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A Review of Learning Strategies towards Learning Outcome

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ABSTRACT: Education is the backbone of a country and it contributes towards economic development by enhancing individual's market value. Therefore, learners' achievement in learning and the factor influencing it such as application of learning strategies must be focused on in order to develop high market value among learners. The focus of this study is to review learning strategies that influence learning outcomes. This paper explores the meaning of learning strategies by various researchers. At the same time, it also explores the relationship between dimensions of learning strategies towards learning outcomes and the dimensions are believed to be capable of affecting academic performance. It is concluded that suitable and good learning strategies can lead towards successfulness in learning and academic performance. The findings of previous researchers are also included to support the arguments used in this study.

KEYWORDS: Learning strategies, time management, motivational, attitude, academic performance

I. INTRODUCTION

Learning strategy is regarded as the predictive factor towards learners' learning outcome because an effective learning strategy is always linked to producing successful learners. Other than the influence of teacher-student relationships on student excellence in learning outcomes (Jamaluddin et al., 2021), Brilliant and successful learners have specific learning pattern or they undergo a combination of academic activities in order to convert information into knowledge (Vermetten et al., 1999; Vermunt, 1996). A study by Loh (2002), supported by Dumford et al., (2016) clarified that high achieving and low achieving learners exist due to the different use of learning strategies that affect their learning outcome. The relationship is apparent and it is supported by Schmeck (1988) that relates learning strategy as part of the procedure to ensure learning objective is accomplished.

Besides, learning strategy is a mental activity controlled by learners to learn and understand subjects in school (Frey et al., 2018; Ohst et al., 2015). This mental activity involves thinking and behavioral process that are applied by learners during studying and is related to learners' success in school (Weinstein & Palmer, 1990); which is also classified as part of a learning strategy. Hence, any behavior or steps that are being acted out by learners to induce acquisition, storage, memorization and application of new information can be determined as the definition for learning strategy (Oxford, 1990). It is in conjunction with learning strategy as a combination of thoughts (intention), behavior, and belief or feeling (emotion) that facilitates acquisition, understanding or transfer of new knowledge and skills.

Weinstein and Mayer (1986) also supported the view by Oxford (1990) and Weinstein et al., (2000) by concluding that learning strategy is a cognitive or behavioral process by the learners during learning in which causes positive effect in acquisition, retention and exploring of new knowledge. Thus, focus on acquisition technique, retention technique, and development technique is important towards learners' education whether in class or outside of class. Based on the various definition provided and the synthesis by the researches, learning strategy can be concluded as behavior or thoughts that influences learners' cognitive, metacognitive and affective process in mastering a subject.

II. THE DIMENSION OF LEARNING STRATEGIES

Past researches in regards to learning strategies, focused on learning within Language field. It is safe to say that the researches can be adapted and absorbed outside of Language field which is through other learning subjects as the general aim and objectives of other subject are more the least the same, that is to ensure learning objectives are achieved (Baskin et al., 2017; Dan, 2014).

During early researches around the year 1970s, language researchers categorized learning strategies into explanation given by Weinstein et al., (2000) that defines two general categories; strategies that affect learning directly such as memorization, and strategies that affect learning indirectly such as time and self-management (Stern, 1970). Dansereau et al., (1979) further developed the dimension of learning strategies into primary strategy and support strategy. Primary strategy includes information acquisition,

information storage, information retrieval and information application. As for support strategy, it is a strategy that is used to maintain conducive environment while learning such as planning and scheduling.

Supervision strategy can be explained as an external element that affects cognitive processing strategy. This is in accordance with Vermunt and Vermetten's view (2004), and Vermunt's (1998) that defined supervision strategy as a strategy applied by learners to supervise or to control cognitive processing. During learning session, processing strategies applied by learners must be assisted and supported by supervision strategy which is further divided into self-rules and external rules. Self-rules occur when learners control their own learning process while external rules occur when external resources such as teachers, course materials, and evaluations are involved.

A study by Baskin et al., (2017) employed Schmitt's Taxonomy that divides learning strategy into five main dimensions. Schmitt's Taxonomy is a comprehensive inventory of learning strategies that is related to vocabularies. It includes determination strategies, social strategies, memory strategies, cognitive strategies, and metacognitive strategies (Schmitt, 1997). Lee et al., (2015) however used four types of learning strategies that were related to motivation, tasks, planning, and learner's cognitive as indicator in measuring the effectiveness of learning process.

III. LEARNING STRATEGIES TOWARDS LEARNING OUTCOME

Aside from learning environment, learning strategies also have significant relation towards learners' achievement. This is because the effectiveness of learning strategies practiced by learners is the main contributor towards their academic achievement (Ali, 2008). This is proven by past researches conducted both domestically and abroad in regards to learning strategies and academic achievement in schools and in higher education. Various researches had been carried out in the past (Hassan, 2017; Lee & Lai., 2017; Baskin et al., 2017; Wijnen et al., 2017; Dumford et al., 2016a; Kikas & Jogi, 2016; Dan, 2014; Bathuma & Kalaimakal, 2014; Sanip & Che Ahmad, 2014; Ahmad et al., 2011; Ibrahim, 2010; Nadzir, 2009; Ali, 2008; Mansuri, 2002) due to learning strategies being viewed as having high potential in contributing towards successfulness in learning a subject.

Supervision strategy is the factor that heaves the learners towards triumph in their studies as well as preparing them to keep on striving forward in the future. This happens because a good supervision strategy will provide learners with a list of self-evaluation that displays their strengths and weaknesses in which they can reflect on during learning process (Dumford et al., 2016). The importance of learning strategies was explained in detail through Self-Regulated Theory (Zimmerman, 1990). The theory stated that learning strategy is one of the catalysts towards the successfulness of High Order Thinking Skills (HOTS) among learners. Therefore, the leaners must ensure that their chosen learning strategies are applied accordingly with their self-suitability and subject suitability.

Research towards 193 college students (McKeachie et al., 1985) clarified the significant relationship between learning strategies and academic achievement. It showed that different learning strategies resulted in different academic achievement. The result was supported by research that was implemented in Universiti Kebangsaan Malaysia (UKM) by Ahmad et al., (2000) in which it revealed that the practice of learning strategies contributed as much as 20% towards the variation in learners' achievement in Science and Mathematics. Hence, learning strategies must be taken into consideration when learners' achievement is being discussed of.

IV. CONCLUSION

Furthermore, as a conclusion learners' inability in choosing a suitable learning strategy also influences learners' mastery in a certain subject. Past researches explained in details regarding the issue of learners' mastery in their studies; learners were not able to achieve the expected learning outcome due to their failure in implementing a good cognitive, metacognitive, and affective strategy and it was not solely due to their intellect (Hassan, 2017; Wijnen et al., 2017; Kikas & Jogi, 2016). Therefore, learners must recognize the most suitable learning strategy that they could apply without being influenced by their peers as different individuals have different adaptability in learning.

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REFERENCES

1) Abu, N. E., & Eu L. K. (2014). Hubungan antara sikap, minat, pengajaran guru dan pengaruh rakan sebaya terhadap pencapaian Matematik Tambahan tingkatan 4. *Jurnal Kurikulum dan Pengajaran Asia Pasifik*, 2 (1).
2) Alkharusi, H. A., Sulaimani, H. A., & Neisler, O. (2019). Predicting critical thinking ability of Sultan Qaboos university students. *International Journal of Instruction*, *12*(2), 491-504. https://doi.org/10.29333/iji.2019.12231a.

3) Anderson, O. W., & Krathwohl, D. R. (2001). *Taxonomy for learning, teaching, and assessing: A Revision of Bloom's Taxonomy of educational objectives*. A Bridged Edition. New York: Addison Wesley Longman, Inc.
4) Candra, & Retnawati, H. (2020). A meta-analysis of constructivism learning implementation towards the learning outcomes on civic education lesson. *International Journal of Instruction, 13(2),* 835-846. https://doi.org/10.29333/iji.2020.13256a.
5) Che Ahmad, C. N., Osman, K., & Halim, L. (2013). *Persekitaran Pembelajaran Aspek Fizikal dan Psikososial*. Bangi: Universiti Kebangsaan Malaysia.
6) Chen, C., Fan, J., & Jury, M. (2017). Are perceived learning environments related to subjective well-being? A visit to university students. *Learning and Individual Differences, 54,* 226–233. https://doi.org/10.1016/j.lindif.2017.01.001.
7) Curriculum Development Division (2016). *Buku Penerangan Kurikulum Standard Sekolah Menengah (KSSM)*. Putrajaya: Kementerian Pendidikan Malaysia.
8) Curriculum Development Division (2016). *Dokumen Standard Kurikulum dan Pentaksiran (DSKP) Mata Pelajaran Prinsip Perakaunan*. Putrajaya: Kementerian Pendidikan Malaysia.
9) Dorit, M., & Barry J. F. (2005). An online questionnaire for evaluating students' and teachers' perceptions of constructivist multimedia learning environments. *Research in Science Education, 35,* 221–244. DOI: http://10.1007/s11165-005-2148-3.
10) Dumford, A. D., Cogswell, C. A., & Miller, A. L. (2016a). The who, what, and where of learning strategies. *The Journal of Effective Teaching, 16 (1),* 72– 88.
11) Fitriani, A., Zubaidah, S., Susilo, H., & Al Muhdhar, M. H. I. (2020). PBLPOE: a learning model to enhance students' critical thinking skills and scientific attitudes. *International Journal of Instruction, 13(2),* 89-106. https://doi.org/10.29333/iji.2020.1327a
12) Fraser, B. J. (1998). Classroom environment instruments: Development, validity and applications. *Learning Environments Research, 1,* 7–33.
13) Gasser, L., Grutter, J., Buholzer, A., & Wettstein, A., (2018). Emotionally supportive classroom interactions and students' perceptions of their teachers as caring. *Learning and Instruction, 54,* (2018), 82-92.
14) Hashim, N., Kee, C. P., & Abdul Rahman, M. F. (2016). STOPS: Mengungkai isu kebolehpasaran graduan di Malaysia. *Jurnal Komunikasi, Malaysian Journal of Communication, 32 (2),* 139–164.
15) Hassan, A., & Mohd, A. (1999). *Komunikasi untuk guru*. Kuala Lumpur: Utusan Publications and Distributors Sdn. Bhd.
16) Husamah, Fatmawati, D., & Setyawan, D. (2018). OIDDE learning model: Improving higher order thinking skills of Biology teacher candidates. *International Journal of Instruction, 11(2),* 249264. https://doi.org/10.12973/iji.2018.11217a.
17) Ichsan, I. Z., Sigit, D. V., & Miarsyah, M. (2019). Environmental learning based on higher order thinking skills: A needs assessment. *International Journal for Educational and Vocational Studies, 1 (1),* 21-24. https://doi.org/10.29103/ijevs.v1i1.1389.
18) Ishak, M. N., & Mohammad, N. S. (2001). *Gaya pertautan dan komitmen terhadap profesion perguruan di kalangan guru-guru pelatih*. Kertas Kerja International Conference on Challenges and prospects in teacher education. Shah Alam: Concorde Hotel.
19) Jamaluddin, N. S., Kadir, S. A., Alias, S. N., & Abdullah, A. (2021). A Review of Psychosocial Learning Environment. International Journal of Academic Research in Progressive Education and Development, 10(3), 801–805.
20) Joyce, B., & Weil, M. (1996). *Models of Teaching (Fifth Edition)*. Englewood Cliffs, NJ: Prentice-Hall.
21) Kementerian Pendidikan Malaysia (2015). Kemahiran Berfikir Aras Tinggi (KBAT) dan Perlaksanaan KBAT di Sekolah. *Buletin Anjakan*, 1–4. Retrieved from http://www.padu.edu.my/files/Anjakan_Mac_2015.pdf
22) Kock, A. D., Sleegers, P., & Voeten, M. J. M. (2004). New learning and the classification of learning environments in secondary education. *Review of Educational Research, Vol. 74, No. 2,* pp. 141– 170. https://doi.org/10.3102/00346543074002141.
23) Lawrence. E., & James, E. (2016). Constructivist approaches: An emerging paradigm for the teaching and learning of business education. *Nigerian Journal of Business Education, Volume 3, No 1*, 2016.
24) Marzano, R. J. (1988). *Dimensions of thinking: A framework for curriculum and instruction*. Alexandria, VA: Association for Supervision and Curriculum Development.
25) Mohd Nadzir, Z. (2010). *Hubungan Antara Persepsi Pelajar Tentang Persekitaran Sekolah, Motivasi Akademik dan Strategi Pembelajaran Dengan Pencapaian dalam Mata Pelajaran Sains*, [Tesis Doktor Falsafah, Universiti Kebangsaan Malaysia].
26) Mohd Nadzir, Z. (2010). *Hubungan antara persepsi pelajar tentang persekitaran sekolah, motivasi akademik dan strategi pembelajaran dengan pencapaian dalam mata pelajaran Sains*, [Tesis Doktor Falsafah, Universiti Kebangsaan Malaysia].

27) Mohebali, S., Maghsoudy, S., Doulati, F. A. (2020). Developing a coupled environmental impact assessment (C-EIA) method with sustainable development approach for environmental analysis in coal industries. *Environ Dev Sustain 22*, 6799–6830. https://doi.org/10.1007/s10668-019-00513-2.
28) Mokhtar, S. B. (2012). *Faktor persekitaran pembelajaran, pendekatan pembelajaran dan kemahiran generik dalam kalangan pelajar politeknik*, [Tesis Doktor Falsafah, Universiti Kebangsaan Malaysia].
29) Moos, R. H. (1979). *Evaluating Educational Environments: Procedures, Measures, Findings and Polic Implications*. San Francisco, CA: Jossey-Bass.
30) Newmann, F. M. (1990). higher order thinking in teaching social studies: A rationale for the assessment of classroom thoughtfulness. *Journal of Curriculum Studies, 22 (1),* 41- 56.
31) Nold, H. (2017). Using critical thinking teaching methods to increase student success: An action research project. *International Journal of Teaching and Learning in Higher Education, 29 (1)*, 1732.
32) Nor, M. R. (2005). *Perkaitan di antara budaya sekolah dengan pencapaian akademik pelajar di Negeri Sembilan*, [Tesis Doktor Falsafah, Universiti Kebangsaan Malaysia].
33) Okula, S. (1999). Creating a positive school culture; strategies that work. *Business Education Forum, 54 (2),* 7-13.
34) Onosko, J. J., & Newmann, F. M. (1994). *Creating more thoughtful learning environments, In J.N.Mangieri & C.C. Block (Eds.). Creating powerful thinking in teachers and students: Diverse perspectives*. Fort Worth: Harcourt Brace College Publishers.
35) Pereira, E. T., Villas-Boas, M., & Rebelo, C. C. (2019). Does entrepreneurship and innovative education matter to increase employability skills: A framework based on the evidence from five European countries. In L. Carvalho, & A. Daniel (Eds.), *Global Considerations in Entrepreneurship Education and Training* (pp. 218-231). Hershey, PA: IGI Global. doi:10.4018/978-1-5225- 76754.ch013.
36) Puteh, M., Adnan, M., Ibrahim, M. H., Mohamed Noh, N., & Che Ahmad, C. N., (2014). An analysis of comfortable teaching and learning environment: Community response to climate change in school. *Procedia - Social and Behavioral Sciences, 116*, 285–290. https://doi.org/10.1016/j.sbspro.2014.01.209.
37) Razak, A. R. J. (2015). *Persepsi Pelajar terhadap Kaedah Pengajaran Guru dan Persekitaran Pembelajaran Kemahiran Hidup serta Hubungannya dengan Kemahiran Amali Pelajar*, [Tesis Ijazah Sarjana, Universiti Putra Malaysia].
38) Richardson, C., & Mishra, P., (2018). Learning environments that support student creativity: Developing the SCALE. *Thinking Skills and Creativity, 27*, 45-54.
39) Sanip, F. A., & Che Ahmad, C. N. (2014). Kesedaran strategi metakognitif dan kemahiran berfikir aras tinggi dalam kalangan pelajar Biologi. *Jurnal Penyelidikan Pendidikan, 15*.
40) Shernoff, D. J., Ruzek, E. A., & Sinha, S. (2017). The influence of the high school classroom environment on learning as mediated by student engagement. *School Psychology International, 38 (2),* 201–218.
41) Short, M. N., & Keller-Bell, Y. (2019). Essential skills for the 21st century workforce. In J. Keengwe, & R. Byamukama (Eds.), *Handbook of Research on Promoting Higher-Order Skills and Global Competencies in Life and Work* (pp. 134-147). Hershey, PA: IGI Global. doi:10.4018/978-1-5225-6331-0.ch009.
42) Suardana, I N., Redhana, I W., Sudiatmika, A. A. I. A. R., & Selamat, I N. (2018). Students' critical thinking skills in chemistry learning using local culture-based 7E learning cycle model. *International Journal of Instruction, 11(2),* 399-412. https://doi.org/10.12973/iji.2018.11227a.
43) Suprapto, E., Fahrizal, F., Priyono, P., & Basri, K., (2017). The application of problem-based learning strategy to increase high order thinking skills of senior vocational school students. *International Education Studies, 10 (6),* 123. https://doi.org/10.5539/ies.v10n6p123.
44) Tasker, R. (1992). Effective teaching: What can a constructivist view of learning offer. *The Australian Science Teacher Journal, 38,* 25-34.
45) Tessmer, M., & Harris, D. (1992). *Analyzing the instructional setting: Environmental analysis*. London/Bristol, PA: Kogan Page/Taylor and Francis.
46) Thorndike, R. L. (1898). *Reliability. In J. P. Keeves (Ed.), Educational research, methodology and measurement: an international handbook* (pp. 330–343). Oxford, UK: Pergamon.
47) Underbakke, M., Borg, J. M., & Peterson, D. (1993). researching and developing the knowledge base for teaching higher order thinking. *Theory into Practice, Vol. 32, No. 3*, 138-146.
48) Vinales, J. J. (2015). Learning styles: A guide for mentors. *British Journal of Nursing, 24 (8),* 454–457.
49) Vygotsky, L. S. (1978). *Mind in society - The development of higher psychological processes*. Cambridge: Harvard University Press.
50) Wan, N. W. S., Abdul Ghani, K., & Lubis, M. A. (2011). Persekitaran pembelajaran kefahaman bacaan Bahasa Arab dalam kalangan murid J-Qaf. *The Journal Online of Islamic, 1974*, 1–7.

51) Wang, Y. A., & Mijke, R. (2021). Power Analysis for parameter estimation in structural equation modeling: A discussion and tutorial. *Advances in Methods and Practices in Psychological Science, Vol. 4(1)*, 1–17. DOI: 10.1177/2515245920918253.
52) Wilkin, C. L. (2017). Enhancing critical thinking: accounting students' perceptions. *Education + Training*, *59* (1), 15–30. https://doi.org/10.1108/ET-01-2015-0007.
53) Windschitl, M. (2002). Framing constructivism in practice as the negotiation of dilemmas; An analysis of the conceptual, pedagogical, cultural and political challenges facing teachers. *Review of Educational Research, 72 (2)*, 131-175.
54) Yahya, M., & Sa'ari, C. Z. (2015). Sistem pendidikan negara abad ke 21 Brunei Darussalam dalam melestari ketamadunan islam Negara Zikr: Cabaran dan harapan. *Afkar*, 16, 61–92.
55) Yee, M. H., Md Yunos, J., Othman, W., Hassan, R., Tee, T. K., & Mohamad, M. M. (2015). Disparity of learning styles and higher order thinking skills among technical students. *Procedia - Social and Behavioral Sciences, 204*, 143 – 152.
56) Yurniwati, & Soleh, D. A. (2020). The effectiveness of computer-based problem solving to improve higher order thinking skills on prospective teachers. *International Journal of Instruction, 13(2)*, 393-406. https://doi.org/10.29333/iji.2020.13227a.
57) Yusof, M. K. (2017). *Laporan Tahunan 2016 (Pelan Pembangunan Pendidikan Malaysia 2013-2025).* Putrajaya: Kementerian Pendidikan Malaysia. Retrieved from http://www.moe.gov.my.
58) Zuhairi, F. F. M., Che Ibrahim, C. K. I., & Belayutham, S. (2018). Analysis of employability skills for future civil engineers in Malaysian construction industry. *Int. J. Continuing Engineering Education and Life-Long Learning*, *Vol. 28*, Nos. 3/4, pp.310–336.