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Impact of Self-Regulated Learning Behavior on the Academic Achievement of Saudi Undergraduates

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Abstract

In an era where academic success is paramount, understanding the strategies that underpin effective learning is crucial. Self-regulated learning (SRL) behavior is one of the self-learning behaviors that students utilize to incorporate significant differences in their academic performances. The research study aims to analyze the impact of self-regulated learning behavior on the educational achievement of Saudi undergraduates. A quantitative method was employed to analyze the data using descriptive and inferential methods. The study adopted an online questionnaire to collect data from undergraduate students in the Natural Sciences and English course in the western region of Saudi Arabia. The data was collected through an online survey questionnaire (OSLQ). Cronbach's alpha value for the reliability of the questionnaire was 0.90. The data consisted of 404 respondents' online filled questionnaires after piloting. ANOVA and regression tests were applied to analyze the data. The result of the study indicates a significant difference in the academic achievement of respondents with different Self-Regulated Learning (SLR) levels ($F= 83.662$, $p < 0.05$). The study concluded that SRL skills make a significant contribution to enhancing students' academic achievement.

Keywords: *Self-Regulated Learning, Undergraduates, Academic Achievement, Learning Strategy, SRL Behavior*

Introduction

Self-regulated learning (SRL) is a metacognitive learning strategy significantly linked to better and higher academic performance of the students. The concept of self-regulated learning determines the motivating factors and the strategies students use to control and monitor their learning (Higgins et al., 2021; Xu et al., 2022). Although no single and appropriate definition has been coined for self-regulated learning, the notion of Zimmerman (2001). It was noticed that students are self-directed and use goal-oriented skills in their learning. Additionally, students use self-regulated learning strategies to varying degrees based on their motivation to achieve enhanced academic performance. Learners make decisions that are generally connected to their feelings and emotions regarding self-regulation. Self-regulatory behavior raises responsibility among students along with classifying and acquiring improved knowledge (Alkhasawnh & Alqahtani, 2019).

Learning with self-regulatory behavior and a sense of responsibility increases their academic performance with improved scores and enhanced knowledge (Khan & Sahibzada, 2020). Self-regulation is crucial for students to succeed and meet learning goals by making necessary adjustments in different learning environments. With the help of SRL skills, students learn to tackle and encounter various academic tasks with self-motivation and self-efficacy (Higgins et al., 2021). Moreover, Yan (2019) suggested that self-assessment and self-regulatory learning are intertwined. Students reflect and monitor in self-assessment practice and implement the same practices while self-learning. However, students must learn different self-assessment strategies to become autonomous learners and help themselves in higher education.

Learners can think, plan, set goals, and organize an active environment to make the most of their learning (Babayigit & Guven, 2020). Further, educators need to teach self-learning behavior to students from the primary level as a vital element of student success. Students reaching the tertiary level of studies face a demanding learning environment with extensive self-learning behaviors and self-monitoring, and they need to control and set goals for academic performance (Vosniadou, 2020; Xu et al., 2022). Learning strategies in primary, secondary, and higher education require different student learning behaviors. Higher education involves autonomous learning and less teaching time; therefore, students with developed self-regulated behavior use effective learning strategies and can cater to varied learning environments.

Teachers can essentially foster self-regulated learning behavior among students. Teachers as role models significantly provide opportunities for students to develop self-regulated learning skills and behavior (Alenezy et al., 2022). Along with the adequate implementation of teaching strategies, teachers must know how to convey SRL to students. Before entering universities, learners rely highly on teachers for gathering information (Doyle & Tagg, 2023) and, therefore, cannot fully develop self-learning (Sosibo, 2024). Teachers must learn about SRL and its implementation for students' enhanced academic achievements. However, most of the time, teacher-centered classrooms provide less freedom of learning to students, and thus, learners enter university with insufficient self-learning behaviors.

Nonetheless, the higher education organizations in Saudi Arabia have advanced through innovative teaching methods and technology (Alenezi, 2023) but still need help for quality education. The innovative teaching methods lack appropriate implementation processes, resulting in lower-quality education and teacher-centered classrooms (Saif Ghaleb, 2024). Teachers with poor implementation knowledge follow traditional methods, for which students use the traditional rote learning strategy (Almoslamani, 2022). Students enrolled in Saudi Higher education institutes have inadequate knowledge of learning strategies due to limited teaching methods. Therefore, there is an immediate need to involve self-regulated learning and teaching behaviors to assist students in achieving academic performance.

Students at the university level become self-reliant in learning new knowledge and developing skills like readiness and creativity for the future (Thelma et al., 2021). Undergraduate students need to develop self-regulated learning behavior to enhance their academic achievements and outperform in future tasks. University students set specific goals and work to achieve them while developing their professional careers (Khan & Sahibzada, 2020). Additionally, various actions take place under the umbrella of self-regulated behavior, including making choices, planning, practically doing, and reviewing and understanding (Khan & Sahibzada, 2020). As a result, learners undertaking the mentioned steps in higher education are more likely to achieve better academic achievements and professional goals.

Undergraduate students' academic success and achievement are highly dependent on their self-regulatory behavior (Babayigit & Guven, 2020). As discussed earlier, students shift towards the learner-centered environment in higher education, and therefore, they need to develop learning strategies to meet the learning outcomes. According to Seli and Dembo (Seli & Dembo, 2019), students controlling their learning and thinking concerning their knowledge schema are called smart students. Moreover, SRL promotes well-developed cognitive skills and higher-order thinking among students. Academic achievement also depends on students' desires and motivation to achieve their goals through active learning (Ilishkina et al., 2022). However, there is nearly no research on self-regulated behavior among undergraduates in Saudi Arabia. Therefore, this study aimed to identify the impact of self-regulated behavior on the academic achievement of undergraduate learners in Saudi Arabia.

Research objectives

1. To investigate the level of self-regulated skills of undergraduate students in Saudi Arabia.
2. To find out the academic achievement of undergraduate students.

3. To examine the impact of self-regulated learning on undergraduate students' academic achievement.
4. To examine gender differences in self-regulated behavior and academic achievement.

Research Questions

1. What is the level of self-regulated learning skills among undergraduate students in Saudi Arabia?
2. What is the academic achievement level of undergraduate students in Saudi Arabia?
3. What is the impact of self-regulated learning on students' academic achievement?
4. Are there any significant gender differences in self-regulated behavior and academic achievement among undergraduate students of Saudi Arabia?

Research Hypothesis

Hypothesis 1 (H0): Self-regulated learning has no significant impact on the academic achievement of undergraduate students.

Hypothesis 2 (H0): There is no significant variation in the academic achievement of undergraduate students in Saudi Arabia.

Hypothesis 3 (H0): There are no significant gender differences in self-regulated learning behaviors among undergraduate students in Saudi Arabia.

Hypothesis 4 (H0): There are no significant gender differences in academic achievement among undergraduate students in Saudi Arabia.

Literature Review

The term self-regulatory has been extensively explored and reviewed by researchers in the existing literature. In the educational context, an individual's academic performance is highly connected to their mastering level of self-regulated behavior for learning (Amri, 2024). SRL is the degree to which students set and try to achieve goals. Alkhasawnh and Alqahtani (2019) suggested that self-regulated behavior expands learning outcomes and helps students with life-long learning. Students practicing self-regulated learning strategies perform tasks to achieve their specific goals while cognitively monitoring and regulating their motivational behavior (Pintrich, 2000; Vosniadou, 2020). The present study investigates the development of SRL behavior aligning with Saudi Vision 2030, which focuses on developing life-long learners with autonomous learning; hence, self-regulated learning promotes autonomous learning behaviors.

Academic Achievement through Self-Regulated Learning Behavior

Existing literature has indicated a substantial positive effect of self-regulated learning in various educational settings on students' performance and academic achievements (Cetintav & Yilmaz, 2023; Ma & She, 2023; Zimmerman, 2001). Students achieve good grades and enhance their active learning skills through self-regulated learning. However, several other factors lying under self-regulated behavior contribute to student's high academic achievement. Self-motivation, behavioral engagement, cognitive abilities, and higher-order thinking significantly help students achieve their goals (Morosanova et al., 2022). Students use enhanced skills to cater to diverse autonomous learning environments at university level education.

Additionally, the findings of various studies confirm the positive effects of self-regulated behavior in different domains of studies. Correlational research conducted on paramedical students suggests that

self-regulated behavior had a positive and direct relation ($p<0.001$) with the academic achievement of students (Koosha et al., 2020). Moreover, student academic achievement is enhanced when students incorporate self-regulated learning strategies.

Moreover, teachers' support is emphasized by various other studies to help students with self-regulated learning behavior. The findings of the research conducted by Jansen et al. (2019) recommend that practitioners should support and practice self-regulated learning among students of higher education. Teacher support effectively guides students to achieve target learning outcomes and build critical and independent learning skills. Parallel to teacher support, another study by Apridanyani et al. (2023) indicated that continuous support from teachers and peers is instrumental in self-regulated behavior. Hence, students cannot progress academically solely with self-regulated behavior; the factors discussed are equally essential with SRL to help students achieve their learning goals.

Student Academic Achievement in Saudi Arabia

Limited literature exists in the educational context of Saudi Arabia regarding the academic achievements of students through self-regulated learning. Studies are conducted on student achievement and academic performance with other variables at different educational levels.

A study conducted at King Saud University used an SRL instrument to measure students' academic achievement by evaluating their scores in mathematics and the English Language. The findings of this research suggested a positive and significant relationship between SRL and academic achievement. Similarly, goal-setting and planning constructs of SRL were notable in academic achievement as well (Alotaibi, 2017).

Parallel to the mentioned studies, another research conducted on two online groups, where one group was treated with SRL strategies and the other with no specific strategy, efficiently indicated a positive impact of SRL strategies on student learning outcomes and achievements (Alkhasawnh & Alqahtani, 2019). Moreover, apart from the Role of self-regulated learning in academic achievement, it has a significant impact in other domains. For instance, self-regulation has a positive and significant effect on the employability rate of students of Information Systems (Almutairi & Hasanat, 2018). Thus, self-regulation has a role to play in an individual's academic as well as professional achievement.

Additionally, student achievement is further connected with the teacher's knowledge of SRL, whereas Saudi teachers have low self-regulation learning knowledge. However, teachers consider self-regulation significant for their practices but have limited knowledge of it (Soliman & Alenazi, 2017). Therefore, practical teacher training on SRL knowledge would be beneficial to Saudi students. A similar study conducted in the K-12 educational context of Saudi Arabia recommends teachers promote SRL competencies among students (Al-Abdullatif, 2020). Self-regulation among learners can be effectively developed with the potential support of teachers.

The incorporation of the factors discussed is significant to inculcate self-regulated learning behavior in undergraduate students. Therefore, this study aimed to examine undergraduate student achievement based on their self-regulated behavior with other variables.

Methodology

The research incorporated a non-experimental quantitative correlational method, collecting the data through an online survey from a large study sample. The online survey was integrated for the convenience of reaching out to students from different institutes simultaneously.

Study population and sample

The study population consists of students enrolled in the undergraduate programs of freshman students from the Natural Sciences course and English course from the western region of Saudi Arabia. The study

employed a stratified random sampling technique to obtain a sample of 620 students, as the technique covers a vast collection of subjects and divides the target population into sub-sections (Ali et al., 2020). From each university, 124 students (62 males and 64 females), ranging from 20 to 24 years old, were stratified from the undergraduate programs of the universities and enrolled in the second semester of the year 2023.

Data collection

The Online self-regulated learning questionnaire was adapted from Barnard et al. (2009) and divided into two sections. The first section of the questionnaire asked for demographic information such as university, semester, GPA, department, and total marks obtained. The second section asked for different variables regarding self-regulation. The questionnaire consisted of 45 items and required 40 minutes for completion. It was meant to measure various aspects, including goal setting (8 items), environment structuring (8 items), task strategies (8 items), time management (8 items), help-seeking (6 items), and self-evaluation (7 items). All items were based on a five-point Likert Scale.

With the help of teachers and administration, 450 out of 620 online survey questionnaires were filled. The respondents' answers were reviewed further, and 39 out of 450 were rejected due to missing information, with seven being taken out as outliers during screening. In the end, 404 respondent questionnaires were used for research. The questionnaire was tested on a small group of participants (n=40) for piloting to detect ambiguities, unforeseen problems, and distractions like flow, wording, and structuring. The instrument's reliability was determined by Cronbach's alpha, which was 0.90. The reliability coefficient values for different aspects were 0.712 for goal setting, 0.701 for environment structuring, 0.789 for task strategies, 0.871 for time management, 0.745 for help-seeking, and 0.801 for self-evaluation.

To measure the self-regulation scores of the students, the standard deviation and sample mean were compared and calculated with a population mean. The Mean±2SD formula was used to determine the levels of self-regulation (Sharma & Jain, 2014). Students with scores below Mean-2SD were considered low; the scores greater than mean+2SD were considered high, whereas the scores in between were considered average. Scores from the previous semester's students were collected and converted to standard scores for use in the search for academic achievement. To find the impact of SRL on academic achievement, ANOVA was used to compare students' academic achievement with different self-relation levels, and a T-test was employed to find gender-based differences.

Ethical Considerations

For ethical considerations, the researcher contracted permission to collect data from the selected university administrations. The researcher assured that the information stays confidential. Strict guidelines were followed in this study to guarantee the privacy and accuracy of participant data. All subjects provided their informed consent, and the appropriate institutional review board granted ethical approval prior to data collection. Participants were informed that they might leave the study at any moment and that there would be no repercussions. To maintain anonymity, data were gathered anonymously, and no personally identifiable information was connected to the answers. Furthermore, the commitment to ethical research techniques was reinforced by informing participants of the study's goal, the voluntary nature of their involvement, and the intended use of the data. The results are presented in an open and impartial manner, taking into account the need to prevent any misrepresentation or injury to the participant group.

Results

SRL impact on student's academic achievement

Results from the analyzed data revealed better academic scores for the students who had a high self-regulatory behavior, whereas the findings also suggested a positive impact of self-regulated skills and learning behavior on the academic achievement of the students.

Table 1.
Overall self-regulation score of respondents

	N	Mean Score	Std. Deviation
SRL	403	438.66	32.97
Valid N (listwise)	403		

Table. 1 shows the complete score of self-regulation among undergraduate students. The mean score for the SRL is 438.66, having a standard deviation of 32.97. The high mean value and moderate standard deviation value suggest the dataset to be homogeneous, indicating high SRL levels of the respondents.

Table 2.
SRL Level of Students

Level of SRL	Frequency	%
Low	109	27
Average	197	49
High	95	24
Total	401	100

Table 2. presents the student levels of self-regulated learning as low, average, and high. 27% of students are found to be in the lower levels of SRL, which suggests that a significant number of the population needs additional resources to enhance their SRL skills. 49% of the students are found to be in the average levels of SRL, which indicates room for further improvement in most of the students as the percentage suggests the SRL skills to be fairly typical. 24% of the students have shown high levels of SRL skills depicting that around a quarter of the entire population has excelled in the management of their learning effectively.

Table 3.
Student's Academic Achievement

	N	Minimum	Maximum	Mean score	Std. Deviation
Student Academic Result	404	344	471	432.56	30.48
Valid N (listwise)	404				

Table 3 depicts the mean score as 432.56 for the students' academic achievement, which shows a constant level of performance across the group. The standard deviation of 30.48 infers variation in students' performance. However, the scores do not drastically vary from one another, which suggests that there is a moderate spread of academic abilities.

Table 4.
ANOVA Represents the Difference Between the Academic Scores of Respondents with Different SRL Levels

	Sum of Squares	df	Mean Square	Friedman's Chi-Square	Sig
Between groups	267840.597	1	267840.597	83.662	.002
Within groups	707909.165	402	1764.126		
Total	975749.762	403			

Table 4 indicates a significant difference in the academic achievement of respondents with different SRL levels ($F= 83.662$, $p <0.05$). Table 4 further explains the alteration in academic achievement between respondent groups paired with varying SRL levels. The data reveals that the ANOVA test for the difference between the academic scores of the respondents with different SRL levels. The evaluation depicts a statistically significant difference between the groups ($p=0.02$). The value for Friedman's Chi-square is observed to be 83.662, which suggests a substantial difference, and the mean scores indicate high variability between the groups as compared to within the groups.

Table 5.

Correlation Analysis Between SRL and Students' Academic Achievements

Correlations			
		Student Academic Result	**SRL**
Pearson Correlation	Student Academic Result	1.000	.801
	SRL	.801	1.000
Sig. (1-tailed)	Student Academic Result	.	.001
	SRL	.032	.
N	Student Academic Result	404	404
	SRL	404	404

The results presented in Table 5 indicate a strong positive relationship between the academic achievement of the students with their SRL skills, as depicted by the correlation coefficient value of 0.801. It shows higher levels of self-regulated learning to be aligned with better academic performance. Similarly, the p-value of 0.001 indicates statistical significance, which suggests a low probability of this correlation occurring by chance.

The overall evaluation of Table 5 indicates a statistically significant and strong positive correlation between the academic results of the students and their skills of self-regulated learning. These results underline the significance of self-regulation skills in the academic progress of students and suggest that efforts for improving SRL might lead to enhanced academic results.

Table 6.

Total SRL Behavior in Gender Differences with Different Aspects

SRL aspects	**Gender**	**N**	**Mean**	**Std. Deviation**	**p**
Goal Setting	Male	200	41.00	2.84	0.001
	Female	203	39.04	1.29	
Environment structuring	Male	200	63.07	4.12	0.112
	Female	203	60.04	4.01	
Task Strategies	Male	198	40.93	3.25	0.706
	Female	203	38.00	2.24	
Time management	Male	200	42.78	4.98	0.001
	Female	209	50.45	2.01	
Help-Seeking	Male	187	21.96	7.48	0.378
	Female	203	20.97	5.23	
Self-Evaluation	Male	179	24.81	3.48	0.001
	Female	203	26.29	2.13	

Table 6 demonstrates the standard deviation and mean scores of several SRL aspects divided among males and females. The Table indicates statistically significant differences in goal setting, self-evaluation, and time management. The male respondents outperformed the female respondents in goal setting, whereas the female respondents are seen to have outperformed the male respondents in self-evaluation and time management. Moreover, according to the evaluated results, no statistically significant differences were discovered in task strategies, help-seeking, and environment structuring between the two genders.

The overall analysis of the results depicted in Table 6 indicates a significant gender difference in some of the aspects of self-regulated learning, whereas not in others. This suggests the complexity of the self-regulated learning behavior among students of both genders.

Table 7.
Gender Difference in Academic Achievement

Gender	N	Mean	Std. Deviation	p
Male	201	209.70	30.98	0.112
Female	203	301.67	37.30	

Table 7 presents summarized statistics of the means compared between males and females. The female respondents' mean score is 301.67, higher than the mean score of the male respondents, 209.70, indicating the female respondents have outperformed the male respondents. The female respondents' standard deviation value is 37.30, higher than the significant value of the male respondents; 30.98, indicating higher variability in the scores obtained by the female respondents.

Similarly, the p-value of 0.112 depicts that the mean difference between male and female respondents is not statistically significant. Hence, the value fails to reject the null hypothesis that says 'there is no statistically significant difference between female and male undergraduate academic achievement.'

Discussion

The study aimed to analyze the impact of self-regulated learning behavior on undergraduate students' academic achievement. The study also analyzed the gender differences based on academic achievement and self-regulated behavior of undergraduates in the universities of the western region of Saudi Arabia. The analyzed data revealed that undergraduate students possess self-regulated learning skills. Nonetheless, the majority of students (49%) stood at an average level of self-regulated learning skills, and students with lower levels of self-regulated learning skills remained at 27%. The results of this study align with the findings of Sardareh et al., (2012), who revealed that the majority of students having self-regulated learning strategies fall in the mid-level (average), bearing a percentage of 37.8%.

The results further analyzed that the students with high levels of SRL skills have highly significant differences as well. Hence, the SRL behavior of those students substantially affects their academic achievements positively. These results align with the existing literature, which shows that students who possess the skills of self-regulated learning progress effectively in academics (Alammar et al., 2022; Sutarni et al., 2021). The previous findings, parallel to the current study, imply the prerequisite self-regulation skills among undergraduate students. Since university students shift from teacher-centered to autonomous learning, they must develop self-regulated skills to perform better.

SRL strategies are valuable for undergraduate students as learners use different strategies to regulate their learning behaviors, such as cognitive and resource management strategies (Theobald, 2021). Learners implementing self-regulated behavior effectively manage self-instructions, goal-setting, time management, and self-evaluation. However, SRL strategies are a determining factor for achieving enhanced academic achievement, and studies have suggested the use of self-regulated strategies to promote learning outcomes in SRL interventions, which is consistent with the findings of this study (Xu et al., 2022). Therefore, students need to practice self-regulated strategies so they can meet the demands of university-level academic performance.

Furthermore, gender difference was analyzed in the academic achievement and SRL behavior of undergraduate students. The findings suggested no significant differences based on gender academic performance. However, female respondents ranked higher in three aspects of self-regulation, which included self-evaluation, time management, and goal setting. The findings of a study based in Pakistan suggest opposing results to the current research that there is no significant difference between females and males regarding time management at the university level (Kanwal et al., 2024). Another study reports that females frequently used time management and self-efficacy strategies for developing SRL skills, which is similar to the results evaluated in this study (Almwalad, 2023). Results regarding gender differences in self-regulation and academic achievement differ due to cultural backgrounds and study motivation. Therefore, it cannot be concluded by remarking females' academic performance is superior to males based on the studies from different contexts.

The data analysis of the research study depicts the significance of self-regulated learning behavior among undergraduate students in Saudi Arabia. However, there is limited literature on the proposed learning strategy, but students highly rely on their self-learning to gain academic achievements.

Conclusion

Self-regulated learning is extensively practiced by university students as they rely on an autonomous learning environment. Students learning with self-regulated behavior achieve better learning outcomes with enhanced academic performance. The study hypothesized that SRL has no significant impact on the academic achievement of undergraduates. It was determined that undergraduate students in Saudi Arabia retain self-regulation skills better than average. The study validates a positive relation between the academic achievement of students and self-regulatory behavior. Additionally, female respondents in the undergraduate programs dominated in goal setting, self-evaluation, and time management in comparison to the male students. As the study views SRL and academic achievement among Saudi undergraduates, it further paves the way for researchers to conduct analyses based on self-regulated learning behavior in different contexts in Saudi Arabia.

Limitations

- The study does not involve ways to improve student's self-regulated behavior.
- The study does not include undergraduate students for more than one semester.

Recommendations and Future Studies

- Incorporate SRL behaviors from secondary education to promote academic achievement among students at the university level.
- Seminars on SRL strategies to help students understand and utilize learning strategies in the best way possible.
- Teacher training to enhance their knowledge about SRL so they can support and promote SRL behavior among students.
- Explore and identify the ways to develop students with self-regulated behaviors.

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Appendix

Questionnaire for Undergraduate Students

Section A: Demographic Data

University: _____ **Semester: _____**

GPA: _____ **Department: _____**

Total marks obtained: _____ **Gender: _____**

Section B: Statements

SA= strongly agree, A= agree, ND= not decided, DA= disagree, SDA= strongly disagree

Statements	**SA**	**A**	**ND**	**DA**	**SDA**
Goal Setting					
I establish clear benchmarks for completing my assignments in online courses.					
I set both short-term (daily or weekly) and long-term (monthly or semester-wise) academic objectives.					
I maintain high expectations for my learning performance in online courses.					
I create specific goals to better manage my study time in online classes.					
I maintain the quality of my work regardless of whether it is an online course.					
I regularly assess and adjust my goals to ensure I meet my academic targets in online learning.					
I set personal deadlines for completing assignments ahead of the official due dates.					
I break down large projects into smaller, more manageable tasks with clear goals.					
Environment Structuring					
I select a study environment that minimizes distractions.					
I create a comfortable space for studying.					
I know the most productive place for me to study for online courses.					
I pick times to study that are free from distractions.					
I ensure that my study environment is well-organized and conducive to learning.					
I minimize interruptions by turning off notifications and avoiding multitasking while studying online.					
I adjust my workspace regularly to maintain a productive atmosphere for learning.					
I ensure my study area is equipped with all necessary materials before starting my online study sessions.					

Task Strategies					
I take detailed notes for my online courses because they are more critical for learning compared to traditional classes.					
I read online learning materials aloud to maintain my focus and fight distractions.					
I prepare questions ahead of time for participation in online discussion forums.					
I complete additional practice problems beyond the assignments to solidify my understanding of the course content.					
I utilize online resources and tools to enhance my understanding of the course material.					
I break down complex tasks into smaller steps to make them more manageable.					
I create summaries of key concepts to reinforce my learning in online courses.					
I utilize study aids like flashcards or outlines to reinforce my grasp of the material.					
Time Management					
I allocate extra time for studying because I know online courses demand more independent work.					
I try to maintain a regular schedule for studying my online courses and stick to it.					
Even without daily classes, I spread out my study time evenly across the week.					
I prioritize my study time based on deadlines and the difficulty of the assignments.					
I create a weekly study plan to ensure I stay on track with my online course requirements.					
I use productivity apps or timers to help manage my study sessions effectively.					
I review my progress weekly and adjust my study schedule if necessary.					
I break up long study sessions into shorter intervals to maintain focus and efficiency.					
Help-Seeking					
I reach out to knowledgeable peers when I need assistance with the course material.					
I share challenges with classmates in online forums to help find solutions together.					
If necessary, I arrange face-to-face meetings with my peers for academic support.					
I am proactive in seeking help from my instructor via email whenever I need clarification.					

I use online communities or study groups to help me understand difficult course content.					
I frequently ask for feedback from peers and instructors to improve my performance.					
Self-Evaluation					
I review and summarize what I have learned in my online courses to assess my understanding.					
I frequently ask myself questions to gauge my grasp of the material in my online courses.					
I discuss my performance with classmates to compare how I am progressing in my courses.					
I talk with peers to identify any differences in our learning outcomes from the same course materials.					
I evaluate my progress by comparing my current performance to my initial expectations.					
I reflect on the feedback I receive to identify areas where I can improve.					
I set specific criteria to measure my success in achieving learning objectives.					