adjustment, worries about after study, societal problems and opportunities. If these stressors are not dealt with they can only hamper their academic performance, emotional and social wellbeing, and worst, the students contemplate or commit suicide. As such, this is an important domain for further research and an effective channel of intervention for university mental health professionals.

Recent large-scale surveys indicate that 80% of college students frequently or

*__Corresponding Author__: *Glenda T. De Guia*
University of Eastern Philippines
Catarman, Northern Samar
E-mail: g.deguia@yahoo.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

sometimes experience "daily stress" (Meaney-Tavares & Hasking, 2013), and that a quarter of students reports that stress has hurt their academic performance, including lower grades or dropped courses. Furthermore, college students experience high rates of stress-related mental health problems, including depression and anxiety, and mental health problems are a leading cause of withdrawal from college.

Tristan Yuvienco, as cited in Bueno (2018), stated that a student from the University of the Philippines conducted a survey on mental depression among college students in Metro Manila. With a sample of 135 students from selected universities ages 16 to 24, 96 percent of the participants reported having experienced an episode of moderately intense to very intense depression during their stay in school. The survey further revealed that academic work was the biggest factor that led to "depressed feelings", followed by family issues and relationship-related problems.

Yuvienco's study (Bueno, 2018), also found out that more than 50 percent of the students who experienced depression felt a lack of understanding from friends and family. This finding – that most depressed students find no empathy from people close to them – is an important observation. The lack of empathy, therefore, aggravates depression. This discovery can help experts develop more effective treatments for depressed people.

University students are able to reduce the negative impact of stresses, when they know how to cope with them. Coping strategy is a human ability to resolve problems or to manage problematic situations. Problem-oriented coping, emotional coping, and social support are effective strategies for managing stressful situations (Turashvili & Japaridze, 2013).

Over recent years, there has been growing interest in psychoeducational interventions (PIs) , that is, the delivery of accurate information to individuals; families and careers about mental health or a specific diagnosis (including possible causes and symptoms); management (including associated risks/side-effects) and prognosis, and how affected individuals can stay well (Jones et al., 2017). Research on interventions to reduce or prevent stress-associated risk for psychopathology in college students is wide ranging. This includes both narrowly focused interventions designed to teach single specific skills such as mindfulness, cognitive reappraisal, and problem-solving, and broadly focused interventions to build multiple skills (Bettis, Coiro, England, Murphy, Zelkowitz, Dejardins and Compas (2017). 2017). Across modalities, interventions in college students have shown promise in reducing symptoms of anxiety, depression, and general distress (Conley et al., 2015).

Within the university context, student affairs practitioners such as guidance counsellors and psychologists are required to assist students in developing the strategies required to cope with stressors and establish academic-personal life balance, among other things (Van Heerden-Pieterse, 2015). Helping students manage stressful lives has been a goal of counsellors, because college students perceive academic life as stressful and demanding and report experiencing emotional and cognitive reactions to this stress, especially due to external pressures and self-imposed expectations.

Research Questions

This study on the academic stress and coping strategies of college freshman students generally aimed to evaluate how academic stress and coping strategies were affected by the DEAL-based intervention. Specifically, it aimed to answer the following questions:

1. What are the pretest and posttest scores of the respondents in terms of:
   1.1. academic stress
   1.2. coping strategies?
2. Does DEAL-based intervention program have significant effects on students with severe cases of academic stress?

*__Corresponding Author__: *Glenda T. De Guia*
University of Eastern Philippines
Catarman, Northern Samar
E-mail: g.deguia@yahoo.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

3. Does DEAL-Based intervention program have significant effects on the coping strategies of students with severe cases of academic stress?

Methodology

Research Design

This is a longitudinal research conducted among selected freshman college students of the province of Northern Samar. This is an intervention study that examined the effects of the DEAL-based stress management intervention on freshman students' academic stress and coping strategies. The research was able to identify how freshman students' academic stress and coping strategies changed over time by comparing the data that were collected from a single group over 5- time point interval pretest and posttest intervention assessments.

Subjects of the Study

The subjects of this study were the 91 college freshman students in the province of Northern Samar enrolled during the school year of 2018-2019 from the clustered four (4) schools that were selected from among the eight (8) different tertiary schools in the province. A total of 754 freshman students from the chosen clustered schools participated the pretest, however, only 296 freshman students qualified the inclusion criteria on moderate to severe level of academic stress and practicing negative or dysfunctional coping strategies. All the students who qualified the inclusion criteria were invited to attend the orientation and the seminar workshop on stress management however, only 96 responded and consented to participate the intervention using the DEAL model. A total of 91 freshman students completed the 4-time post intervention assessments and were considered as the respondents of this study.

Inclusion

The freshman students who got a moderate to severe level of stress, frequently practicing denial or avoidant coping strategies during the pretest were chosen as the participants. The students were invited to attend the stress management intervention program using the DEAL model. The students who responded the invitation and attended the seminar workshop were also considered as the subjects in the post-intervention tests.

Exclusion

Those students who had normal to mild stress were excluded from this study. Those who refused to participate and did not give a written consent were also excluded as subjects. The students who missed any post-intervention assessments were also excluded from the study.

Sampling Technique

To achieve the purpose of this study, cluster sampling was used. The schools were clustered into state university, private schools, computer schools, and agri-tech vocational schools. Primary data were collected from one school representing each and every cluster. Hence, the data were collected from one state-university which is the University of Eastern Philippines (UEP), main campus, one from private schools which includes the Eastern Visayas Central Colleges (EVCC), ASIA and Global College representing the computer schools, and San Isidro Balicuatro School of Agriculture and Trade representing the agro-tech vocational schools.

Due to the small number of students from the private schools, all the 354 freshman students from the clustered schools of private, computer and agri-tech vocational schools were chosen as participants in the pretest. The researcher, in consideration of the large number of freshman students of UEP (3,678) allocated 400 students to represent the state university with 50 students representing every college or department. Thus, a total of 754 freshman

*__Corresponding Author__: *Glenda T. De Guia*
University of Eastern Philippines
Catarman, Northern Samar
E-mail: g.deguia@yahoo.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

students were subjected to pretest as baseline measurement of this study.

Measures

The participants answered the questionnaires which comprised of two (2) well-validated and reliable measurement instruments. The Student Stress Inventory (SSI) is an instrument developed by Mohamed Arip, et al. (2015). SSI contains 40 negative items to measure 4 subscales (10 items for each subscale) which are sub scale (a) Physical, (b) Interpersonal relationship, (c) Academic, and (d) Environmental factor. The SSI has an ordinal scale of the 1 for 'Never', 2 for 'Somewhat frequent', 3 for 'Frequent' and 4 for 'Always'. The administration process approximately took 15 to 20 minutes only. SSI questionnaire had good content validity with an overall score of 0.805 (80.5%). SSI had a high overall reliability coefficient of .857.

The Brief COPE was developed by Carver (1997). It consists of 30 items describing coping methods and are rated under four (4) categories of responses (I haven't been doing this at all, I've been doing this a little bit, I've been doing this a medium amount, I've been doing this a lot) to indicate how frequent they have been doing what the items describe. There are three (3) coping strategies such as negative coping strategy, adaptive coping and accommodative coping strategies in the 15 domains. The reliability coefficients (Cronbach's Alpha) of the coping domains have ranged from 0.56 to 0.89.

Stress Management Intervention Based on the DEAL Model

A stress management intervention was conducted based on the DEAL model developed by Muhamad Saiful Bahri Yusoff. The goal of the intervention was to help students in handling their stresses. The first part of the intervention was devoted to a general discussion on the importance of managing stress, the concepts of stress, the relationships between stress, stressors and coping strategies, and the impacts of unfavorable stress on individuals. The second part was allocated for an actual assessment where the freshman students were able to identify their individual stress level, stressors, and coping strategies through simple psychometric assessments. The results of the hands-on were discussed in detail to the freshman students as well as the general overview of the ways of handling their stressful situations. The third part was allotted for group discussion on a scenario that was shown in the form of video clip. The session consolidated students' understanding on the previous inputs. The last part of the workshop was devoted to feedback and the students shared the experiences they have learned from the intervention and things to be improved in the future as a result of attending the intervention. The total time of the intervention was four (4) hours.

Data Analysis

Descriptive statistics was applied to calculate mean and standard deviation. MANOVA was used to determine the significance between the pretest and posttest on academic stress and the coping strategies of the respondents. ANOVA repeated measures was used to determine the significance and the effects of the intervention across 5-time interval pretest and posttest assessments.

Procedure and Ethical Considerations

Data were collected from first week of November to third week of December 2018 after obtaining approval from the Dean of Student Affairs, the UEP President, School Administrators and the Ethics committee. The researcher clustered first the school and then conducted the pretest to all the 754 freshman students from the clustered schools. Among the students who participated in the pretest only 296 met the inclusion criteria. The selected subjects based on the inclusion criteria were then invited to attend a 3-hour briefing session on the study protocol and for the signing of an informed consent. However, only 96 students responded and consented to attend the seminar

*__Corresponding Author__: *Glenda T. De Guia*
University of Eastern Philippines
Catarman, Northern Samar
E-mail: g.deguia@yahoo.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

workshop. After ensuring that each participant met the study inclusion criteria, the researcher personally provided them with the information about study aims, design, procedures, rights as participants, anticipated benefits, and possible adverse effects of participation. The participants were also informed that they were free to withdraw their consent anytime. The researcher then conducted a stress management workshop. The participants underwent a 4-hour stress management intervention using the DEAL Model. The posttest assessments were conducted at one (1) week interval for four (4) consecutive weeks.

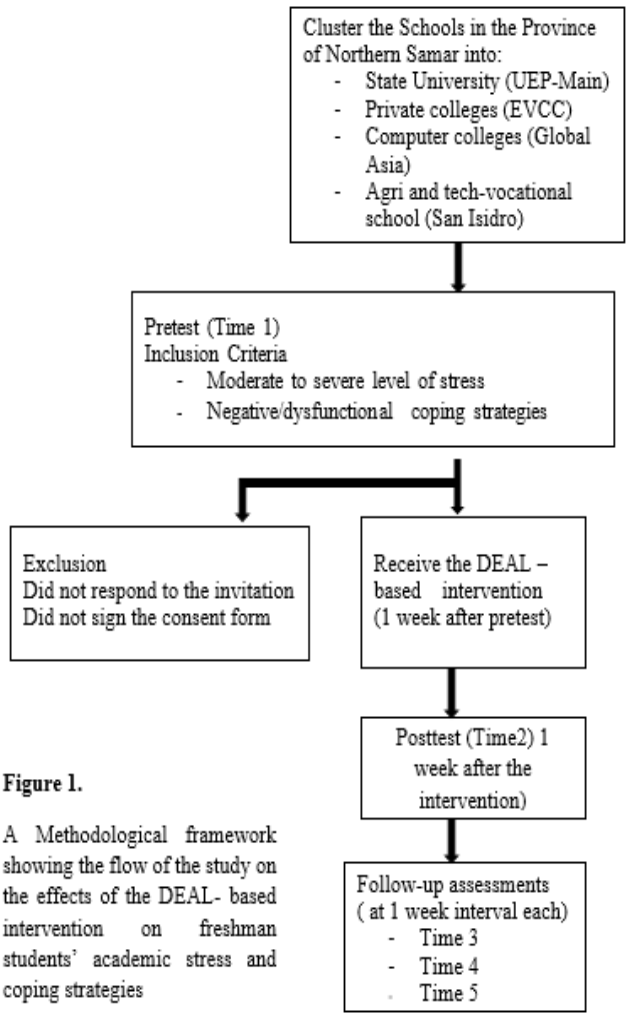

Figure 1.

A Methodological framework showing the flow of the study on the effects of the DEAL- based intervention on freshman students' academic stress and coping strategies

Results and Discussion

Transition from pre-university to university life needs a period of adjustment as it has many challenges and difficulties. Social life along with school demands cause stress and depression among freshmen. Through early detection of symptoms, students would be able to seek assistance from administrators or university counsellors who could help prevent and minimize the effects of mental, emotional, and physical morbidity. In this study, it is worth observing that the academic stress of the respondents had lowered. It revealed that the intervention had lessen the academic stress of the freshman students including those with severe cases. Figure 2 shows the pretest and posttest results on academic stress of the freshman students. The result showed that the academic stress of the respondents had lowered after being subjected to the DEAL-based intervention. The finding indicates that the intervention had lowered the academic stress and coping strategies of the respondents. This finding affirmed the finding in the study of Conley, Durlak, and Kirsch, (2015) that interventions among college students have shown promise in reducing symptoms of anxiety, depression, and general distress.

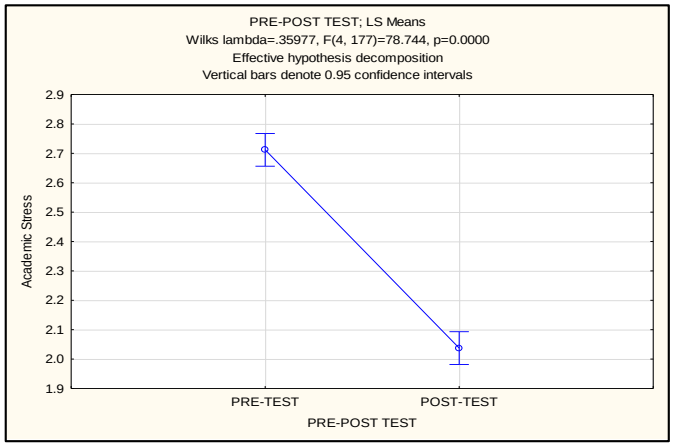

Figure 2. A graph showing the academic stress before and after DEAL-based intervention program.

MANOVA revealed that there are significant differences between the pretest and posttest scores of participants as a result of DEAL-based intervention program. The academic stress and coping strategies had lowered after the intervention. The intervention showed a significant effect in lessening the academic stress of the freshman students.

*__Corresponding Author__: *Glenda T. De Guia*
University of Eastern Philippines
Catarman, Northern Samar
E-mail: g.deguia@yahoo.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018

Journal of Education and Society

Table 1.
Comparison of the Respondents' Pretest and Post-Intervention Tests according to Academic Stress and Coping Strategies

MANOVA PRETEST vs. POSTTEST (N = 91)

Criterion	Test Statistic	F	DF Num	DF Denom	P
Wilks'	0.35977	78.744	4	177	0.000***
Lawley-Hotelling	1.77954	78.744	4	177	0.000***
Pillai's	0.64023	78.744	4	177	0.000***
Roy's	1.77954				

****p*<.001*

DV = Academic Stress, Coping Strategies
IV = DEAL-Based Intervention Program
Measures = Pre-Test vs. Post-Test

The result revealed significant differences in negative coping, adaptive coping, and accommodative coping strategies after the intervention. This finding affirmed what Lazarus and Folkman (1987) pointed out that coping with a stress-inducing situation is a composite amalgam of thoughts and attitudes for which a variety of coping strategies is required and not just a one-dimensional approach. In addition, the coping process is a slow process, so an individual may select one method of coping (i.e. avoidance, emotion-focused or adaptive coping) under one set of circumstances and a different strategy (i.e. emotion focused strategies or problem-focused) at some other time. Such selection of strategies takes place as the situation changes.

Figure 3 shows the significant difference between the pretest and posttest result on the negative coping strategies of the respondents. The intervention had minimized the respondents' utilization of non-adaptive or dysfunctional coping such as, self-blame and behavioural disengagement, self-distraction, denial, and substance or alcohol abuse. This finding affirmed the transactional theory of Lazarus and Folkman (1987) that intervention helps people develop effective coping strategies and mitigate unproductive strategies. This also affirmed the findings of Yusoff and Esa (2015) finding DEAL- based intervention effective which modify the participants' coping strategies to effectively manage stress.

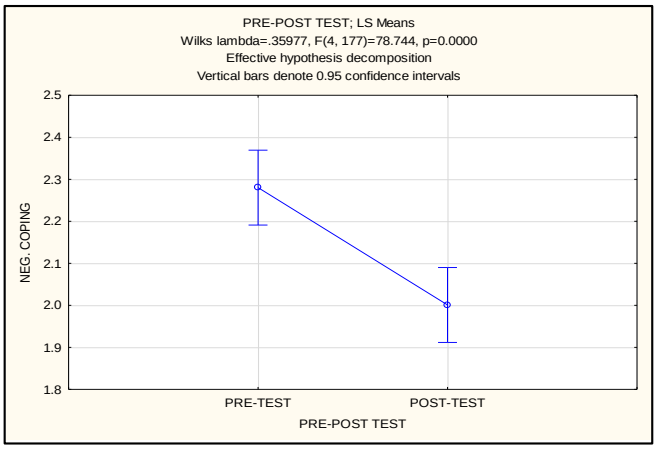

Figure 3. A graph showing the negative coping before and after DEAL-based intervention program.

Figure 4 shows the significant difference between the pretest and posttest results of the respondents on adaptive coping strategy. The data revealed that the frequency of practicing the adaptive coping strategy of the respondents such as planning, positive reinterpretation, active coping, and acceptance had been minimized immediately after the intervention. This finding affirmed the transactional theory of Lazarus and Folkman (1987) that intervention helps people develop effective coping strategies and mitigate unproductive strategies. This also affirmed the findings of Yusoff and Esa (2015) finding DEAL- based intervention effective which modify the participants' coping strategies to effectively manage stress. This indicates that coping with the stress is a mixture of personality traits, attitudes, experiences, and stressors for which a variety and a combination of different coping strategies is required. This finding affirms the theory of Lazarus and Folkman (1987) that coping process is a slow process, so an individual may select one method of coping (i.e. adaptive coping) under one set of circumstance and a different strategy (i.e. accommodative) at some other time, and such selection of strategies takes place as the situation changes.

**Corresponding Author*: *Glenda T. De Guia*
University of Eastern Philippines
Catarman, Northern Samar
E-mail: g.deguia@yahoo.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018

Journal of Education and Society

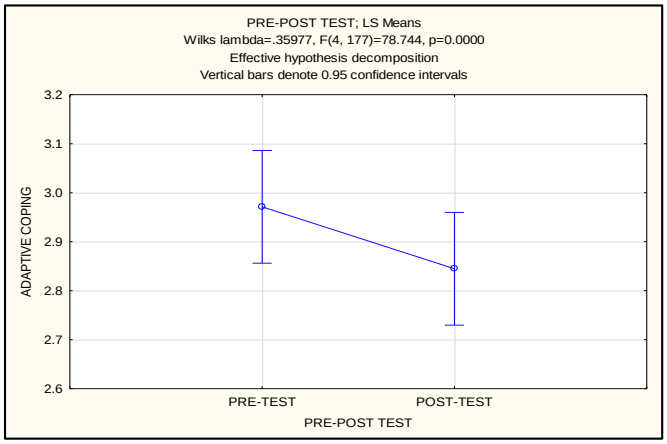

Figure 4. Adaptive coping before and after DEAL-based intervention program.

The result also demonstrated a significant difference between the pretest and posttest results of the respondents on accommodative coping strategy as shown in Figure 5. The data revealed that the frequency of practicing the accommodative coping strategy of the respondents such as social support, instrumental support, venting of emotions, humor, religion and restraint had been minimized after the intervention. This indicates that the intervention had changed the accommodative coping which temporarily help in buffering the effects of stressful events before adaptive coping takes place. This finding affirms the finding of Lazarus and Folkman (1987) which stated that accommodative or emotion-focused can assist the individual to change his/her perspective on a stressful situation without actually changing the situation.

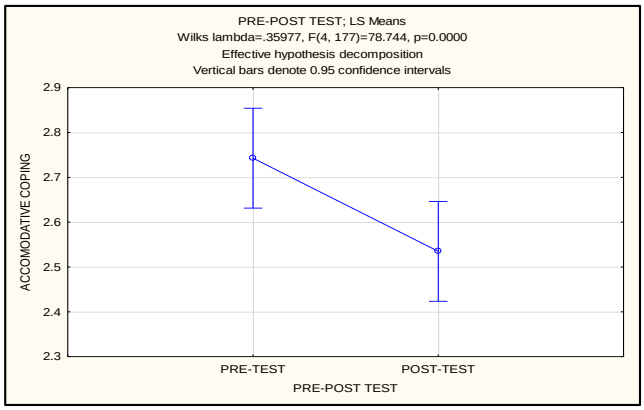

Figure 5. Accommodative coping strategy before and after DEAL-based intervention program.

In determining the effects of the intervention on the level of academic stress of the respondents with severe cases, it was observed that DEAL-based intervention program had positive effects in lessening the academic stress of the students with severe academic stress. ANOVA repeated measures on table 2 shows that there are significant differences between the pretest and posttest scores of the participants as a result of DEAL-based intervention program. The DEAL-based intervention program had positive effects in lessening the academic stress of the students with severe academic stress as evident in the significant differences between the pretest (*3.194)* and posttest (*2.350)* scores on academic stress and on repeated measures in three (3) follow-up sessions (*F1 = 2.325; F2 = 2.293; 2.325).*

Table 2.
Analysis of Variance for Academic Stress of Students with Severe Academic Stress

Source	DF	SS	MS	F	P
PRE-POST TEST	1	20.6972	20.6972	285.432	0.000***
Error	180	13.0521	0.0725		
Total	181	33.7493			

****p<.001 N= 4*

Figure 6 shows the effects of the DEAL-based intervention on the academic stress of the respondents with severe academic stress. The result revealed that the DEAL-based intervention lowered the academic stress of the respondents. This indicates that DEAL-based intervention is an appropriate intervention in reducing the academic stress of the students. This finding affirms the findings of Yusoff and Esa (2015) that the intervention successfully reduced the perceived academic stressors of the medical students. This also confirms the study of Conley, et al. (2015) that interventions among college students have shown promise in reducing symptoms of anxiety, depression and general distress.

Corresponding Author: *Glenda T. De Guia*
University of Eastern Philippines
Catarman, Northern Samar
E-mail: g.deguia@yahoo.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018

Journal of Education and Society

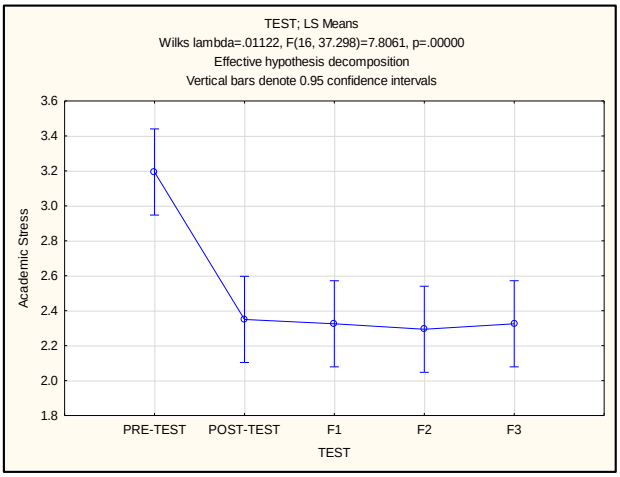

Figure 6. A graph showing the effects of DEAL-based intervention on the academic stress of the respondents with severe academic stress.

In this study, DEAL-based intervention program showed positive effects on the tendency of the students with severe academic stress to practice negative coping strategy. Table 3 shows that DEAL-based intervention had positive effects on the tendency of the students with severe academic stress to practice negative coping strategy as evident in the significant differences between the pretest (2.468) and postest (2.181) scores on negative coping strategy and on repeated measures in three (3) follow-up sessions (F1=1.500;F2= 1.275; F3= 1.325). The intervention had minimized the respondents frequency of practicing negative coping strategy such as self-blame, behavioural disengagement, self-distraction, denial and substance or alcohol abuse. This is an affirmation of the claims of previous authors that intervention helps people develop effective coping strategies and mitigate unproductive strategies Lazarus and Folkman (1987). The findings indicates that negative coping responses may be the first response that freshman students have to a large amount of stress or it may be that freshmen do not know other ways to deal with stress besides reacting with a negative emotional outburst. This also affirmed the findings of Yusoff and Esa (2015) finding DEAL- based intervention effective which modify the participants' coping strategies to effectively manage stress.

Table 3.

Analysis of Variance for Students with Severe Academic Stress on Negative Coping Strategy

Source	DF	SS	MS	F	P
PRE-POST TEST	1	3.5504	3.5504	19.123	0.000***
Error	180	33.4188	0.1857		
Total	181	36.9692			

****p<.001 N=4*

Figure 7 shows the effects of the DEAL-based intervention on the negative coping strategies of the respondents with severe academic stress. The result revealed that the DEAL-based intervention had positive effects on the negative coping strategies of the respondents. The intervention had minimized the respondents' frequency of practicing negative coping strategy such as, self-blame, behavioral disengagement, self-distraction, denial, and substance or alcohol abuse.

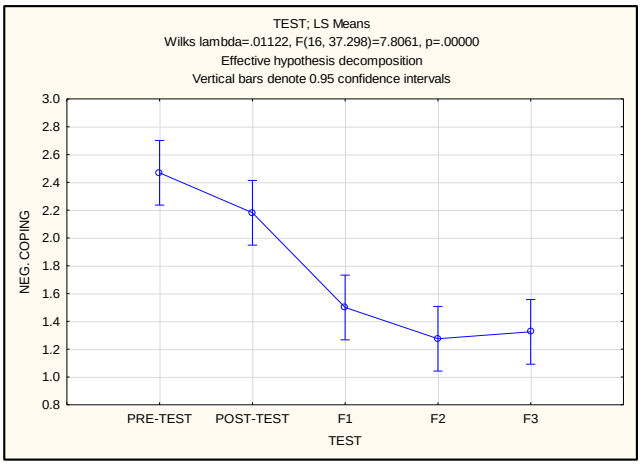

Figure 7. A graph showing the effects of DEAL-based intervention on the negative coping strategies of the respondents with severe academic stress.

Result of the study also demonstrated in Table 4 that intervention program initially had negative effect (decreasing) on the adaptive coping strategy of students with severe academic stress as evident in the significant differences between the pretest (3.312) and posttest (2.698) scores. However, on the three

*__Corresponding Author__: Glenda T. De Guia
University of Eastern Philippines
Catarman, Northern Samar
E-mail: g.deguia@yahoo.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018

Journal of Education and Society

(3) follow-up sessions a significant increased on the students' adaptive coping strategy had been observed as compared to their posttest scores (F1 = 3.125; F2 = 3.312; F3= 3.218. This indicates that the positive effects of the intervention on the students with severe academic stress had manifested only after two (2) weeks from the intervention. This finding affirms the theory on coping strategy of Lazarus and Folkman (1987) that coping process is a slow process. The following studies further affirm the findings that interventions designed to improve students' coping strategies may be an effective way to reduce mental health problems on college campuses. Stress management intervention in college students have shown promise in reducing symptoms of anxiety, depression, and general distress (Conley et al., 2015). Randomized controlled trials have shown that interventions can enhance skills to cope with stress and regulate emotions and that changes in these skills mediate intervention effects on depression and anxiety (Mason, 2017).

Table 4 . *Analysis of Variance for Adaptive Coping Strategy of Students with Severe Academic Stress*

Source	DF	SS	MS	F	P
PRE-POST TEST	1	0.7266	0.7266	7.806	0.000***
Error	180	55.6380	0.3091		
Total	181	56.3647			

****p<.001 N=4*

Figure 8 shows the effects of the DEAL-based intervention on the adaptive coping strategies of respondents with severe academic stress. The result revealed that the DEAL-based intervention had positive effect on the adaptive coping strategies of the respondents only after two weeks from the intervention. This indicates that the positive effects of the intervention on the students with severe academic stress had manifested only after two (2) weeks from the intervention.

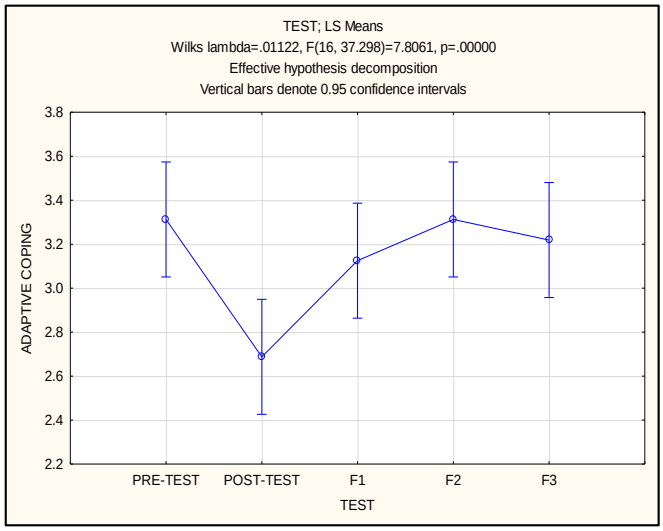

Figure 8. Pretest and 4-time post-intervention tests on adaptive coping strategies of the students with severe academic stress.

Table 5 shows Table 5 shows that the DEAL-based intervention program had no significant effects on the accommodative coping strategy of students with severe academic stress as evident in the significant differences between the pretest (*2.916)* and posttest (*2.791)* scores and on repeated measures in three (3) follow-up sessions (*F1 = 2.312; F2 = 2.208; F3= 2.333).* The data revealed that the frequency of practicing the accommodative coping strategy of the respondents such as social support, instrumental support, venting of emotions, humor, religion, and restraint had not changed after the intervention. The finding of this study affirms the other findings, which states that accommodative coping such as emotional support, religion/praying have stress-buffering effect and prove to be situational resources in cases of strong stress Turashvili and Japaridze (2013), and an important coping strategy in confronting and handling stressful situations. It demonstrates that this dimension effectively contributes toward the management of handling stress (Sheu, Lin, Whans as cited in Hirsch et al., 2015).

*__Corresponding Author__: *Glenda T. De Guia*
University of Eastern Philippines
Catarman, Northern Samar
E-mail: g.deguia@yahoo.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018

Journal of Education and Society

Table 5. *Analysis of Variance for Accommodative Coping Strategy of Students with Severe Academic Stress*

Source	DF	SS	MS	F	P
PRE-POST TEST	1	1.9662	1.9662	6.788	0.010*
Error	180	52.1349	0.2896		
Total	181	54.1011			

**p<.05 N=4*

The result on figure 9 revealed that the DEAL-based intervention had no significant effect on the accommodative coping strategies of the respondents. The data revealed that the frequency of practicing the accommodative coping strategy of the respondents such as social support, instrumental support, venting of emotions, humor, religion and restraint had not changed after the intervention.

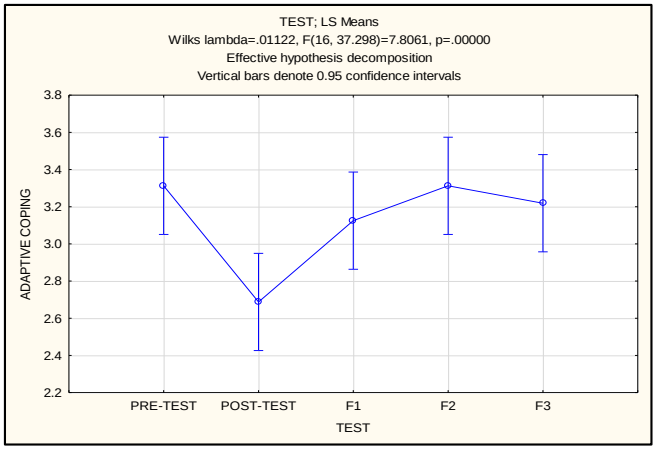

Figure 9. A graph showing the effects of DEAL-based intervention on the accommodative coping strategies of the respondents with severe academic stress.

Conclusion

It can be inferred from this study that there are significant differences between the pretest and posttest scores of the respondents as a function of DEAL-based intervention program on academic stress and coping strategies. DEAL-based intervention program has positive effects on lessening the academic stress of the college freshman students including those with severe cases of stress as evident in the significant differences between the pretest and posttest and on repeated measures in three (3) follow-up sessions. The intervention has positive effects on lessening the frequency of practicing the negative coping strategy of students with severe academic stress. The intervention has strengthen the adaptive coping strategies very effective in lessening the academic stress of the students including the students with severe academic stress. The intervention has strengthened the adaptive coping strategies of the respondents with severe academic stress only after two weeks from the intervention. The intervention has no significant effects on the accommodative coping strategies of the students with severe academic stress.

References

Bettis, A.H., Coiro, M.J., England, J., Murphy, L.K., Zelkowitz, R. L., Dejardins, L., … Compas, B.E. (2017). Comparison of two approaches to prevention of mental health problems in college students: Enhancing coping and executive function skills. *Journal of American College Health, 65*(5), 313-322. doi: 10.1080/07448481.2017.1312411.

Bueno, A. (2018). *CNN Philippines*.

Carver, C. S. (1997). You want to measure coping but your protocol too long: Consider the brief cope. *International Journal of Behavioral Medicine*, *4*(1), 92-100. 10.1207/s15327558ijbm0401_6.

Conley, C. S., Durlak, J. A., & Kirsch, A. C. (2015). A meta-analysis of universal mental health prevention programs for higher education students. *Prevention Science*, *16*(4), 487–507. doi: 10.1007/s11121-015-0543-1.

Hirsch C. D., Barlem E. L. D., Almeida L. K., Tomaschewski-Barlem, J. G., Figueira, A. B., & Lunardi, V. L. (2015). Coping strategies of nursing students for dealing with university stress. *Revista Brasileira de*

***Corresponding Author**: *Glenda T. De Guia*
University of Eastern Philippines
Catarman, Northern Samar
E-mail: g.deguia@yahoo.com

Enfermagem, 68(5), 501-5088. doi:10.1590/0034-7167.2015680503i.

Kwaah, C. Y., & Essilfie, G. (2017). Stress and coping strategies among distance education students at the University of Cape Coast, Ghana. *Turkish Online Journal of Distance Education, 18* (3), 120-134.

Lazarus, R. S. & Folkman, S. (1987). *Stress, appraisal, and coping*. New York, NY: Springer.

Lewin, T., & Mawoyo, M. (2014). *Student access and success: Issues and interventions in South African universities.* Cape Town, South Africa: Inyathelo.

Mason, H.D. (2017). Stress-management strategies among first-year students at a South African University: A Qualitative Study. *Journal of Student Affairs in Africa, 5*(2),131–149. doi:10.24085/ jsaa.v5i2.2744.

Meaney-Tavares R., & Hasking, P. (2013). Coping and regulating emotions: A pilot study of a modified dialectical behavior therapy group delivered in a college counselling service. *Journal of American College Health, 61*(5), 303–309. doi:10.1080/07448481.2013.791827.

Mohamed Arip, M. A. S., Kamaruzaman, D. N., Roslan, A., & Ahmad, A. (2015**). Development, validity and reliability of Student Stress Inventory (SSI).** *The Social Sciences, 10*(7), 1631-1628. doi:10.3923/sscience.2015.1631. 1638.

Sheu, S., Lin, H. S., & Hwang S. L. (2002). Perceived stress and physio-psychosocial status of nursing students during their initial period of clinical practice: The effect of coping behaviors. *International Journal of Nursing studies, 39*(2), 165-175.

Turashvili, T. & Japaridze L. (2013). Coping strategies of University studdents in Georgian context. Problems of Education in the 1st Century, *Problems of Education in the 21st Century, 56*, 144-149.

World Health Organization (WHO). (2013). *Mental health action plan 2013-2020.*

World Health Organization (WHO). (2014). *Mental Health Atlas 2014*.

Yusoff, M. S. B., & Esa, A. R., (2015). A DEAL-based intervention for the reduction of depression, denial, self-blame and academic stress: A randomized controlled trial. *Journal of Taibah University Medical Sciences, 10*(1), 82-92. doi: 10.1016/j.jtumed.2014.08.003.

*__Corresponding Author__: *Glenda T. De Guia*
University of Eastern Philippines
Catarman, Northern Samar
E-mail: g.deguia@yahoo.com

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018

Journal of Education and Society

Research Article | A Refereed Journal

Integration of the Gender-Fair Education in the Grade 9 Curriculum

Jovita E. Cendaña*

ABSTRACT

The study aimed to establish the level of gender-fair education integration in the different SSpS Schools in the Philippines, as perceived and experienced by the Subject Area Coordinators, Grade 9 teachers, and Grade 9 students. Through descriptive-survey and purposive sampling, 392 respondents participated in the study, mostly female. A checklist consisting of three parts was used to draw out responses of four variables.

In the level of integration, the study showed that the schools were excellently incorporating into the instructional plan, materials, classroom activities, and assessment tools. However, the focus group discussions and interviews disclosed that the respondents showed little knowledge, awareness, experience, and skills regarding its integration. The study revealed that the seven schools had minimal inclusion of gender-fair concepts, principles, values, and issues in the instructional plan, materials, classroom activities, and assessment tools.
Furthermore, findings indicated no significant difference in the respondents' perceptions regarding the level of integration. The respondents cited difficulties and challenges in its integration. Suggestions like inclusion of gender sensitivity orientations and seminars, and gender sensitivity training and workshops surmised.

Responses to the four questions was the basis for the final problem in order to provide an improved curriculum guide for Grade 9 with gender-fair integration including a Five-Day Gender-Fair Training Program; production of gender-fair instructional materials; introduction of classroom activities in crafting assessment tools and sample lesson plans with gender-fair integration. The results showed that the administrators and stakeholders be guided in appropriate ways in handling the workforce of the institution towards the effective integration of gender-fair education in all areas of the school.

Keywords: *Gender-fair education, gender concepts, instructional plan, instructional materials, classroom activities, assessment tools*

Introduction

Education is the most powerful way to change the world. It is therefore imperative to keep up and be abreast with new developments in education. The new face of education in the current time is that of a global village. The learners, to be at par with the global arena, are challenged to be prepared in responding to global demands (Tupaz, 2016). Hence, the educative process has to be continuously enhanced to produce globally competitive learners–the outcomes of education. Among the many issues that every educator has to face and deal with are gender equality and gender-fair education. These two issues have long been recognized as concerns that have to be looked into and addressed accordingly (Gonzaga, 2014). Educational institutions—one of the agents of socialization—many times reinforce the gender role and stereotypes learned at home. The school system plays a crucial role in this regard. Non-sexist education must be instilled. An educational system that recognizes gender equality will have a tremendous impact on the full development of the children (Plan Framework, 1995).

Concepts, principles, values, and issues related to gender equity and gender justice disseminated through a wide range of educational classroom activities, instructional materials, instructional plans, and assessment

Corresponding Author: *Jovita E. Cendaña*
University of San Carlos, Cebu City

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

tools for all of those concerned will help in creating a world wherein women and men, girls and boys may live fuller and abundant lives. Such a process may involve considerable human resources, finances, and many types and levels of education, in accord with varied objectives and activities. The goal is to achieve autonomy and self-determination, to broaden understanding of self and others, to end violence and oppression, and to respect differences and the rights of all human beings for recognition (Anderson, 2000). The educator is faced with the challenge of designing effective curriculum guides for gender-fair education.

Literature Review

Education is a fundamental human right and is thus essential for the exercise of all other human rights (UNDHR, 2009). The Philippines signed the Millennium Declaration that included the promotion of gender equality as its third goal. Likewise, the Philippines supports the ASEAN (Association of South East Asian Nations) Socio-Cultural Community Blueprint 2012. It envisions an inclusive ASEAN that works in achieving gender equality and eliminating all forms of discrimination and addressing the intersectionality of women's discrimination. It aims to protect and empower women, children, youth, the elderly, persons with a disability, ethnic minority groups, and other vulnerable and marginalized groups (DepEd Order No. 32, s. 2017). Under international and national laws, the Philippines is committed to integrating gender equality into the principles, goals, and processes of the country's education. Education has to be complete, adequate, integrated, and relevant to the call of the times and to the kind of life that Filipinos have. The importance of quality education is the concern of everyone.

Gender equality requires everyone to respect human rights and establish a set of ethical demands necessary for all people—men and women alike—to live a full life. Achieving gender equality entails developing the freedom of all individuals, irrespective of gender to choose, actions, aspirations, and attributes that they have reason to value. Gender equality is a fundamental human right and a jumpstart for social justice and economic necessity (UNESCO, 2016). Gender education plays a major role in creating school environments that are free of gender bias and in encouraging women and men, girls and boys to reach their highest potentials in work and abilities. Under the Implementing Rules and Regulations of RA No. 10533, the Department of Education is mandated to ensure that the basic education curriculum is gender and culture-sensitive (Rule 11, Section 10.2). This study also strongly supports the Gender-Responsive Basic Education of the Department of Education, whose aim is to holistically develop Filipinos who have access to quality, culture-based basic education in a learner-friendly, safe, and nurturing environment (DepEd Updates, 2013) and commits to integrate the principles of gender equality, gender equity, gender sensitivity, non-discrimination, and human rights in the provision and governance of basic education (DepEd Order No. 32, s. 2017).

The Philippines has laws prohibiting sexual discrimination in school and in the workplace such as the Anti-Sexual Harassment Act (RA No. 7877), Committee on Decorum and Investigation (CODI) to address sexual issues (CHED Memo No. 01, s. 2015) and the Anti-Violence against Women and their Children (RA No. 9262).

Research Questions

This study assessed the level of integration of gender-fair education (GFE) and the difficulties encountered by Grade 9 teachers and Subject Area Coordinators of the different Holy Spirit Schools in the Philippines in their integration of gender concepts, gender principles, gender values, and gender issues into the instructional plan (IP), instructional materials (IM), classroom activities (CA), and assessment tools (AT) in order to craft an improved Grade 9 curriculum, gender-fair

*__Corresponding Author__: *Jovita E. Cendaña*
University of San Carlos, Cebu City

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

education training program and sample lesson plans based on the findings.

The study aimed to answer the following questions:

1. What is the gender and age profile of the following respondents?
    1.1 Subject Area Coordinators
    1.2 Grade 9 Teachers
    1.3 Grade 9 Students
2. What is the level of integration of gender-fair education in Grade 9 with regard to gender concepts, gender principles, gender values, and gender issues along with the following, as perceived by the respondents?
    2.1 Instructional Plan
    2.2 Instructional Materials
    2.3 Classroom Activities
    2.4 Assessment Tools
3. Is there a significant difference in the perceptions of the respondents regarding the level of integration of gender-fair education along with the following?
    3.1 Instructional Plan
    3.2 Instructional Materials
    3.3 Classroom Activities
    3.4 Assessment Tools
4. What difficulties were encountered by the Grade 9 teachers in integrating gender concepts, gender principles, gender values, and gender issues into the following, as perceived by the teachers themselves?
    4.1 Instructional Plan
    4.2 Instructional Materials
    4.3 Classroom Activities
    4.4 Assessment Tools
5. What difficulties were encountered by the Grade 9 teachers in integrating gender concepts, gender principles, gender values, and gender issues into the following, as perceived by the Subject Area Coordinators?
    5.1 Instructional Plan
    5.2 Instructional Materials
    5.3 Classroom Activities
    5.4 Assessment Tools
6. What improvements can be made to the instructional plan, instructional materials, classroom activities, and assessment tools in the Grade 9 curriculum based on the findings of the study?

Methodology

This chapter presents the methodology used in this study. It also describes and discusses the different variables, the respondents of the study, the instruments administered in data gathering, the research design and procedure, and the techniques applied as part of data processing.

Research Design

The study employed the descriptive survey research method of using the quantitative and qualitative design because of some follow-through questions in the interview and triangulations through FGD. This method was deemed appropriate since the primary focus was to determine the current level of integration of gender-fair education and the difficulties encountered in the integration. This methodology involved the exposition of materials that were analyzed.

After a review and analysis of the relevant international and national documents and other related materials, a survey questionnaire was constructed and administered to the respondents. When all the needed information from the respondents were in, the researcher proceeded to determining the level of the integration of the gender concepts, gender principles, gender values, and gender issues in the instructional plan, instructional materials, classroom activities, and assessment tools.

Sampling

The respondents of the study were the Subject Area Coordinators (SAC), Grade 9 teachers, and a number of Grade 9 students of the different Holy Spirit Schools in the Philippines. This study was conducted in the seven (7) Holy Spirit Schools owned and managed by the Mission Congregation Sisters Servants of the Holy Spirit (SSpS), an international congregation of religious women, whose apostolates include education.

Fifty-three Grade 9 teacher-respondents and 43 Subject Area Coordinators in the seven schools covered in this study were respondents.

*__Corresponding Author__: *Jovita E. Cendaña*
University of San Carlos, Cebu City

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

The study deemed it sufficient to get 30% of the total number of Grade 9 students from each institution covered in the study, totaling 296 Grade 9 student-respondents. The purposive sampling technique was used to obtain the needed sample for the student-respondents.

The 392 respondents were requested to answer the survey questionnaire on the level of integration of gender-fair education in terms of gender concepts, principles, values, and issues. A maximum of 12 respondents from each set of respondents was randomly identified and chosen for the semi-structured interviews and focus group discussion (FGD). The interview and FGD were done for triangulation purposes.

Research Instruments

The study used a pilot tested self-structured survey questionnaire to draw answers from the Subject Area Coordinators, Grade 9 teachers, and Grade 9 student-respondents. The main research instrument was the questionnaire with three major sections. To validate the answers of the respondents, qualitative data in the form of informal interviews, semi-structured interviews, and focus group discussions were conducted. With the process, the following were undertaken:

Validation of Survey Questionnaire

To ensure the validity and reliability of the self-made instruments, validation procedures and reliability tests were undertaken. Three persons were tapped for their expertise: face validity, content validity and construct validity. The experts were given copies of the instrument. Based on their suggestions, the instrument was revised. For face validity, the instrument was shown to the respondents. A content expert was requested to check the kinds of questions listed in each item. Double-barreled questions were revised; other conditions in making a good instrument were noted. In the different items, the stem statements were added and some terms and options were simplified. Factor analysis was used to validate constructs. After implementing the suggestions given by the experts, copies of the instruments were reproduced, ready for pilot testing.

Pilot Testing of Survey Questionnaire

Since not all reliable instruments are valid, they have to be subjected to tests of reliability and validity. In this study, steps were put in place that the instruments ascertained what they were supposed to measure. The responses from the pilot testing were subjected to item analysis. Revisions on the questionnaire were then made. Some items were retained; others were revised; others were discarded. A stem statement for all the areas was added.

Before the study was undertaken, and to ensure a more credible and objective undertaking, the researcher conducted a pilot survey in two Society of the Divine Word (SVD)-owned schools, with permission from the Directors and the Principals of the two schools. These schools were chosen since the SSpS Sisters are part of their staff. The first dry-run was done in Liceo del Verbo Divino (LVD), Tacloban City. Three Subject Area Coordinators, 3 Grade 9 teachers and 5 Grade 9 student-respondents were randomly chosen. The second pilot testing was done at the University of San Carlos South Campus Basic Education Department (USC-SC BED), Cebu City. Eight Subject Area Coordinators, 15 Grade 9 teachers and 35 Grade 9 student-respondents participated in the pilot testing of the survey questionnaire. In all, the instrument was pilot tested among 69 respondents in the two schools mentioned earlier. Those who were included in the pilot testing were no longer involved in the final survey. The questionnaire was finalized after considering the comments and suggestions that were given. A total of 160 items were asked of the Subject Area Coordinators, Grade 9 teachers and Grade 9 student-respondents. In doing so, the researcher was able to establish internal validity of the survey questionnaire. All the questions yielded positive results. This indicated that the survey questionnaire was a

*__Corresponding Author__: *Jovita E. Cendaña*
University of San Carlos, Cebu City

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

good, valid, and credible instrument. Cronbach's Alpha Reliability Coefficient was used to analyze the reliability of the instrument.

A reliability test was performed too in order to measure the internal consistency or homogeneity of the items and how well they measured a single construct. One way of calculating an internal consistency is through a coefficient alpha. This measure is expected to be over 0.7 before concluding that the test is internally consistent.

Table 1
Cronbach Alpha Reliability Coefficient of the Subject Area Coordinator, Grade 9 Teachers and Grade 9 Student-Respondents Survey Questionnaire

Categories	Reliability	Description
1. Level of Integration	0.853	Fairly High Reliability
a. Instructional Plan	0.955	Very High Reliability
b. Instructional Materials	0.948	Very High Reliability
c. Classroom Activities	0.961	High Reliability
d. Assessment Tools		Very High Reliability
Overall	0.985	Very High Reliability
2. Difficulties Encountered in the Integration	0.932	High Reliability
a. Instructional Plan	0.963	Very High Reliability
b. Instructional Materials	0.889	Very High Reliability
c. Classroom Activities	0.953	Fairly High Reliability
d. Assessment Tools		Very High Reliability
Overall	0.979	Very High Reliability

Legend:

Mean	Interpretation
0.95 – 0.99	Very High Reliability
0.90 – 0.94	High Reliability
0.80 – 0.89	Fairly High Reliability
0.70 – 0.79	Rather Low Reliability
Below 0.70	Low Reliability

In determining the reliability of the survey questionnaire for the Subject Area Coordinators, Grade 9 teachers, and Grade 9 student-respondents, the researcher made use of Cronbach Alpha Reliability Coefficient as the statistical tool. The results revealed Very High, High and Fairly High results in all of the areas considered for assessment. The over-all result of 0.985 for the level of integration and 0.979 for the difficulties encountered in the integration were interpreted as Very High reliability. This would mean that the instrument achieved internal consistency of responses across all conditions given for each category or aspect of assessment: its reliability is established as measured using the Cronbach's Alpha Reliability Coefficient.

Actual Survey

The actual survey commenced after obtaining permits from the SSpS Provincial Leaders of the Rosary and the Trinity Provinces, including the SSpS Schools Superintendent, School Directors, and School Principals. A letter seeking approval and obtaining the schedule for the conduct of the interview and the FGD was also sent. After securing approval, assistance was requested from the heads of the school in identifying the respondents.

The researcher conducted an orientation among the respondents on how to accomplish the questionnaire. The survey was first conducted with the Subject Area Coordinators and Grade 9 teachers. In order not to put pressure on the respondents during their assessment, the researcher informed the respondents that the instruments would be retrieved at the end of the day or the following day.

The researcher distributed the questionnaire to the intended student-respondents, randomly chosen by the teacher gathered in one venue. The researcher facilitated the proceedings. The students were given thirty (30) minutes to finish answering the questionnaire.

*__Corresponding Author__: *Jovita E. Cendaña*
University of San Carlos, Cebu City

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

For triangulation purposes, a face-to-face interview, semi-structured interview and FGD with the identified respondents were conducted to validate the responses when all survey questionnaires were retrieved. In this stage, the selection of the representative-respondents was based on the endorsement of the principals in each school and their willingness and availability to attend and participate in the discussion.

From the three groups of respondents, one semi-structured interview and focus group discussion in every school was conducted. For each session, all proceedings were audio-recorded for transcription purposes, which served as basis for analysis and interpretation of responses. An informal interview was conducted by the researcher among a few randomly selected respondents. After the triangulation process was completed, the researcher proceeded to the interpretation of data.

Survey Questionnaire for Subject Area Coordinators, Grade 9 Teachers and Students were based on various references such as books, researches and other sources. They served as guide and/or benchmark. The researcher used the Likert's scale with five numerical ratings ranging from the highest to the lowest.

Data Analysis

The researcher applied the following specific analysis of each research instrument and procedure.

- Frequency and Percentage were used to determine the profile of the respondents according to their age and sex.
- Kruskal-Wallis Test and Wilcoxon Rank-Sum Test were employed for testing the differences between the mean ranks of the perception of the respondents in the level of integration of gender concepts, gender principles, gender values, and gender issues in the instructional plan, instructional materials, classroom activities, and assessment tools.

Ethical Consideration

In the conduct of this study, ethical considerations were taken into account. Standard procedures were followed in the gathering of data up to its collection and analysis. It was made sure that the confidentiality and anonymity of these data and responses provided by the respondents were maintained in the course of making this study.

Results and Discussion

Profile of the Subject Area Coordinators (SAC), Grade 9 Teachers and Selected Grade 9 Student-Respondents:

Table 1 presents the profile of the respondents from the seven Holy Spirit Schools in the Philippines in terms of their ages and sex. The data gathered revealed that of the Grade 9 student-respondents, 296 or 100% belong to the 14 to 17 ages comprising one-third of the country's population. Forty Three Subject Area Coordinators belong to the 18 - 25 age brackets. On the other hand, there were 27 Grade 9 teachers within the age interval of 18-25.

The data revealed that there are 34 female (79.07%) Subject Area Coordinators and 9 male Subject Area Coordinators (20.93%). Similarly, there were more female Grade 9 teachers than the males: 33 (62.26%) and 20, (37.74%) respectively. Lastly, there were more female student-respondents at 216 or 72.97% than their male counterparts at 80 or 27.19%. The data show that the teaching profession is dominated by women. Blanco (2017) believed that the relatively big number of female teachers allows women to impart knowledge to students, not only academic topics but gender-related issues as well.

*Corresponding Author: *Jovita E. Cendaña*
University of San Carlos, Cebu City

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

Table 1
Profile of the Respondents on Age and Sex

Categories	Subject Area Coordinators (n=43)		Teachers (n=53)		Students (n=296)	
	Frequency	Percentage (%)	Frequency	Percentage (%)	Frequency	Percentage (%)
Age						
14 – 17	0	0	0	0	296	100%
18 – 25		4.65%				
26 – 35	2		27	50.94%	0	0
36 – 50		16.28%		30.19%		
Above 50	7	60.47%	16	9.43%	0	0
		18.60%		9.43%		
	26		5		0	0
	8		5		0	0
Sex						
Female	34	79.07%	33	62.26%	216	72.97%
		20.93%		37.74%		27.03%
Male	9		20		80	

Level of Integration of Gender-Fair Education (GFE) in Grade 9 with regard to Gender Concepts, Gender Principles, Gender Values, and Gender Issues in the Instructional Plan (IP), Instructional Materials (IM), Classroom Activities (CA), and Assessment Tools (AT) as Perceived by the respondents.

Instructional plan (IP)

The data show excellent integration of gender-fair education in the Grade 9 teachers' instructional plan. The Subject Area Coordinators believed that they have excellently done the integration of gender-fair education in their instructional plan as well. Thus the figures show that the totality of the integration of gender concepts, principles, values, and issues in the instructional plan by the Grade 9 teachers and the Subject Area Coordinators was excellent.

However, the answers yielded from the interview and the FGD proved contradictory since the majority expressed their difficulty in integrating the gender concepts, gender principles, gender values, and gender issues in the lesson. They admitted that they have limited knowledge or they lack knowledge on global issues, gender equality, and gender-fairness. Based on the survey there is an inconsistency between the result of the survey and the interview and FGD. Because of this, the researcher sees the need to propose a gender-fair training program for the Subject Area Coordinators, teachers, and administrators, for them to journey together.

Instructional materials (IM)

The figures show that the Grade 9 teachers were excellently integrating gender-fair education in their instructional materials. The Subject Area Coordinators they too believed that they were excellently doing the integration of gender-fair education. However, in the interview and during the focus group discussions the respondents shared a different thing. One need or concern they felt is attending gender-sensitive training and in-service training on gender-fair education for teachers. They also expressed that they are helped in spotting gender stereotypes in various instructional materials. Gender training was among the felt need by the whole school community as it will provide adequate knowledge regarding major factors for the development of intervention aimed to change awareness, knowledge, skills, and behavior in relation to gender.

Classroom activities (CA)

The Grade 9 student-respondents believed that Grade 9 teachers were able to integrate gender-fair education in their classroom activities. Moreover, the claim of the Grade 9 teachers that they have integrated gender-fair education across classroom activities was supported by the Subject Area Coordinators who claimed that the Grade 9 teachers' level of integration of gender-fair education was excellent. In terms of the instructional materials, the total result of the responses of the Grade 9 student-respondents, Grade 9 teachers and the Subject Area Coordinators were 4.66 for gender concepts, 4.79 for gender principles, 4.54 for gender values and 4.38 for gender issues which were also categorized as excellent in the integration. Although the findings implied that the teachers were excellently doing the integration yet in the focus group discussion they realized that they still need enough knowledge on gender

*__Corresponding Author__: *Jovita E. Cendaña*
University of San Carlos, Cebu City

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

concepts, gender principles, gender values, and gender issues. This situation of insufficiency of gender knowledge and gender sensitivity support Storey's (2006) contention that majority of the teachers seem to be unaware of their gender biases which are due to their lack of gender-fair knowledge, and that, in school, they continue and perpetuate gender inequalities in various classroom activities.

Assessment tools (AT)

With regards to assessment tools, the result for the Grade 9 student-respondents was 4.51 for gender concepts, 4.59 for gender principles, 4.14 for gender values, and 4.25 for gender issues; for the Grade 9 teachers were 4.72 for gender concepts, 4.69 for gender principles, 4.68 for gender values and, 4.62 for gender issues and for the Subject Area Coordinators were 4.61 (gender concepts), 4.72 (gender principles), 4.67 (gender values), and 4.46 (gender issues). The three groups of respondents yielded excellent integration in terms of gender concepts, gender principles, gender values, and gender issues in the assessment tools. Studies also show that effective classroom assessment has a greater impact on student achievement than any other type of assessment. In the study of Willingham et. al. (1997) on the test performance of women and men, much attention was given in recent years. Because of this increased interest, there is a great deal to review this new information with two objectives in mind namely, to clarify patterns of gender difference and similarity in test performance and related achievements, and to see what implications these findings might have for fair assessment and, as a corollary, examine the assessment process as a possible source of gender differences.

The difference in the Perceptions of the Respondents of the Level of Integration of Gender-Fair Education (GFE) in the Instructional Plan (IP), Instructional Materials (IM), Classroom Activities (CA), and Assessment Tools (AT) are as follows:

Instructional plan. The results imply that the teachers and Subject Area Coordinators agree as to the level of integration of gender concepts, gender principles, and gender values in the instructional plan. However, the two groups of respondents do not agree on the level of integration of gender issues in the instructional plan. To foster gender equality and gender equity, the school environment ought to start adapting gender equality and gender equity policies to set directions for administrators, other school officials, teachers, curriculum planners, students, parents, and other school stakeholders. Despite various initiatives in school, gender issues and gaps in education continue to be a reality and therefore must be addressed accordingly (Gonzaga, 2014).

Instructional materials. The results imply that the teachers and Subject Area Coordinators agree as to the level of integration of gender concepts, and gender principles in the instructional materials. However, the two groups of respondents do not agree on the level of integration of gender values, and gender issues in the instructional materials. In the interview and focus group discussions with the respondents, the fear surfaced especially introducing gender equality in the classroom knowing that growing up in a patriarchal society is somewhat difficult to talk openly about gender sensitivity. They recommended that there should be seminars or training for teachers in basic education to equip them to deliver the tenets of gender-fair education in a non-threatening way.

Classroom activities. The results imply that the teachers, Subject Area Coordinators, and the students agree as to the level of integration of gender concepts, gender principles, gender values, and gender issues in classroom activities. As pointed out, there is equality in the learning process as believed by the teachers, Subject Area Coordinators, and the students. This means to say that the students (that is girls and boys) receive equitable treatment and attention and have equal opportunities to learn. The students were

*__Corresponding Author__: *Jovita E. Cendaña*
University of San Carlos, Cebu City

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

exposed to teaching methods, classroom activities and instructional materials that are more or less free of stereotypes and gender bias (USAID, 2008).

Assessment tools. The results imply that the teachers, Subject Area Coordinators, and the students agree as to the level of integration of gender concepts, gender principles, and gender values in the assessment tools. However, the three groups of respondents do not agree on the level of integration of gender issues in the assessment tools.

In the assessments, the Subject Area Coordinators believed that teachers included an assortment of question types when developing tests, examination, or assessment questions to respond to the diversity in students' learning styles. Secondly, various question types (multiple choice, essay, short answer, etc.) and weigh the test items to ensure that students with different learning styles have equal opportunities to succeed. Lastly, the teachers and the Subject Area Coordinators were believed to have a periodic review of existing tests, examinations, and assessments to determine whether the samples, and language used are free of gender issues like gender biases, and gender stereotypes (Ayo, 2013).

Difficulties Encountered by the Grade 9 Teachers and Subject Area Coordinators in Integrating Gender Concepts, Gender Principles, Gender Values, and Gender Issues in the Instructional Plan (IP), Instructional Materials (IM), Classroom Activities (CA), and Assessment Tools (AT) are as follows:

Instructional plan. Generally, the Grade 9 teachers and Subject Area Coordinators believed that integrating gender concepts in the instructional plan was not so difficult (NSD). The Subject Area Coordinators seemed to find difficulty integrating gender principles in the instructional plan whereas for the Grade 9 teachers they felt that they did not find gender principles difficult to integrate into the instructional plan. Though the Grade 9 teachers perceived that they are into the integration of the gender concept, gender principles, gender values, and gender issues there is a need to provide gender sensitivity orientation (GSO), and gender sensitivity training (GST) to the Grade 9 teachers to answer their somewhat difficult due to insufficient knowledge and understanding of gender-fair education.

Instructional materials. On the part of the Subject Area Coordinators, they also believed that integrating the gender principles, gender values, gender issues, and gender concepts in the instructional materials were not so difficult (NSD). It can be concluded, therefore, that for them they did not find gender-fair education difficult to be integrated into the instructional materials except on two (2) gender concepts on the insufficient knowledge on how to integrate gender concepts (2.49) and the lack of skills in integrating them in the instructional materials (2.50).

Classroom activities. The findings in this item, the Grade 9 teachers and the Subject Area Coordinators were consistent. The lack of knowledge and the lack of skills need to be given attention to since these were the felt needs. However, there is one item in the gender principle that the Grade 9 teachers perceived as somehow difficult (SD) to integrate into classroom activities; the gender principle that asked for a commitment to learning and practicing equitable teaching to improve the needs and welfare of both sexes. There is a need, therefore, to look into the gender principles in order to blend them into different classroom activities. This might be that they themselves have little knowledge on the different gender concepts and have limited opportunity to undergo gender sensitivity seminars and training that is why they find it somewhat difficult to do the integration; the gender principle that asked for commitment to learning and practicing equitable teaching to improve the needs and welfare of both sexes. Classroom performance of the teacher can largely affect the learning outcomes of the students; as such gender-fair training and seminars are what they need to make them

*__Corresponding Author__: *Jovita E. Cendaña*
University of San Carlos, Cebu City

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

committed to help improve the needs and welfare of the students.

Assessment tools. The respondents felt that items under assessment tools were not so difficult (NSD) to be integrated. However, for the Grade 9 teachers, there was one (1) item under gender concepts that was somehow difficult (SD) to integrate into the assessment tools; it was on the lack of skills and techniques that they find hard to be able to do the integration. The Grade 9 teachers perceived that they were doing what is being asked to do the integration of the gender-fair education, however; the lack of the needed skills and technology in integrating the gender concepts in their assessment tools is one concern that needs to be looked into.

On the other hand, there were two (2) items that the Subject Area Coordinators found somehow difficult (SD) to integrate into the assessment tools. One item under gender concepts is the lack of skills in integrating the gender concepts and the other item is under gender issues which are gender biases remain, and are still embedded in the learning media, curricula, and instructional methods. This implies that there is a need for a gender sensitivity orientation and training for the Subject Area Coordinators and Grade 9 teachers.

During the focus group discussions and interview it was reiterated and suggested that they are provided with different gender training, seminars, and activities in order to intensify the gender-fair integration across all the different subjects. There is a need for the increased awareness of the integration of gender concepts, gender principles, gender values, and gender issues not only in the assessment tools but also in the instructional plans, instructional materials, and classroom activities.

Conclusion

The results of the survey enabled the researcher to arrive at the following significant findings and conclusions:

1. Majority of the respondents were females and their ages mostly clustered at the bracket of 14 to 25.
2. The respondents quantitatively manifested excellent integration of gender concepts, gender principles, gender values, and gender issues in the instructional plan, instructional materials, classroom activities, and assessment tools. However, in the interview and focus group discussions, the respondents expressed that they lack the knowledge and skills of gender-fair integration.
3. There is no significant difference in the perceptions of the respondents of the level of integration of gender-fair education in the instructional plan, instructional materials, classroom activities, and assessment tools conveys that there is no congruency of the respondents' perception.
4. Significant difficulties were encountered by the respondents in integrating the gender concepts, gender principles, gender values, and gender issues in the instructional plan, instructional materials, classroom activities, and assessment tools. The focus group discussions and interview reveal that the respondents' needs are to undergo gender orientations, seminars, workshops, training and capacity building sessions.
5. The derived findings call for a proposed training design for teachers and Subject Area Coordinators that would equip them with the necessary gender knowledge, gender understanding, and skills for gender-fair integration in their daily lesson plans.

*__Corresponding Author__: *Jovita E. Cendaña*
University of San Carlos, Cebu City

ISSN: 2619-7162 (print); 2619-7189 (online)
Volume 2, Issue 1
December 2018
Journal of Education and Society

Recommendations

After the review of the analysis, interpretation of data and in light of the findings of this study the researcher recommends the following:

1. The school has to revisit its instructional plans, instructional materials, classroom activities, and assessment tools to assess if gender-fair education has been given due consideration based on the result of the study making such materials gender responsive and gender-sensitive which is believed to be the initial step for gender-fair education.
2. The school administration should initiate the provision of learning opportunities like orientations, seminars, trainings, workshops, capacity building sessions, and gender development for the Subject Area Coordinators and teachers to equip them with gender concepts, gender principles, gender values, and skills, which are needed in ensuring a gender-fair school programme and curriculum.
3. The conduct of seminar-workshops and trainings on gender-related concepts, innovative and critical thinking strategies, and the use of online web and multimedia facilities should be included in the faculty development program to improve teachers' competence in the integration of gender-fair concepts, gender principles, gender values, and gender issues, and to increase the capacity at all levels ensuring that gender-fair education is integrated into the instructional plan, instructional materials, classroom activities, and assessment tools.
4. The Subject Area Coordinators and teachers are encouraged to make an assessment of their instructional plan, instructional materials, classroom activities, and assessment tools as to the suitability and effectiveness of the subject matter, teaching strategies and methodologies essential in the realization of a gender-fair education.
5. The school should provide gender-responsive activities to the students like fora, symposia, monthly activities, and celebrations that would enhance their gender awareness and gender sensitivity.
6. The school should purchase adequate instructional materials both print and non-print such as books and audio materials which could be of great help to the Subject Area Coordinators, teachers and students on raising their awareness and consciousness on gender knowledge and gender sensitivity.
7. The school should identify a focal point and create women's desk to ensure success in the integration of gender-fair education in school and incorporate clear policies, provisions, objectives, and strategies for the integration of gender-fair education.
8. Finally, related studies in relation to the integration of gender-fair education in all basic education are encouraged.

References

Anderson, J. (2000). Educating about gender and changing gender system. Discussion paper presented to the follow-up conference to *CONFITEA V on gender and adult education*. Catholic University of Peru. Florence, Italy.

Ayo, R. (2013). Integrating gender-fair education in the teaching of Philippine History in Bicol University. *Tawarikh: International Journal for Historical Studies, 4*(2), 205-222.

Blanco II, S. (2017). Gender and development mainstreaming in selected state universities in region VIII. (Unpublished dissertation). Leyte Normal University. Tacloban City.

CHED Memo. (2015). *CHED memorandum order no. 01 series of 2015. Establishing the policies and guidelines on gender and development in the*

*__Corresponding Author__: *Jovita E. Cendaña*
University of San Carlos, Cebu City

commission on higher education and higher education institutions. Higher Education Development Center, Quezon City.

Department of Education Updates. (2013). *DepEd updates on K to 12: Benefits of the K 12 curriculum for Filipino students*. Retrieved from https://ph./theasianparent.com/advan

DepEd Order No. 32. s. 2017. *Gender-responsive basic education policy*. Retrieved from https:www.teacherph.

Gonzaga, M.V. (2014). *Status of gender and development (GAD) mainstreaming in higher education institutions of Leyte* (Unpublished dissertation). Leyte Normal University. Tacloban City.

Plan Framework PPGD. (1995). Plan framework of the Philippines plan for gender-responsive development 1995-2025. Manila, Philippines.

Storey, J. (2006). *Cultural theory and popular culture: An introduction*, vol. 2 (3rd Edition.). Pearson Prentice Hall.

Tupaz, G. (2016). *Lexico-morphological competence and writing proficiency of students in state universities and colleges in Leyte* (Unpublished dissertation). Leyte Normal University. Tacloban City.

UNDHR. (2009). *United Nations declaration of human rights.* Retrieved from www.kidcyber.com.au.2.un.org/wome nwatch/daw/beijing/platform/plat

UNESCO. (2016). UNESCO building peace in the minds of men and women. Retrieved from ww.unesco.org/new/en/unesco/theme/g ender-equality

Willingham, W., Cole, N., & Bridgeman, B. (1997). Gender and gender-fair assessment. United States: Lawrence Erlbaum.

*__Corresponding Author__: *Jovita E. Cendaña*
University of San Carlos, Cebu City