

Vocabulary Learning Strategies of Filipino College Students across Five Disciplines

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Abstract

This descriptive survey research investigated the use of 53 common vocabulary learning strategies (VLS) by 202 baccalaureate students across five disciplines: liberal arts and education (AB/Ed), computer science and engineering (CSE), business education (BE), hospitality management (HM), and allied medical science (AMS) in a comprehensive Philippine university. This study attempted to compare the strategies used by the subjects across disciplines and to uncover if significant differences existed as regards the category and frequency of the VLS. A researcher-designed inventory using Schmitt's (1997) taxonomy was used to gather pertinent data. The data on the frequencies of use of the five identified VLS namely: Determination, Social, Memory, Cognitive, and Metacognitive were compared to explore apparent differences using One-Way Analysis of Variance (ANOVA). Findings revealed statistically significant differences in the use of determination and social VLS across the disciplines. Another finding exhibited non-significant differences in the employment of memory, cognitive, and metacognitive VLS. The results also showed that the identified vocabulary learning strategies converged with each other. Scheffe- post-hoc procedure indicated significant differences between AMS and AB/Ed with AB/Ed using determination VLS with greater frequency and between AMS and CSE with AMS employing social VLS with lesser frequency. Correlation analysis also showed significant positive association between the VLS. This research could be best used by language faculty as means to improve students' vocabulary learning and acquisition.

Introduction

For the past decades, there has been a paradigm shift in the realm of language learning and teaching. Language educators have seen how positive the assimilation of strategies into the language learning process is through the growing number of researches conducted (Brown, 2000). Currently, researchers put more premium on the learners and how they learn not so much on the teachers and how they teach. The researchers that deal with foreign language learning are more interested in how learners process latest information and what learning strategies they use in comprehending texts and restoring information (Arani, 2005). They are

prompted by the notion that understanding the way people learn is so significant and is the key to educational reform (Riazi & Riasati 2007).

Rasekh (2003) posited that successful language learners have their own 'special way of doing it'. Oxford (1994) described these special ways as actions, behaviors, steps or techniques students use, often unconsciously, to improve their progress in apprehending, internalizing, and using their second language (L2). For Wenden (1991), learning strategies are any sets of operations, steps, plans and routines used by the learner to facilitate the obtaining, storage, retrieval, and use of information. For Arani (2005), all language learners use learning strategies either consciously or unconsciously when processing new information and performing tasks in the language classroom and since the classroom is likened to a problem-solving environment, learners attempt to find the quickest or easiest way to do what is required using language learning strategies. For Gu (2003), a learning strategy is an array of actions a learner employs to achieve a goal or task. Simply stated, these language learning strategies aid the learners in the process of mastering a target language and research findings have revealed that learners' skillful use of appropriate tactics leads to improved proficiency or achievement overall or in specific skill areas (Wenden, 1991).

Oxford (1990) is one of those who endeavored to present a very comprehensive taxonomy or classifications of language learning strategies. The key distinction in this taxonomy is that between direct strategies and indirect strategies. Oxford divided the direct strategies into three: memory strategies (used for storing and retrieving aspects of the target language); cognitive strategies (used for using the language and for understanding how it works); and compensation strategies (used for using the language despite gaps in knowledge). On the other hand, indirect strategies cover metacognitive strategies (used for planning, organizing, and evaluating learning); affective strategies (used for approaching the task positively); and social strategies (used for collaborating with others for assistance).

Contemporarily, a number of vocabulary learning strategies categories have been described and presented. For example, Schmitt's (1997) taxonomy which can be standardized as a test is utilized to elicit answers from students easily and is anchored on the theory of learning strategies and theories of memory. Furthermore, it is technologically simple and can be used with learners of diverse educational backgrounds and target languages, is rich and sensitive to variety of learning strategies and allows comparison with other studies. Though based on Oxford's (1990) model, Schmitt introduced another category called determination strategies. However, affective and compensation strategies were excluded as categories and some of the strategies were shifted to other groups (Jurkovic, 2006). Cognizant of these taxonomies, researchers incessantly endeavor to explore the VLS learners employ and other variables deemed to correlate with their use.

Considering the paramount importance of language acquisition techniques, this research was conducted with an attempt to discover what strategies are used most and least frequently by college students across five disciplines and to draw possible pedagogical implications from the findings. Peacock and Ho's (2008) study likewise provided the researchers the impetus to undertake this endeavor. Peacock and Ho investigated the use of 52 common language learning strategies by English for Academic Purposes students across 8 disciplines: Building, Business,

Computing, Engineering, English, Mathematics, Primary Education, and Science in a university in Hong Kong. The study compared and contrasted the strategies used across disciplines and examined relationships among strategies used, second language proficiency, age, and gender. Their study revealed that students from different disciplines employ strategies that differ in frequencies and categories. Further, the students' strategy use is found to be influenced by several factors like age, gender, and proficiency. This present study, however primarily aimed to identify the range, category, and frequency of vocabulary learning strategies of college students across five disciplines namely liberal arts and education (AB/Ed), business education (BE), computer science and engineering (CSE), allied medical sciences (AMS), and hospitality management (HM). Specifically, this investigation sought answers to the following questions: (1) What vocabulary learning strategies do the students from each of the five disciplines frequently or seldom use? and (2) How do the vocabulary learning strategy use of students from the five disciplines compare?

Comparing strategy use across five disciplines is based on the assumption that there are glaring differences as to the types and frequencies of use of the various word learning techniques. Different fields or disciplines demand differentiated instruction and require students to employ discipline-specific approaches to learning. Durrant (2009) for instance, averred that the vocabulary needs of students in arts and humanities are characteristically different from those students in other disciplines. The allied medical field on the other hand places emphasis on learning prefixes, suffixes, root words, combining forms of medical vocabulary as related to specific body systems. Hence, this paper assumes that vocabulary is also acquired using varied and self-directed ways. Furthermore, this study explores the possibility that students coming from different disciplines in any educational setting vary in terms of processing latest information and executing tasks in the language classroom and acquiring word learning strategies for helping themselves figure out the meanings of words on their own.

Results of this investigation will assist the language teachers and the academic community at large in the further improvement of the students' language proficiency. This study is deemed to indirectly raise the learners' level of awareness, make them recognize more effective learning strategies for a given circumstance, and propose to students an array of strategies and allow them to discern which ones are the best for them. Through this study, the language instruction in a university may also be improved since language teachers will become more mindful of which learning strategies of students need to be retooled and enhanced. It would also prompt the university to evolve more effective language programs that address the students' specific and individual needs.

Method

Research Design

This research is based on the premise that students employ diverse vocabulary learning strategies in comprehending and acquiring a wide range of vocabulary. Thus, this investigation draws theoretical support from Schmitt's (1997) taxonomy of vocabulary learning strategies categorized into five: Determination

(DET), Social (SOC), Memory (MEM), Cognitive (COG), and Metacognitive (MET).

The present study used the descriptive survey method to determine the vocabulary learning strategies employed by the students from each of the five identified disciplines and to elicit other pertinent information that might be required to answer future questions posed in this investigation.

Participants

Two-hundred fifty university students enrolled in English 2 (Communication Skills) in a comprehensive university were purposively selected to participate in the study. However, in the computation of data, only 202 instruments representing 80.8 per cent of the target number was considered for others were not appreciated because of incomplete answers. The student respondents were informed about the purpose of the investigation and were also requested to honestly and reflectively fill out the inventory since their answers reveal their personal use of second language learning strategies.

Instrument

The data required for this investigation were obtained through an author-made second language vocabulary learning strategies inventory (L2VLSI) developed based on Schmitt's (1997) model. A total of 53 common vocabulary learning strategies were identified in the questionnaire and were grouped as follows: 7 determination strategies, 8 social strategies, 24 memory strategies, 9 cognitive strategies and 5 metacognitive strategies. The questionnaire was tested and results showed that the 53 items of L2VLSI are reliable since there is a high level of distinction among persons/items along the measured variable (Person Reliability = 0.99; Item Reliability = .95). It was also pre-tested to a number of respondents to ensure clarity of items and directions.

The questionnaire required the respondents to indicate how often they use a certain strategy. The extent of vocabulary learning strategy use was determined using indicators expressed on a six-point Likert scale: 1-never, 2-seldom, 3-occasionally, 4-often, 5-usually, and 6-always. In accomplishing the questionnaire, the respondents were simply instructed to indicate how often they have used a certain strategy whether in school, at home or in other places by checking the brackets that correspond to their answers.

Data Analysis

One-way *ANOVA* was performed to test if the mean uses of vocabulary learning strategies vary across the five disciplines. Subsequently, a multiple comparison test using Scheffe was done for each variable to determine where the differences lie. Correlation analysis was also conducted to test the relationship among the vocabulary learning strategies variables.

Results

Table 1 presents the summary of the use of vocabulary learning strategies (VLS) across the five disciplines.

The data show the application of varying VLS by the subjects. Close scrutiny of the data shows that determination VLS is the most preferred strategy by AB/Ed. CSE employed the most varied strategies; social, memory, cognitive, and metacognitive VLS. AMS, nonetheless was noted to use all the strategies occasionally with no special preference among the VLS. The findings also imply that there are myriad of VLS that can be used in language learning process and that there is not a single best strategy in vocabulary learning and students across disciplines employ different VLS. Put simply, students from a particular course use VLS they deem helpful and effective in unlocking discipline-specific vocabularies. The students from one discipline employ VLS that differ in categories and frequency and the choice and effectiveness probably depend on the task, the learners themselves, and the context. The findings are also indicative that the language classroom is responsible for providing students with opportunities to choose the individual strategies themselves or for exposing the learners to a wide array of VLS from which learners could select. The results also show that students who rarely use any of the VLS categories should be given further explicit instruction on VLS usage and enough motivation since failure to unlock unknown words might seriously impede their comprehension and result in poor linguistic performance.

One-Way Analysis of Variance (*ANOVA*) was used to establish if significant difference existed in terms of the preferred VLS the respondents employed. Generated data using *ANOVA* yielded *F* values of 4.49 for determination, 5.47 for social, 2.44 for memory, 1.40 for cognitive and 1.77 for metacognitive. Findings revealed statistically significant differences in the respondents' use of determination and social VLS. However, the data exhibited non-significant differences for memory ($F=2.44$, $p=.05$), cognitive ($F=1.41$, $p=.23$) and metacognitive ($F=1.77$, $p=.14$).

The data suggest that the non-significant differences of memory, cognitive, and metacognitive VLS may imply that the frequency of use of these VLS across disciplines are much the same or are correlative. Further, the non-significant difference in the use of metacognition may entail that the subjects least prefer the strategy and they lack awareness in its value as VLS. This result can have further teaching implications that is, teachers should encourage the students to learn how to use metacognition since it is an important VLS as it includes the ability to be in charge of one's own learning performance and it also underlies all other learning and memory strategies. Students must be provided training and opportunities to employ this VLS category since its use would affect better language acquisition.

Table 1
Summary of the Use of Respondents' VLS across Five Disciplines

Strategy	Discipline	SD	F	η^2
Determination	AB/Ed (n=19)	.64	4.49**	.08
	BE (n=39)	.59		
	CSE (n=21)	.51		
	AMS (n=76)	.65		
	HM (n=47)	.76		
Social	AB/Ed (n=19)	.78	5.47**	.10
	BE (n=39)	.77		
	CSE (n=21)	.57		
	AMS (n=76)	.63		
	HM (n=47)	.79		
Memory	AB/Ed (n=19)	.78	2.44*	.05
	BE (n=39)	.77		
	CSE (n=21)	.57		
	AMS (n=76)	.63		
	HM (n=47)	.79		
Cognitive	AB/Ed (n=19)	.96	1.4	.03
	BE (n=39)	.74		
	CSE (n=21)	.82		
	AMS (n=76)	.89		
	HM (n=47)	.99		
Metacognitive	AB/Ed (n=19)	.97	1.77	.04
	BE (n=39)	.87		
	CSE (n=21)	.88		
	AMS (n=76)	.93		
	HM (n=47)	.93		

To explore the association between the VLS and the disciplines, Eta^2 was computed. Examination of the results shows that there existed strong association between social VLS and the disciplines as revealed by Eta^2 of .10. This also holds true between determination VLS and the disciplines where computed Eta^2 is .08. From the values, it may be deduced that social and determination VLS can be employed as efficacious vocabulary learning by the L2 learners.

Since the F-test disclosed only the existence of significant difference, not where the difference lies, Scheffe-post-hoc procedure was used to analyze the significance of difference between pairs of means in the use of determination and social VLS. Table 2 presents the results of Scheffe test for determination VLS.

Table 2
Scheffe Test for the Respondents' Determination VLS

BI1	N	Subset for alpha = .05	
		1	2
AMS	76	3.43	
HM	47	3.64	3.64
BE	39	3.77	3.77
CSE	21	3.81	3.81
AB/Ed	19		4.05
Sig.		.28	.20

The findings show that marked variation is between AB/Ed and AMS as indicated by the p-value of .002 which is way below the alpha level of .05. This implies that AB/Ed subjects employ determination strategies more often than do the AMS respondents.

The Scheffe test results also revealed significance of difference in the respondents' use of social strategies. Table 3 shows that the significant difference is attributed between CSE and AMS where p -value is .00. The data indicate statistically marked difference between CSE and AMS with the AMS group using social VLS less frequently than do CSE respondents.

Table 3
Scheffe Test for the Respondents' Social VLS

BI1	N	Subset for alpha = .05	
		1	2
AMS	76	2.98	
BE	39	3.17	3.17
HM	47	3.39	3.39
AB/Ed	19	3.40	3.40
CSE	21		3.68
Sig.		.24	.10

Correlation Analysis was also conducted to test the relationship among the vocabulary learning strategies variables. Table 4 records the statistical analysis that yields significant positive correlations between VLS.

Table 4
Correlation Coefficients among the Vocabulary Learning Strategies

VLS	1	2	3	4	5
(1) Determination	---				
(2) Social	.48**	---			
(3) Memory	.67**	.62**	---		
(4) Cognitive	.50**	.60**	.74**	---	
(5) Metacognitive	.48**	.41**	.70**	.66**	---

** $p < .01$

Worth noting is the correlation coefficient (.74) between cognitive and memory VLS, that denotes strong correlation in the positive direction. Stated differently, the degree of association indicates greater strength of correlation since .74 is closer to 1.00. The more frequent the subjects use cognitive VLS, the frequency of using memory VLS also increases.

In a similar vein, the following correlation coefficients of .67 (between memory and determination VLS), .62 (between memory and social VLS), .70 (between memory and metacognitive VLS), and .66 (between metacognitive and cognitive VLS) also revealed statistically strong positive correlations. From the data, it can be inferred that merging or using these VLS may bring about better English vocabulary acquisition.

Between VLS with correlation coefficients of .48 (social and determination VLS), .50 (cognitive and determination VLS), .48 (metacognitive and determination VLS), .41 (metacognitive and social VLS), and .60 (between cognitive and social VLS), the data are indicative of having degrees of association of moderate positive correlation. Language mentors may yet find them as invaluable learning strategies to facilitate teaching English vocabulary among L2 learners.

Discussion

This paper reports what learners do to help themselves learn a second language and introduces the concept of strategies which researches have shown that active and successful language learners use. Hence, after comparing the five disciplines with respect to their reported use of 53 VLS, it was found that there is a significant variation in the learners' attempt to acquire English vocabulary and to improve their strategic and linguistic competence.

Preference of determination and social VLS by the subjects across the 5 disciplines in vocabulary learning and acquisition revealed statistically significant differences although the respondents claimed they employed other identified VLS.

Correlation analysis showed that the choices of using all the 5 VLS were associated, thus, it is highly recommended that language teachers support and assist their students to foster communication skills development by training them to use varied VLS and to discover for themselves which of the strategies would be most beneficial for their learning. Orchestration of multiple VLS will help students decide that which may best suit them.

This study clearly shows that one discipline (AMS) ranked the lowest in four categories which may be explained by their lack of awareness of the different word learning strategies. This implies that more deliberate efforts have to be exerted in teaching AMS how to effectively and confidently use these second language learning strategies. In addition, for all the learners, regardless of discipline, to appropriately and flexibly use the abovementioned strategies, it is imperative that they be provided fundamental knowledge as regards the nature of language learning processes (Wenden, 1991). The results must also prompt the university to make critical decisions as regards how the students can be further assisted in learning the vocabulary they need to functionally acquire conceptual knowledge in the different disciplines.

As stated earlier, results of this study entail that explicit teaching of various vocabulary learning strategies to students is crucial and that teachers must expose them to varied L2 learning techniques and train them how to effectively use these by applying discipline-specific strategy where appropriate. On the other hand, those disciplines that use the most strategies must be provided with more challenging activities, enrichment exercises, and classroom situations that call for the optimal use of vocabulary learning techniques.

A more profound implication of this study could be that teachers obtain baseline information on students' learning processes which include the learning strategies they use, what they know about language learning, and their determination to become independent learners. This information must serve as bases for the identification of content, materials, and pedagogy that suit the needs of the learners. In other words, the plan of actions that any educational institution would undertake must be anchored on the careful investigation of the learners and their environment (Wenden, 1991). Further, it may be suggested that teachers consider the premise that learners come in the classroom with broad range of differences and each of these variations has implications for teaching and learning.

The present study may also prompt language instructors to promote strategies-based instruction (SBI) or learner strategy training (Mc Donough, 1999). Through this, one of the most important goals of language teaching – learners' autonomy, would be better facilitated since they will be taught the technical know-how of acquiring a language and sensitized to the significance of taking charge of their own learning (Brown, 2000).

Hence, it is essential that teachers and even students themselves are cognizant of the various VLS and how they vary considerably within individuals as well as across individuals. The need to teach students strategic activities to improve their power to unlock unfamiliar words and effectively learn a language as well with or without the teachers' presence or intervention remains to be well-advised. It is also of prime importance that students have a full grasp of word meaning since functional understanding of terms, discipline-related or not, leads to effective

comprehension which can be attained through functional use of varied VLS. It is very true that the students' scholastic success or achievement in their chosen field also greatly depends on wide vocabulary acquisition.

In view of this, language teachers have to start with knowing what their students *do*, *can do*, *do not do*, and *cannot do*. They have to discover if their students know how to carefully look at words and decide how to pronounce them, use context clues to arrive at meanings of unfamiliar words, know how to use the dictionary and thesaurus, enjoy learning new words or they simply ignore terms that they don't know etc. In other words, teachers must know where their students are vis-à-vis word learning techniques so that they would know what to reinforce, re-teach, or introduce. This can only be done if teachers have sufficient understanding of the kind of strategies students employ and if they themselves can strategically and flexibly model and teach the different VLS.

Conducting investigations on the VLS of students would yield relevant findings in relation to students' strengths and weaknesses along the line of language development. Involving the learners by asking them to reflect on their own practices and assess themselves in regard to variables under study would prove useful in delivering classroom instruction. Results of which would also be a sound basis for school-wide program development and implementation.

Finally, it is strongly suggested that language practitioners, educational managers, instructional materials developers, curricularists, and classroom teachers must have inventories and data banks of language functions readily available and easily accessible. Strategy inventories can serve as very useful references and guide in the planning for teaching and learning experiences and development of teaching materials that eventually result in learners' ability to process information independently (Wenden, 1991).

References

- Arani, J. A. (2006). *Learning strategies of English medical terminologies in the students of medicine*. Retrieved August 9, 2008, from http://www.esp-world.info/Articles_13/DOC/Learning%20Strategies_JA.doc
- Brown, H.D., (2000). *Principles of language learning and teaching*. New York: Addison Wesley Longman, Inc.
- Durant, P. (2009). Investigating the viability of a collocation list for students of English for academic purposes. *English for Specific Purposes*, 28(3), 157-169.
- Gu, P.Y. (2003). Vocabulary learning in a second language: Person, task, context, and strategies. *Teaching English as a Second or Foreign Language- EJ*, 7(2), A-4.
- Jurkovic, V. (2006). *Vocabulary learning strategies in an ESP context*. Retrieved September 3, 2007, from http://www.sdutsj.edus.si/ScriptaManent/2006_1/Jurkovic.pdf
- McDonough, S. (1999). Learner strategies. *Language Teaching*, 32, 1-18.
- Oxford, R.L. (1990). *Language learning strategies. What every teacher should know*. New York: Newbury House.

- Peacock, M. & Ho, B. (2003). Student language learning strategies across eight disciplines. *International Journal of Applied Linguistics*, 13(2), 179-200.
- Rasekh, Z.E. (2003). Metacognitive strategy training for vocabulary learning. *Teaching English as a Second or Foreign Language- E.J.*, 7(2), A-1.
- Riazi, A. & Riasati, M. (2008). Language learning style preferences. A students' case study of Shiraz EFL Students. *The Iranian EFL Journal*, 1, 156-82.
- Schmitt, N. (1997). *Vocabulary learning strategies*. Cambridge: Cambridge University Press.
- Wenden, A. (1991). *Learner strategies for learner autonomy*. Maryland: Prentice-Hall.

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