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Self-Regulated Learning Strategies for The Challenges of Learning During Pandemic

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ABSTRACT : *Higher education institutions have long been thought to be more vulnerable to the COVID-19 virus community spread, and nearly all schools and universities have abandoned face-to-face academic activities in favour of alternate teaching techniques. This quantitative study examines foundation students' self-regulated learning abilities and the extent to which self-regulation skills occur in the online learning context during the COVID-19 pandemic. Self-regulation skills awareness is critical in foundation programme education. These abilities will prepare students to learn effectively in their future studies, especially in a blended learning environment in higher education. This study looked at six sub-constructs of self-regulated learning skills in the context of online learning, including goal-setting, environmental structuring, task methods, time management, help-seeking, and self-evaluation. Fifty foundation students from Universiti Kuala Lumpur MICET participated in this study. Most students reported using goal-setting, time management, environmental structuring, and help-seeking in an online learning environment. Overall, the findings showed that Foundation students' self-regulated learning skills were all above the midpoint of the fifty percent, except task techniques and self-evaluation, which are still minor. The study comes to a close with a few observations and suggestions.*

KEYWORDS: Self-regulated learning; Foundation students; Online Learning; COVID-19

1 INTRODUCTION

The global proliferation of Govid-19 in 2020 has resulted in the worldwide suspension of regular schooling. The beginning of 2020 brought dramatic changes that challenged practically every aspect of existence. The global coronavirus (COVID-19) outbreak prompted institutions worldwide to mobilise and transfer all of their classes online. Because of the pandemic's abrupt change in many universities from face-to-face classroom instruction to online learning, it is expected that online learning adoption will continue post-pandemic and become the new standard for most universities.

As part of sustainable learning practices, a primary goal of higher education must be to assist learners in managing their learning both now and in the future (Balloo, et al.,2018). Lack of structured in-class learning environments may have necessitated greater self-control and determination to learn with less help. (Zhou & Wang, 2021). Several researchers have looked at students' self-regulated learning and academic outcomes in online and face-to-face education environments. Students must organise, manage, and control their learning activities to complete courses successfully in the online setting, so self-regulated learning abilities are vital (Wang, et al., 2013). According to Barnard, et al (2009), self-regulation skills are required to improve learning outcomes in online and face-to-face modes. According to past research, learners with high self-regulated learning skills do better than those with lower self-regulation skills. As a result, self-regulated learning is an essential part of students' learning and teaching process in both online and face-to-face settings.

Moreover, online students are expected to be self-directed and self-regulated learners who can manage their learning processes. Students cannot be expected to have this talent or have it to the level required for the type of learning needed for an online course. Rather, in an online setting, educators must carefully analyse and actively design and guide student learning to support the development of self-regulation.

2 LITERATURE REVIEW

Bandura was the first to define self-regulation, a psychological concept (1988) by using motivation and learning strategies that students use to achieve their learning goals to promote self-regulation. From there on, self-regulation research has expanded to include educational studies.

Generally, Self-regulated learning is a cyclical process in which a learner sets a goal, tracks their progress, and assesses their results. The cycle repeats itself as the learner adjusts and prepares for the next challenge through reflection. Rather than being a one-size-fits-all approach, the strategy should be tailored to the needs of individual students and learning objectives (Zimmerman, 2002).

Self-regulated learning is a critical component of lifelong learning and a process in which a learner manages, monitor, and influences their thought process, requiring knowledge and competence (Dabbagh & Kitsantas, 2012). Therefore, in online learning environments where students study independently, self-regulated learning skills are crucial for success. Learners must always consider how they learn to be self-regulated in an online learning context.

According to a prominent theory of motivation, social cognition theory, self-regulated learning involves students' self-generated thoughts and behaviours that are continuously oriented toward achieving their learning goals (Schunk, 2001). In a self-regulated learning environment, students engage in goal-directed activities. To be self-regulatory, students must first understand themselves, the subject, the assignment, the learning approaches, and the circumstances in which they will apply what they have learned.

In the case of Malaysian university students, self-regulated learning was proven to have a considerable impact on academic attainment. High achievers were better users of self-regulated learning than low achievers in this study. Undergraduates' achievement was influenced significantly by their resource management strategies such as time, study environment, effort regulation, peer learning, and assistance. For the research of self-regulated learning and academic accomplishment, online and computer-mediated learning settings have proven to be fruitful. These findings back up the theory that self-regulated learning is linked to academic success among university students (Kosni, 2007).

A study was done at a university in Texas, the United States, to determine the impact of the COVID-19 epidemic on college students' mental health. In response to the COVID-19 epidemic, this university closed all its campuses on March 23, 2020, and held all of its classes virtually. During the pandemic, 138 (71%) of the 195 students were stressed and anxious due to uncertainty about the situation, problems with focusing at home, lack of social connection, and prolonged attention to a computer screen. (Son et al., 2020). Hence, the student had to swiftly adjust their learning strategies to apply them in the new online setting. According to a recent systematic review, self-regulation, motivational control, help seeking, and technological competence is major hurdles for students who choose to participate in online (blended) education (Rasheed et al., 2020).

3 PROBLEM STATEMENT

The changing world and the COVID-19 lockdown place enormous demands on students' self-regulation, jeopardising their academic achievement and well-being. Online learning environments can offer different affordances than physical campuses, including opportunities for increased collaboration while equipping students with stronger digital skills" (Johnson et al., 2014, p. 10). Self-regulated learning is important for both instructors and students in online learning because it has the potential to improve learning outcomes and cognitive development. However, given the great degree of student autonomy from the instructor's physical absence, effective self-regulated strategies may be crucial in online learning. Unfortunately, not every student is a self-regulated learner. Many students are unmotivated and cannot apply cognitive methods, thinking skills, or self-monitoring. Students who lack self-regulated learning skills may misinterpret the autonomy of the online learning environment and, as a result, may not complete learning activities in online learning courses as planned.

This study was designed to measure students' ability to self-regulate their learning in online environments. Research question: Which self-regulatory strategies do Foundation Students use, and to what extent do self-regulatory skills occur in the online learning context during the COVID-19 pandemic.

4 SIGNIFICANCE OF RESEARCH

As education becomes more self-directed, the need for students of all ages to develop self-regulated learning skills has been highlighted. Self-regulated learning is a skill that should be cultivated from an early age. However, when the literature is reviewed, it is observed that the research concerning this skill has been mainly carried out in higher education. Since secondary school significantly differs from college or university in terms of curriculum and instruction, foundation students must develop their self-regulation skills before enrolling in their major courses. Therefore, if an instructor teaches foundation students solely in an online course, they may need to provide more scaffolding than teaching seniors or degree students.

Furthermore, higher-achieving students have more robust self-regulation in online courses than low-achieving ones (Cho & Shen, 2013). Students who concentrate on what they can control develop a gradual set of learning techniques that will help them succeed in a complex learning environment (J, Lock et al., 2017). Therefore, recent research findings suggest that teachers and course designers should focus on self-regulation processes in online learning (Dabbagh & Kitsantas, 2012).

5 RESEARCH METHODOLOGY

After the semester, students were given an online survey to measure their abilities to self-regulate their learning during online learning. Barnard et al. (2009) 's Online Self-Regulated Learning Questionnaire was used to create the self-regulation survey (OSLQ). The OSLQ comprises six elements of self-regulation in online learning: environment structuring, goal setting, time management, help-seeking, task approaches, and self-evaluation.

The questionnaire contains 23 survey items. Each question requires a 5-point Likert scale response, with 1 indicating strong disagreement and 5 indicating strong agreement. Appendix A has a list of the questionnaire items.

Microsoft Excel 2019 was used to analyse the data collected from the Google Form, sent to the students via WhatsApp, Microsoft Team chat, and the Virtual Learning Platform (VLE). Each survey item's mean scores and standard deviation are presented using descriptive analysis. It also looks at the overall percentage of agreeing to each survey item's responses (strongly agree and agree).

A total of 50 Foundation in Science students have participated in the study. The students were chosen using a simple random sampling procedure to represent the entire student population enrolled in the Foundation in Science Program at MICET, Universiti Kuala Lumpur Malaysia, during the data collection period in 2020. The Foundation in Science curriculum is a university preparatory programme that focuses on science (e.g., physics, chemistry, and biology), mathematics, and computer technology disciplines. It usually prepares students for a smooth transition from SPM to various science-related degrees, including medical, engineering, biology, and computer science.

According to the student demography, there are 100% Malaysian students, with the bulk of them being female students (70%) and male students (30%). The classroom setting was designed for both online and face-to-face learning.

6 RESULTS AND DISCUSSION

6.1 Goal Setting

In order to improve assessment effectiveness in higher education, it has been advocated that assessment be viewed as a learning opportunity that directs students' attention to what should be studied and engages them in the learning process (Boud, 2010).

By selecting the items as shown in Table 1 with the mean score of above 3.8, it shows that:

- 88% of students agreed that they set standards for their assignments in online courses.
- 74% of students agreed that they set goals to help them manage study time for their online courses.
- 68% of students agreed that they set short-term (daily or weekly) goals as well as long-term goals (monthly or for the semester)

The results reflected that students with a goal orientation could compare their development to goals or criteria. Concern about social comparison exists in a typical face-to-face classroom. However, this may not be true in an online setting.

Typically, teachers use rubrics to express "the expectations for an assignment by identifying the criteria or what counts, and describing levels of quality." Not only that, but rubrics can help students understand the learning objectives and quality requirements for a specific assignment and make reliable judgements about their work that can inform revision and growth (Reddy & Andrade, 2010). This explains that the students can set goals for their achievement in assignments and online courses. As standard practice for outcome-based learning, a rubric is compulsory for each course assignment. As students always tie the rubric to their intended grade, a clear rubric can assist students in defining goals for themselves, and, therefore crucial in supporting students' self-regulatory development. When students are new to a task, rubrics are incredibly vital. Hence, implementing rubrics for assessment will enhance students' self-regulatory skills in goal setting.

Table 1 Self-Regulated Learning Scores by Goal Setting

Survey Item	**Mean M**	**Cum. Agree(%)**	**SD(%)**	**D(%)**	**N(%)**	**A(%)**	**SA(%)**
I set standards for my assignments in online courses.	4.14	88.00	0.00	0.00	12.00	62.00	26.00
I set short-term (daily or weekly) goals as well as long-term goals (monthly or for the semester)	3.94	68.00	2.00	4.00	26.00	34.00	34.00
I keep a high standard for my learning in my online courses.	3.62	52.00	4.00	10.00	34.00	24.00	28.00
I set goals to help me manage study time for my online courses.	4.12	74.00	0.00	10.00	16.00	26.00	48.00
I don't compromise the quality of my work because it is online.	3.18	38.00	12.00	12.00	38.00	22.00	16.00

6.2 Environment Structuring

In terms of environment structuring, students seemed to have stronger self-regulation in environment structuring, with an overall means of 4.2, as shown in Table 2. Almost 90% of the students agreed that they find a comfortable place to study online. Students can learn from any location with online learning. With this in mind, choosing a study environment that allows students to concentrate on their work without being distracted is a good option. According to Barnard, et al (2009), college students who thought their online environment was encouraging and comfortable engaged in more self-regulated learning. The study environment encourages concentration since it provides a reasonably quiet location for individual work. Beyond that, prolonged and regular practice, increasing in time each session, is the best way for students to learn how to regulate their attention and impulses. While collaboration and conversation are key aspects of learning, self-regulation in a noisy situation is far more complicated. This is especially crucial in higher education because distractions significantly limit students' higher critical thinking skills. Instructors can help students develop self-control by assigning complex, open-ended activities that allow them to practice controlling distractions and keeping focus while working on increasingly tricky academic work.

Table 2 Self-Regulated Learning Scores by Environment Structuring

Survey Item	Mean M	Cum. Agree(%)	SD(%)	D(%)	N(%)	A(%)	SA(%)
I choose the location where I study to avoid too much distraction.	4.4	84.00	0.00	2.00	14.00	26.00	58.00
I find a comfortable place to study.	4.56	90.00	0.00	2.00	8.00	22.00	68.00
I know where I can study most efficiently for online courses.	4.42	88.00	2.00	4.00	6.00	26.00	62.00
I choose a time with few distractions for studying for my online courses.	3.74	70.00	2.00	24.00	4.00	38.00	32.00

6.3 Task Strategies

A learner's ability to plan, discover and employ learning strategies that will aid them throughout their learning is called task strategies. (Littlejohn, et al., 2016). Self-regulated learners, for example, engage with supplementary material, take notes and create personal recordings of knowledge, watch lectures and complete quizzes and assignments, participate in practical activities to solidify learning, and work backwards from tasks.

According to the result, 66% of foundation students believed that taking more detailed notes for online courses is more important than taking notes in a traditional classroom. As shown in Table 3, only 18% of students took the initiative to prepare material before the class. Pre-lecture preparation is vital to ensure students are confident with fundamental courses, especially for those science subjects.

Students should be encouraged to find what information is accessible to them by providing an environment that enables them to ask questions and think critically as they transition from a spoon-feeding environment in secondary school to an independent learning environment in college or university. Educators can use cooperative learning as a different instructional style to help students grasp academic subjects or attain a learning goal and help them improve task methods. Furthermore, positive motivation is supported by teamwork, a sense of shared purpose, and individual accountability, as seen in Figure 1. As a result, educators should allow groups to plan, monitor, and assess their work to keep their motivation in check (Järvelä et al., 2007).

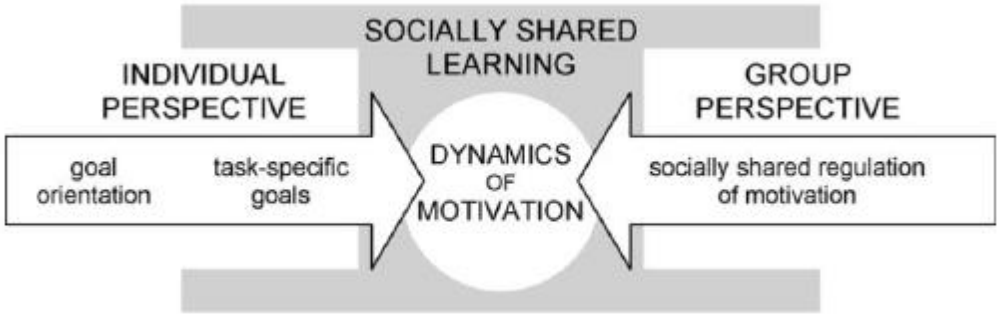

Figure 1 Self and group regulation in socially shared learning. Adapted from Järvelä, et al. (2007, p. 123)

Table 3 Self-Regulated Learning Scores by Task Strategies

Survey Item	Mean M	Cum. Agree(%)	SD(%)	D(%)	N(%)	A(%)	SA(%)
I try to take more thorough notes for my online courses because notes are even more important for learning online than in a regular classroom.	3.9	66.00	4.00	14.00	16.00	20.00	46.00
I read aloud instructional materials posted online to fight against distractions.	3.6	48.00	4.00	10.00	38.00	18.00	30.00
I prepare my questions before joining the discussion forum.	2.88	18.00	14.00	16.00	52.00	4.00	14.00
I work on extra problems in my online courses in addition to the assigned ones to master the course content.	3.4	46.00	6.00	12.00	36.00	28.00	18.00

6.4 Time Management

In particular, the students reported that studying online did not support their time management, with an overall mean of 3.6. As shown in Table 4, 66% of students agreed to allocate extra studying time for their online courses because they know it is time-demanding. Students often experience increasing autonomy and responsibility from secondary school to university. They are asked to participate in more learning activities outside of the classroom, on their own time, and under their direction. Many university students no longer meet regularly with instructors, parents, or other mentors, who would have previously provided structure to when, for how long, and under what conditions they engaged in academic-related activities. Furthermore, the learning required for success at university is sometimes more challenging and time-consuming than what students encounter in secondary school. In fact, for foundation students, meeting the many academic goals they pursue is a massive cause of stress and a significant struggle.

Planning, scheduling, and managing one's time are examples of time management skills. For example, a student might set out time each week to read articles or finish an assignment. Students must be aware of deadlines and the time required to complete activities and prioritise learning tasks.

Table 4 Self-Regulated Learning Scores by Time Management

Survey Item	Mean M	Cum. Agree(%)	SD(%)	D(%)	N(%)	A(%)	SA(%)
I allocate extra studying time for my online courses because I know it is time-demanding.	3.62	66.00	2.00	16.00	16.00	50.00	16.00
I try to schedule the same time every day or every week to study for my online courses, and I observe the schedule.	3.4	54.00	8.00	18.00	20.00	34.00	20.00
Although we don't have to attend daily classes, I still try to distribute my studying time evenly across days.	3.7	62.00	8.00	4.00	26.00	34.00	28.00

6.5 Help-Seeking

Students utilise help-seeking to enlist the help of their classmates or more competent others, such as instructors or lecturers. Academic help can take several forms in the online educational environment, including information seeking, formal enquiries, and casual inquiry (Cheng, Liang, & Tsai, 2013). Students can also look for help on the internet by using search engines, information-gathering websites, textbooks, and other resources.

By selecting the items in Table 5 with a mean score of above 4.0, it shows that:

- 88 % of students agreed they find someone knowledgeable in course content so that they can consult with them when they need help.
- 76% of students agreed that they share their problems with their classmates online to know what they are struggling with and how to solve them.
- 72% of students agreed that they try to meet their classmates face-to-face if needed.

Unfortunately, on the other hand, students had varied feelings about the necessity of getting help from the instructors, either through email or WhatsApp. Only 60% agreed that they would seek help from the instructor if needed. The reasons may be due to embarrassment to a lack of possibilities to communicate with instructors in online classes or personal communication channels. Students who seek assistance also have higher levels of self-control. Some students believed that an online course required greater engagement, while others said they did not.

Table 5 Self-Regulated Learning Scores by Help-Seeking

Survey Item	Mean M	Cum. Agree(%)	SD(%)	D(%)	N(%)	A(%)	SA(%)
I find someone knowledgeable in course content so that I can consult with them when I need help.	4.4	88.00	0.00	2.00	10.00	34.00	54.00
I share my problems with my classmates online so we know what we are struggling with and how to solve our problems.	4.3	76.00	0.00	2.00	22.00	20.00	56.00
If needed, I try to meet my classmates face-to-face.	4.14	72.00	0.00	2.00	26.00	28.00	44.00
I am persistent in getting help from the instructor through e-mail 0r WhatsApp	3.76	60.00	0.00	8.00	32.00	36.00	24.00

6.6 Self-evaluation

By selecting the items in Table 6 with a mean score of above 3.78, it shows that:

- 70% of students agreed that they ask themselves many questions about the course material when studying for an online course.
- 66% of students agreed that they communicate with their classmates to learn how they are doing in their online class.

By comparing their progress and performance to those of their peers, students self-evaluated their growth and performance. When they cannot answer a particular question in class while others in the class can do so, they will convince themselves that they must work harder to keep up with their peers.

While not statistically significant, it is interesting that foundation students reported they did not summarise their learning in online courses, to examine their understanding of what they have learned. Self-evaluation was used in different forms for the participants. They reflected on their learning progress and

quality of work and gave themselves personal feedback. Perhaps unsurprisingly, foundation students need a bit more familiarity with web-based technology. For some students, online learning is excellent, but it may not be the best option for others. Students who are more effective at self-regulation, on the other hand, create better feedback or are better equipped to use it to achieve their objectives.

Learners could use self-evaluation to bridge the gap between themselves and their peers, understand their limitations, and become self-sufficient lifelong learners. As a self-regulated learner, effectively evaluate own performance during and after completing the task is essential.

Table 6 shows that most students will contact their peers to find out how they did in their online classrooms for self-evaluation tactics. It can be concluded that students' interactions with one another influence self-regulated learning. In online learning environments where major portions of tasks are completed through interaction, students with a higher predisposition toward mastery self-evaluation are more likely to self-regulate for contact with others. As a result, social interaction self-regulation should be considered an important area to explain online student self-regulation. In other words, learner-learner interaction is crucial for transmitting information, knowledge, opinions, or ideas about course content, whether or not an instructor is present.

Table 6 Self-Regulated Learning Scores by Self-evaluation

Survey Item	Mean M	Cum. Agree(%)	SD(%)	D(%)	N(%)	A(%)	SA(%)
I summarise my learning in online courses to examine my understanding of what I have learned.	3.64	54.00	0.00	12.00	34.00	32.00	22.00
I ask myself many questions about the course material when studying for an online course.	3.94	70.00	0.00	6.00	24.00	40.00	30.00
I communicate with my classmates to find out how I am doing in my online classes.	3.76	66.00	8.00	10.00	16.00	30.00	36.00

6.7 Overall Cumulative Percentage of Agree Responses by Subscale

All of the students in this study self-regulated their learning, even if they did so in diverse ways, to varying degrees, and for different tasks. This is consistent with the social cognition theoretical paradigm that views self-regulation as a context-dependent attribute rather than a general trait: Students are not inherently self-regulated or non-self-regulated (Schunk, 2009). Figure 2 depicts the overall cumulative percentage for each scale. All elements in constructing environmental structure, self-evaluation, help-seeking, and time management were all above the midpoint of fifty per cent, as shown in Figure 2. This means that foundation students possessed mid-to-high levels of each of the constructs above average. On the other side, several survey items suggested less than 50% for task strategies and goal-setting constructs. The findings revealed that some students still lack self-regulatory skills, particularly in task strategies and goal-setting.

To improve self-regulated learning, goal-setting and task strategies, strategies should be translated into user-friendly tips to guide individuals while they learn. Such self-regulated learning support should be made available across various learning contexts, from face-to-face to online environments. They can be inspired to think about the pacing and time management that will be required in multiple stages and phases of upcoming lessons and projects (macro-level), as well as to overcome resistance to goal setting and planning by seeing the success stories of those who use these techniques regularly (Yarnall, et al.,2019).

Students can obtain higher non-academic outcomes in an online learning environment using self-regulated learning strategies. For example, a student may continue to study despite uninteresting or difficult learning material, a student may continue to investigate a specific software for an assignment, or a student may view an online tutorial to learn how to complete a challenging academic task. This method demonstrates dedication to achieving a goal. It can assist students in dealing with setbacks and failures more effectively during the online learning process.

Self-regulation is taught to students through experience and self-reflection. Instructors can help students become self-regulating learners by teaching in various methods. Students can modify their behaviours and improve their academic learning and performance because self-regulation is not a personality feature. Furthermore, foundation students benefit from self-regulated learning since they have complete control over their schedule and approach to studying and learning.

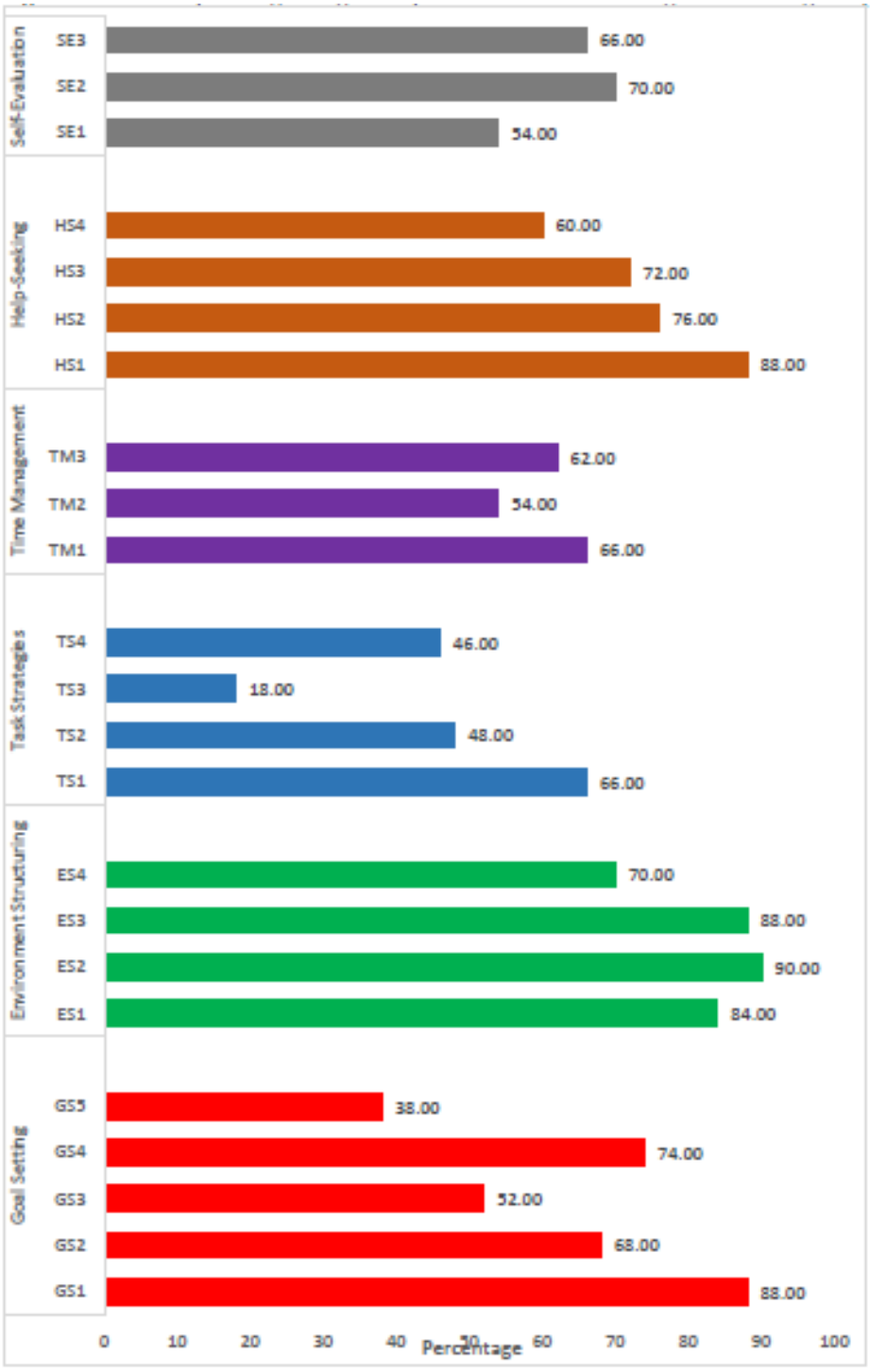

Figure 2 Cumulative percentage of Agree Response of each of the Self-Regulated Learning Components

7 CONCLUSION AND RECOMMENDATION

In online learning environments where students study independently, self-regulated learning abilities are essential for success. Educators can identify learning practices that need to be improved by evaluating self-regulatory skills among foundation students. Educators can also use the findings of this study to alter teaching and learning activities based on students' self-regulation abilities.

Researchers can also use the findings of this study to investigate the relationship between self-regulation and a variety of aspects in online learning environments, such as social media use, learning outcomes, achievement, or motivation. This study has some strengths and limitations. This study was developed by the involvement of foundation students enrolled in 2020 (n=50), with a limited sample used. For future research direction, the following implications can be considered by researchers. First, it is recommended that further studies, which address different variables in different contexts, should be conducted. The scale should be enlarged to involve other factors. For instance, researchers can carry out similar research in different cultural settings to see if new items or elements are needed to measure the self-regulated skills of the learners. Secondly, future research should focus on how technology may be used to satisfy students' various learning needs due to the rapid advancements of technological innovations and the complex nature of human behaviour (Rasheed et al., 2020). Finally, educators and researchers can devise strategies to improve these skills based on the findings found in this study.

One of the recommendations is to divide the assignment into phases and have students submit intermediate deliverables for evaluation for complex written tasks that involve the synthesis of material throughout the semester. The educators can post an announcement summarising some of the trends in the submissions, along with recommendations for the next steps.

In addition, educators can create rubrics for students to help students clarify their thoughts on the assignment's goals and help relieve some of the pressure. Educators also can make past student work available as samples and allow students to give each other feedback on their work.

Besides, self-check quizzes can be beneficial in technical subjects. Most virtual learning platforms include a technique for deploying short quizzes and various alternatives for producing automated feedback, either right after a student completes the quiz or later. Educators may need to identify students who require assistance through assessments and reach out to them, which requires more than just providing assignment comments. Educators may consider creating a supportive and helpful online group with the students so that students do not feel isolated in their classes.

In addition, examine how to employ peer-assessment procedures to promote community development and provide opportunities for foundation students to learn by examining and critiquing the work of others. For example, peer assessment is a good option in writing projects with interim deliverables.

If we expect students to self-regulate their learning, we might presume the same of instructors. Teachers who are self-regulated, for example, are better equipped to perceive and manage the needs, challenges, and difficulties that children may face as a result of their self-regulated learning process. Furthermore, self-regulated teachers may better understand the unique learning and teaching practices linked to self-regulated learning growth and the potential for teacher and student learning congruence.

Overall, this study supports the strategies for transforming the university's online learning environment to enhance student's learning experiences and promote self-regulated learning. This study can help in a successful online teaching and learning migration during outbreaks like COVID-19.

Appendix A

Online Self-Regulated Learning Questionnaire (OSLQ) (adopted from Barnard et al., 2009)

Subscale	Item Code	Survey Item
Goal setting	GS1	I set standards for my assignments in online courses.
	GS2	I set short-term (daily or weekly) goals and long-term goals (monthly or for the semester).
	GS3	I keep a high standard for my learning in my online courses.
	GS4	I set goals to help me manage study time for my online courses.
	GS5	I don't compromise the quality of my work because it is online.
Environment Structuring	ES1	I choose the location where I study to avoid too much distraction.
	ES2	I find a comfortable place to study.
	ES3	I know where I can study most efficiently for online courses.
	ES4	I choose a time with few distractions for studying for my online courses.
Task strategies	TS1	I take more thorough notes for my online courses because notes are even more important for learning online than in a regular classroom.
	TS2	I read aloud instructional materials posted online to fight against distractions.
	TS3	I prepare my questions before joining the discussion forum.
	TS4	I work on extra problems in my online courses in addition to the assigned ones to master the course content.
Time Management	TM1	I allocate extra studying time for my online courses because I know it is time-demanding.
	TM2	I try to schedule the same time every day or every week to study for my online courses and I observe the schedule.
	TM3	Although we don't have to attend daily classes, I still try to distribute my studying time evenly across days.
Help-Seeking	HS1	I find someone knowledgeable in course content so that I can consult with them when I need help.
	HS2	I share my problems with my classmates online so we know what we are struggling with and how to solve our problems.
	HS3	If needed, I try to meet my classmates face-to-face.
	HS4	I am persistent in getting help from the instructor through email or WhatsApp Self-Evaluation.
Self-Evaluation	SE1	I summarise my learning in online courses to examine my understanding of what I have learned.
	SE2	I ask myself many questions about the course material when studying for an online course.
	SE3	I communicate with my classmates to find out how I am doing in my online classes.

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