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Exploring Learning Strategies among Students Using the Social Cognitive Theory

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Abstract

In this borderless world, learning has a wide variety, as people could seek knowledge almost everywhere as long as they have an internet connection. Learning strategies also become more flexible depending on the purpose of the learners. This study explores learning strategies using social cognitive theory, inclusive of behaviour, personal factors, and environment. A quantitative survey was conducted via online questionnaire, and 128 respondents participated in the survey questionnaires consisting of diploma and degree students from various faculties in public universities in Malaysia. Findings of the study revealed that students used behaviour, personal, and environment as part of their learning strategies. As a suggestion for future research, a bigger sample size is needed and could mix between qualitative and quantitative data in the future.

Keywords: Learning Strategies, Social Cognitive Theory, Personal, Behavioural, Environmental

Introduction

Background of Study

Learning strategies can be defined as steps or planned approaches to achieve the educational objectives in efficient and effective ways (Rianto et al., 2024). In the education context, strategies not only involve educators (teachers, coaches, lecturers, or trainers) as material delivery but also the students as active participants in the learning process. Good learning strategies are needed to create a conducive and interactive environment. In this modern era, where information and technology change rapidly and in various ways, the traditional approach is not sufficient. Therefore, educators need to adapt and expand the learning strategies in a way that suits what the students need. This also includes the right method choice, using innovative learning media, and the right technique in evaluation that could measure the student performance in a rightful manner.

Statement of Problem

Academic performance is a crucial indicator of the qualifications of graduates capable of meeting industry demands, acting as leaders, and supplying the nation with future labour resources (Setapa et al., 2023). Learning strategies are a significant predictor of students' academic achievement (Amoslamani, 2022; Jin et al., 2023; Fong et al., 2021). Implementing a learning strategy can enhance its efficiency if the focus is on achieving the learning goal. Higher academic achievement could portray a person's personality, academic work quality, and intellectual capacity. Learning ability, learning effort, and time management are among the factors that contribute to students' academic achievement (Bakar et al., 2023).

The researchers had made pre-observations on social science students and science and technology students at two campuses in one of the universities in Malaysia. They found that regardless of the programs that the students followed, most of the students were not active learners, with only 45.0 percent of students being active in classes, while the motivation to study was only around 40.0 percent. A traditional learning method that involved lectures and tutorials seemed to be ineffective in increasing the involvement of students in class and making them understand the subject matter.

Objective of the Study and Research Questions

This study is done to explore the perception of learners on their use of learning strategies. Specifically, this study is done to answer the following questions:

- How do learners perceive their behaviour as their learning strategy?
- How do learners perceive their personal components as their learning strategy?
- How do learners perceive their use of the environment as their learning strategy?
- Is there a relationship between all learning strategies?

Literature Review

Theoretical Framework

Social Cognitive Theory (SCT) and How Learners Learn

Social cognitive theory (SCT) is a well-established theoretical framework that clarifies the dynamic relationship between behavioural and individual as well as environmental factors (Bakhshi et al., 2024). SCT has been widely utilized in the study of physical behaviour among various populations, including learners. Numerous studies (Bakar et al., 2023; Amoslamani, 2022; Bakhshi et al., 2024) have discussed the effectiveness of SCT in exploring various aspects of social studies, including learning strategies. A systematic review conducted by Jin et al. (2023) revealed that SCT-based interventions are effective in promoting behavioural among learner populations. These studies highlight the robust evidence supporting SCT in facilitating behavioural changes. This theory of human motivation in SCT influences psycho-social functioning.

Learning Strategies

Learning strategies are the important network in the learning and teaching process. In rationale, learning strategies are in direct connection with the choice of learning activities that are both efficient and effective in giving the right experience to the students to achieve competencies in the subject matters (Ramadhan et al., 2024). Basically, there are no learning strategies that are perceived as the best because every learning strategy has its own uniqueness. The learning strategies that are deemed effective in one subject matter are not

necessarily good in another subject matter. Therefore, educators need to master various techniques to ensure the smooth learning process. As for students, the right learning strategies can ease their learning process and make them understand the subject matter more (Rianto et al., 2024; Ramadhan et al., 2024; & Harahap, 2018).

Past Studies

Past Studies on Learning Strategies

Numerous studies on learning strategies indicate that learning strategies can be categorized into three main groups: cognitive learning strategies, self-regulatory strategies for cognitive control, and resource management (Rahmat & Thasrabiab, 2024; Moussaoui et al., 2023; Amoslamani, 2022; Ramadhan et al., 2024).

Learning Strategies: Behaviour or Cognitive

Social impact refers to an individual's thinking on behaviour reflected in others' actions (Abedini et al., 2024). Perceived social impact is one main factor behind the social benefits. Cognitive learning theories consider learners as primary participants in the education process in which their role goes beyond passively acquiring information to being active participants (Amoslamani, 2022). Cognitive strategies that are found in certain behaviours of learners are techniques that are used to facilitate the execution of learning processes and thus ensure the acquisition of knowledge or the development of skills. In these behavioural factors, other sub-factors like organization, elaboration on the certain aspects of the subject matter, and the learner's critical thinking skills are also important in measuring the cognitive aspects of the learners (Amoslamani, 2022; Bakar et al., 2023; Bakhsi et al., 2024; Abedini, 2024). Cognitive strategies aid in learning processes, facilitating knowledge acquisition and skill development by encoding information and building connections between new and old knowledge (Moussaoui et al., 2023). It is stressed that learners with a strong sense of achievement are more likely to succeed than those with a low sense of achievement (Abedini et al., 2024).

Learning Strategies: Personal/Metacognitive Self-Regulation

In terms of personal factors, some learners believed that those who engage in learning activities have a clear vision and understanding of the subject matter, which indicates that these learners have positive self-regulation and encourage information exchange. Information exchange activities offer two things: firstly, a common understanding of the real-world problem, and secondly, an idea of a practical solution in their learning life. Considering the importance of information exchange, we categorize it as a personal factor in terms of self-regulation of the learners. Self-regulated learners are individuals who use a series of active learning strategies in which the learners plan and set goals for their learning using appropriate strategies to accomplish the goals and monitor and evaluate their progress throughout their learning process (Abedini et al., 2024; Wang et al., 2022). Self-regulated strategies are utilized in all stages of the learning process, including goal setting, planning, performance monitoring, and reflection (Theobald, 2021).

Learning Strategies: Environment/Resource Management

For environmental factors, in the context of SCT, the learning environment extends beyond the physical surroundings in which the individuals or learners interact in social and learning environments (Lee & Tseng, 2024). Environmental factors included effort management and seeking help in terms of perceived social impact. The term perceived social impact from

others was defined as the effect on an individual's emotions, thoughts, or actions that results from the presence or actions of others, whether real, implied, or imagined (Abedini et al., 2024). Furthermore, the perceived social impact from others manifested itself in two forms: first, perceived social impact from others through engaging in someone's project; and second, perceived social impact from others in terms of willingness to make an effort in learning. In sum, the social impact from others could go through a two-way combination of contribution to project-based activities of mutual interest and member willingness to help others in their learning process (Abedini et al., 2024).

Conceptual Framework

The use of learning strategies acts as a catalyst to learning success. This is because learners' success comes from how they use their strategies. These strategies are influenced by their attitudes, learning drive, and learning environment (Rahmat & Thasrabiab, 2024). This study explores learners' strategies from the social cognitive theory by Bandura (2012). Wenden and Rubenson (1998) three components in learning strategies are mapped with Bandura's (2012) three factors to reveal the framework in Figure 1 below. According to Bandura (2012), learners use behaviour strategies by using their cognitive components. They also use their personal strategies by using metacognitive self-regulation. They also need to use strategies to cope with the environment.

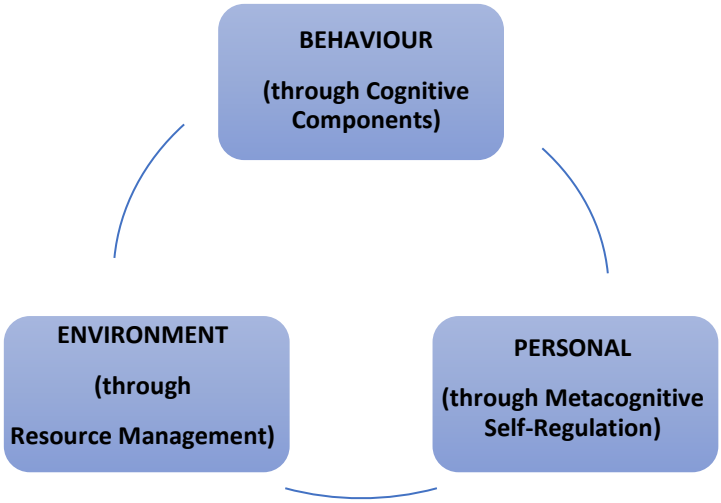

Figure 1- Conceptual Framework of the Study
Learning Strategies among Students Using the Social Cognitive Theory

Methodology

This quantitative study is done to explore motivation factors for learning among undergraduates. A purposive sample of 128 participants responded to the survey. The instrument used is a 5-point Likert-scale survey, adapted from Bandura (2012) and Wenden and Rubin (1987), to reveal the variables in Table 1 below. The survey has 4 sections. Section A has items on demographic profile. Section B has 14 items on reading difficulties. Section C has 17 items on global strategies. Section D has 8 items on problem-solving strategies, and section E has 9 items on support strategies.

Table 1
Distribution of Items in the Survey

Sect	FACTORS IN SCT (Bandura, 2012)	STRATEGY (Wenden & Rubin, 1987)		SUB-STRATEGY	Item	Total Items	Cronbach's Alpha
B	Behaviour	COGNITIVE COMPONENTS	(a)	Rehearsal	4	19	.892
			(b)	Organization	4		
			(c)	Elaboration	6		
			(d)	Critical Thinking	5		
C	Personal	METACOGNITIVE SELF-REGULATION				11	.852
D	Environmental	RESOURCE MANAGEMENT	(a)	Environment Management	5	11	.811
			(b)	Effort Management	4		
			(c)	Help-Seeking	2		
						41	.936

Table 1 also shows the reliability of the survey. The analysis shows a Cronbach's alpha of .892 for Behaviour, .852 for Personal and .811 for Environment. The overall external reliability is .936; thus, revealing a good reliability of the instrument chosen/used. Further analysis using SPSS is done to present findings to answer the research questions for this study.

Findings

Findings for Demographic Profile

Table 2
Percentage for Q1 Gender

1	Male	53%
2	Female	47%

Table 2 shows the demographic profile of the respondents in terms of gender. The data indicate that 53% of the participants are male, while 47% are female.

Table 3
Percentage for Q2 Discipline

1	Science & Technology	59%
2	Social Sciences	41%

Table 3 shows the percentage of participants' discipline. 59% of the participants are from Science & Technology, while 41% of the participants are from Social Sciences.

Table 4
Percentage for Q3 Level

1	Diploma	77%
2	Degree	23%

Table 4 shows the level of study for participants. 77% of the participants are from the diploma level, while 23% of participants are from the degree level.

Findings for Behaviour

This section presents data to answer Research Question 1: How do learners perceive their behaviour as their learning strategy? In the context of this study, behaviour is measured by cognitive components such as (i) rehearsal, (ii) organization, (iii) elaboration, and (iv) critical thinking.

Table 5
Mean for (i) Rehearsal

Item	Mean	SD
LSCCRQ1 When I study for the classes, I practice saying the material to myself over and over.	3.5	.79364
LSCCRQ2 When studying for the courses, I read my class notes and the course readings over and over again.	3.9	.85455
LSCCRQ3 I memorize key words to remind me of important concepts in this class.	4.1	.80354
LSCCRQ4 I make lists of important items for the courses and memorize the lists.	4	.86485

The mean for Rehearsal is shown in Table 5. The correspondents' mean varied from 3.5 to 4.1. The item "I memorize key words to remind me of important concepts in this class" records the highest mean, which is 4.1 (SD=.80354). The second highest mean, 4, is recorded by the item " I make lists of important items for the courses and memorize the lists," and the third highest mean, 3.9 (SD=.85455), is recorded by the item "When studying for the courses, I read my class notes and the course readings over and over again." Meanwhile, the lowest mean of 3.5 (SD=.79364) is recorded by the question "When I study for the classes, I practice saying the material to myself over and over."

Table 6
Mean for (ii) Organization

Item	Mean	SD
LSCCOQ1 When I study the readings for the courses in the program, I outline the material to help me organize my thoughts.	3.7	.83698
LSCCOQ2 When I study for the courses, I go through the readings and my class notes and try to find the most important ideas.	4	.81267
LSCCOQ3 I make simple charts, diagrams, or tables to help me organize course materials in this program.	3.2	.99405
LSCCOQ4 When I study for the courses, I go over my class notes and make an outline of important concepts.	3.8	.83651

The mean for Organization is shown in Table 6. The correspondents' mean varied from 3.2 to 4. The item "When I study for the courses, I go through the readings and my class notes and try to find the most important ideas" records the highest mean, which is 4 (SD=.81267). The second highest mean, 3.8, is recorded by the item "When I study for the courses, I go over my class notes and make an outline of important concepts," and the third highest mean, 3.7 (SD=.83698), is recorded by the item "When I study the readings for the courses in the

program, I outline the material to help me organize my thoughts." Meanwhile, the lowest mean of 3.2 (SD=.99405) is recorded by the question "I make simple charts, diagrams, or tables to help me organize course materials in this program."

Table 6
Mean for (iii) Elaboration

Item	Mean	SD
LSCCEQ1 When I study for the courses in this program, I pull together information from different sources, such as lectures, readings, and discussions.	3.6	.84590
LSCCEQ2 I try to relate ideas in one subject to those in other courses whenever possible.	3.8	.90680
LSCCEQ3 When reading for the courses, I try to relate the material to what I already know.	3.9	.80108
LSCCEQ4 When I study for the courses in this program, I write brief summaries of the main ideas from the readings and my class notes.	3.5	.9556
LSCCEQ5 I try to understand the material in the classes by making connections between the readings and the concepts from the lectures.	3.8	.77099
LSCCEQ6 I try to apply ideas from course readings in other class activities, such as lectures and discussions.	3.6	.83356

Table 6 shows the mean value for the total of six statements about Elaboration. The correspondent's mean is 3.5 to 3.9. The item "When reading for the courses, I try to relate the material to what I already know" had the highest mean score of 3.9 (SD=.80108). The items "I try to relate ideas in one subject to those in other courses whenever possible" and "I try to understand the material in the classes by making connections between the readings and the concepts from the lectures" obtained the second highest mean at 3.8 (SD=.90680 & SD=.77099). The third highest mean at 3.6 was obtained by the items "When I study for the courses in this program, I pull together information from different sources, such as lectures, readings, and discussions" and "I try to apply ideas from course readings in other class activities, such as lectures and discussions." The item "When I study for the courses in this program, I write brief summaries of the main ideas from the readings and my class notes" achieved the lowest mean at 3.5 (SD=.9556).

Table 7
Mean for (iv) Critical Thinking

Item	Mean	SD
LSCCCTQ1 I often find myself questioning things I hear or read in the courses to decide if I find them convincing.	3.6	.78604
LSCCCTQ2 When a theory, interpretation, or conclusion is presented in classes or in the readings, I try to decide if there is good supporting evidence.	3.4	.83739
LSCCCTQ3 I treat the course materials as a starting point and try to develop my own ideas about them.	3.5	.79228
LSCCCTQ4 I try to play around with ideas of my own related to what I am learning in the courses.	3.6	.76006
LSCCCTQ5 Whenever I read or hear an assertion or conclusion in the classes, I think about possible alternatives.	3.5	.85054

Table 7 shows the mean value for the total of five statements about Critical Thinking. The correspondent's mean ranges from 3.4 to 3.6. The items "I often find myself questioning things I hear or read in the courses to decide if I find them convincing" and "I try to play around with ideas of my own related to what I am learning in the courses" had the highest mean score of 3.6 (SD=.78604 & SD=.76006). The items "I treat the course materials as a starting point and try to develop my own ideas about them" and "Whenever I read or hear an assertion or conclusion in the classes, I think about possible alternatives" obtained the second highest mean at 3.5 (SD=.76006). The item "When a theory, interpretation, or conclusion is presented in classes or in the readings, I try to decide if there is good supporting evidence" achieved the lowest mean at 3.4 (SD=.83739).

Findings for Personal Components

This section presents data to answer Research Question 2: How do learners perceive their personal components as their learning strategy? In the context of this study, this aspect is measured by metacognitive self-regulation.

Table 8
Mean for Metacognitive Self-Regulation

Item	Mean	SD
MSSRQ1 During class time, I often miss important points because I am thinking of other things.	3.1	.93686
MSSRQ2 When reading for the courses, I make up questions to help focus my reading.	3.2	1.01550
MSSRQ3 When I become confused about something I am reading for the classes, I go back and try to figure it out.	3.8	.83974
MSSRQ4 If course readings are difficult to understand, I change the way I read the material.	3.6	.96005
MSSRQ5 Before I study new course material thoroughly, I often skim it to see how it is organized.	3.5	.90479
MSSRQ6 I ask myself questions to make sure I understand the material I have been studying in this program.	3.6	.91086
MSSRQ7 I try to change the way I study in order to fit any course requirements and the instructors' teaching style.	3.5	.89495
MSSRQ8 I try to think through a topic and decide what I am supposed to learn from it rather than just reading it over when studying for the courses in this program.	3.5	.866929
MSSRQ9 When studying for the courses in this program, I try to determine which concepts I do not understand well.	3.8	.80827
MSSRQ10 When I study for the courses, I set goals for myself in order to direct my activities in each study period.	3.6	.90697
MSSRQ11 If I get confused taking notes in classes, I make sure I sort it out afterwards.	3.7	.92347

Table 8 depicts the mean score for Metacognitive Self-Regulation. There are 11 items given under the category. Among all these items, two items share the highest mean score of 3.8 (SD=.83974 & SD=.80827), and they are "MSSRQ3 When I become confused about something I am reading for the classes, I go back and try to figure it out," and "MSSRQ9 When studying for the courses in this program, I try to determine which concepts I do not understand well."

The item with the lowest mean score of 3.1 (SD=.93686) is "MSSRQ1 During class time, I often miss important points because I am thinking of other things."

Findings for Environment

This section presents data to answer research question 3: How do learners perceive their use of the environment as their learning strategy? In the context of this study, this is measured by resource management components such as (i) environment management, (ii) effort management, and (iii) help-seeking.

Table 9
Mean for (i) Environment Management (5 items)

Item	Mean	SD
RMCEMQ1 I usually study in a place where I can concentrate on my course work.	4	.85098
RMCEMQ2 I make good use of my study time for the courses in this program.	3.7	.83345
RMCEMQ3 I have a regular place set aside for studying.	3.6	.92217
RMCEMQ4 I make sure that I keep up with the weekly readings and assignments for the courses.	3.4	.88514
RMCEMQ5 I attend the classes regularly in this program.	4.4	.78979

Table 9 shows the mean scores for Environment Management. The highest mean score was 4.4 for the item "RMCEMQ5 I attend the classes regularly in this program." The second highest mean score was 4 (SD=.85098) for the item "RMCEMQ1 I usually study in a place where I can concentrate on my coursework," followed by "RMCEMQ2 I make good use of my study time for the courses in this program," with a mean score of 3.7 (SD=.83345). The next item with a mean score of 3.6 (SD=.92217) is "RMCEMQ3 I have a regular place set aside for studying." The lowest mean score of 3.4 (SD=.88514) was for the item "RMCEMQ4 I make sure that I keep up with the weekly readings and assignments for the courses."

Table 10
Mean for (ii) Effort Management (4 items)

Item	Mean	SD
RMCEMQ1 I have a regular place set aside for studying.	3.8	.92000
RMCEMQ2 I work hard to do well in the classes in this program, even if I do not like what we are doing.	3.8	.87644
RMCEMQ3 When coursework is difficult, I either give up or only study the easy parts.	3	1.10731
RMCEMQ4 Even when course materials are dull and uninteresting, I manage to keep working until I finish.	3.7	.86886

Table 10 presents the mean score for Effort Management. Two items share the highest mean score of 3.8 (SD=.9200 & SD=.87644), and they are "RMCEMQ1 I have a regular place set aside for studying" and "RMCEMQ2 I work hard to do well in the classes in this program even if I do not like what we are doing." Next, the item with a mean score of 3.7 (SD=.86886) is "RMCEMQ4 Even when course materials are dull and uninteresting, I manage to keep working until I finish." The item with the lowest mean score of 3 (SD=1.10731) is "RMCEMQ3 When coursework is difficult, I either give up or only study the easy parts."

Table 11
Mean for (iii) Help-Seeking (2 items)

Item	Mean	SD
RMCHSQ1 When I cannot understand the material in a course, I ask another student in the class for help.	4.2	.78808
RMCHSQ2 I try to identify students in the classes whom I can ask for help if necessary.	4.1	.82376

Table 11 presents the mean for Help-Seeking, which consists of two items. The item with the highest mean score of 4.2 (SD=.78808) is "RMCHSQ1 When I cannot understand the material in a course, I ask another student in the class for help," followed by the item "RMCHSQ2 I try to identify students in the classes whom I can ask for help if necessary," with a mean score of 4.1 (SD=.82376).

Findings for Relationship between All Learning Strategies

This section presents data to answer research question 4: Is there a relationship between all learning strategies? To determine if there is a significant association in the mean scores between all learning strategies, data is analysed using SPSS for correlations. Results are presented separately in Table 12, 13 and 14 below.

Table 12
Correlation between Behaviour and Personal Factors

Correlations

		BEHAVIOUR	PERSONAL
BEHAVIOUR	Pearson Correlation	1	.710**
	Sig. (2-tailed)		.000
	N	128	128
PERSONAL	Pearson Correlation	.710**	1
	Sig. (2-tailed)	.000	
	N	128	128

**. Correlation is significant at the 0.01 level (2-tailed).

Table 12 shows there is an association between behaviour and personal factors. Correlation analysis shows that there is a highly significant association between behaviour and personal factors (r=.710**) and (p=.000). According to Jackson (2015), the coefficient is significant at the .05 level, and positive correlation is measured on a 0.1 to 1.0 scale. A weak positive correlation would be in the range of 0.1 to 0.3, a moderate positive correlation from 0.3 to 0.5, and a strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between behaviour and personal factors.

Table 13
Correlation between Personal and Environmental Factors

Correlations

		PERSONAL	ENVIRONMENT
PERSONAL	Pearson Correlation	1	.672**
	Sig. (2-tailed)		.000
	N	128	128
ENVIRONMENT	Pearson Correlation	.672**	1
	Sig. (2-tailed)	.000	
	N	128	128

**. Correlation is significant at the 0.01 level (2-tailed).

Table 13 shows there is an association between personal and environmental factors. Correlation analysis shows that there is a highly significant association between personal and environmental factors (r=.672**) and (p=.000). According to Jackson (2015), the coefficient is significant at the .05 level, and positive correlation is measured on a 0.1 to 1.0 scale. A weak positive correlation would be in the range of 0.1 to 0.3, a moderate positive correlation from 0.3 to 0.5, and a strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between personal and environmental factors.

Table 14
Correlation between Environmental and Behaviour Factors

Correlations

		ENVIRONMENT	BEHAVIOUR
ENVIRONMENT	Pearson Correlation	1	.661**
	Sig. (2-tailed)		.000
	N	128	128
BEHAVIOUR	Pearson Correlation	.661**	1
	Sig. (2-tailed)	.000	
	N	128	128

**. Correlation is significant at the 0.01 level (2-tailed).

Table 14 shows there is an association between environmental and behavioural factors. Correlation analysis shows that there is a highly significant association between environmental and behavioural factors (r=.661**) and (p=.000). According to Jackson (2015), the coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. A weak positive correlation would be in the range of 0.1 to 0.3, a moderate positive correlation from 0.3 to 0.5, and a strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between environmental and behavioural factors.

Discussion

This study aimed to explore the perception of learners using social cognitive story (SCT). Based on SCT studies, various constructs have been identified as the strongest predictors of lifestyle-related behaviour for the learners. In our study, behaviour, personal, and environment influenced the learning strategies of the learners. Other researchers had found similar results (Rianto et al., 2024; Ramadhan et al., 2024). The mean for each variable (personal, behaviour, and environment) is more than 3, meaning that learners agreed that those variables are valid for their learning strategies.

There was a significant relationship between the construct and the highest mean, which is Help-Seeking, for 4.1 and 4.2 mean in the Environment construct. The help-seeking method that the learner used was seeking help from friends or seniors in the same classes so that they could fully understand the subject matter. The results showed consistency with the past research (Rianto et al., 2024; Ramadhan et al., 2024).

Conclusion

To summarize the findings for this study, it is in accordance with past studies (Rahmat & Thasrabiab, 2024; Rianto et al., 2024; Ramadhan et al., 2024). In this study, the learning strategies significantly come from social cognitive theory, i.e., the personal, behavioural and environmental factors. One of the main aims of this study is to characterize the learning strategies of the learners. Using SCT as the theoretical basis of our research, we explored factors that shape the engagement and found that environmental, personal and behavioural factors shaped the learning strategies for the learners. While prior work has already found a strong link between engagement and learning outcomes in online environments (Abiden et al., 2024; Rianto et al., 2024), most of the past research was conducted on employees' work-related learning and students in higher education, focusing more on students' achievement and limiting the research on the learners' activities using social cognitive theory. However, this study addressed this void by characterizing the learners' engagement in the learners' community and more specifically, presenting how environmental, personal, and behavioural factors shape the engagement. As for the recommendation for future research, maybe the future researchers could focus on learning strategies on adult learners using social cognitive story with bigger sample size and widen the sample to national region in Malaysia.

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