Multiple Intelligences, Critical Thinking and Vocabulary Skills of Senior High School (SHS) Students in San Jose, Camarines Sur, Philippines

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Abstract- This study assessed the multiple intelligences, critical thinking and vocabulary skills of Grade 12 SHS students under General Academic Strand (GAS) in the selected schools in San Jose, Camarines Sur, Philippines. Descriptive correlational method of research was utilized using the modified critical thinking and vocabulary skills tests, researcher-made multiple intelligences test, questionnaires and unstructured interviews. Findings revealed that the level of Grade 12 SHS students under GAS in critical thinking and vocabulary skills falls under below average. Teacher factors are those that affect the critical thinking skills of students while language factors are those that affect the vocabulary skills of students. The types of multiple intelligences that are prevalent among the student-respondents were musical, existential and intrapersonal. Moreover, it was revealed that the critical thinking skills, vocabulary skills, and multiple intelligences of Grade 12 SHS students have very low correlations. This study recommends that SHS teachers may incorporate learning activities with the intent of improving the critical thinking and vocabulary skills of the students. Administrators may show support and encourage teachers to be updated on the current trends in critical thinking and vocabulary skills through continuing professional development. Teachers may provide learning activities/ tasks that will cultivate students' dominant intelligences.

Keywords: Multiple Intelligences, Critical Thinking Skills, Vocabulary Skills, Senior High School (SHS) Students

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I. INTRODUCTION

Two major problems in Philippine education are memorization rather than thinking, and teacher domination in the classroom. Filipino students are trained to be good to memorization yet they don't know how to think (Galdon, 2011). To develop holistic, globally-competitive, and locallygrounded Filipinos, critical thinking skills of students must be enhanced (Quilario, 2014). This was supported by Angara (2007) who theorized that in order to meet international benchmarks, upgrading the skills and qualifications of Filipino students must be prioritized. Graduates of SHS are expected to possess necessary skills that will enable them to respond to the requirements of the emerging global economic and social environment. SHS curriculum aims to prepare students for the future by equipping them with 21st century skills and one of that is critical thinking (Sasota & Nava, 2017).

Critical thinking has been defined in so many ways as an effective ways to improve interpretation, analysis and judgement in making evaluation and inferences among learners (Haase, 2010). Critical thinking is the ability to test and evaluate information, prejudices and assumptions, discuss different aspects in order to reach a decision, and provide regarding claims and ideas (Aktamis & Yenice, 2010). Students have to develop critical thinking skills in order to succeed in today's fast-paced global society (Osman & Marimuthu, 2010). Critical thinking is important in dealing effectively with social, scientific, and practical problems (Sharikova, 2007); and an essential skill in all other aspects of life (Slamet, 2014). Four (4) of ten (10) fresh graduates and young job seekers in the Philippines are not hired because they lack skills critical thinking, initiative, and effective communication (Buenvenida (2017), People Management Association of the Philippines, 2012). Thus, educators must have teaching-learning activities to the students that may be mentally challenging but can still develop their higher order

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thinking skills, letting them feel that sense of responsibility in the completion of tasks is tantamount to usual classroom setting. Some of the activities such as debates, class recitation, essay writing, presentation activities and research tasks to enhance their skills in writing, speaking and reading habits have great contributions to boost critical thinking skills (Paterno, 2024) and also to address students' varying degrees of intelligence (Paterno, 2012).

Article XIV, Section 3 of the 1987 Philippine Constitution states that in order to promote vocational efficiency, school shall develop critical and creative thinking skills, aside from broader scientific and technological knowledge among learners. However, Yap (2011) specified that regardless of of the guarantees provided by the government, the current performance indicators showed a dismal picture of the quality of education in the country as participation rates have worsened, dropout rates remain high and performance in both national and international assessment tests have poor results. In the municipality of San Jose of the province of Camarines Sur, the result in National Achievement Test (NAT) of a big-sized secondary school with both junior and senior high school showed declining performance in the school year 2014-2015 in Critical Thinking. In 2013-2014, its rating in critical thinking is 54.42. But in 2014-2015, it dropped to 53.19. This case also happened to a medium-sized secondary school in the same municipality which in 2013-2014 the rating was 61.64; but in 2014-2015, it dropped to 53.86. Meanwhile, a small-sized secondary school in the same municipality improved its rating in Critical Thinking. Rating of this school in 2013-2014 was 42.30 and in 2014-2015 it improved to 43.10. Results suggest that critical thinking skills of students must be strengthened, sustained and properly monitored.

Despite the fact that schools in the Philippines include teaching subjects that develops critical thinking but so far many graduates remain unprepared (Marquez, 2017). Teachers are constrained to the didactic approach because of the misconceptions in teaching (Lipman, 2003); the quantity of information given is prioritized over the development of critical thinking; didactic teaching is perceived easier than reflective teaching; while the government is bent on producing skilled laborers more than critical thinkers.

Critical thinking skills are also linked with vocabulary skills since words are used to express ideas and feelings, explore and analyze the world around them (Siriwan, 2007). Learners with large and rich vocabulary give them the right words to use at the right time and are believed to improve their listening, reading, speaking, writing and thinking abilities.

Critical thinking skills are also associated with multiple intelligences (Ahmadabad and Behnam2017) revealed that there is a significant and meaningful relationship among multiple intelligences and critical thinking (Deepa, 2014).

In order to meet the international benchmarks and the qualifications for tertiary education and enable students to succeed in work and life for the future, this study was hereby conducted.

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> Objectives:

This study aimed to assess the multiple intelligences, critical thinking and vocabulary skills; the factors that affect the critical thinking skills and vocabulary skills of student-respondents and to test the significant relationship between and among variables of Grade 12 students under GAS in the selected public senior high schools in San Jose, Camarines Sur, Philippines.

II. MATERIALS AND METHODS

Research Design

This study used descriptive-correlational design to assess the level of critical thinking and vocabulary skills, multiple intelligences and the factors affecting the critical thinking skills and vocabulary skills of students. The correlational method was employed with the intent of determining the significant relationship between and among variables- critical thinking skills and vocabulary skills; vocabulary skills and multiple intelligences, and critical thinking skills and multiple intelligences.

> Respondents

This study utilized one hundred ninety six (196) Grade 12 SHS students under GAS. These participants were expected 2020 graduates of the K to 12 curriculum of the Department of Education in the selected San Jose District schools of the province of Camarines Sur. One hundred twenty five (125) students are from the most populated schools; fifty seven (57) students are from the medium school and fourteen (14) students from the small school. The total enumeration sampling method was used since the total population enrolled to Grade 12 SHS students under GAS in the respondent-schools was included in the study. Schools were coded to protect their identity and identify their trend, pattern and results.

Data Gathering Instruments

The modified critical thinking skills test by Watson and Glaser (1994) was used in determining the level of critical thinking skills of Grade 12 SHS students under Academic Track GAS. The modified critical thinking skills test is composed of competencies including: inference, recognition of assumptions, deduction, interpretation and evaluation of arguments. The modified vocabulary skills test is composed of competencies including: synonyms, antonyms, homographs, homophones and idiomatic expressions. The researcher-made multiple intelligences test was used to determine the prevalent multiple intelligences of the SHS students. It was patterned to Howard Gardner's nine (9) multiple intelligences. There were five (5) items for each form of intelligence such as: linguistic, Volume 10, Issue 2, February – 2025

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logical-mathematical, musical, visual- spatial, bodilykinesthetic, intrapersonal, interpersonal, existential and naturalist. The questionnaires were used to determine the factors that affect the critical thinking and vocabulary skills. The multiple intelligences test and the questionnaires on factors affecting the critical thinking skills and vocabulary skills of SHS students were validated through Cronbach Alpha. The result of Cronbach Alpha tests revealed 0.70 for multiple intelligences test, 0.89 for questionnaire on the factors affecting the critical thinking skills of SHS students and 0.87 on the factors affecting the vocabulary skills of SHS students.

III. RESULTS AND DISCUSSION

Critical Thinking Skills and Vocabulary Skills Levels of Grade 12 SHS students

Table 1. Level of Critical Thinking Skills of Grade 12 SHS Students in the Selected Schools in San Jose, Camarines Sur	
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LEVEL	Scho	ol A	Scho	ol B	Scho	ol C	OVER-ALL		
	No. of students	%	No. of students	%	No. of students	%	No. of students	%	
Above Average	59	47.20	25	43.86	4	28.57	88	44.90	
Average	3	2.40	0	0	0	0	3	1.53	
Below Average	63	50.40	32	56.14	10	71.43	105	53.57	
Mean	16.	16.03		16.63		13.92		53	
SD	8.4	8.45		10.75		8.47		2	
	n=125	n= 57	n =1	14 N	N=196				

Legend: SD- Standard Deviation N- Total Number of Student-Respondents n- Sample Size

Table 1 reveals that School A, B and C have parallel results as to the level of critical thinking skills, *below average*. In School A, 63 or 50.40% out of 125 participants exhibited below average level. In School B, 32 or 56.14% out of 57 respondents displayed below average level while in School C, 10 or 71.43% out of 14 respondents comes close with the below average level. At the same time, the over-all level of critical thinking skills of students reveals that 105 or 53.57 % out of 196 respondents fall under below average level. The cited results suggest that most of the student-respondents have below average level in thinking reasonably and logically. Students did the expectation not meet for extraordinary/exceptional students of the SHS program as expected by the Department of Education.

The cited results are compatible to the study findings of Tamayo, et. al. (2014) that the level of critical thinking skills students was interpreted as practicing thinkers who recognize the need to develop skills in deducing and inducing an argument, assumptions and judgment. Large number of students had low critical thinking level (Günaydın and Barlas, 2015).

LEVEL	Schoo	ol A	Schoo	ol B	Schoo	ol C	OVER-ALL		
	No. of students	%	No. of students	%	No. of students	%	No. of students	%	
Above Average	62	49.60	20 35.09		4	28.57	87	44.49	
Average	4	3.20	2	3.51	2	14.29	6	3.06	
Below Average	59	47.20	35	61.40	8	57.14	103	52.55	
Mean	19.7	19.79		23.53		10.28		87	
SD	9.3	0	11.04		5.6	8	8.67		

Table 2. Level of Vocabulary Skills of Grade 12 SHS Students in the Selected Schools in San Jose, Camarines Sur

n=125 n= 57 n=14 N=196 Legend: SD- Standard Deviation N- Total Number of Student-Respondents n- Sample Size

Table 2 shows that majority of the Grade 12 SHS students in School B and C comes close with *below average level* in vocabulary skills except in School A that displayed above average level. However, the over-all level of vocabulary skills of the students falls under *below average*. It can be deduced that most of the students-respondents have *below average level* of skills in acquiring the right meaning of words in certain sentences that fit the context of certain statements.

Participants could not express their ideas and feelings clearly as they only knew few English vocabularies.

The vocabulary comprehension level of students (Gaza, 2011; Rodriguez, 2010; & Tizon, 2009) who as low which indicates that respondents have difficulty understanding words in the text and its context. The result implied a low level of vocabulary ability among students

➢ Factors that affect the Critical Thinking Skills and Vocabulary Skills of the Respondents

Table 3. Summary of the Factors that Affect the Critical Thinking Skills of Grade 12 SHS Stud	dents
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Parameters	Weighted Mean	Interpretation	Rank
1. School's Resources, Curriculum, and Environment	3.70	Agree	3
2. Family Factors	3.27	Moderately Agree	6
3. Social Factors	3.55	Agree	5
4. Teacher Factors	3.83	Agree	1
5. Personal Attitude Factors	3.75	Agree	2
6. Language Proficiency Factors	3.67	Agree	4
Grand Mean	3.63	Agree	

Legend:

Numerical Value 4.51-5.00 3.51-4.50 2.51-3.50 1.51-2.50 1.00-1.50 Descriptive Value Strongly Agree Agree Moderately Agree Disagree Strongly Disagree Volume 10, Issue 2, February – 2025

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Table 3 illustrates Teacher factors (WMn= 3.83) topped among the factors that affect the critical thinking skills of Grade 12 SHS students. The result suggests that the methods that teachers are using deductive, inductive and lecture method that isolate learners to the four (4) corners of classroom as well as memorization impedes students' opportunity to enhance their critical thinking skills.

The aforementioned finding verifies the claims of Ahuna et al. (2014), Lauer (2005), Shim and Walczack (2012) and Duron, et. al (2006) that even though developing critical

thinking is generally recognized as an important educational objective, evidence exists that many teachers do not fully understand how to effectively teach critical thinking or develop higher order cognitive abilities and are not able to incorporate critical thinking exercises into course curricula. Teachers use lecture format and focus students' assignments and efforts on memorization and lower level cognitive tasks which do not encourage critical thinking considering teachers as a critical factor (Mahapoonyanonta, 2012) as reflected on their teaching methods, education media and education atmosphere.

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Table 4. Summary	v of the Factors that Affect the V	Vocabulary Skills of Grade 12 SHS Students
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Parameters	Weighted Mean	Interpretation	Rank
1. School's Resources, Curriculum, and Environment Factors	3.43	Agree	4
2. Family Factors	3.19	Moderately Agree	6
3. Social Factors	3.35	Moderately Agree	5
4. Teacher Factors	3.60	Agree	2
5. Personal Attitude Factors	3.59	Agree	3
6. Language Proficiency Factors	3.64	Agree	1
Grand Mean	3.63	Agree	

Legend:

Numerical Value 4.51-5.00 3.51-4.50 2.51-3.50 1.51-2.50 1.00-1.50

Table 4 shows that language proficiency factors ranked 1st (WMn=3.64) in developing vocabulary skills among students. Majority of the respondents revealed that language proficiency factors contribute to Grade 12 SHS students' level of vocabulary skills. This is due to the reason that their listening, speaking, writing, reading and viewing skills are not fully developed. This is also triggered by some other factors such as absenteeism, too much exposure to extracurricular activities like sports, lack of interest, motivation and support from stakeholders. Most of them are hesitant to speak using English. Only few love to read complex texts because for them it's difficult and challenging. Most of them have problems in listening and even note taking as well as in writing even simple English sentences with simple grammar.

Descriptive Value Strongly Agree Agree Moderately Agree Disagree Strongly Disagree

The lack of adequate mastery of English language is a major problem relating to inadequate understanding that results from poor vocabulary and syntantic language (Iliyas, 2011). There are many components that contribute to building proficiency in a language, including grammar, reading, writing, listening, pronunciation, and vocabulary among many other factors (Alkhofi, 2015). While these components are acknowledged by educators as critical to language learning, vocabulary has traditionally been recognized the least. Nevertheless, learners have reported that vocabulary acquisition continues to be one of the main barriers to learning a second language.

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> Multiple Intelligences of the Participants

MULTIPL E INTELLIG ENCES	Lingu	istic	Log Math ic	ical- iemat	Mus	-	Vis	sual- atial	Boo Kin	dily esth ic	-	person l		erperson al	Exist	ential		urali st
Parameter (See Appendix G)	F	Ra nk	F	Ran k	F	Ran k	F	Ran k	F	Ra nk	F	Rank	F	Rank	F	Ran k	F	Ra nk
1	80	4	134	3	90	5	11 9	2	10 6	2	158	3	92	3	154	3	11 7	5
2	156	1	176	1	149	4	10 1	4	70	5	161	1	15 3	1	185	1	12 9	3
3	121	3	156	2	180	3	11 4	3	14 9	1	159	2	15 4	5	112	5	12 4	4
4	73	5	101	5	189	2	91	5	95	4	150	4	13 8	4	153	4	16 5	2
5	132	2	103	4	192	1	12 0	1	97	3	129	5	13 5	2	161	2	16 7	1
Average Score	112		134		160		10 9		10 3		151		13 4		153		14 0	
Rank	7		5.5		1		8		9		3		5. 5		2		4	

Table 5. Multiple Intelligences of Grade 12 SHS students

N=196

Legend: N- Total Number of Student-Respondents

Table 5 shows that the highest intelligence is musical with an average score (AS) of 160; followed by existential intelligence (f=153) and intrapersonal (f=151). This indicates that students have strong inclination to music, with good human connections with their family and friends and strong religious beliefs. From the findings, it can be concluded that musical, existential and intrapersonal are the prevalent types of multiple intelligences of Grade 12 SHS students. It showed that majority of the students have the ability to produce music, have the capacity to tackle deep questions about human existence and self-aware with inner feelings, values, beliefs and thinking processes.

The aforesaid results come in agreement with Llagas (2017); Quiatchon (2012) and Ferranil (2006) who found out that students showed as musically inclined, as most of them chose to perform the activities given in musical intelligence.

The abovementioned results are in a partial agreement with the studies of Romero and Malana (2013); Pascua and Baccay (2006); Rivas (2005) and Jumadiao- Aguinaldo (2009) who revealed that freshmen students most dominant multiple intelligences were the same for the slow and fast learners namely in varying degrees of intelligences (Paterno, 2012) and when grouped according to year level (Jamon, 2015).

Relationship between the Critical Thinking Skills and Vocabulary Skills, Vocabulary Skills and Multiple Intelligence, and Critical Thinking Skills and Multiple Intelligences of Grade 12 SHS students

Table 6. Significant Relationship of Critical Thinking Skills, Vocabulary Skills and Multiple Intelligences of Grade 12 SHS Students in the Selected Schools in San Jose, Camarines Sur

Variables Correlated	Correlation	Computed t value	Tabular Value t	Interpretation
Critical Thinking Skills and Vocabulary Skills	.057	.42	1.96	H_O accepted- NS
Vocabulary Skills and Multiple Intelligence	.24	.14	1.96	H_O accepted-NS
Critical Thinking Skills and Multiple Intelligence	.038	6.86	1.96	H_O accepted-NS

N= 196df= 48level of significance= 5%tabular value= 1.96Legend:N= Number of student-respondentsdf= Degrees of Freedom

Table 6 presents the test of significant relationship between critical thinking skills and vocabulary skills, vocabulary skills and multiple intelligences, and critical thinking skills and multiple intelligences of Grade 12 SHS students. The absolute computed value of .42 for critical thinking skills and vocabulary skills is less than the tabular value of 1.96 at 48 degrees of freedom with .05 percent level of significance, thus the null hypothesis is accepted in favor of the research hypothesis. This implies that there is no significant relationship between critical thinking skills and vocabulary skills of Grade 12 SHS students.

On the one hand, since the absolute computed value of .14 for vocabulary skills and multiple intelligences is less than the absolute tabular value of 1.96 at .05 percent level of significance with 48 degrees of freedom, the null hypothesis is accepted in favor of the research hypothesis. This means that there is no significant relationship between vocabulary skills and multiple intelligences of Grade 12 SHS students.

Since the absolute computed value of 6.86 for critical thinking skills and multiple intelligences is less than the absolute tabular value of 1.96 at .05 percent level of significance with 48 degrees of freedom, the null hypothesis is accepted in favor of the research hypothesis. This indicates that there is no significant relationship between critical thinking skills and multiple intelligences of Grade 12 SHS students.

It implies that the correlation results of the three variables are very low which means negligible correlations. Critical thinking skills are more on deep reasoning and logical analysis while vocabulary skills are more on recall and usage of lexicons. Multiple intelligences are more on the areas or forms of intelligences that the students may possess.

The cited results on the significant relationship between critical thinking skills and vocabulary skills do not lend support to the study of Fahim and Komijani (2011) who revealed that the critical thinking ability of intermediate EFL students, majoring in English Literature, English Translation, and English Language Teaching at Arak Islamic Azad correlated positively and significantly with their L2 vocabulary knowledge. Also, these are not in line with the investigation of Mirzai (2008) who found out that there is a significant relationship between critical thinking and lexical inferencing of Iranian EFL learners.

The findings on the significant relationship between vocabulary skills and multiple intelligences are in consonance to the study of Javanmard (2012) who indicated that there is no significant relationship between intelligence preferences of the respondents and their scores on different formats of vocabulary tests as well as their total vocabulary score. Participants fail to match the prerequisite of individualized education as favored by Multiple Intelligence theory since teachers vaguely used the same strategies in teaching-learning process. These are in congruence to the study of Zarei (2012) who found out that the correlation between lexical/ vocabulary knowledge and critical thinking. However, the result can be accounted for on the following grounds: 1.) cultural background of students; and 2.) differences in the proficiency level and readiness of students.

However, the results are incongruent to the study of Razmjoo et. al. (2009); and Farahani and Kalkhoran (2014) who revealed that there is a relationship between multiple intelligence and vocabulary learning knowledge. It's because the respondents' vocabulary proficiency level were homogenized.

As to the significant relationship between critical thinking skills and multiple intelligences, the study of Ahmadabad and Behnam (2017) found out that there is a significant and meaningful relationship. However, these do not conform to the study of Deepa (2014) who found out that there is significant relationship between multiple intelligence and critical thinking of students.

IV. CONCLUSIONS AND RECOMMENDATIONS:

From the cited findings, the following conclusions and recommendations were made:

- > The over-all level of critical thinking skills of respondents in the selected schools in San Jose, Camarines Sur falls under below average level. Thus, to augment the critical thinking skills of students, SHS teachers may incorporate learning activities in relation to the development/ enhancement of critical thinking skills in the teaching learning-process such as: devil's advocate activity, scenario analysis, look, select and deepen, circular response method and critical reading. In addition, parents' involvement and support to the academic and extracurricular activities of the SHS students in which critical thinking skills enhancement is involved must be strengthened. Likewise, SHS administrators may support to initiate activities and programs that require critical thinking skills of students and have proper monitoring and post evaluation after they were carried out/implemented to identify their strengths and weaknesses so that they may either be sustained or improved.
- Most of the students-respondents have below average level of skills in acquiring the right meaning of words in certain statements/ sentences and in getting the right words that fit the context of certain statements/ sentences. It is therefore recommended that SHS teachers may use learning activities such as: maintaining personalized vocabulary activities to address individual student needs. SHS administrators should also look into the possible areas of support for the SHS students have optimum level of vocabulary skills like acquisition of a school library and books for those who don't have and more books for those who have and encourage SHS teachers to require their students to visit and read books in the library for them to be exposed to different reading materials thus acquiring new words.
- Most of the student-respondents said that matters pertaining to their teachers affect their critical thinking skills. Thus, SHS administrators may encourage SHS teachers to attend seminars, trainings and workshops to be updated on the current trends in critical thinking skills and to device and hunt innovative teaching methods, strategies and materials that will sharpen the critical thinking skills of the students.
- Teachers' method of teaching affects students' vocabulary skills. With this, SHS teachers may implement an English Speaking Zone to encourage students to use English language whether there are discussions of lessons to intensify the foundation of their language proficiency. They may also have weekly debates, panel discussions, news castings and role paying to build up the language

proficiency of students and that contribute to the development of their vocabulary skills. Likewise, SHS teachers may utilize some of the vacant periods of the students and carry out remedial listening, speaking, reading, writing and viewing to at least lessen problems in these aspects. Furthermore, SHS teachers may include right choice of words as one of the grading criteria in the performance tasks that they will be giving either in written or oral form.

- From the findings, it can be concluded that musical, existential and intrapersonal are the prevalent types of multiple intelligences of Grade 12 SHS students. For this reason, SHS teachers must provide learning activities/ tasks that will cultivate and capitalize musical, existential and intrapersonal intelligences. At the same time, SHS teachers may device activities that will give opportunities to students to strengthen other multiple intelligences for them to be prepared and enhance their success for their future careers. Students must also be exposed to multiple intelligences' awareness seminars so that they be cognizant and realize their multiple intelligences. Furthermore, SHS Administrators must encourage teachers to give importance in establishing positive environment that will enable students to explore other multiple intelligences.
- > There is no significant relationship between and among variables- multiple intelligence, critical and vocabulary skills. It is therefore recommended that another study may be conducted considering other variables such as comprehension skills, reasoning skills and grammatical skills that can be linked to critical thinking skills of SHS students. Likewise, another study may be carried out considering the factors that contribute to the development of critical thinking skills of SHS students. Another study may be conducted considering other variables such as listening, speaking, reading, writing and viewing proficiency level. Study may also be conducted to a wider group of SHS students. Another study may be conducted considering other variables such as: learning styles, level of motivation in language and confidence level in English that can be associated to multiple intelligence. Similarly, another study may be carried out determining the significant difference between the multiple intelligence of SHS students studying in public schools and private school, considering the factors that affect the prevalent types of multiple intelligence of students.

REFERENCES

- [1]. Ahmadabad, S.E. & Behnam, B. (2017). The relationship between EFL Learners' Multiple Intelligence and Critical Thinking Strategies. *Extensive Journal of Applied Sciences*, Vol. 5, No. 2, 39-43.
- [2]. Ahuna, K.K. et. al (2014). A new era of critical thinking in professional programs. Transformative Dialogues: *Teaching & Learning Journal*, 7(3), 1-9.
- [3]. Aktamis, H. & Yenice, N. (2010). Determination of the Science Process Skills and Critical Thinking Skills Levels. *Procedia- Social and Behavorial Sciences*. 2(2), 3282-3288.
- [4]. Alkhofi, A. (2015). Comparing the Receptive Vocabulary Knowledge of Intermediate-Level Students of Different Native Languages in an Intensive English Program. Unpublished Master's thesis. University of Central Florida.
- [5]. Almejas, B.C. (2016). Vocabulary Size and English Language Comprehension of Teacher Education Students. *Imperial Journal of Interdisciplinary Research*, Vol. 2.
- [6]. Angara, E. (2007). "Angara Reveals 3-point Agenda to Revive the Quality of Philippine Education". Retrieved from http://www.edangara.com/archives/newsreleases/2007ma

rch/quality-of-philippine.html.

- [7]. Buenvenida, M. (2017). Quality and Relevance of College Education in Capiz State University - Pilar Campus. Paper presented at International Conference on Arts, Social Sciences, Humanities and Interdisciplinary Studies (ASSHIS-17), 131-136. Retrieved from https://doi.org/10.17758/URUAE.UH0917137
- [8]. Carranza, E.F. et. al. (2015). Vocabulary Learning and Strategies used by Teacher Education Students. *Asia Pacific Journal of Multidisciplinary Research*. Vol. 3, No. 2.
- [9]. Deepa, H. (2014). Relationship between Multiple Intelligence and Critical Thinking of B.Ed. Students With Reference to Locality. *International Journal of Informative & Futuristic Research*. Vol. 2, No. 1.
- [10]. De Roxas, J. & Joson, L.N. (2009). Critical Thinking Skills and Emotional Intelligence of Tourism Students in Manila Philippines. *Pamantasan Lungsod ng Manila Abstract of Researches*.
- [11]. Duron, R et. al. (2006). Critical thinking framework for any discipline. *International Journal of Teaching and Learning in Higher Education*, 17(2), 160-166.
- [12]. Fahim, M. & Komijani, A. (2011). Critical Thinking Ability, L2 Vocabulary Knowledge, and L2 Vocabulary Learning Strategies. *Journal of English Studies Islamic Azad University, Science & Research Branch*, 1(1), 23-38.

- [13]. Farahani, A. & Kalkhoran, E. (2014). The Relationship between Incidental Vocabulary Learning and Multiple Intelligences of Iranian EFL Learners. *Theory and Practice in Language Studies*, Vol. 4, No. 1, pp. 58-64.
- [14]. Ferranil, C.E. (2006). Relating Multiple Intelligences to Performance in Mathematics of Senior Secondary Students. Unpublished Thesis. De La Salle University, Dasmarinas.
- [15]. Galdon, J. (2011). *Best Practices in Language and Literature Teaching*. Quezon City. Cornerstone of Arts and Sciences.
- [16]. Gaza, R. (2011). Correlates of English Vocabulary Comprehension Level of Fourth Year High School Students in Calauag National High School Year 2010-2011. Unpublished Master's Thesis. Laguna State Polytechnic College. San Pablo City Campus.
- [17]. Günaydın, N. & Barlas, G.U. (2015). The Factors Affecting Critical Thinking and Empathic Disposition of Nursing Students. *Middle Black Sea Journal of Health Science*, 1(3), 1-8.
- [18]. Haase, F. A. (2010). Categories of Critical Thinking in information management: A Study of Critical Thinking in decision making process. *Nomadas. Revisita Critica de Ciencas Sociales Y Juridicas*, 27 (3).
- [19]. Iliyas, R. A. (2011). An assessment of the use of English programme in higher education. The Nigerian College of Education case. *Journal of Research in Education*. An official Journal of the Collaboration of Education Faculties in West Africa (CEFWA).
- [20]. Jamon, M. (2015). Multiple Intelligence and Mathematics Performance of the BS Mathematics Students of Western Visayas College of Science and Technology. 3rd International Conference on education for Sustainable Development.
- [21]. Javanmard, Y. (2012). On the Relationship Between Multiple Intelligences and Their Performance on Vocabulary Tests among Iranian EFL Learners. *Global Journal of HUMAN SOCIAL SCIENCE Linguistics & Education*. Vol. 12 Issue 12.
- [22]. Jumadiao-Aguinaldo, M. (2009). Multiple Intelligences and Academic Achievement of Special Classes in the Selected Secondary Schools of Catarman Northern Samar. Unpublished Master's Thesis. University of Eastern Philippines.
- [23]. Lauer, T. (2005). Teaching critical-thinking skills using course content material. *Journal of College Science Teaching*, 34(6), 34-44.
- [24]. Lipman, M. (2003): *Thinking in Education, 2nd ed.* Cambridge: Cambridge University Press.
- [25]. Llagas, J. (2017). Students' Multiple Intelligences and Critical Thinking Skills: Inputs to a developed differentiated Modules in Mathematics. Unpublished Master's Thesis. University of Nueva Caceres.

- [26]. Lopina, R.S.et. al (2010). Vocabulary Level and Spelling Proficiency of the First Year Education Students of Jose Rizal Memorial State University. Tampilisan Campus. *Bibliography of Research Abstracts*, Vol. 1, No. 2.
- [27]. Mahapoonyanonta, N. (2012). The causal model of some factors affecting critical Thinking abilities. *Procedia Social and Behavioral Sciences*, 46. 146 150.
- [28]. Marquez, L. (2017). Critical Thinking in Philippine Education: What We Have and What We Need. *Journal for Critical Education Policy Studies*, Vol. 15, No. 2, 272-303.
- [29]. Mirzai, Z. (2008). *The relationship between Critical Thinking and Lexical Inferencing of Iranian EFL Learners*. Unpublished master's thesis, Azad University of Science and Research, Tehran, Iran.
- [30]. Osman, K. & Marimuthu, N. (2010). Setting New Learning targets for the 21st Century Science Education in Malaysia. *Procedia- Social Science and Behavioral Sciences*, 2(2), 3737-3741.
- [31]. Pascua, W.L. & Baccay, R.S. (2006). Multiple Intelligences of Freshman students enrolled at Isabela State University. Ilagan Campus. *Research and Development Journal*, Vol. 10, No. 1.
- [32]. Paterno, K.V. (2024). Online-Distance Instruction: Impact on the English Language Learning. International Journal of Innovative Science and Research Technology (IJISRT), Volume. 9 Issue.9, September - 2024, www.ijisrt.com. ISSN - 2456-2165, PP:- 600-610, https://doi.org/10.38124/ijisrt/IJISRT24SEP198
- [33]. Paterno, K. (2012). Academic Performance and Attitudes towards English of BS HRM Students in Multiple Intelligence Classroom. Unpublished Master's Thesis. Partido State University.
- [34]. Quilario, KE. (2014). Biology Modelling-Based Lesson Study: Effects on Teacher Self-Efficacy and Student's Critical Thinking Skills. Unpublished Master's Thesis. University of the Philippines-Diliman.
- [35]. Quiatchon, C. (2012). Learning Styles, Multiple Intelligences and Achievement of Sophomores in Science and Technology at St. Thomas Academy, Sto. Tomas, Batangas. Unpublished Master's Thesis. Laguna State Polytechnic University.
- [36]. Razmjoo, S. A., et. al. (2009). On the relationship on the relationship between MI, vocabulary learning knowledge and vocabulary learning strategies among the Iranian EFL learners. *The Iranian EFL Journal*, 3, 82-110.
- [37]. Rivas, A. (2005). Multiple Intelligences and CSAT Performance of Fourth Year High School Students of Southern Baptist College: A Correlation. (Unpublished Master's Thesis) . Southern Baptist College. Miang Cotabato.

- [38]. Rodriguez, E. (2010). *Reading Comprehension, Vocabulary Proficiency and Motivation of Secondary English Language Learners.* Unpublished Master's Thesis. Ateneo de Naga University.
- [39]. Romero, R. & Malana, V. (2013). Multiple Intelligences and the Fields of Specialization of Freshman Education Students at CSU Piat. CSU Piat College of Education Research Journal, Vol. 2, No. 1.
- [40]. Sasota, S. & Nava, F. (2017). Critical Thinking Skills of Grade 11 Students: Action Research for Selected Schools in Quezon City. Paper presented at the National Conference on Research in Teacher Education (NCRTE) 2017. Retrieved from: https://www.researchgate.net/publication/320980105
- [41]. Sharikova, D.M. (2007). Technology for Shaping of College Students' and Upper-Grade Students' Critical Thinking. *Russian Education and Society*, 49(9), 42-52.
- [42]. Shim, W. & Walczak, K. (2012). The impact of faculty teaching practices on the development of students' critical thinking skills. *International Journal of Teaching and Learning in Higher Education*, 24(1), 16-30
- [43]. Siriwan, M. (2007). English Vocabulary Learning Strategies Employed by Rajabhat University students. Suranaree Unpublished Ph.D Dissertation. University of Technology Nakhoratchasima, Thailand 2007.
- [44]. Slamet, S. (2014). Stage of Critical Thinking Abilities In Solving Mathematical Problems For Prospective Teachers Departement of Mathematics FMIPA UM Malang [Internet]. Available from: eprints.unsri.ac.id
- [45]. Tamayo, J.D. et. al (2014). A Cross-Sectional Analysis on the Level of Critical Thinking Skills of Students in the College of Management and Technology at CEU Malolos. *International Journal of Scientific and Research Publications*, Vol. 4, No.5.
- [46]. Tizon, M. N. (2009). Vocabulary Ability of BSN1 Students of La Salle University. La Salle Journal, Vol. 14, No. 4.
- [47]. Yap, R. (2011). "K to 12: the Key to Quality Education?" Retrieved from: www.senate.gov.ph/publications.
- [48]. Zarei, A. (2012). *The Relationship between Critical Thinking and L2 Grammatical and Lexical Knowledge*. Retrieved from: https://www.researchgate.net/publication/276223879_Th e_Relationship_betweenCritical_Thinking_and_L2_Gra mmatical_and_Lexical_Knowledge