

**VOCABULARY LEARNING STRATEGIES
OF FILIPINO SENIOR HIGH SCHOOL (SHS) LEARNERS:
AN EXPLORATORY FACTOR ANALYSIS**

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ABSTRACT

Vocabulary learning strategies vary across context and cultural background. This paper examines and explores the structure of vocabulary learning strategies of senior high school students in the Philippine where English is considered as a second language. A total of 341 senior high school (SHS) learners from twenty-five different institutions in the northeastern part of Luzon, Philippines participated in the online survey. Exploratory Factor Analysis (EFA) using Maximum Likelihood and Promax techniques and reliability analysis using Cronbach Alpha were conducted to ensure its validity and internal consistency. From 15, the questionnaire was trimmed to seven vocabulary learning strategies namely: Cognitive Strategies, Word Listing, Word Encoding, Note-taking, Self-Initiation, Visual-Spatial Thinking and Selective Attention. This can explain 49 percent of total variance with acceptable level of reliability. The result of this study can be a baseline reference for policymakers on instituting policy changes in language education and a useful reference for future research on Filipino senior high school students' vocabulary learning strategies especially in the context of new normal.

Keywords: Second Language, Vocabulary, Vocabulary Acquisition, Vocabulary Learning Strategies

INTRODUCTION

In the Philippines, one of the essential competencies needed in the senior high school (SHS) curriculum is the

vocabulary building. It facilitate learners' development of four macro skills namely speaking, listening, writing, and reading

(Ferrer & Carmen, 2022; Carranza et al., 2015; Richards & Renandya, 2002). Since most SHS subjects requires intensive reading, it is a necessary tool that helps learners meet the academic demands implemented by the Department of Education (Santillan & Daenos, 2020).

Vocabulary is a staple aspect in learning a second language (Zhang, 2011) since it highly influences one's communicative competence (Asyiah, 2017; Carranza et al., 2015). It is one of the four-fold framework of communicative proficiency as established by Canele and Swain (Calub & Calub, 2017) which is parallel with discourse, socio-cultural, and strategic competence. Goodwin et al. (2018) defined vocabulary as a complex concept because it overlaps principles which are connected to language learning. On the other hand, Butler et al. (2010) claimed that vocabulary is the knowledge of words and their meanings. It helps learners build assurance in communication and handle individuals with the cumulative demands of the different areas in the academe (Carranza et al., 2015). Further, vocabulary expands and develops when used on a regular basis. Without it, communication will not transpire expressively.

Despite the positive outcomes that vocabulary imposes to the learners, Kweldju and Priyono (as cited in Asyiah, 2017) found that the main problem in learning the second language is the insufficient amount of vocabulary of the learners. Also, Snow and Kim (2007) attested that vocabulary shows a stimulating problem to readers as they hardly decipher words. Moreover, students' biggest challenge is learning vocabulary (Alizadeh, 2016) due to poverty, inadequate conversation, and poor reading (Santillan & Daenos, 2020). Hence, vocabularies need to be learned and

imparted through the use of effective learning strategies (Asyiah, 2017) that will contribute a positive outcome on the vocabulary development of the learners.

Zhang (2011) stressed the suggestion of Moir and Nation (2002) that as a teacher, it is more effective to focus on strategies that a learner could utilize rather than exhaust the time in memorizing individual words. According to Cohen (as cited in Baskin, et al., 2017), learning strategy is the student's preferred approach in order to master a concept that meets one's learning needs. It has an indispensable function (Oxford, 2011) because it either hinders or stimulates the coding process. Learning a word is a rigorous task (Baskin et al., 2017) because it requires awareness, repetition, attention and self-initiative. It is not a one time achievement in the classroom but a continuous learning outside the school is required. Hence, the use of VLS is encouraged to attain a vocabulary independence (Santillan & Daenos, 2020) and increase the learner's productivity (Faraj, 2005).

Research on VLS has been undeniably increasing especially in second language acquisition (Fahim & Komijani, 2010). Horwitz (2016) also reasoned out that strategies depend on the cultural background of the respondents which leads to different explanations even if it is the same set of questionnaires. As a result, there has always been an attempt to create a list of strategies in L2 learners. Gu (2010) stated that some VLS has a significant relationship with vocabulary size but not with general proficiency which means that learning a new word is protracted and involves constant change. It is a developmental stage that encompasses form-meaning pairs into activation and lastly application of words into linguistic competence. Therefore, Gu (2018)

reported that there should be a broad list of strategies to enhance their process of acquisition that can be used to explore the range of strategies a group of students use for the learning of vocabulary.

Hence, this study. This exploratory factor study aims to revalidate

the questionnaire constructed by Gu (2018) in the context of Philippine setting. This is to acknowledge that vocabulary learning strategies are variable based on many factors such as educational and cultural backgrounds.

REVIEW OF RELATED LITERATURES

Santillan and Daenos (2020) aimed to discern and differentiate the presumed vocabulary knowledge and actual vocabulary knowledge of six Grade 12 students in the Philippines. This study highlighted the importance of vocabulary knowledge in reading comprehension. It is one of the macro-skills needed to fully engage in a meaningful conversation. Through reading, learners develop words in their mind which enhance their knowledge that leads to strong vocabulary. It entailed eight VLS which were re-reading as an umbrella of VLS, using context clues, using the dictionary, surfing the internet as the convenient choice, associating with familiar words and experiences, analyzing word structure, asking “reliable” sources, and reading as a habit. The findings were classified into themes and it showed that the actual vocabulary was lower than their presumed vocabulary. Thus, it indicated that reading practice should be implemented in their curriculum to strengthen the vocabulary skills of the learners.

Kulikova (2015) provided an analysis on the correlation of learning strategies and beliefs about vocabulary learning of American students in Russia. The author cited Ogden (1937) who postulated that 850 words permit an L2 speaker to convey his thoughts. However, these numbers of words were limited to expressing one’s self in a straightforward discussion and not into an in-depth

conversation with a native speaker. About 95 percent of lexicons in an article should be absorbed by a learner to completely grasp the meaning of the rest of the text (Laufer, 1989 as cited in Kulikova, 2015). The findings showed that Western learners undermined the use of memorization and repetition as opposed to Asian. They mostly used dictionary, guessing, note-taking, rehearsal, contextual encoding, activation affective strategies, and repetition. It was also reported that there was a relationship between motivational beliefs and the VLS.

Falculan (2017) examined the most difficult VLS among Science Class students in reading literature. Literature has an extensive range of words from different contexts, thus, a student needs a wide vocabulary to apprehend an account. The author examined four vocabulary skills in getting the meaning of a text through word parts, context clues, denotation/connotation, and figurative language. Based on the analysis, learners frequently used context clues because it was easier to find the setting or definition in a literature. Whereas, they considered figurative language as the most difficult strategy because it implied beyond the literal meaning.

This paper, on the other hand, used an online Vocabulary Questionnaires provided by Gu (2018). The author asserted that learning lexical terms in a second language is a challenging task, thus, a

strategic plan is a requisite in building vocabulary. In his study, he aimed to measure the questionnaire based on its content, construct, and predictive validity and reliability. The author underscored that to identify VLS, questionnaires were usually administered to accumulate information from the respondents. Originally, Gu (2018) created a 90-item questionnaire in 2013 measuring 21 strategies under metacognitive and cognitive dimensions with a 7-point Likert scale. However, a newer version was published with 62 variables under 8 categories.

Beliefs about vocabulary learning (BVL)

BVL is a variable that greatly impacts vocabulary acquisition (Moir & Nation, 2002) but has an insufficient amount of empirical data (Li, 2010). Belief system can be highly confusing because it has interrelation with other disciplines. Belief about vocabulary is defined as the speaker's perspective about his primary choice in learning vocabularies (Subasi, 2007). Li (2010) accentuated that BVL pertains to the students' innate cognition about L2 terms which depended on their past learning experiences.

Metacognitive strategies

Inclusive Schools Network (as cited in Perras, 2014) reiterated that metacognitive strategy is an action designed for the learners to think about thinking. Cross & Paris (as cited in Diaz, 2015) stated that this strategy allowed the learner to have the power over his cognizance. Further, Anderson (2002) supported metacognitive strategy as a vocabulary strategy because it stimulates one's thinking which could advance his performance. It is an advantageous method

because the learner is conscious of the approach to obtain his learning needs.

Inferencing

According to Qian (2004), lexical inferencing is described as creating informed guesses about the meaning of unfamiliar words in a text using context clues. It was considered to be the most helpful strategy (Mohseni-Far, 2008) because learners believe that they do not have to identify the meaning of each word (Rousoulioti & Mouti, 2016).

Using dictionary

Dictionaries have long been known to be a beneficial assistance in reading comprehension (Chen, 2011). It is a book or online source that has a long list of words from a certain language which is either defined in the same language or translated. Zucchi (as cited in Welker, 2010) said that using an on-line dictionary had notably increased the scores of learners compared to a non-dictionary group. It was found to be effective because of the easy access of information that could help in learning new words.

Taking notes

Note taking is writing down words to assist in the decoding process (Zhang, 2011) or to support one's reflection about a word. It is a transcription of a lesson using symbols or shortened words that is recognized by the learner to create an external storage that could be utilized when needed (Boch & Piolat, 2005 as cited in Özçakmak, 2019). Hartley (2002) stated that it is an effective information processing tool because it is not time-consuming and it provides a stable source.

Rehearsal

Ahour and Berenji (2015) explained that rehearsal is an encoding technique in the long term memory through memorization and repetition. It is a repeated practice through thinking-aloud or subvocalization. This technique increases the familiarity and retention of knowledge in the mind. However, he claimed that rehearsal was time-consuming because students needed to repeat words in order to memorize it.

Encoding

Presley and Hilden (as cited in Dermitzaki et al., 2008) describe encoding as a strategy to generate mental associates that are easily remembered to achieve

maximum productivity by restoring and retrieving vocabulary. Learners can control the amount of information that is kept and recovered in the brain so it would not be overwhelming (Al-Shalchi, 2015). It seeks to encrypt new knowledge in the memory with a goal of constructing a language schema.

Activation

Activation strategy is an instructing procedure that prepares the students to learn through writing an outline of their previous learning experiences and essential jargon. Gu (2010) simplified activation as the active use of known or new words. It should provide an interest to motivate the learners in connecting the vocabulary in their prior knowledge (US Digital Literacy, 2016).

METHODS

Design

The study utilized a factor analytic research design to determine the validity and reliability of VLQ as VLS of SHS learners.

Respondents

The researchers gathered data from 341 SHS respondents from 25 different schools in the northeastern part of the Luzon archipelago. The sample size exceeded the guidelines of Tabachnick and Fidell (2007) that having at least 300 cases are needed while Hair et al. (1995) said that there should be 100 or greater cases. On the other hand, Comrey (1973) suggested that 300 sample size is good enough. In sample variable ratio, the study has a 1:5.5 ratio, which is the minimum guideline of MacCallum, et al. (1999).

The mean age of the respondents is 16.5 and most were females (60%).

Instrument

This paper adopted the VLQ questionnaire of Gu (2018) consisting of 62 indicators. From a 90-item VLQ5 consisting of 21 strategies under metacognitive and cognitive dimensions (Gu, 2013), a revised version consisting of 62-item 7-point Likert scale and an online-slider version was crafted. The author ensured that the questionnaire is fit to learners with a basic grasp of the first 2000 most frequent words in English and to those preparing to study in tertiary level.

It followed a 7-point Likert scale from “1 = strongly disagree” to “7 = strongly agree.” A 7-point scale was more preferable because it improved the likelihood of obtaining the research

objective. Since it provided a range of choices, it displayed a more specific description about the subject (Joshi et al., 2015). It was administered through Google Form and the students voluntarily answered the given questionnaire for 10-15 minutes. Each statement was required to be assessed based on their perspective on a given strategy.

A permission was derived from the author for the utilization of the questionnaire and consent from the participants.

Data Analysis

The data underwent exploratory factor analysis. Initial data analysis was conducted using inter-item correlation,

Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity. The extraction method used was Maximum Likelihood and Promax with Kaiser Normalization as a rotation method with an absolute value controlled below .30. Kaiser Criterion or eigenvalue-greater-than-one rule (Kaiser, 1960) was used as factor retention method because it is simple and easier to implement (Braeken, J. & van Assen, 2017). In terms of the elimination of the items, it depended both on the item loadings and theoretical background of the items. Finally, Cronbach Alpha was used in determining the internal consistency of the items in each factor and of the questionnaire as a whole.

RESULTS AND DISCUSSION

To ensure factorability, initial checking was conducted. The KMO value of 0.948 and $\chi^2 = 6614.746; p < 0.05$

suggested that the data is suitable for factor analysis (Field, 2009). There was also a good evidence that correlations exist between and among the indicators.

Table 1. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.948
Bartlett's Test of Sphericity	Approx. Chi-Square	6614.746
	df	780
	p	.000

Extraction of Factors

Using Kaiser's criterion, 10 factors (eigenvalue > 1.0) were extracted which was 5 factors lesser than the adopted

questionnaire. The scree plot also demonstrated a similar result.

Rotation of Factors

The correlation of factors ranged from 0.007 to 0.692 and most of the r were greater than 0.32. This warranted the use of Oblique rotation either Promax or Direct Oblimin (Tabachnick & Fidell, 2007; Brown, 2009b; Pallant, 2009; Field, 2005).

The researchers used the Promax in Oblique Rotation as suggested by Gorsuch (1983) since there was not much difference between Promax and Direct Oblimin.

The values also warrant sufficient evidence of discriminant validity.

Table 2. Factor Correlation Matrix

Factor	1	2	3	4	5	6	7	8	9	10
1										
2	.692									
3	.507	.377								
4	.564	.520	.585							
5	.480	.384	.445	.352						
6	-.025	-.073	.286	.107	.186					
7	.577	.551	.348	.505	.350	-.084				
8	.324	.330	.365	.462	.258	.028	.316			
9	.320	.384	.280	.217	.312	.014	.246	.399		
10	.125	.060	.120	.159	-.025	.075	.180	.158	-.007	

Note: Extraction Method: Maximum Likelihood.

Rotation Method: Promax with Kaiser Normalization.

Initially, ten extracted factors were analyzed. Items with weak loadings below 0.30 were removed one at a time before running another Exploratory Factor Analysis (EFA). The same was done with the cross-loaded onto different factors (>.32). Further, the elimination criteria did not only depend on the item loadings, but also on item's theoretical background by considering if an item theoretically matches the intended meaning of the factor it was supposed to define (Steinmetz, 2019).

After employing the criteria based on the standard, one-item factor was evident, item 4, "A good memory is all you need to learn a foreign language well." Since it is may be contrary to English as a second language, it was eliminated and the final EFA was administered. There were 7 factors generated with factors 6 and 7 as two-item factor labeled as Visual Spatial Thinking and Selective Attention, respectively. MacCallum et al. (1999) and Raubenheimer (2004) suggested that a

factor should be represented by three to five items. However, the two-item factors were still included in the list because Bergkvist and Rossiter (2007), Drolet and Morrison (2001), and Wanous et al. (1997) argued that for some constructs that are very narrowly defined, even a single-item measures may suffice.

Problem in cross-loading items was also evident on the final EFA. Two items, 19 and 45, cross-loaded to factors 1 and 7 and to factors 2 and 6, respectively. Theoretically, item 19 will fit to factor 1 and item 45 to factor 6. In terms of the loadings, item 19 had a loading of 0.513 on factor 1 and 0.372 on factor 7, item 45 had a loading of 0.390 on factor 2 and 0.568 on factor 6. Since eliminating either of the items made the result worse and cluttered, Lirn, et al. (2014) suggested that in case of cross-loadings, the loading of the item which was <0.5 can be ignored and can follow the factor where the item load was

>0.5. Therefore, item 19 went to factor 1 and item 45 to factor 6.

Finally, the researchers concluded a 7-factor questionnaire, with 18 items in factor 1; 4 items in factor 2; 7 items in factor 3; 4 items in factor 4; 3 items in factor 5;

and 2 items in both factors 6 and 7, with a total of 40 items.

The final factor structure is shown in Table 3. The 7 factors could explain 49 percent of the total variance. The explanatory power of the factors ranges from 6.997 to 12.101 percent.

Table 3. Maximum likelihood with promax rotation

Scale Items	Factor						
	1	2	3	4	5	6	7
26. When not knowing a word prevents me from understanding a whole sentence or even a whole paragraph, I look it up.	.955						
14. Besides textbooks, I look for other readings that fall under my interest.	.718						
22. I look for explanations in the reading text that support my guess about the meaning of a word.	.718						
30. When I want to know more about the usage of a word that I know, I look it up.	.689						
8. Learners should pay attention to expressions (e.g., pick up) and collocations (e.g., heavy rain; strong wind) that go with a word.	.675						
27. I look up words that are important to the understanding of the sentence or paragraph in which it appears.	.618						
28. I pay attention to the examples when I look up a word in a dictionary.	.594						
9. Learners can learn vocabulary simply through reading a lot.	.581						
29. When I want to have some deeper knowledge about a word that I already know, I look it up.	.559						
7. The meanings of a large amount of words can be picked up through reading.	.558						
62. I try to use newly learned words in imaginary situations in my mind.	.552						
59. I make up my own sentences using the words I just learned.	.514						
19. I use common sense and knowledge of the world when guessing the meaning of a word.	.513						
61. I try to use newly learned words in real situations.	.512						
42. When I try to remember a word, I repeat its pronunciation in my mind.	.457						
21. When I don't know a new word in reading, I use my background knowledge of the topic to guess the meaning of the new word.	.439						
25. When I see an unfamiliar word again and again, I look it up.	.396						

20. I check my guessed meaning in the paragraph or whole text to see if it fits in.	.336						
39. I make vocabulary cards and take them with me wherever I go.	.676						
38. I go through my vocabulary list several times until I remember all the words on the list.	.551						
46. I write both the new words and their translation in my native language (e.g. Iloco, Ibanag) again and again in order to remember them.	.534						
36. I write down both the meaning in my native language (e.g. Iloco, Ibanag) and the English explanation of the word I look up.	.502						
55. I memorize the commonly used roots and prefixes.	.674						
48. I create a picture in my mind to help me remember a new word.	.628						
50. I put words that sound similar together in order to remember them.	.495						
52. When I try to remember a new word, I link it to a sound-alike word that I know.	.463						
24. I make use of the part of speech of a new word when guessing its meaning.	.460						
53. When I learn new words, I pay attention to prefixes, roots, and suffixes (e.g., internation-al).	.450						
58. I remember a new word together with the context where the new word appears.	.379						
34. I make a note when I see a useful expression or phrase.	.671						
32. I make a note when I think the meaning of the word I'm looking up is commonly used.	.563						
33. I make a note when I think the word I'm looking up is related to my personal interest.	.540						
44. When I try to remember a word, I write it again and again.	.417						
15. I wouldn't learn what my English teacher doesn't tell me to learn.	.708						
17. I wouldn't care much about vocabulary items that my teacher does not explain in class.	.616						
16. I only focus on things that are directly related to examinations.	.439						
45. I memorize the spelling of a word letter by letter.	.568						
49. To help me remember a word, I try to "see" the spelling of the word in my mind.	.364						
12. I know which words are important for me to learn.	.522						
11. I know whether a new word is important in understanding a passage.	.470						
Initial eigenvalue	14.242	2.938	1.509	1.256	1.192	1.054	1.026
Variance explained %	35.606	7.344	3.773	3.140	2.981	2.635	2.564
Accumulated variance explained	34.352	40.436	42.827	44.600	46.358	47.778	49.085

Labeling of Factors

The theoretical meanings of the items were evaluated in order to label the seven extracted factors.

The items in Factor 1 were regarded as cognitive strategies that contributed the greatest variance (12.101%). This suggested that SHS learners from the Northeastern Philippines exceedingly preferred cognitive strategies in learning vocabulary.

There were 17 original cognitive strategy items from Gu (2018) that were retained under the subcategories dictionary strategies (Items 25, 26, 27, 28, 29, and 30); guessing strategies (Items 19, 20, 21, and 22); words should be learned through use (Items 7, 8, and 9); activation (Items 59, 61, and 62); and oral repetition (Item 42). Meanwhile, there was an added subcategory originally from the metacognitive strategies which was labeled as extensive reading (Item 14). Cognitive strategies are strategies that deal with remembering concepts, conveying ideas, and learning how to learn (Suyitno, 2017; Thompson & Rubin, 1996). This includes the idea of learning based on one's interest. Also, Poon (2011) said that cognitive strategies include inferring ideas, getting the essence of a paper, looking for specific information, making meaning through context, and deducing attitudes of the author. Hence, item 14 was theoretically placed as cognitive strategies. However, this had opposed the results of Gu (2018) where metacognitive strategies emerged as one of the core factors on the VLS in China. Metacognitive strategies are strategies that require students to think beyond what they are thinking (Iftikhar, 2014) to strengthen their ability to comprehend texts. Metacognitive strategy, as compared to cognitive strategy, employs higher order

thinking skills. Ayure et al. (2018) postulated that this strategy enhances an individual's autonomy and growth to become life-long learners. Meanwhile, Tudy and Villasor (2017) claimed that Filipinos had a hard time learning the vocabularies in their second language. It was also noted that the vocabulary knowledge of a person is correlated with reading comprehension (Glende, 2013). Thus, this might explain why Filipinos ranked among the lowest in reading based on the 2018 Programme for International Student Assessment (Paris, 2019; San Juan, 2019). Therefore, educators and curriculum innovators need to integrate and elevate VLS to the learners to become at par with the neighboring countries.

Meanwhile, the second factor generated was word listing. Marquez & Bandril (2015) defined word list as a compilation of words. However, Kwary and Jurianto (2017) argued that word listing is not just about listing words but its chief purpose is to know what the learners need to determine in order to offer more concerted materials. Also, word lists need to be supplemented with the senses and the patterns of words in order to learn vocabularies. There were three subcategories revealed in the second factor namely: use of word catalogs (Items 38 and 39) which was originally labeled by Gu (2018) as word listing; visual repetition (Items 46) which uses learners' sense of sight to remember vocabularies; and deciding information what goes into notes (Item 36) which employs patterns of words to understand the meaning of a vocabulary. Based on the given theoretical meaning of Kwary & Jurianto (2017), reclassification of the last two subcategories, which were from rehearsal and taking notes respectively, was made. Since the

Philippines is a multicultural country, word listing helps its learners remember and reiterate the words that they need to know to form an intellectual use of both Filipino and English languages.

Further, the third factor produced was word encoding. There were four original subcategories that were retained in this factor. These were use of word structure (Items 53 and 55); visual encoding (Item 48); auditory encoding (Items 50 and 52); and contextual encoding (Item 58). Moreover, Item 24 was classified by Gu (2018) as inferencing strategy. However, it was renamed and characterized as word labeling based on its theoretical context. Yu et al. (2017) determined word encoding as a leading technique in processing a language and in analyzing a text. It is used in identifying similarities of texts (Bakarov & Gureenkova, 2017); labeling parts of speech (Lin, et al., 2015); encapsulating of texts (Rossiello, 2017); and sorting of words (Kalender & Korkmaz, 2017). Hence, all items included in the third factor were justified as word encoding that helps learners to remember knowledge (Yunhao, 2011).

Further, the fourth factor created was note-taking which contains its original Items 32, 33, and 34. Meanwhile, Item 44 was originally from visual repetition and liketheoretical meaning. Parantar (2013) revealed that note-taking stimulates the mind, marks learning personal, aids learners in preparing for exams, completes learners' materials, and suits well with visual and kinesthetic learners. The education system in the Philippines has given much importance on grades and exams. Hence, note-taking as a strategy helps Filipino learners achieve optimum language learning especially in mastering unfamiliar words where they can recall and

comprehend these words (Kobayashi, 2005) by encrypting the data (Haghverdi et al., 2010).

Moreover, the fifth factor extracted was self-initiation which includes its original Items 15, 16 and 17. Self-initiation is one of the most popular strategies that learners use in studying (Tian, 2019) because learners can use multiple ways on how to comprehend vocabulary items (Boonkongsaen, 2012). This is evidently true to all learners since they have their own pace and styles in learning and memorizing words.

The sixth factor formed was visual-spatial thinking. The Items 45 and 49 which came from rehearsal and encoding were relabeled based on their thematic backgrounds that relate to the sense of sight and character of space. Visual-spatial thinking plays a crucial role in reading (Giovagnoli, et al., 2016) as it uses visual patterns that learners need to recognize, evaluate, create, and reflect (Mather & Woodcock, 2001) to remember optical presentations of vocabularies. To fully understand and remember a word, learners must possess visual processing skills where they see words in their minds that they try to remember and apply it in writing academic and literary texts.

Lastly, selective attention was obtained. This factor is composed by its original Items 11 and 12. Learners who utilize selective attention strategies know which information is important and relevant in their studies (Gu & Johnson, 1996; Stevens & Bavelier, 2012; McLeod, 2018). It is relevant to Filipino learners for them not to be shelled with excessive vocabulary information. Thus, they will be able to examine well the meaning of a text by choosing significant lexis.

Rotation Confirmation

To justify appropriateness of using oblique rotation, promax rotation was re-ran.

Table 4 confirmed that the use of oblique rotation was justifiable since most

of the correlation factors were >0.32 (Tabachnick & Fidell, 2007; Brown, 2009b; Pallant, 2009; Field, 2005).

Table 4. Factor correlation matrix

Factor	1	2	3	4	5	6	7
1							
2	.301						
3	.621	.467					
4	.629	.358	.630				
5	-.075	.303	.103	.035			
6	.384	-.011	.362	.501	.019		
7	.575	.257	.503	.547	-.075	.285	

Note. Extraction Method: Maximum Likelihood.

Rotation Method: Promax with Kaiser Normalization.

Internal Consistency

The alpha ranges from .511 to .934. According to Hair, et al. (2006), the score below .70 suggests that the items within the tool may not be measuring the same underlying construct like the value of self-initiation ($\alpha = .605$) and visual-spatial thinking ($\alpha = .511$). On the other hand, Hinto (2004) and Field (2009) argued that $<.5$ is realistically accepted especially in the area of psychology. Rahimnia and

Hassanzadeh (2011) quoted Churchill (1979) who suggested that a .6 is still acceptable because it shows convergent validity. On the other hand, .5 is considered low but acceptable because Streiner & Norman (2008) claimed that a value within 0.5 to 0.7 has an acceptable level of internal consistency.

As a whole, the scale is reliable. $\alpha = .947$.

Table 5. Internal Consistency of the Scale

Scale	Number of Items	Cronbach Alpha
Cognitive Strategies	18	.938
Word Listing	4	.738
Word Encoding	7	.839
Note-Taking Strategies	4	.767
Self-Initiation	3	.605
Visual-Spatial Thinking	2	.511
Selective Attention	2	.712
<i>Vocabulary Learning Strategies</i>	40	.947

CONCLUSION

The results show the underlying structure of VLS among senior high learners in the Philippines specifically from the northeastern part of Luzon. Senior high students utilize several strategies to build their vocabulary. This can be used as a research and academic tool to explore the

range of strategies used by Filipino students in the context of blended learning.

A similar effort producing structure and substructures on different context of the Philippines should be conducted.

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