Is There A Relationship between Motivational Beliefs and Learning Independently?

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Abstract
Motivation and self-regulated learning are two critical aspects of academic success that have received significant attention in the educational psychology literature. Research has shown that students who are motivated and possess self-regulated learning skills tend to achieve better academic outcomes than those who lack these qualities. Online learning was used in educational institutions during the Covid 19 pandemic and this forced learners to be more independent. This quantitative study examines the relationship between motivational beliefs and learning independently among foundation students post Covid-19. A purposive sample of 170 undergraduates responded to the survey which used a 5 Likert-scale survey divided into 4 sections and rooted from Pintrich & De Groot (1990). Data analysis using SPSS found that students have moderately high motivational beliefs and self-regulation abilities. There is also a strong positive relationship between motivational beliefs and independent learning among these participants. This suggests that the learning environment needs to be adjusted to enhance motivation and independence among students.
Keywords: Motivational Beliefs, Learning Independently, Undergraduate Students

Introduction
Background of Study
Motivation refers to the driving force that initiates, directs, and sustains behavior towards achieving a particular goal. Motivation in learning can be defined as attempts and desire as well as attitudes needed to obtain academic goals. Motivation functions by encouraging

behaviour in learning, guiding students and giving them directions and acting as the driving force, or determining whether the goals and tasks are completed quickly or slowly (Noraishah et al., 2022). On the other hand, self-regulated learning involves the ability to set goals, monitor progress, and adjust learning strategies to achieve desired outcomes. Self-regulated learning refers to the process through which individuals actively and purposefully manage their own learning experiences, including the planning, monitoring, and evaluation of their learning strategies (Zimmerman, 2002). It involves learners taking control of their own learning by setting goals, selecting appropriate strategies, and adapting their learning approaches based on feedback and self-reflection. Research has shown that self-regulated learning is associated with improved academic performance, enhanced problem-solving skills, increased self-efficacy, and a sense of autonomy and ownership over one's learning (Pintrich, 2000; Pintrich & De Groot, 1990). Research has shown that motivational beliefs is one of the strongest predictors of self-regulated learning as it is assumed that in order for students to determine and navigate their learning process, they must have the motivation to sustain their efforts (Zurina et al., 2023; Zimmerman, 2002).

During the Covid-19 pandemic, educational institutions throughout the world were forced to migrate to online platforms in order to resume their teaching and learning process. Malaysian schools and universities adopted the same strategies and the participants involved in this study went through two years of online learning at the end of their secondary education and achieved good results which enabled them to further their studies at universities. Online learning requires learners to be disciplined, self-motivated and independent in order to be successful. Therefore, it can be hypothesized that students who achieved good results after two years of online classes in secondary schools are more motivated and independent. Thus, this study seeks to explore perception of learners' motivational beliefs and their independence as learners.

Statement of Problem

In many educational settings, students often struggle with low motivation levels and lack of self-regulatory skills which hinders their ability to effectively manage their learning processes, set appropriate goals, monitor their progress, and utilize effective learning strategies (Siegesmund, 2017). This also presents a considerable challenge for both educators and learners, impeding the attainment of optimal learning outcomes.

There are several challenges that make the achievement of self-regulated learning difficult. Students may not be fully aware of the importance of self-regulated learning or may not understand how to effectively engage in it. Furthermore, students need to have discipline and self-control to manage their time, attention, and resources effectively. However, many students struggle with self-control and find it difficult to stay focused and motivated. Other than that, students may lack metacognitive skills, such as self-reflection and self-evaluation, making it challenging to regulate their learning effectively.

Learners may experience a gap in motivation to engage in self-regulated learning. They may lack the intrinsic motivation and self-efficacy needed to take control of their learning. This can result in a lack of initiative or persistence in setting goals, monitoring progress, and implementing effective learning strategies. Zimmerman's model of self-regulated learning (2000) suggests that learners with high motivation are more likely to engage in self-regulated learning behaviours, leading to better learning outcomes.

To gain insights into the self-regulated learning of students, it is important to take into consideration their motivational beliefs, such as self-efficacy, control belief, and anxiety

(Hayer, 2022). These motivational factors play a significant role in how students engage with and regulate their own learning processes.

Objective of the Study and Research Questions

This study is done to explore perception of learners' motivational beliefs and their independence as learners. Specifically, this study is done to answer the following questions;

- How do learners perceive their motivational beliefs?
- How do learners perceive their independent learning?
- Is there a relationship between motivational beliefs and independent learning?

Literature Review

Motivation to Learn

Motivation to learn can be defined as the internal psychological state or drive that influences an individual's willingness, interest, and effort to engage in the learning process. It involves the desire, goals, and expectations individuals have to acquire new knowledge, develop skills, and achieve academic or personal growth. Motivation to learn can stem from various sources, including intrinsic factors such as curiosity, enjoyment, and a sense of competence, as well as extrinsic factors like rewards, recognition, and future opportunities (Pintrich & Schunk, 2002). It plays a crucial role in shaping students' engagement, persistence, and overall learning outcomes.

Characteristic of Independent/ Self-Regulated Learners

Self-regulated learning refers to the process by which individuals actively and intentionally take control of their own learning. It involves the use of cognitive, metacognitive, and motivational strategies to plan, monitor, and evaluate one's learning progress. Independent/self-regulated learners demonstrate proactivity by initiating and sustaining their learning efforts, effectively managing distractions, and maintaining focus on their tasks. The characteristics of independent/self-regulated learners include traits such as self-motivation, goal setting, self-monitoring, and self-reflection (Pintrich & De Groot, 1990; Zimmerman, 2000). By developing and nurturing these characteristics, learners can become more effective and autonomous in managing their own learning processes.

Past Studies on Motivation to Learn

Many studies have been done on motivation to learn. The study conducted by Evangelia et al (2015) to examine students' motivation towards learning biology and identify factors related to it, specifically students' gender and their parents' occupation (whether it is relevant to biology or not). The research sample comprised 360 Greek high school students in the 10th grade, with 178 boys and 182 girls. Data were collected using the Students' Motivation Toward Science Learning (SMTSL) questionnaire, which demonstrated validity and reliability among Greek students. The questionnaire consisted of six subscales: self-efficacy, biology learning value, active learning strategies, performance goal, achievement goal, and learning environment stimulation. The result of the study found that Greek students have a moderate level of motivation towards biology learning, and there were no significant differences in motivation levels between male and female students. However, a significant difference was found in the "performance goal" factor of the SMTSL questionnaire, with female students scoring higher than male students. The study also found that parents' occupation did not have a significant effect on students' motivation towards biology learning. All sub-factors of the SMTSL questionnaire were found to be correlated, except for "biology learning value" with

"performance goal." The implication of these results is to develop strategies to enhance students' motivation towards biology learning, which can ultimately lead to better academic performance and career choices in the field of biology.

Next , the study by Durage et al (2019) is to examine whether there are differences in science performance and motivation to learn science among secondary school students in Sri Lanka based on gender, ethnicity, instructional medium, and school category. Science performance was measured using the mean of five successive term test scores, while motivation was assessed using the Science Motivation Questionnaire, which included six dimensions. The sample consisted of 1316 grade 11 students from Sinhala, Tamil, and Muslim ethnic groups, attending public schools with instruction in either Sinhala or Tamil. The findings revealed that girls had significantly higher science performance compared to boys, and there was a significant gender difference in motivational levels favoring girls. While Tamil medium students showed a higher level of motivation to learn science, Sinhala medium students outperformed their Tamil medium counterparts in science performance. Significant differences in science performance were also observed among Sinhala, Tamil, and Muslim students. However, motivation to learn science did not significantly differ between Tamils and Muslims. Additionally, there were highly significant differences in both motivation to learn science and science performance across the three categories of schools. The implication of this study is to provide valuable information for education officials, teachers, and school principals in their efforts to promote equity in terms of gender, ethnicity, instructional medium, and school category. The findings can guide the development of academic support programs and strategies to enhance science learning outcomes for all students.

Past Studies on Self-Regulation
Many studies have been done to investigate the importance of self-regulation skills and their impact on learning outcomes. The study by Tavakoli et al., (2020) is to investigate the relationship between motivational belief and self-regulation learning with students' academic performance. These studies employed a descriptive-correlational method and included a total of 460 male and female students who were enrolled during the academic year 2015-2016. The data collection instrument was the Motivated Strategies for Learning Questionnaire (MSLQ) developed by (Pintrich and De Groot, 1990). The results from the Pearson's correlation test showed that there is a direct relationship between self-regulation learning and academic performance of students. The implication of the study indicates that the students' academic performance improves with increasing self-regulation learning. Students with high academic achievement tend to have better learning skills than those with low academic achievement.

The research conducted by Batool et al (2019) examined the correlation between learner empowerment and self-regulation among university students. These studies included a sample size of 300 students, comprising 150 male students and 150 female students, all located in the District of Lahore. In this study, two instruments were utilized: one to measure learner empowerment and the other to assess students' self-regulation. The findings revealed a significant and positive relationship between learner empowerment and students' self-regulation at the university level. These results have implications for educators, as they suggest that implementing self-regulation strategies in the classroom is beneficial. Students who exhibit high levels of self-regulation are likely to excel in planning and executing their academic activities independently, including preparing for tests and completing assignments. However, further research is warranted to delve deeper into this topic. It is noteworthy that

a considerable number of students reported feeling empowered, which contributes to their goal attainment. Both self-regulation and learner empowerment are influential factors that contribute to students' academic success.

Conceptual Framework

Figure 1 shows the conceptual framework of the study. This study investigates the relationship between learners' motivational beliefs and independent learning. Post covid times have helped students become independent learners. Online learning has pushed learners to become more independent than they were before (Rahmat,et.al.,2021). Pintrich & De Groot (1990) state that learners are motivated by their motivational beliefs. These beliefs are (a) self-efficacy, (ii) intrinsic, (ii) and reduced test anxiety. In addition to that, motivated learners are more able to become independent learners . Independent learners depend on (a) cognitive strategy use and also (b) self-regulation.
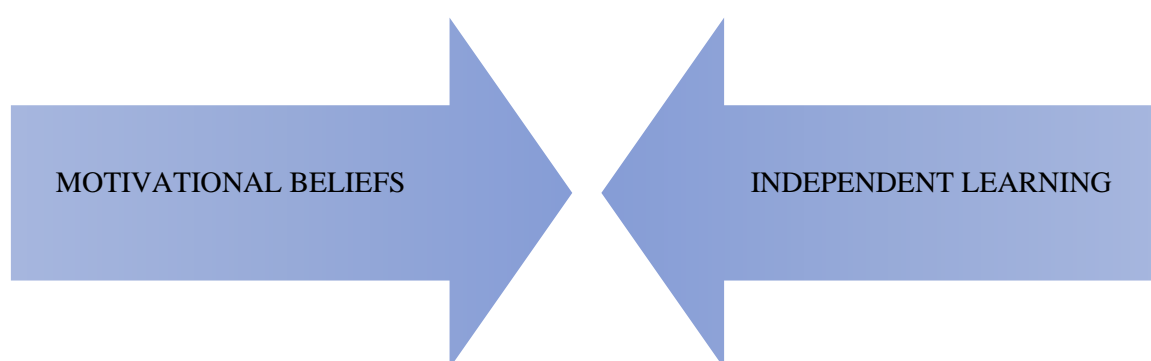
MOTIVATIONAL BELIEFS   INDEPENDENT LEARNING

Figure 1- Conceptual Framework of the Study-
 Relationship between Motivational Beliefs and Learning Independently

Methodology

This quantitative study is done to explore motivation factors for learning among undergraduates. A purposive sample of 170 participants responded to the survey. The instrument used is a 5 Likert-scale survey and is rooted from Pintrich & De Groot (1990) to reveal the variables in table 1 below. The survey has 3 sections. Part one has items on demographic profile. Part Two has 21 items on motivational beliefs. Part three has 22 items on independent learning.

Table 1
Distribution of Items in the Survey

PART	STRATEGY		SCALE	No of Items	Total Items
ONE					
TWO	MOTIVATIONAL BELIEFS	A	SELF-EFFFICACY	9	21
		B	INTRINSIC VALUE	8	
		C	TEST ANXIETY	4	
THREE	INDEPENDENT LEARNING	D	COGNIVE STRATGY USE	13	22
		E	SELF-REGULATION	9	
	TOTAL NO OF ITEMS				43

Table 2
Reliability of Survey

Reliability Statistics

Cronbach's Alpha	N of Items
.932	43

Table 2 shows the reliability of the survey. The analysis shows a Cronbach alpha of .932 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.
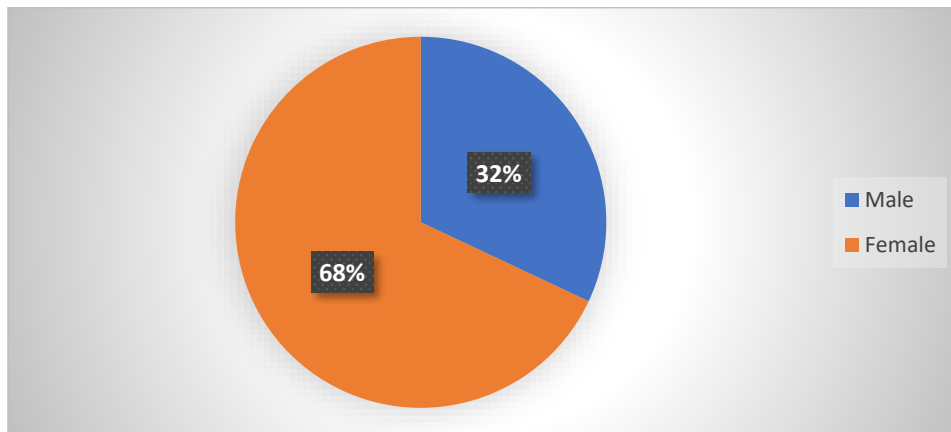
Findings
Findings for Demographic Profile
Q1.Gender

Figure 2- Percentage for Gender

Figure 2 shows that 68% of the respondents are female while only 32% are males. This could be due to current trends where more female students further their studies at university level compared to male students.
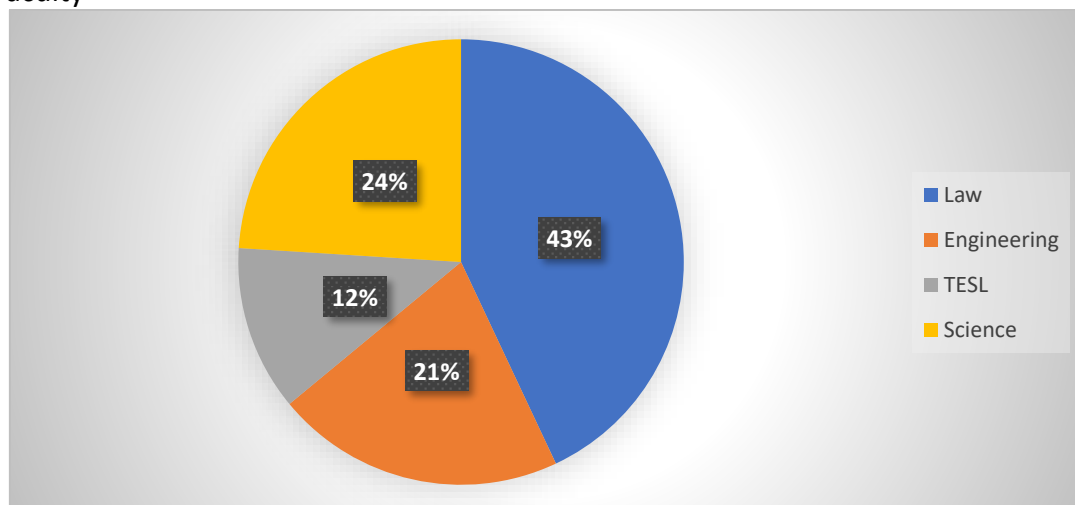Q2 Faculty

Figure 3- Percentage for Faculty

Based on figure 3, the highest number of respondents are from Law Faculty at 43%, followed by 24% who are from Science Foundation, 21% are Engineering students while only 12% of the participants are TESL (Teaching English as a Second Language) students.
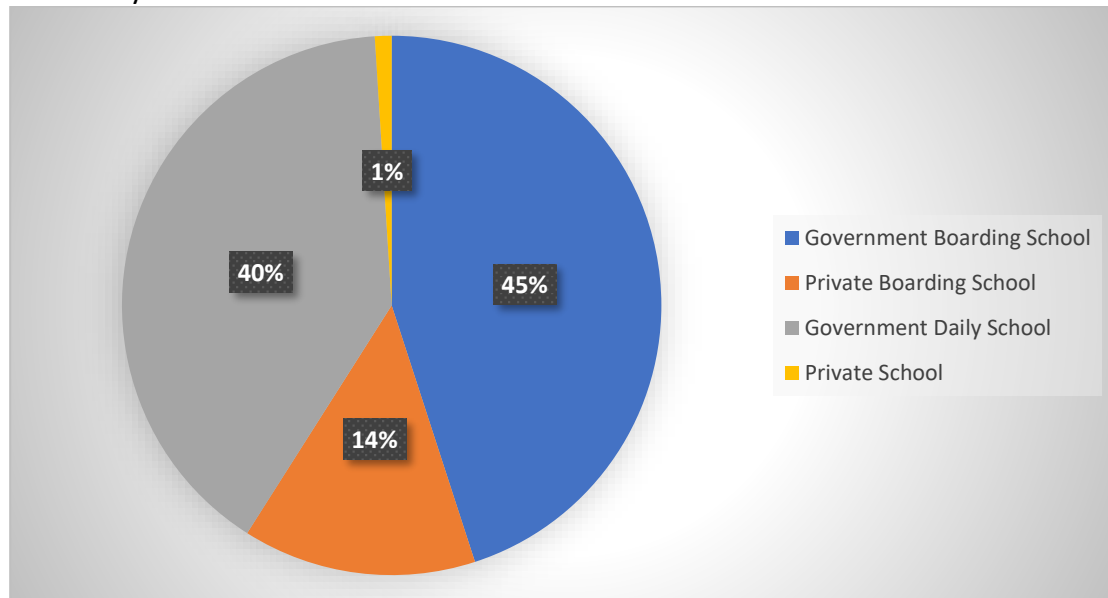
Q3 Secondary School

Figure 4- Percentage for Secondary School

Almost half of the participants (refer to figure 4) or 45% of them attended Government Boarding Schools at secondary level. These schools choose only students who were high achievers in their primary schools. 40% of the respondents attended Government Daily School, followed by 14% who went to Private Boarding Schools. Only 1% of the students surveyed are from Private Schools.

Findings for Motivational Beliefs
This section presents data to answer research question 1- How do learners perceive their motivational beliefs ? In the context of this study, motivational beliefs are measured by (a) self-efficacy, (b) intrinsic value, and (c) test anxiety.

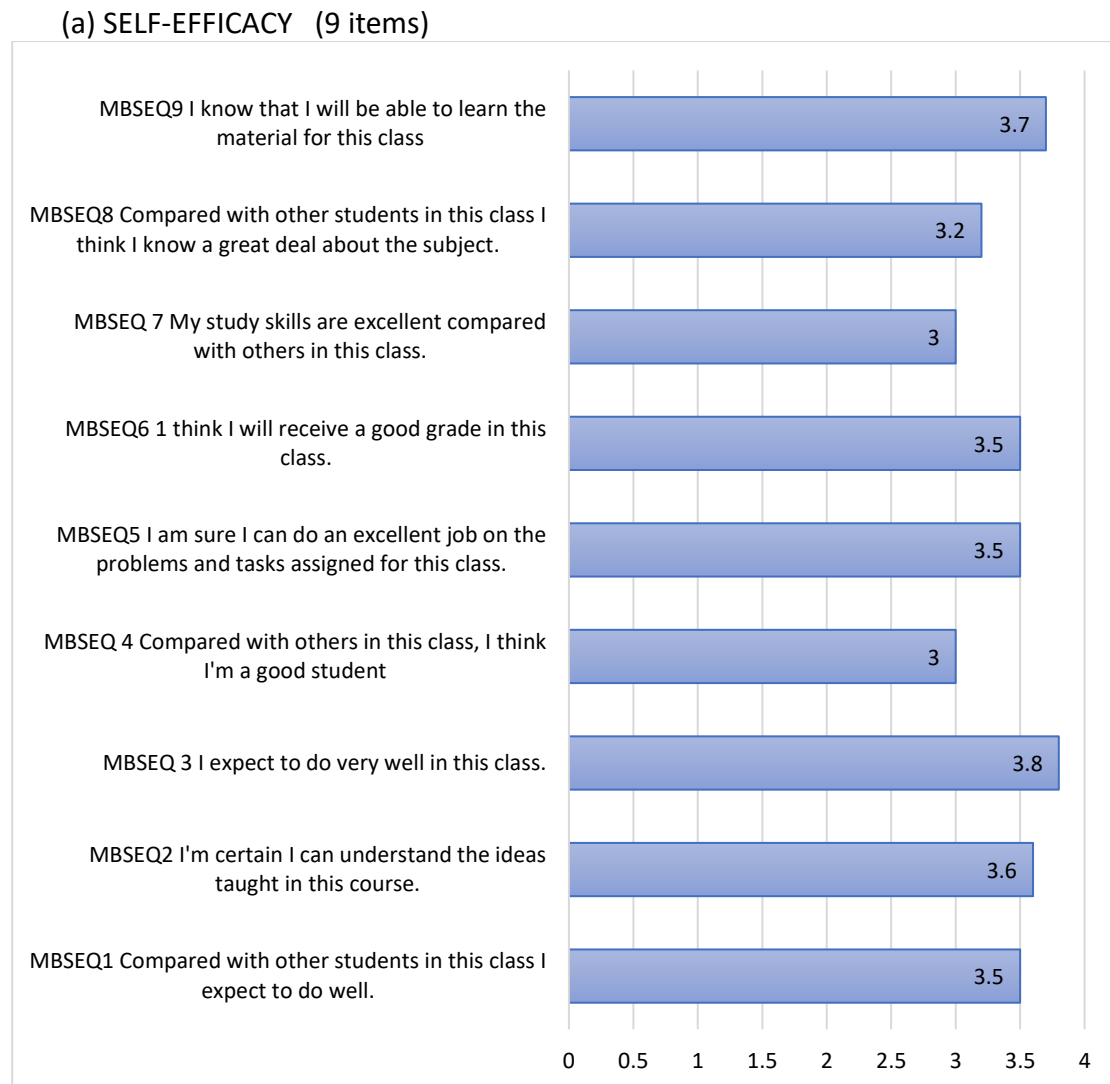**(a) SELF-EFFICACY   (9 items)**

Figure 5- Mean for Self-Efficacy

Figure 5 shows the students' motivation for learning by observing the mean for self-efficacy for the Centre of Foundation Studies program. In recent studies, self-efficacy has emerged as one of the most significant positive factors influencing motivation. This has garnered considerable attention from psychologists, particularly within the realm of positive psychology. The concept of self-efficacy exhibits a strong and meaningful correlation with motivation, leading some researchers to propose that it is a dimension of intrinsic motivation. In other words, individuals experience a dual motivation when they possess confidence in their abilities and capabilities, which serves to propel them forward in their pursuit of tasks and goals. To measure self-efficacy for motivational beliefs, researchers have developed the Self-Efficacy for Motivational Beliefs Scale. This scale consists of nine items that are designed to assess a student's expectancy for task-specific success, as well as their appraisal of their own ability and skill in performing the given task. The highest score of Motivation Beliefs Self-Efficacy Question is MBSEQ3 with a mean of 3.8 where "I expect to do very well in this class". Thus, the second highest is MBSEQ9 with a mean of 3.7 and followed by MBSEQ2 with a mean of 3.6). Both MBSEQ5 and MBSEQ6 have a mean score of 3.5, while MBSEQ8 has a mean score of 3.2. The lowest mean is 3 for MBSEQ4 "Compared with others in this class, I think I'm a good student" and MBSEQ7 "My study skills are excellent compared with others in this class".
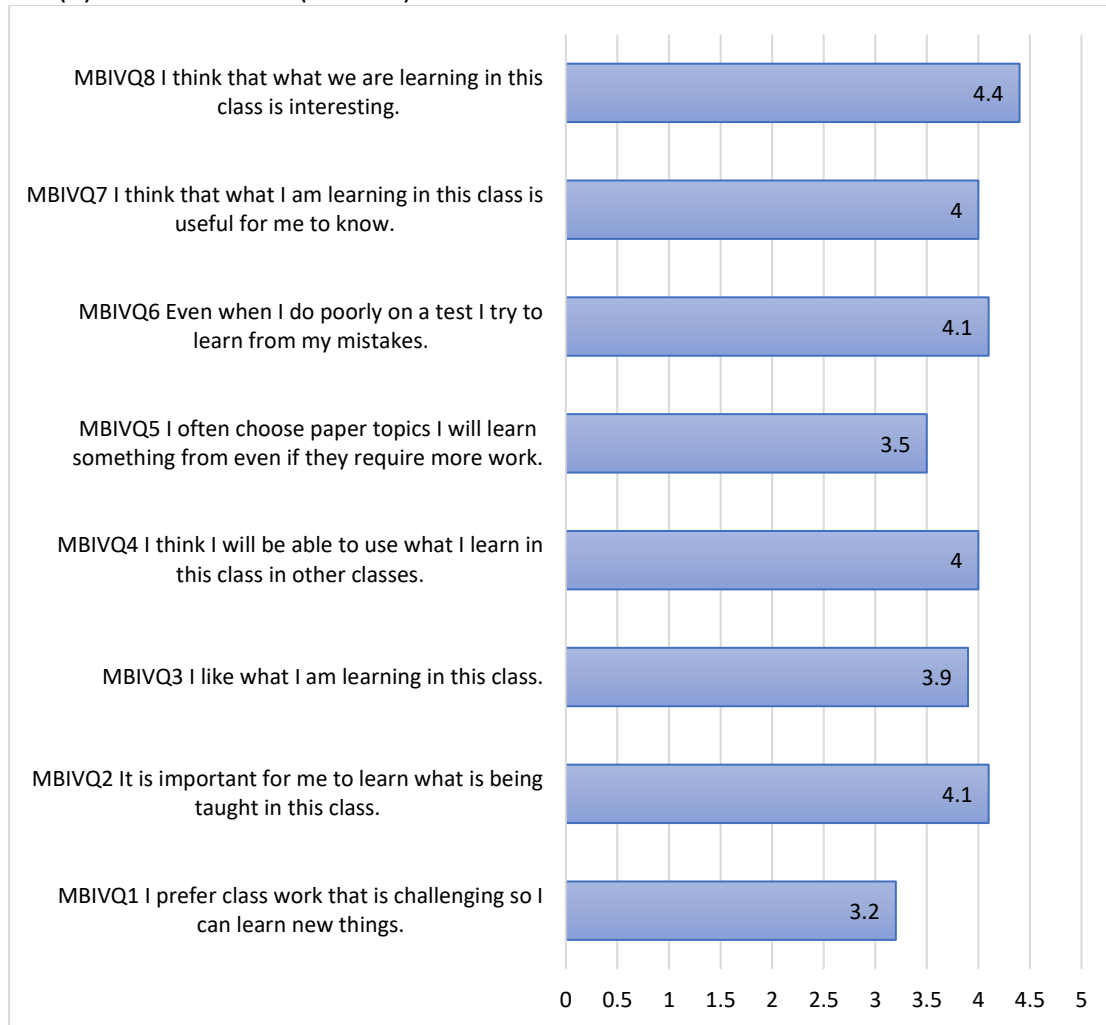
(b) Intrinsic Value (8 items)

Figure 6- Mean for Intrinsic Value

Figure 6 shows the mean for the intrinsic value used by respondents. Based on the eight items on intrinsic value, the highest score for Motivation Beliefs Intrinsic Value Question (MBIVQ) is MBVIQ8 with a mean of 4.4. Meanwhile MBVIQ2 and MBVIQ6 have a mean score of 4.1 and MBVIQ4 and MBVIQ7 have a mean score of 4. MBVIQ3 has a mean score of 3.9 and the second-lowest score is MBVIQ5. The lowest mean is 3.2 for item MBVIQ1 where "I prefer class work that is challenging so I can learn new things''. It is evident from the data that the respondents, who are students enrolled in various programs at the Centre Foundation of Studies exhibit intrinsic motivation and a strategic approach to their studies. Although the research sample may not encompass all students at the institution, the findings indicate a general interest among participants in engaging with the modules taught in the classroom.
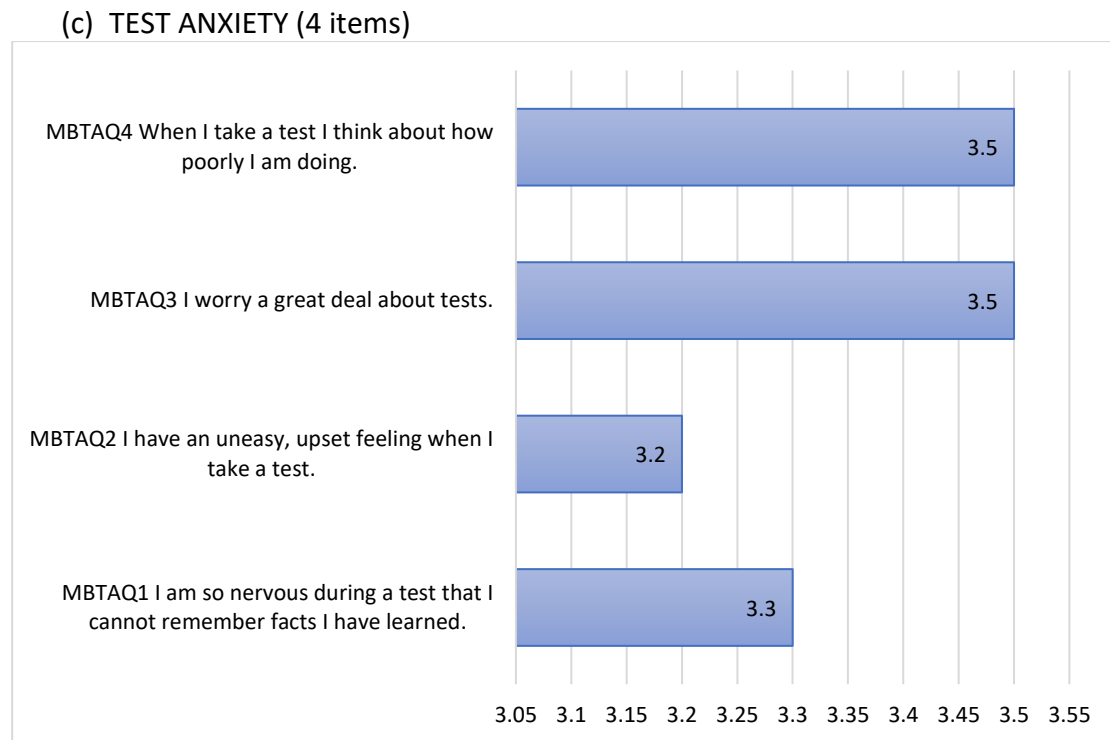
(c) TEST ANXIETY (4 items)

Figure 7- Percentage for Test Anxiety

Figure 7 shows the mean for test anxiety. Both MBTAQ3 " I worry a great deal about tests " and MBTAQ4 "When I take a test, I think about how poorly I am doing" have the highest mean score of 3.5. MTBAQ1 "I am so nervous during a test that I cannot remember facts I have learned" shows the second-highest mean of 3.2. Item for MTBAQ2 "I have an uneasy, upset feeling when I take a test" shows the lowest mean of 3.2 for test anxiety. Based on the results, it is evident that students harbor concerns regarding their tests and their performance outcomes. The data suggests that students experience a significant level of worry or apprehension when it comes to their test performance. This finding highlights the importance of tests and their impact on students' academic lives, emphasizing the need for further investigation into the factors influencing test-related anxiety and its potential effects on student performance.

Findings for Independent Learning
This section presents data to answer research question 2- How do learners perceive their independent learning? In the context of this study, independent learning is measured by (a) cognitive strategy use and (b)self- regulation.
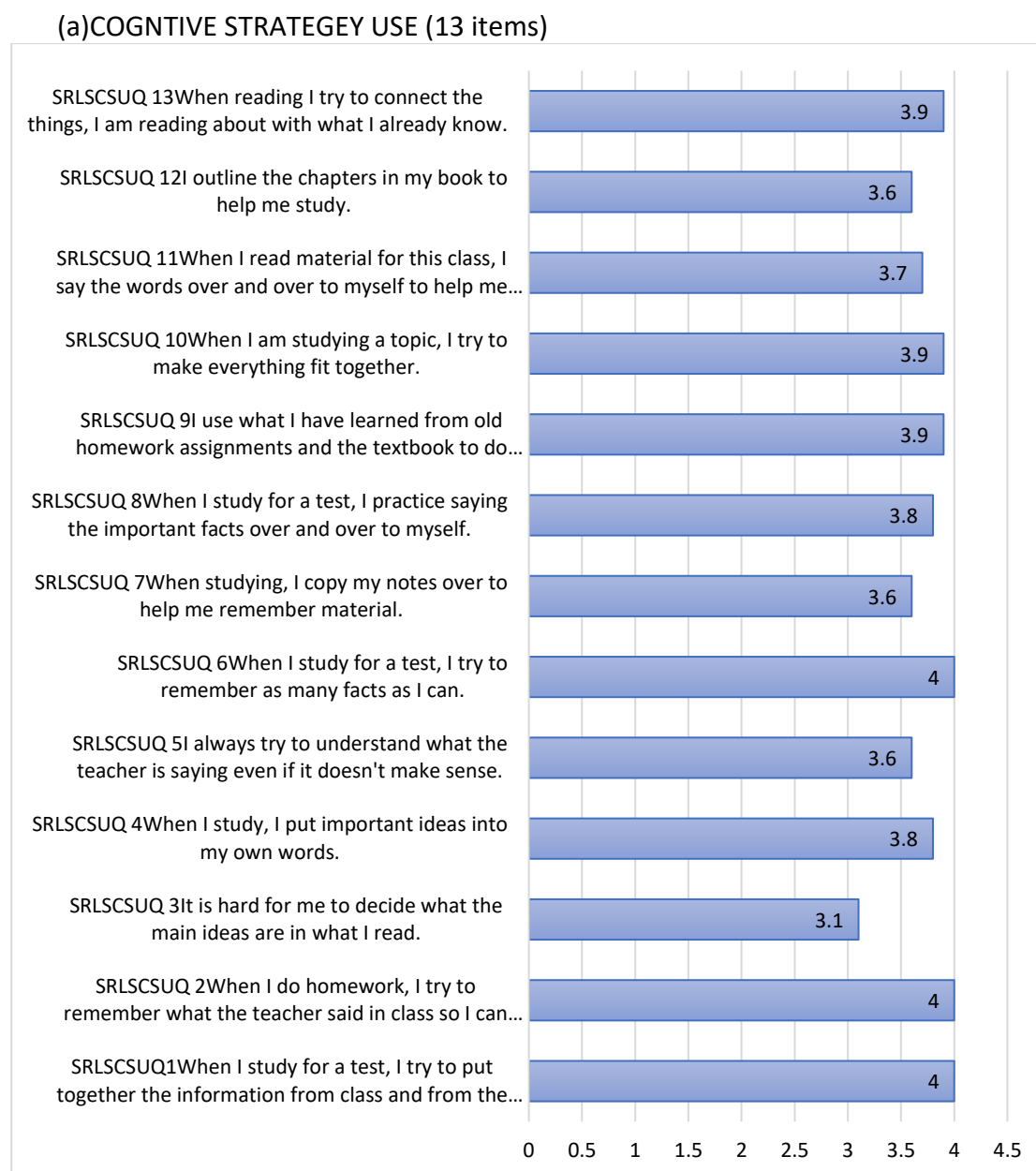
Figure 8- Mean for Cognitive Strategy

Figure 8 presents the mean scores for cognitive strategies utilized by the respondents. Notably, the highest mean score of 4.0 is attributed to SRLSCSUQ1 "When I study for a test, I try to put together the information from class and from the book", SRLSCSUQ2 "When I do homework, I try to remember what the teacher said in class so I can answer the questions correctly" and SRLSCSUQ6 "When I study for a test, I try to remember as many facts as I can". While SRLSCSUQ9 "I use what I have learned from old homework assignments and the textbook to do new assignments", SRLSCSUQ10 "When I am studying a topic, I try to make everything fit together" and SRLSCSUQ13 "When reading I try to connect the things, I am reading about with what I already know have the second highest mean score of 3.9. The lowest is SRLSCSUQ3 "It is hard for me to decide what the main ideas are in what I read" with a mean score of 3.1. It can be concluded that respondents utilize the knowledge they gain in class to improve their cognitive strategies when studying. Moreover, the knowledge or information that students acquire during learning sessions or while completing homework

holds significant importance. This is because it enhances students' cognitive abilities and facilitates their learning process. By gaining and internalizing knowledge, students develop a stronger cognitive foundation, enabling them to think critically, analyze information, and make connections between different concepts. However, students' cognitive capacity may be affected when they encounter difficulties in identifying the main idea while reading course materials for informational purposes.
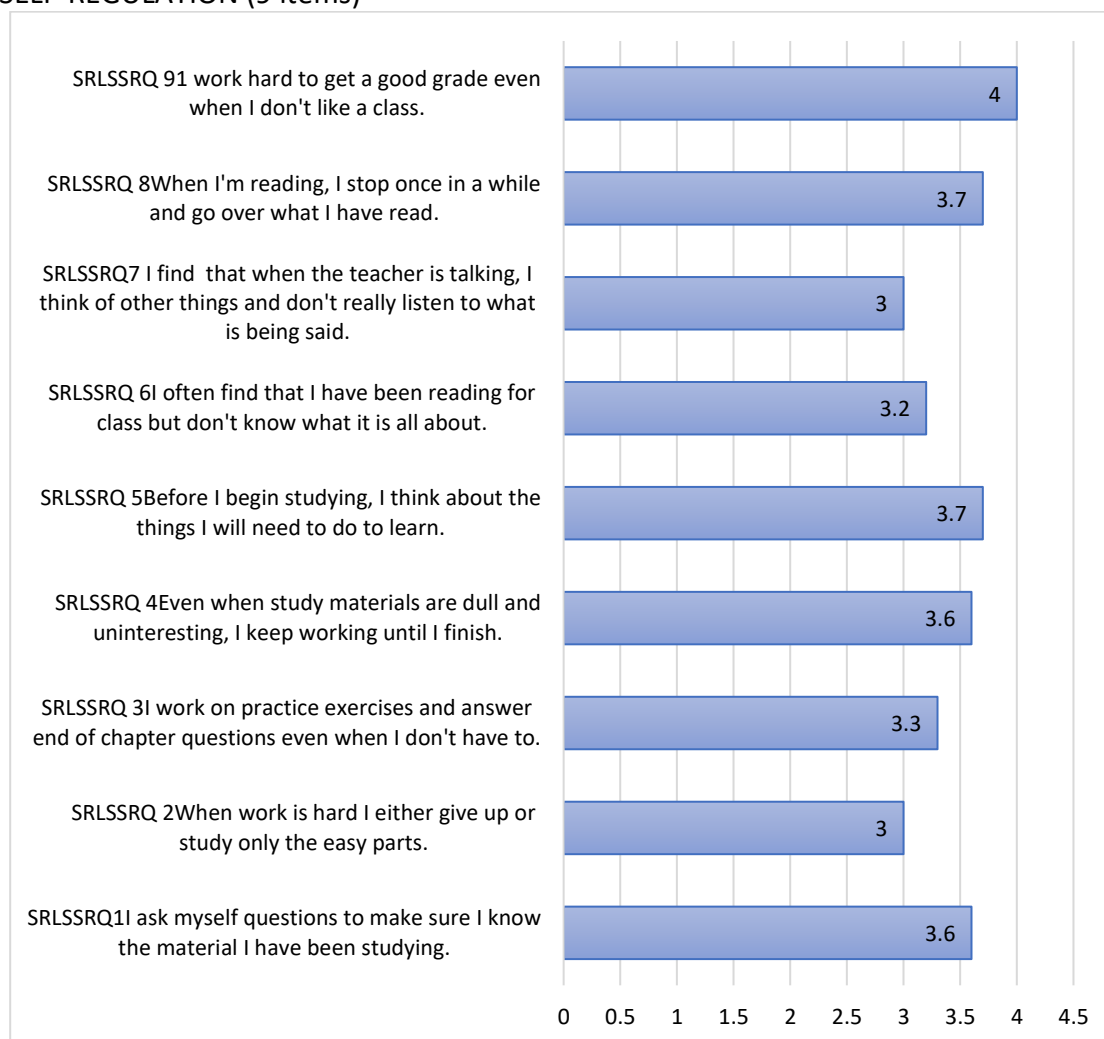
(b)SELF-REGULATION (9 items)

Figure 14- Mean for Self-Regulation

Figure 14 shows the mean for self-regulation. SRLSSRQ9 "I work hard to get a good grade even when I don't like a class" has the highest mean score of 4. Meanwhile, both SRLSSRQ5 "Before I begin studying, I think about the things I will need to do to learn" and SRLSSRQ8 "When I'm reading, I stop once in a while and go over what I have read" have the second highest mean score of 3.7. The lowest is SRLSSRQ2 "When work is hard I either give up or study only the easy parts" and SRLSSRQ7 "I find that when the teacher is talking, I think of other things and don't really listen to what is being said" with a mean score of 3. Based on the findings, it is evident that students exert considerable effort to achieve favorable outcomes, even when they lack interest in the learning material. These findings shed light on the remarkable ability of the students to grasp and comprehend the material, even when confronted with topics that fail to engage their attention or spark their curiosity. However, it is noteworthy that

students' self-regulation tends to diminish when they encounter challenging topics. In such cases, students tend to focus their studying efforts solely on sections of the subject that they perceive as easier and more engaging.

Findings for Relationship between motivational beliefs and self-regulation
This section presents data to answer research question 3- Is there a relationship between motivational beliefs and independent learning? To determine if there is a significant association in the mean scores between metacognitive, effort regulation, cognitive, social and affective strategies data is anlaysed using SPSS for correlations. Results are presented separately in table 3 below.

Table 3

Correlation between Motivational Beliefs and independent Learning

Correlations

		MOTIVATION ALBELIEFS	INDEPENDEN TLEARNING
MOTIVATIONALBELIEFS	Pearson Correlation	1	.691[**]
	Sig. (2-tailed)		.000
	N	170	170
INDEPENDENTLEARNING	Pearson Correlation	.691[**]	1
	Sig. (2-tailed)	.000	
	N	170	170

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

Table 3 shows there is an association between motivational beliefs and independent learning. Correlation analysis shows that there is a high significant association between motivational beliefs and independent learning (r=.691**) and (p=.000). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between motivational beliefs and independent learning.

Conclusion
Summary of Findings and Discussions
Unlike other studies examining motivational beliefs which find that self-efficacy has the lowest overall mean value among motivational beliefs elements (Noraishah et al., 2022; Zurina et al., 2023), this study shows that students' test anxiety is the lowest although this is closely followed by self-efficacy. We could conclude that these students are less anxious because of the numerous assessments that they have to sit for each semester and their ability to learn from mistakes in previous tests. Intrinsic value has the highest overall mean, suggesting that students are intrinsically motivated in their studies. In addition, students also find their lessons interesting, are able to apply what they learn in other classes and are aware that their lessons are important. For the second research question, students' self-regulation is moderately high while their cognitive strategies are high such as their ability to synthesize information gained in class and books as well as recall their lessons during tests. The third

objective of the study was to find the relations between motivational beliefs and independent learning. Similar to other past studies conducted by Melissa and Kamariah (2006); Noraisha et al (2020); Zurina et al (2023); Pintrich and De Groot (1990) a high significant association between motivational beliefs and independent learning was found. In other words, students' high motivation levels enable them to self-regulate, be independent learners and take control of their studies.

This research may contribute towards understanding how motivational beliefs can affect an individual's ability and willingness to engage in self-regulated learning. It could cast light on the specific motivational factors that push individuals to take control of their learning process. This study could make significant theoretical contributions by improving our understanding of motivational processes in self-directed learning. Moreover, the research could be significant in educational settings, especially at university level, where the development of independent learning skills is often stressed.

(Pedagogical) Implications and Suggestions for Future Research Although students' responses suggest that they are motivated and have the abilities to apply appropriate strategies in learning, their self-efficacy and self-regulation could be improved. This is especially important since self-regulation in learning seems to have more impact on students' academic performance (Pintrich & De Groot, 1990). Further research should be conducted on how the teaching and learning environment could be tailored to improve students' self-efficacy so that they have the confidence to apply the strategies that they have acquired and perform better in their studies.

References

Batool, T., Noureen, G., & Ayuob, Z. (2019). Relating learner empowerment with learner self-regulation learning in higher education. *Review of Economics and Development Studies*, *5*(4), 755-766.

Durage, A., De Silva, A., Khatibi, A., & Ferdous, S. (2019). Do the demographic differences manifest in motivation to learn science and impact on science performance? Evidence from Sri Lanka. *Journal of Baltic Science Education*, 18(1), 7-20.

Hayer, A. D. (2022). Meta-analysis of self-regulated learning strategies and academic achievement. *International Journal of Multidisciplinary Educational Research*, 11(4), 1-8.

Jackson, S. L. (2015) *Research methods and Statistics-A Critical Thinking Approach (5TH Edition)* Boston, USA:: Cengage Learning

Pintrich, P. R., & De Groot E. V. (1990). Motivational and self-regulated learning Components of classroom academic performance. *Journal of Educational Psychology,* 82(1), 33–40. Retrieved from https://psycnet.apa.org/doi/10.1037/0022-0663.82.1.33

Pintrich, P. R. (2000). The role of goal orientation in self-regulated learning. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 451-502). Academic Press.

Pintrich, P. R., & Schunk, D. H. (2002*). Motivation in education: theory, research, and applications (2nd ed.)*. Pearson.

Rahmat, N. H., Sukimin, I. S., Sim, M. S., Anura, M., & Mohandas, E. S. (2021) Online Learning Motivation and Satisfaction: A Case Study of Undergraduates vs Postgraduates. *International Journal of Asian Social Science*, Vol 11(2), pp 88-97. http://dx.doi.org/10.18488/journal.1.2021.112.88.97

Siegesmund, A. (2017). Using self-assessment to develop metacognition and self-regulated learners. *FEMS Microbiology Letters*, 364(11), fnx096. https://doi.org/10.1093/femsle/fnx096

Tavakoli, A. M., Bahonar, E., Rafie, F., & Mohammadi, P. (2020). Investigating the relationship between motivational beliefs and self-regulation learning with students' academic performance. *Journal of Advanced Pharmacy Education & Research| Jan-Mar*, *10*(S1), 149.

Zimmerman, B. J. (2008). Investigating self-regulation and motivation: Historical background, methodological developments, and future prospects. *American Educational Research Journal*, 45(1), 166-183.

Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 13-39). Academic Press.

Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice*, 41(2), 64–70.