

An Investigation of Deep and Surface Learning Approach towards English Vocabulary Acquisition of EFL Students

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Abstract

Purpose: The aim of this research study is to examine the most dominant EFL Students' approach in acquiring English vocabulary employed by the first-year students of English Department at Muhammadiyah University of Makassar. The study also investigates whether there is any difference in approach preference between male and female students in acquiring English vocabulary by first-year students at English Department, Faculty of Teacher Training and Education, Muhammadiyah University of Makassar, Indonesia
Approach/Methodology/Design: A descriptive quantitative research method is employed in data analysis. Twenty four first-year undergraduate students (42% male & 58 female) were selected as a sample for the study based on purposive sampling technique. These students chose English major at Muhammadiyah University of Makassar and were enrolled in the academic year 2018-2019. The instruments used were a Two-Factor Study Process Questionnaire (R-SPQ-2F) and Likert Scale to assess the research participants' approach preference.

Findings: The findings of this research study reveal that the first-year students of English Department at Muhammadiyah University of Makassar dominantly adopt surface approach compared to deep approach in acquiring English vocabulary. The statistical analysis shows that the mean score for Surface is 35.12 and the mean score for Deep Approach is 34.66. The findings also indicate a difference in approach preference between male and female.

Practical Implications: The study will contribute positively to the understanding of the students' adopted approaches for acquiring vocabulary, assisting instructors to improve their teaching strategies.

Originality/value: The study provides an avenue for exploring students' learning processes. Male students preferred Surface approach to deep approach. Male students scored high (38.10) on surface approach compared to deep approach (36.60). Meanwhile, female students got slightly higher score (33.28) on deep approach than surface approach (33.00).

1. Introduction

EFL Students of the English Department in the first year of their study have a very low mastery level regarding English vocabulary acquisition. It is expected that EFL Students at the university level master 2000-3000 high-frequency words level. The English Proficiency Index (EPI) data arranged by English First (EF) show that in 2017 Indonesia ranked 39th out of 80 countries in the world and 10th out of 20 countries in Asia. The Indonesian score is 52.15 on average and falls under the low-proficiency band level (Sudarman & Chinokul, 2018). Mastering vocabulary is not easy for language learners. Students struggle to grasp vocabulary and transform it into memory retention. Not only students, but teachers are also

challenged to teach and know what way of instructional methods might aid the acquisition of many words. Numerous studies have identified certain barriers that prevent the students from assigning vocabularies into their long-term memories. According to Farjami(2013),to increase language proficiency, teachers should apply better ways of teaching in order to transfer vocabulary into long-term memory of students. With employing a better way of teaching, students' capacity to comprehend unfamiliar vocabulary will be increased in the shortest period of time. Besides that, after acquiring vocabulary, forgetting memorized words is a big issue mostly among first year students. Students face difficulties in recalling those vocabularies from memory retention when the vocabularies are not used in daily conversations. It is due to the lack of sufficient input and output (Takač, 2009).

There have been several research studies regarding the conceptualization and empirical outputs of learning strategies. Yet, some of learning-strategy theories do not clearly explain or recommend a concrete method that can help students overcome vocabulary acquisition problems (Oha, 2016). Biggs and Tang (2007) studied how the information is distributed into memory through approaches to learning. The two types of approaches that are commonly referenced are those of surface approach and deep approach. Surface approach to learning was defined by Biggs as an approach where students only have intention merely to pass an exam and fulfil the requirements of particular institution. In this case, students would have alliance to use a low level of cognitive activity rather than higher level of cognitive processes. Biggs suggested that students using a surface approach to learning end up using the memorization of the facts as a substitute for understanding. They pad their writing with quotes and facts to make it seem more substantial than it is, listing points of theory instead of crafting arguments or relating these points to one another. They are unlikely to check original sources, relying instead on others' interpretations of original sources. Biggs & Tang indicated some factors which lead the students to use surface approach. Those are: an intention to only achieve minimal pass marks; allowing non-academic priorities to take precedence; lack of time, possibly due to a high workload; misunderstanding requirements of a course or course assessments; a cynical view of education, exemplified in statements such as that 'It's only a piece of paper'; high anxiety about passing and workload; and genuine inability (Biggs and Tang, 2007, p. 17).

Meanwhile, a deep approach to learning was defined by Biggs & Tang (2007) as an approach whereby students engage meaningfully with the subject matter and treat the course content as something worthy of their taking the time to get to know and understand. Biggs suggests that, as a consequence of treating the subject matter meaningfully, a student uses a deep approach to learning and thus uses the appropriate higher cognitive activity, which is what is required to work with the material. He relates the deep approach to learning to the motivations and intrinsic desires of the students, claiming that "when students feel this need-to-know, they automatically try to focus on underlying meanings, on main ideas, themes, principles or successful applications"(Biggs & Tang, 2007). Hence, students are said to adopt a deep approach to learning, when they are focusing their learning on the underlying meaning, main ideas, themes, principles and successful applications of their course of study. According to Biggs, while this leads students to gather details similar to those sought in a surface approach

to learning, the student uses a deep approach to learning in trying to understand the big picture or the underlying knowledge structure that these same details fit within, and in trying to ascertain how the details relate to one another.

Biggs & Tang also suggested that there are teaching factors involved that can predispose a student towards a deep approach to learning. Chief among these are teaching to bring out the big picture or underlying structure of the subject matter, along with the interrelationships of the parts; teaching to get active responses rather than passive responses from students; teaching to build on what students already know and assuming that they already know a lot; engaging students' misconceptions directly while teaching; assessing for understanding of underlying structure, rather than facts only; creating a positive working atmosphere; emphasizing depth rather than breadth of learning; and 'practicing what they preach' (Biggs & Tang, 2007).

Hall et al. (2004) investigated the learning approaches of first-year accounting student and indicated that the students rely on surface approach instead of deep approach even if it is changing after changing the learning environment. Likewise, Gijbels et al. (2005) found 133 second-year law school students slightly associated to the deep approach than the surface approach to learning. Plotting students' approaches to learning exhibited that many students had low scores for both deep and surface approaches to learning. However, Gijbels et al. (2014) stated that students' approach to learning is viewed as changeable and influenced by factors in the learning environment, students' perceptions of these factors and student characteristics such as their prior knowledge on the topic under study.

Thus, in response to the importance of vocabulary in learning language and the challenges in acquiring English vocabulary, the present study aimed to investigate (i) The EFL students' approach in acquiring English vocabulary among the first-year students of English department in Muhammadiyah University of Makassar, (ii) the difference of learning approaches that is employed by male and female students in acquiring English vocabulary.

2. Methodology and Procedures

The researchers used descriptive-quantitative research methods in this study. The sample of the study includes a class of twenty four students, ten male and fourteen female students. The participants of this research were selected by using purposive sampling technique. The F Class was the first-year students of the English Education Department at Muhammadiyah University of Makassar that have already learned English intensively for about eight months during the academic year 2018-2019.

For collecting data, a questionnaire was developed, validated and administered to the sample. A structured test was also used to figure out the EFL students' approach in acquiring vocabulary. The questionnaire in this research was designed to find out the preferred approach that the EFL students use in acquiring English vocabulary (Hussin et al., 2017).

The researchers employed a Revised Two-Factor Study Process Questionnaire(R-SPQ-2F) by Biggs & Tang (2007) to find out the reliance of the students on a particular approach to

learning. The researchers distributed a questionnaire which included twenty questions derived from four indicators, namely Deep strategy, Deep Motive, Surface Strategy, Surface Motive. After accomplishing the first question, the researchers still used questionnaire data to find out the second question by dividing it into male and female part to find out the differences of learning approaches employed between male and female students.

3. Results and Discussion

In investigating this research, the researchers used Revised Two-Factor Study Process Questionnaire (R-SPQ-2F) by Biggs and Tang (2007) that consisted of twenty items on a 5 Likert scale point ranges from *always or almost always true of me* to *never or only rarely true of me*. There were ten items related to deep approach and ten items related to surface approach. The ten items of Deep approach were divided into five items regarding deep motive and five items for deep strategy. It had been arranged in the used questionnaire from number one to number ten in a row. In contrast, the ten items of surface approach were also divided into 5 items of surface motive and 5 items of surface strategy. Number 11 to number 15 were surface strategy items, while number 16 to number 20 were surface motive items. Every item of questionnaire was in line with the features of both approaches.

The Profile of Participants

This study involved the first-year students of English Department at Muhammadiyah University of Makassar as the respondent. Those students had learned vocabulary in the prior educational institution and escalated their vocabulary mastering by learning vocabulary as much as possible to make them catch up in any English subject they get to face for about 4 years ahead. The respondents are 24 Students, 10 (42%) students were male and 14 (58%) were female.

Table 1: Percentage of Male and Female Students

Research Subject	Gender	Number	Percentage
First-year students of English Department Student at Makassar Muhammadiyah University	Male	10	42%
	Female	14	58%

Table 2: The Attaining Scores of Male and Female Students

NAMA	SEX	DEEP	SURFACE
Student 1	Male	37	35
Student 2	Male	35	47
Student 3	Male	29	30
Student 4	Male	40	42
Student 5	Male	37	33
Student 6	Male	36	29
Student 7	Male	41	45
Student 8	Male	42	41
Student 9	Male	33	34

Student 10	Male	36	45
Student 11	Female	40	42
Student 12	Female	37	30
Student 13	Female	32	28
Student 14	Female	35	34
Student 15	Female	32	31
Student 16	Female	31	28
Student 17	Female	34	37
Student 18	Female	36	38
Student 19	Female	30	35
Student 20	Female	31	27
Student 21	Female	35	39
Student 22	Female	32	30
Student 23	Female	32	31
Student 24	Female	29	32

Preference of Learning Approach

After analyzing the data, the researchers found out that the first-year students of English Department at Muhammadiyah University of Makassar statistically had higher score on surface approach compared to deep approach. It indicated that the students preferred employing the surface approach in their learning of English vocabulary.

Table 3: Distribution of Learning Approach

Scale	Mean	Standard Deviation
Deep Approach	34.66	3.71
Surface Approach	35.12	5.99

Table 3 reflects the reliance of first-year students toward deep approach. It is lightly low compared to surface approach. The mean score of Deep Approach is 34.66, while the mean score of Surface Approach is 35.12.

The two learning approaches were calculated further by classifying the scores as it follows: 10-19 as low score, 20-29 as moderate score, 30-39 as high score, 40-50 as very high score.

Table 4: Cross Tabulation of Deep and Surface Approach

	Deep Approach Score					
Surface Approach		10-19 (low)	20-29 (moderate)	30 - 39 (high)	40-50 (very high)	Total
	10-19 (low)					
	20-29 (moderate)			4		4
	30 - 39 (high)		2	12		14
	40-50 (very high)			2	4	6
	Total		2	18	4	24

Table 4 pointed out that there were 16 students (67%) adopting both deep approach and surface approach. As it is shown, 12 students (50%) received high scores (30-39) and 4 students (16.6%) received very high scores (40-50) in either surface or deep approach after filling the items of deep approach and surface approach that the researcher distributed.

Then, there were 4 students (16.6%) who gained high scores (32.50) on deep approach and moderate scores (28.00) on surface approach. The accumulation of score had been drawn from Table 4 where it described that each student 6,13,16,20 had high scores (36, 32, 31, 31=32.5) on deep approach and (29, 28, 28, 27=28.00) moderate scores on surface approach.

In addition, there are also 4 students who filled the questionnaire and got high and very high scores (38.5) on surface approach as shown on Table 4. The analysis of data showed that the student 2, 3, 10, 24 received high and very high score (47, 30, 45, 32=38.5) on Surface approach. In comparison, the student 2, 3, 10, 24 got high and moderate score (35, 29, 36, 29=32.25) on deep approach. The attained scores upon surface items from the last 4 students (38.5) showed significant differences with previous 4 students (28), while score of deep approach from the last 4 students and the previous ones are somewhat similar. It pointed out that surface approach is dominantly used by students. The last 4 students gained high and very high scores on Surface Approach.

Gender Differences in Learning Approach Variables

After investigating the use of deep approach and surface approach towards first-year students of English Department in general, the researchers analyzed further the use of deep approach and surface approach with regard to gender difference by using an independent sample *t*-test on SPSS.

Table 5: Approach Preferences of Male Student

Group Statistics					
	Scale	N	Mean	Std. Deviation	Std. Error Mean
Male	Deep	10	36.6000	3.86437	1.22202
	Surface	10	38.1000	6.65749	2.10528

Table 5 shows that male students mostly prefer surface approach to deep approach. It had been proved with the mean score of Surface Approach (38.10) which was higher than the mean score of deep approach (36.60). It is indicated that male students mostly filled surface approach items with high scores on Likert scale points (1 “never or only rarely true of me” to 5 “always or almost true of me”). Male students answered more on surface items including surface motive and surface strategy. It indicates that male students are more likely having extrinsic motivation to acquire more vocabulary and use rote memorization strategy to memorize vocabulary rather than more understanding of the meaning.

In contradiction to male student preference, the table below shows that female students prefer deep approach to surface approach. It is also indicated that the mean score of deep approach (33.29) is slightly higher than the surface approach (33.00).

Table 6: Approach Preferences of Female Student

Group Statistics					
	Scale	N	Mean	Std. Deviation	Std. Error Mean
Female	Deep	14	33.2857	3.02372	.80812
	Surface	14	33.0000	4.60769	1.23146

The scores were computed after the 20 items on questionnaire had been answered by the students. The students scored slightly high on deep approach items. Thus, the researcher concluded that female students had more intrinsic motivation to get more vocabulary instead of extrinsic motivation. Female students enjoyed learning vocabulary and are interested in understanding the meaning and its use.

First-Year Students' Learning Approaches

The research findings reveal that the first-year Students of English Department at Muhammadiyah University of Makassar dominantly employ surface approach in learning English vocabulary rather than Deep approach. The statistical analysis indicates that the mean score of surface approach (35.12) slightly excel the mean score of deep approach (34.66) by examining the 24 total respondents, 14 female students (58%) and 10 male students (42%). It is therefore concluded the Deep approach is associated with deep motive and deep strategy. The characteristics of deep motive were composed of having intrinsic motivation to study, having highly intention to understand the information, while the characteristics of deep strategy were composed of related ideas, comprehension learning, the use of evidence, deep semantic, and self-actualization. The features of Deep strategy and Deep motive had been described by some items of questionnaire such as "When I find new vocabulary, I like to relate a new vocabulary to other words" in line with related ideas, "I am highly excited to learn vocabulary by using body language" in line with self-actualization, and "I am curious to find the function and class of the words I learn" in line with intrinsic motivation.

As with deep approach, Surface Approach was also composed of surface motive and surface strategy. The characteristics of surface motive were extrinsic motivation, fear of failure, Test Oriented, while the characteristics of surface strategy were a rehearsal, rote memorization, listing points of theory, unlikely to check sources. These characteristics are associated with the items of the questionnaire such as "I repeatedly mention the word that I would like to memorize" in line with rote memorization and "I usually stick or write the translation of unfamiliar words to ease reading an English text" in line with listing points. Concerning surface motive, students were more likely to set minimum standard of motivation like passing an examination. As in number 19 of the questionnaire, "I will have many English vocabularies to pass the TOEFL exam" in line with Test Oriented.

The result of this study emphasize the findings of the study by Velo et al. (2015), Lake & Boyd (2015), Hall et al. (2004) in which they reported that first year students who studied

English writing, accounting and other subjects scored high on surface approach and low on deep approach. Younger students employed surface approach due to less of intrinsic motivation to study compared to old students.

Based on the results of Lindblom-Ylänne et al. (2018) the students' reliance towards surface approach is caused by low motivation to study, low self-efficacy beliefs, lack of self-regulation in learning, lack of organized studying, negative study experiences, and heavy workload. Students are also more likely memorizing the information without understanding. It is merely for passing the examination. Moreover, such attitudes reflect that the students have negative perceptions towards the teaching and learning environment. More importantly, half of the participant of the study declared that most problems were more likely to time and effort management.

With respect to first-year students, the first-year at college was full of emotional challenges. There were also other challenges and pressures, such as paying for college expenses, making new friends, keeping in touch with family and friends not at their college and being independent. Likewise, portrayal of college in popular culture –social media, television and movies seemed a lot more fun than it actually was. The reality did not fulfil the students' expectations. Perhaps not surprisingly, stress is a common effect among first year college students. There were also noteworthy feelings of loneliness, depression and anxiety. As per the data analysis, 38% of students said they felt anxious, one in four students (25%) said they felt lonely, and one in five (22%) said they felt depressed all or most of the time during their first term of school (Poll, 2015). These challenges could make students uncomfortable with learning environment that pushes first-year students to predominantly employ Surface Approach.

Fortunately, the teachers are able to eliminate or mitigate the factors that encourage surface learning and develop the course to encourage deep learning by modifying learning environment (Ayalp, 2015). Enhancing the 'deep approach can be done by placing high aims for students which go well beyond reproducing knowledge but use other complementary methods other than expository teaching: problem solving, case studies, designing projects, raising questions, discussion and negotiation in the classroom, etc. (Lopez et al., 2012). Students' motivation also plays significant role in students' academic performance. Hence, supporting students to adopt deep approach is necessary. Lopez et al. (2012) and Hasnor et al. (2013) study explained that deep approach to learning contribute to the success of student academic performance. Greater academic achievement is related to the deep approach and to the reflective and theoretical learning styles. Poorer academic achievement is related to the surface approach and an active style. Delgado et al. (2018) point out that it is due to the student who adopts deep approach more likely relating the ideas to another picture in order to understand the study holistically and have intrinsic motivation to study particular subject.

In studying English language, the students need to adopt deep approach to learning. The goal of teaching and learning is supposed to develop a deep approach to learning. It is important to acknowledge that higher education requires high quality teaching as well as high quality learning (Ayalp, 2015).

Learning Approaches on Different Gender

The data analysis reveals that there is a significant difference in learning approach preference between female and male students. The findings show that male students dominantly preferred surface approach compared to deep approach. It was justified by attaining mean score of students on surface approach (38.10) higher than deep approach (36.60). In contrast, female students received quite high mean score on deep approach compared to surface approach. The female students gained 33.28 mean score on deep approach while on surface approach they gained 33.00 mean score. Male students dominantly preferred surface approach while female students preferred deep approach.

The findings above are contradictory with some previous findings. Hussin et al. (2017) and Ayalp (2015) on their study had showed no significant difference between female and male students regarding to learning approaches. Both female and male students adopted deep approach compared to surface approach. However, it showed that all studies regarding gender differences in learning approaches will not always produce similar results.

Deep approach was associated with students who have intrinsic motivation to study. Students who adopted deep approach had high motivation to learn a particular subject. Sharma (2018) found that female students were significantly more motivated than their male counterparts. Self-efficacy and high motivation significantly contributed to academic achievement of students. Myriad factors lead female students to the use of Deep Approach with regard to learning strategy. Kayaoğlu(2012) in his research found out that in learning languages, female use greater memory strategy and compensate strategy. Memory strategy is comprised of associating/elaborating, using sounds, using imaginary, using physical response, and etc. Compensate strategy is a strategy to use the target language for understanding or speaking the foreign language. Compensation strategies are intended to make up for limitations in knowledge, especially, grammar and vocabulary. Those are using meme/gesture, coining words, using circumlocution/synonym, approximating the message, using clues, getting help and etc. Female students were observed to use significantly higher strategy of approximating the message. Interestingly, instead of directly looking into dictionary, female students were found more frequently to make up new words to overcome limitation in speaking once they forgot the words. Those strategies were in line with the features of Deep strategy. Associating/elaborating, using sounds, using imaginary, using physical response provided evidences of the use of target language to transfer into long memory storage. It showed significant correlation between deep approach and strategies used by female.

Minimum and short-term motivation in the study made students struggle to absorb information and retain the information into long memory storage. Therefore, students were more likely to forget some acquired information. Sharma (2018) and Narayanan, et al. (2007) found that male students have less motivation in language learning. Besides motivation, learning strategy was also a determining factor for the use of Surface Approach. Male students more frequently ask for help to provide the missing expression in the foreign language that they learn (Kayaoğlu, 2012).

4. Conclusion and Suggestion

The First-year students of English Department at Muhammadiyah University of Makassar dominantly employed surface approach compared to deep approach when acquiring new English vocabulary. The results of the study indicate that the mean score of students on surface approach (35.12) was slightly higher than deep approach (34.66). Regarding approach preference between male and female students in acquiring English vocabulary, the results show that there were different preferences between female and male students in terms of adopting an approach for learning vocabulary. Female students tended to adopt deep approach rather than surface approach. On the contrary, male students tended to employ surface approach compared to deep approach.

Conflict of Interest

The authors of the article declare no conflict of interest.

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References

- Ayalp, G. (2015). Relationships between learning approaches of Civil Engineering undergraduates in three Turkish universities and success in Construction Management courses. *International Journal of Engineering Education*, 31(6A), 1504-1515
- Biggs, J.B., and C. Tang. (2007). *Teaching for quality learning at university*, 3rd ed. Berkshire: Open University Press.
- Biggs, J.B., Kember, D., & Leung, D.Y.P. (2001) The Revised Two Factor Study Process Questionnaire: R-SPQ-2F. *British Journal of Educational Psychology*. 71,133-149
- Delgado, Á., Almeida, J., Mendes, L., Oliveira, I., Ezequiel, O., Lucchetti, A. and Lucchetti, G. (2018). Are Surface and Deep Learning Approaches Associated with Study Patterns and Choices Among Medical Students? A Cross-Sectional Study. *Sao Paulo Medical Journal*, 136(5), pp.414-420.
- Donnison, S. and Penn-Edwards, S. (2012). Focusing on First Year Assessment: Surface or Deep Approaches to Learning?. *The International Journal of the First Year in Higher Education*, 3(2).
- Entwistle, N. and McCune, V. (2004). The Conceptual Bases of Study Strategy Inventories. *Educational Psychology Review*, 16(4), pp.325-345.
- Eunmee, K. (2008). *English vocabulary acquisition strategies*. Retrieved from <http://www.vdm-verlag.de>
- Farjami, F., & Aidinlou, N. A. (2013). Analysis of the impediments to English vocabulary learning and teaching. *International Journal of Language and Linguistics. Special Issue: Language Teaching and Learning Key Principles (LTLKP)*, 1(4-1), 1-5.

- Garrison, D. and Innes, M.C. (2005). Facilitating Cognitive Presence in Online Learning: Interaction Is Not Enough. *American Journal of Distance Education*, 19(3), pp.133-148.
- Gijbels, D., Donche, V., Richardson, J. T. E., & Vermunt, J. D. (2014). Learning Patterns in Higher Education. *Dimensions and research perspectives*. London: Routledge.
- Gijbels, D., Watering, G.V.D., Dochy, F., & Bossche, P.V.D. (2005). The Relationship between Students' Approaches to Learning and the Assessment of Learning Outcomes. *European Journal of Psychology of Education*. 20. 327-341. 10.1007/BF03173560.
- Gordon, C. and Debus, R. (2002). Developing deep learning approaches and personal teaching efficacy within a preservice teacher education context. *British Journal of Educational Psychology*, 72(4), pp.483-511.
- Hall, M., Ramsay, A., & Raven, J. (2004). Changing the learning environment to promote deep learning approaches in first-year accounting students. *Accounting Education*, 13(4), 489-505.
- Hasnor, H., Ahmad, Z. and Nordin, N. (2013). The Relationship between Learning Approaches and Academic Achievement Among Intec Students, Uitm Shah Alam. *Procedia - Social and Behavioral Sciences*, 90, pp.178-186
- Hurd, S. and Lewis, T. (n.d.). *Language learning strategies in independent settings*.
- Hussin, F., Hamed, S. and Jam, S. (2017). Approaches to Learning of Engineering Students: Deep or Surface? *International Academic Research Journal of Social Science* 3(1), pp.122-127
- Kayaoğlu, M.N. (2012). Gender-Based Differences in Language Learning Strategies of Science Students. *Journal of Turkish Science Education*, 9(2).
- Lake, W. and Boyd, W. (2015). Age, Maturity and Gender, and the Propensity towards Surface and Deep Learning Approaches amongst University Students. *Creative Education*, 06(22), pp.2361-2371.
- Lindblom-Ylänne, S., Parpala, A. and Postareff, L. (2018). What Constitutes The Surface Approach To Learning In The Light Of New Empirical Evidence? *Studies in Higher Education*, 44(12), pp.2183-2195.
- López, B.G., Cerveró, G.A., Rodríguez, J.S, Félix, E.G. and Esteban, P.G. (2013). Learning Styles and Approaches to Learning in Excellent and Average First-Year University Students. *European Journal of Psychology of Education*, 28(4), pp.1361-1379.
- Mcleod, S. (2013). Memory, Encoding Storage and Retrieval | Simply Psychology. [online] [Simplypsychology.org](https://www.simplypsychology.org/memory.html). Available at: <https://www.simplypsychology.org/memory.html> [Accessed 23 Aug. 2019].
- Narayanan, R., Nair, N.R. and Sundareswaran, I. (2007). Do Female Students Have Higher Motivation than Male Students in Learning of English at the Tertiary Level?. Online Submission.
- Oha, A.B. (2016). *A Review Study in Learning Strategies Theory*. [online] Available at: https://www.researchgate.net/publication/314396546_A_Review_Study_in_Learning_Strategies_Theory [Accessed 30 Jul. 2019].

- Poll, H. (2015). The first year college experience: A look into students' challenges and triumphs during their first term at college. *The JED Foundation*. Available at: <https://www.settogo.org/wp-content/uploads/2017/01/First-Year-College-Experience-Data-Report-for-Media-Release-FINAL.pdf> [Accessed 6 Jan. 2020].
- Schmitt, N. (2008). Review Article: Instructed Second Language Vocabulary Learning. *Language Teaching Research*, 12(3), 329–363.
- Schmitz, A. (2012). *Memories as Types and Stages*. [online] Saylordotorg.github.io. Available at: https://saylordotorg.github.io/text_introduction-to-psychology/s12-01-memories-as-types-and-stages.html [Accessed 23 Aug. 2019].
- Segler, T., Pain, H. and Sorace, A. (2002). Second Language Vocabulary Acquisition and Learning Strategies in ICALL Environments. *Computer Assisted Language Learning*, 15(4), pp.409-422.
- Sharma, D. and Sharma, S. (2018). Relationship between Motivation and Academic Achievement. *International Journal of Advances in Scientific Research*, 4(1).
- Sudarman, S., & Chinokul, S. (2018). The English vocabulary size and level of English Department students at Kutai Kartanegara University. *ETERNAL (English, Teaching, Learning, and Research Journal)*, 4(1), 1-15.
- Sugiyono. 2012. *Metode Penelitian Kuantitatif Kualitatif dan R&D*. Bandung: Alfabeta.
- Takač, V.P. (2009). *Vocabulary Learning Strategies and Foreign Language Acquisition*. Clevedon: Multilingual Matters.
- Trigwell, K. and Prosser, M. (2005). Improving the Quality of Student Learning: the Influence of Learning Context and Student Approaches to Learning on Learning Outcomes. *Higher Education*, 22(3), pp.251-266.
- Veloo, A., Krishnasamy, H. & Harun, H. (2015). What Are the Learning Approaches Applied by Undergraduate Students in English Process Writing Based on Gender?. *International Education Studies*, 8(6).
- Wagner, J., Foster, J. and Genabith, J. (2007). A Comparative Evaluation of Deep and Shallow Approaches to the Automatic Detection of Common Grammatical Errors. *Association for Computational Linguistics*, pp.112–121