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Exploring The Relationship between Learning Approaches and Vroom Motivation AMONG Undergraduate Learners at Malaysian Universities

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Abstract

Diverse learning approaches are crucial to ensure effective and efficient teaching and learning activities for undergraduate learners in higher learning institutions. Learners should prepare to adapt to changes in teaching and learning for productive functioning in a highly demanding environment. For high-calibre academic results, learners must be able to motivate themselves. A successful learner who can function independently may be produced using self-directed learning and Vroom's expectancy model. This study aims to investigate the perception of learners on their choice of learning strategies by looking at the influence of Vroom's instrumentality, expectancy, and valence towards the learners' motivation. This study also examines the relationship between the three of Vroom's expectancy components by employing a quantitative analysis using Vroom's expectancy theory and Pintrich and De Groot's motivational scale. A survey comprising 28 questions with 5-point Likert scales was distributed to 310 undergraduate students in Malaysian universities. The survey has two primary components: demographic profile and motivational scale. The motivational scale has six criteria: intrinsic goals orientation, extrinsic goals orientation, task value beliefs, students' perception of self-efficacy, control beliefs for learning, and affective components. As the respondents provided all items with a good rating, the findings demonstrate that instrumentality, anticipation, and valence moderately influence the learners' motivation. The findings also reveal a highly significant relationship between the expectation and instrumentality components. Meanwhile, expectation and valence are negatively correlated, and instrumentality and valence are not correlated. Overall, the findings offer insightful

information about the motivational elements that might influence students' desire to excel at university.

Keywords: Learning Approaches, Motivation, Vroom Expectancy Theory, Undergraduate Students.

Introduction

Background of Study

The complexity of today's environment leads to various challenges for the education system. The usage of technology has become significant since the Covid-19 pandemic. Higher education institutions must adopt varied learning methodologies to ensure that undergraduate students receive effective and efficient teaching and learning activities. Learners should be prepared to adapt to changes in teaching and learning for productive functioning in a highly demanding environment. One of the approaches is utilising online learning. Online learning success depends on the learners' motivation, educational experience, and self-regulation (Ferrer et al., 2022; Li et al., 2022; Rasheed et al., 2020). The learners' ability to motivate themselves is necessary to achieve high academic outcomes.

Motivation is an influential factor in ensuring that learning goals can be achieved (Filgona et al., 2020). Highly motivated learners will dedicate a specific effort to obtain a result based on their expectations (Oliver, 1974). They can make the learning environment fun and effective as they are ready to participate in classroom activities (Filgona et al., 2020). Therefore, self-directed learning is one of the approaches to ensure learners can achieve their desired goals. Pintrich and De Groot (1990) highlighted that motivational and self-regulated learning is essential for classroom academic performance. The author further explained the need for self-regulated learning to manage, control, and monitor motivation, cognition, and behaviour (Pintrich, 2000). The primary idea focuses on motivation and cognition for a better learning style.

Self-directed learning can be measured with the combination of Vroom's valence–instrumentality–expectancy (VIE) model of motivation as an alternative model for examining the learners' choice of learning strategies. Vroom's theory focuses on the desirability of humans to attain the expected outcome. This theory assumes that individuals will behave based on the outcome that maximises satisfaction and minimises stress (Rehman et al., 2019). This theory also suggests that objectives result from individual evaluations of valence based on the satisfaction of work outcomes (Siddiqui et al., 2021). It comprises three elements, valence, instrumentality, and expectancy, that stimulate individual performance (Rayat & Gupta, 2021).

Valence is the human inclination towards the expected outcomes of performance (Rayat & Gupta, 2021). Individuals will put more effort into achieving their desired outcome (Rehman et al., 2019). Identifying the learners' needs is crucial to ensure they work hard to achieve the expected performance. Instrumentality refers to the rewards offered for individual performance, such as bonuses and promotions. Rewards offered to an individual must be valued by them (Arora & Iyer, 2020). This element considers humans as instruments contributing to the expected results. Thus, learners will deliver excellent performance when the rewards offered to them are attractive. Expectancy refers to an individual's expectation of their effort to achieve excellent performance (Rehman et al., 2019). More effort will lead to better results. Individuals must believe they will be directed towards their desired performance (Rayat & Gupta, 2021). Arora and Iyer (2020) explained that expectancy is affected by having the right combination of resources, the right skills to perform the task, and

the necessary support to complete the task. Combining self-directed learning and Vroom's expectancy model may produce a successful learner that can perform independently.
In Malaysia, motivation is crucial as self-directed learning is widely utilised, especially in online learning. However, Chung et al (2020) found that learners were only slightly to moderately ready for online learning. This finding was due to a lack of learner control, self-directed learning, and online communication efficacy. The authors also reported that the readiness and satisfaction of online learning differ between females and males, with female learners more ready and satisfied with online learning. Motivation can drive the learners' desire to succeed. Additionally, expectancy theory may help us better understand and address motivation as it can directly impact addictive behaviour (Yoes & Silverman, 2020).

Statement of Problem

Motivation was described by Martin (2004) as "learners' energy and drive to learn, work effectively, and achieve to their potential" and the behaviours that correspond with this energy and drive. In higher education, motivation plays a significant role in determining student performance and retention (Edgar et al., 2019). However, the learners' motivation in learning has become debatable since the Covid-19 pandemic changed the learning dynamic specific to university learners. The negative effects of the pandemic caused learners to become demotivated and disengaged (Chiu et al., 2021). The transition phase from traditional face-to-face learning methods to online learning during the Covid-19 pandemic affected the learners' motivation in the learning process (Chiu et al., 2021; Daniels et al., 2021). Offline learning (face-to-face) or a hybrid approach (combining face-to-face and online learning) appears to be an option post-pandemic. These options may affect the learners' motivation by demanding they adapt to frequent changes in the learning process.
Despite the rapid changes and evolvement of the learning process, the learners' motivation must be a priority as it is a critical factor in determining their educational success (Filgona et al., 2020). The current dynamic in the learning environment has opened avenues for more research to examine the motivation factors for learning, specifically among university learners. This study intends to unveil the aspects of motivation among university learners, considering the current trend in the academic environment.

Objective of Study and Research Questions

This study aims to explore the perception of learners on their choice of learning strategies. Specifically, this study seeks to answer the following questions:

- How does instrumentality influence the learners' motivation?
- How does expectancy influence the learners' motivation?
- How does valence influence the learners' motivation?
- Is there a relationship across all three motivators?

Literature Review

Motivation for Learning

The learners' motivation is an essential component of quality education. It drives learners to reach their goals. The success of learning depends on whether the learners are motivated or not. Parijat and Bagga (2014) asserted that motivation is the primary driving force behind determination and is crucial to all individual achievement. It occupies a critical position as one of the characteristics that manage behaviour. However, motivating learners is a difficult task and has become one of the most significant challenges in education. Learning is intrinsically

difficult and pushes the brain to its limits, thus requiring motivation. The presence of learners in a class does not ensure that they want to learn. Culture or rules may have compelled them to attend the learning institution. Hence, motivation to learn plays a significant role in encouraging the learners' enthusiasm to produce a desired learning outcome.

Past Studies on Motivation for Learning

Many studies have investigated the motivation of learning. The earlier research conducted by Atkinson (1957) drew on Lewin and Toman's learning theories. He created his expectancy-value model based on cognitive components. He developed the model to depict the different behaviours related to the achievements and success of people, including perseverance, a persistent effort for attainment, and select achievement tasks. This model was influenced by three major elements: motivation (need for achievement), perceived probability or expectation of success, and incentive value assigned to an activity or task. Another prominent theory based on the same grounds is Vroom's (1964) expectancy theory. In his theory, he studied people's motivation and concluded that motivation depends on three factors: expectations, instrumentality, and valance. Vroom justified that when people make choices, they typically choose the one that motivates them the most.

There have been many past studies on the motivation to learn using these factors (expectations, instrumentality, and valance). Min et al (2020) modelled Vroom's expectancy theory with new variables of reward and punishment to motivate learners to enhance their attitudes and behaviours. They stimulated a 12-month significance test which included four examination scores. Then they compared the normal class performance without testing the theory and the class with the theory. The findings indicate that by using reward and punishment, learners may obtain higher test scores than those in normal classes.

On the other hand, a study by Duy et al (2021) among learners at the Industrial University of Ho Chi Minh City demonstrated that two factors influence the learners' learning motivation. These factors included the learners' learning goals or orientation and teaching methods. Teaching capacity (good professional competence, broad knowledge, and good expressive ability) was another variable, but it did not significantly impact student learning motivation. Learners are more motivated to learn if they have a clear learning goal related to their internal motivation. The teaching method also impacts their learning motivation, but it highly depends on the teachers, school support, and the learners' cooperation.

Next, a study by Zboja et al (2020) looked at the motivation of volunteers to help others based on Vroom's theory. They compared the attitudes of powerlessness (expectancy), attitudes towards charitable organisations (instrumentality), and attitudes towards helping others (valence) across individuals. The results indicate that the instrumentality and valence components of the theory significantly motivate them to volunteer compared to expectancy. In this context, the volunteers are more motivated if they are involved in more structured volunteer organisations with a formal group than if they volunteer alone or with family or friends.

Jenal et al (2022) found positive ratings for the value, expectancy, and affective components when assessing the results of Vroom's motivation and learning approaches. Their findings depict how extrinsic goal orientation received the highest mean scores compared to intrinsic goal motivation orientation and task value beliefs for the value component. Moreover, control beliefs for learning obtained higher mean scores than the learners' perception of self-efficacy in the expectancy component. The respondents were anxious about taking a test or an exam as measured by affective components.

Similarly, Yunos et al (2021) reported that valence possessed the highest total mean when they investigated the motivation to learn mathematics based on Vroom's theory of expectancy, instrumentality, and valence. Their findings indicate that the amount of value students render for the learning outcome highly influences their motivation to learn mathematics. Dong et al (2022) found a positive relationship between foreign language enjoyment and expectancy-value motivation represented by expectancy beliefs, intrinsic value, attainment value, and utility value. Meanwhile, Hariri et al. (2021) studied the relationship between motivation and learning approaches. They found that self-regulation, self-efficacy, and test anxiety emerged as the best predictors of performance based on the regression analysis.

Conceptual Framework

Figure 1 presents the conceptual framework of the study. This study investigates the motivating factors influencing learners. According to Rahmat (2019), learners embark on learning because they value the outcomes as important. The concept of this study is the merging of Vroom's (1964) expectancy theory and Pintrich and De Groot's (1990) motivational scale. Vroom (1964) revealed three motivating factors: instrumentality, expectancy, and valence. Instrumentality refers to the belief that the learners put in the learning behaviour. In the context of this study, instrumentality is measured by Pintrich and De Groot's (1990) value components, such as (i) intrinsic goal orientation, (ii) extrinsic goal orientation, and (iii) task value beliefs. Next, learners stay motivated to learn because of their expectancy. This study measures this by (i) the learners' perception of self-efficacy and (ii) control beliefs for learning. The third motivating factor is valence which refers to the importance the learner puts on the learning.

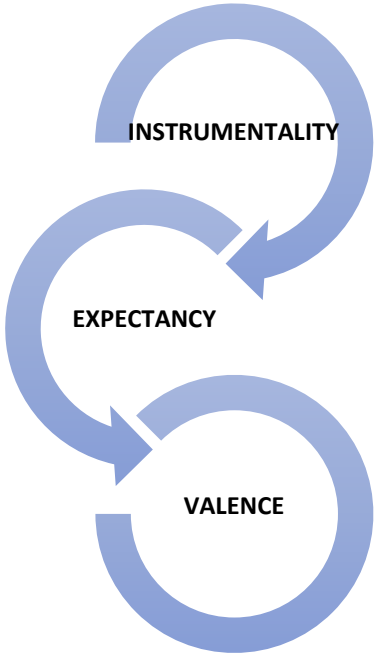

Figure 1- Conceptual Framework of the Study – exploring learning motivation from Vroom's view

Methodology

This quantitative study aims to explore motivation factors for learning among undergraduates. A purposive sample of 310 participants responded to the survey. The

instrument utilised is a 5 Likert-scale survey rooted in Pintrich and De Groot's (1990) motivational scale to reveal the variables in Table 1 below. The survey has four sections. Section A has items on demographic profile. Section B has 14 items on reading difficulties. Section C has 17 items on global strategies. Section D has eight items on problem-solving strategies. Section E has nine items on support strategies.

Table 1
Distribution of Items in the Survey
PART 2-MOTIVATIONAL SCALE (24 items)

SECT	VROOM	CONSTRUCT		VARIABLE	No Of Items	Total Items
A	INSTRUMENTALITY	VALUE COMPONENTS	(a)	Intrinsic Goal Orientation	4	12
			(b)	Extrinsic Goal Orientation	3	
			(c)	Task Value Beliefs	5	
B	EXPECTANCY	EXPECTANCY COMPONENT	(a)	Learners' Perception of Self-Efficacy	5	7
			(b)	Control Beliefs for Learning	2	
C	VALENCE	AFFECTIVE COMPONENTS				5
		TOTAL NO OF ITEMS				24

Table 2
Reliability of Survey

Reliability Statistics

Cronbach's Alpha	N of Items
.874	24

Table 2 demonstrates the reliability of the survey. The analysis displays a Cronbach's alpha of 0.874, thus revealing the high reliability of the instrument. Further analysis using SPSS presents findings to answer this study's research questions.

Findings

Findings for Demographic Profile

Q1 Gender

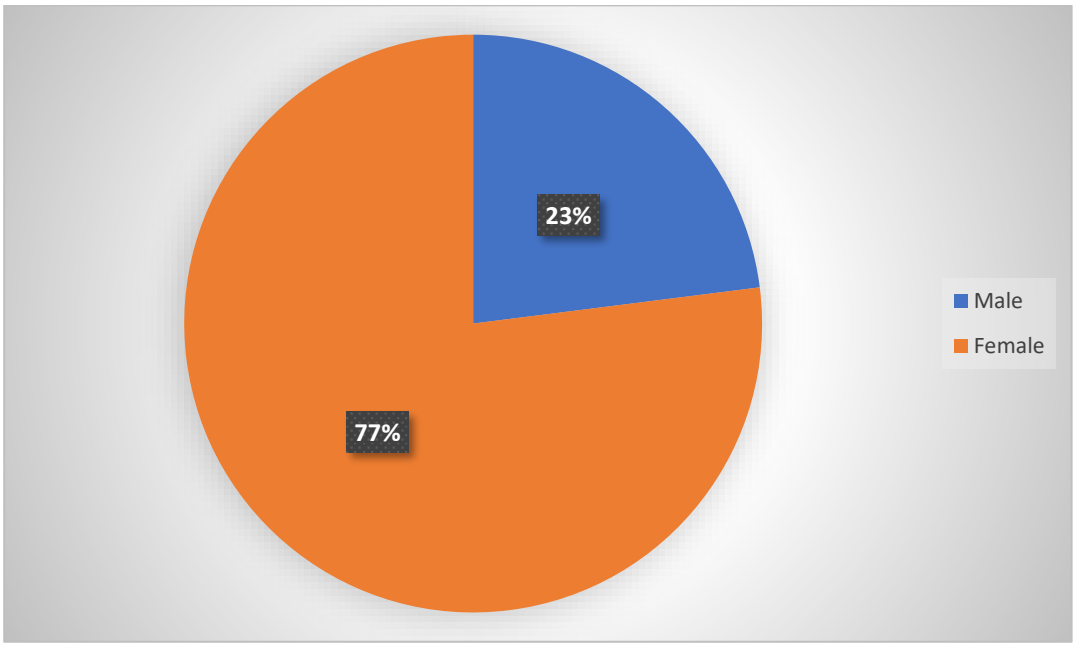

Figure 2- Percentage of Gender

Figure 2 depicts the percentage of gender distribution in this study. A total of 310 participants were involved, dominated by female respondents at 77% and male respondents at 23%.

Q2 Age Group

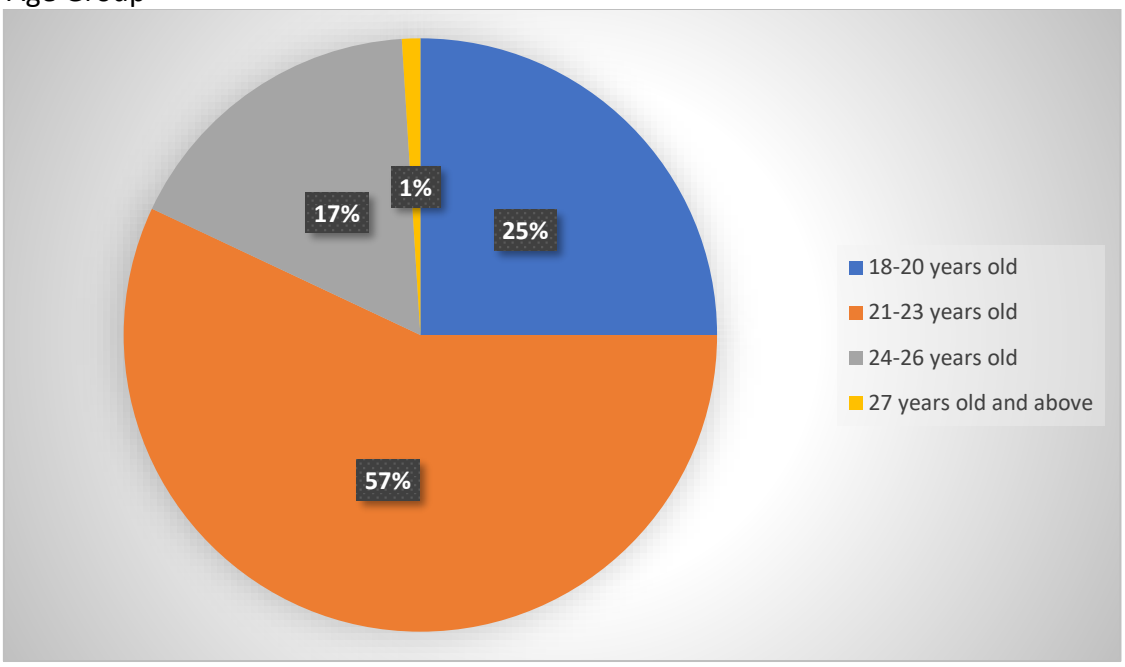

Figure 3- Percentage of Age Group

Figure 3 portrays the age group among participants, where the highest percentage was 21–23 years old at 57%, followed by 18–20 years old at 25%. The remaining 17% were 24–26 years old, and only 1% were 27 years old and above.

Q3 Discipline

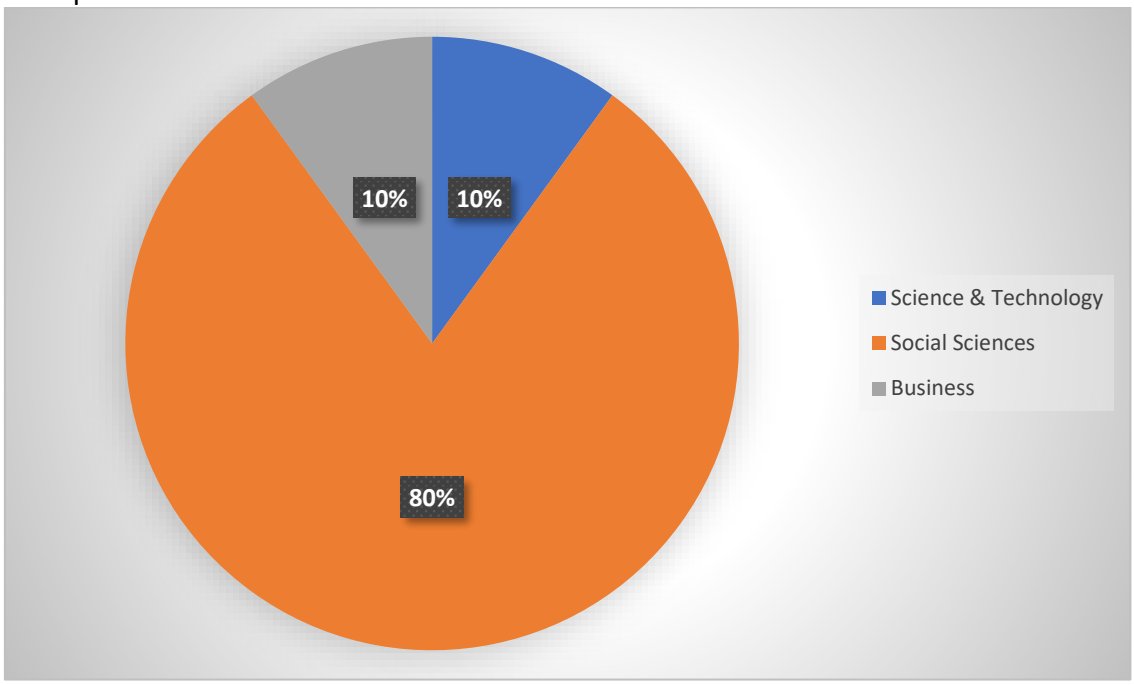

Figure 4- Percentage of Discipline

Figure 4 indicates the percentage of the field among participants. Most were from Social Sciences, comprising 80%. The remaining 20% were from the Science & Technology and Business fields, each with 10% of respondents.

Q4 Educational Level

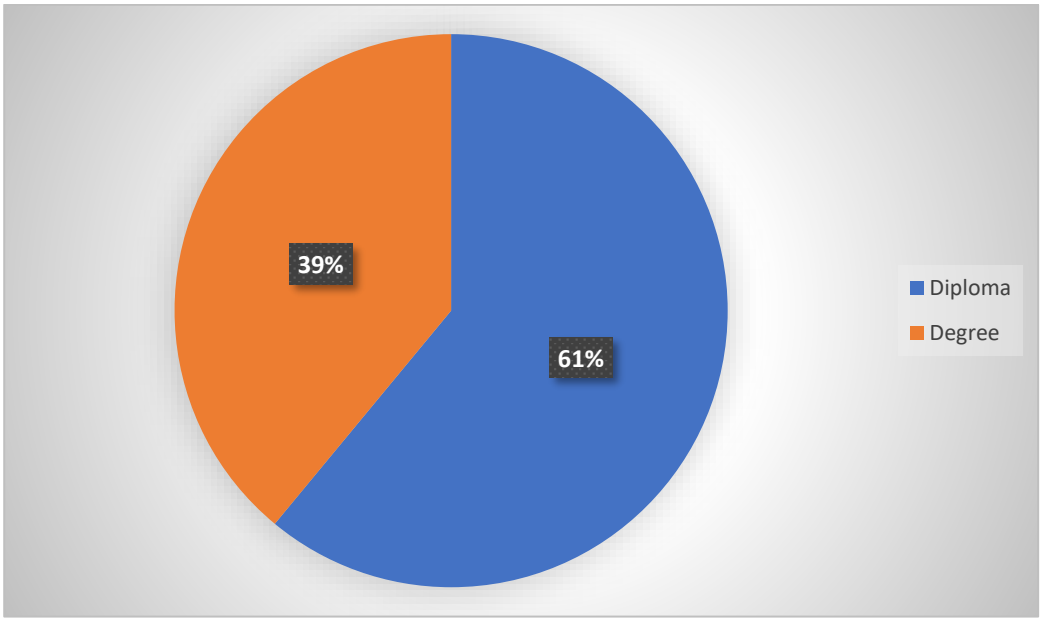

Figure 5- Percentage of Education Level

Figure 5 indicates that most participants were Diploma learners, with 61%, and the remaining 39% were Degree learners.

Findings for Instrumentality

This section presents data to answer research question 1: How does instrumentality influence the learners' motivation? In the context of this study, instrumentality is measured by value components such as (i) intrinsic goal orientation, (ii) extrinsic goal orientation, and (iii) task value beliefs.

Value Component

(i) INTRINSIC GOAL ORIENTATION (4 items)

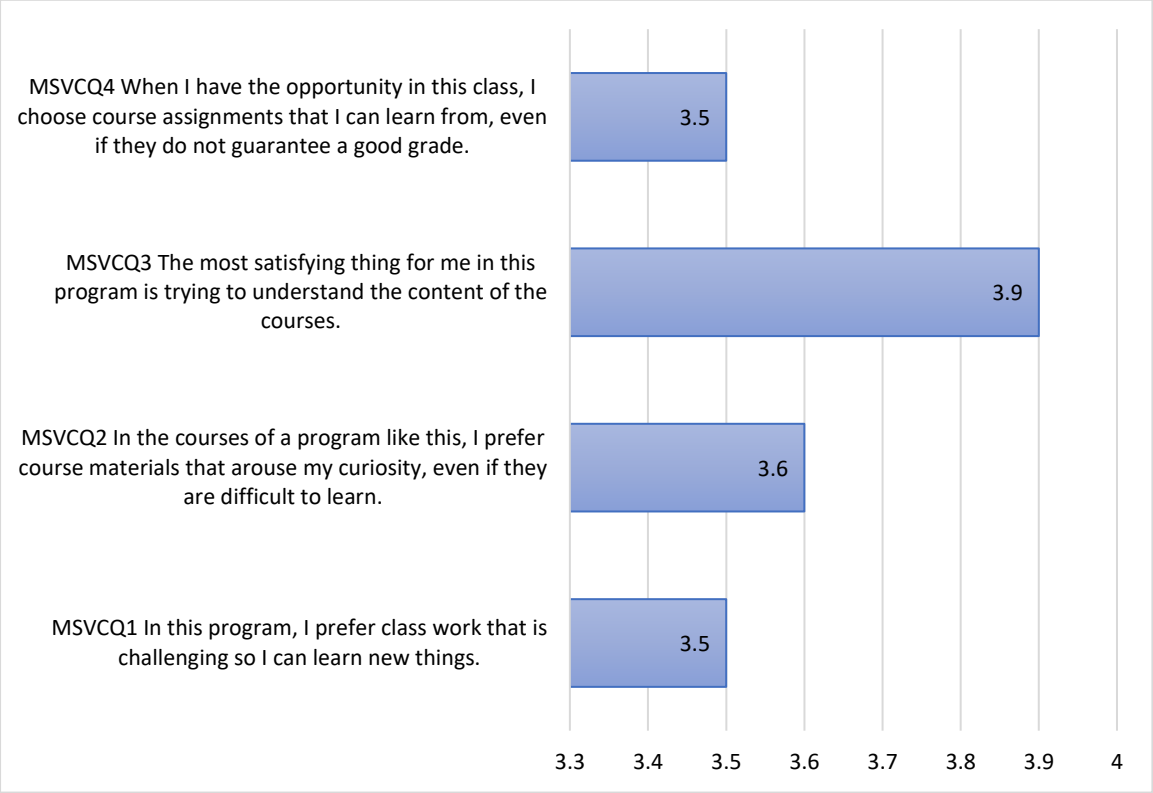

Figure 6- Mean for Intrinsic Goal Orientation

Figure 6 presents the findings on the intrinsic goal orientation among respondents. On average, the respondents preferred classwork that challenged them to learn new things (mean value of 3.5). The respondents also agreed that they preferred course materials that raised their curiosity, despite any difficulty learning those materials (3.6). Moreover, the respondents agreed they felt satisfied when understanding the course content (3.9). Lastly, the respondents' intrinsic goal orientation was shown when they saw a good opportunity to learn new things while doing assignments, even though there was no guarantee of a good grade (3.5). Thus, the results suggest that university learners have a medium level of intrinsic goal orientation when learning.

(ii) Extrinsic Goal Orientation (3 items)

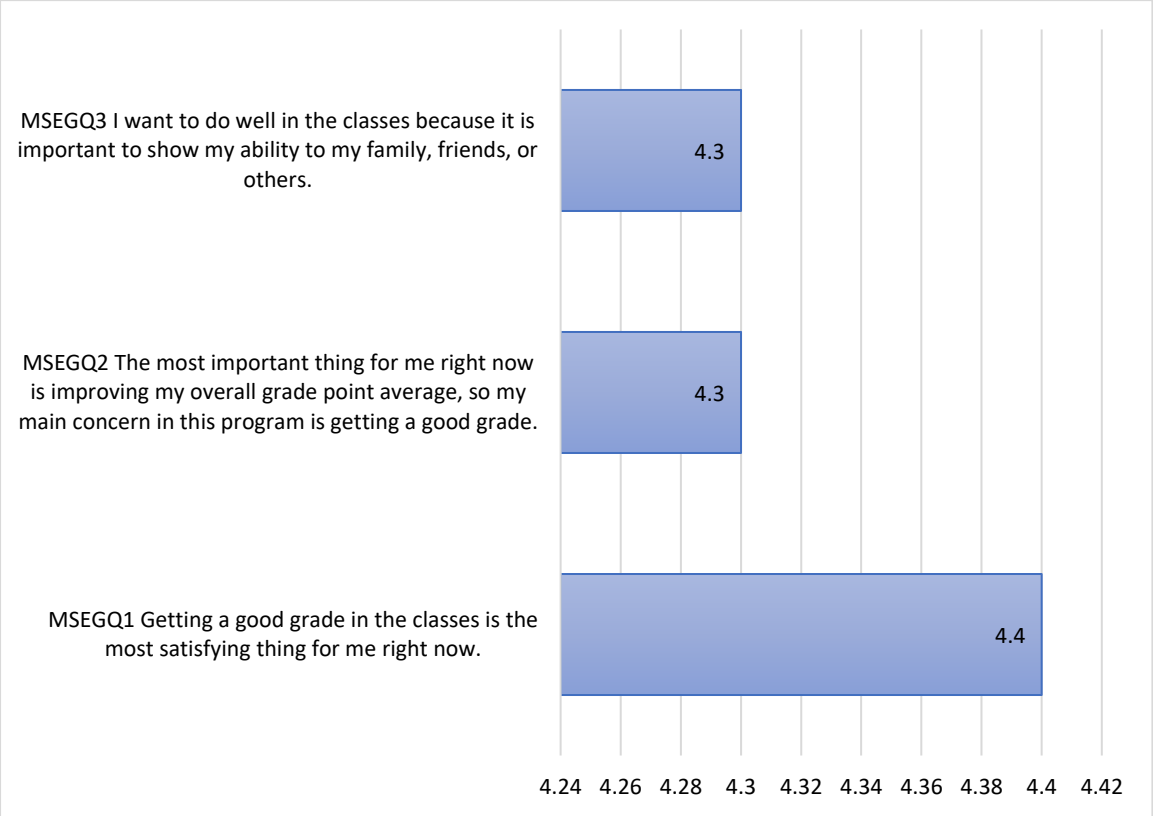

Figure 7- Mean for Extrinsic Goal Orientation

Figure 7 displays the results for the mean value of extrinsic goal orientation. Most respondents agreed that a good grade was one of the contributing factors to their satisfaction (mean value of 4.4). They also agreed that getting good grades and improving their grades were their primary concerns (4.3). Additionally, the findings demonstrate that the respondents performed well in the classes to display their achievements to their family, friends, and others (4.3). The findings suggest that external factors can influence the learners' learning motivation. These external factors include getting good grades from lecturers and the thought of others observing their abilities. Hence, the results indicate that learners are more motivated to learn because they have an extrinsic rather than an internal goal orientation.

(iii) Task Value Beliefs (5 items)

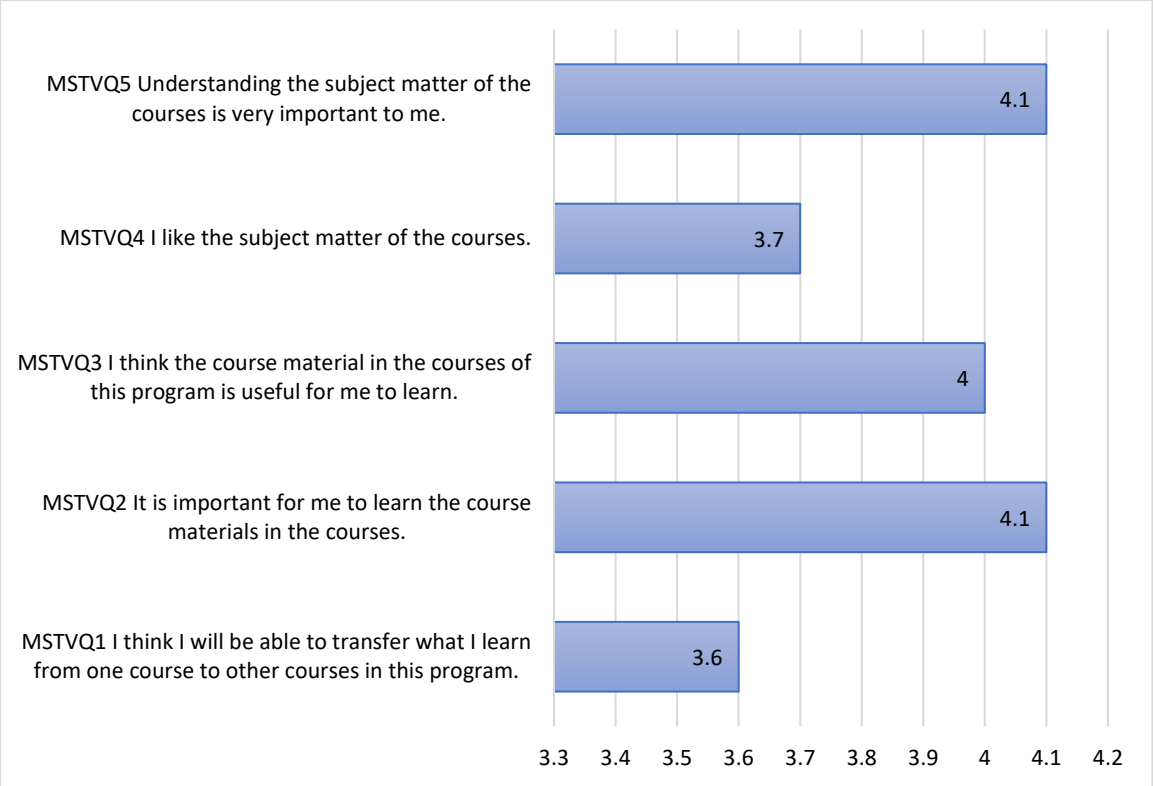

Figure 8- Mean for Task Value Beliefs

Figure 8 displays the results for the mean score of task value beliefs. For the first item, a mean value of 3.6 demonstrates a moderately positive response and room for improvement in their confidence in transferring what they have learned. On the other hand, the second item depicts a mean score of 4.1 which suggests that most respondents strongly agreed that the course materials were highly important to their learning or professional development. Respondents viewed the course material as relevant and helpful to their learning and had a positive view of its usefulness (mean score of 4). Furthermore, most respondents agreed on their engagement and interest in the courses (3.7). A mean score of 4.1 for the final item of task value beliefs indicates that most respondents strongly agreed that understanding the course material was essential. This finding suggests that respondents place a high priority on acquiring a full grasp of the course material.

Findings for Expectancy

This section presents data to answer research question 2: How does expectancy influence the learners' motivation? In this study, expectancy is measured by (i) the learners' perception of self-efficacy and (ii) control beliefs for learning.

(ii) Learners' Perception of Self-Efficacy (5 items)

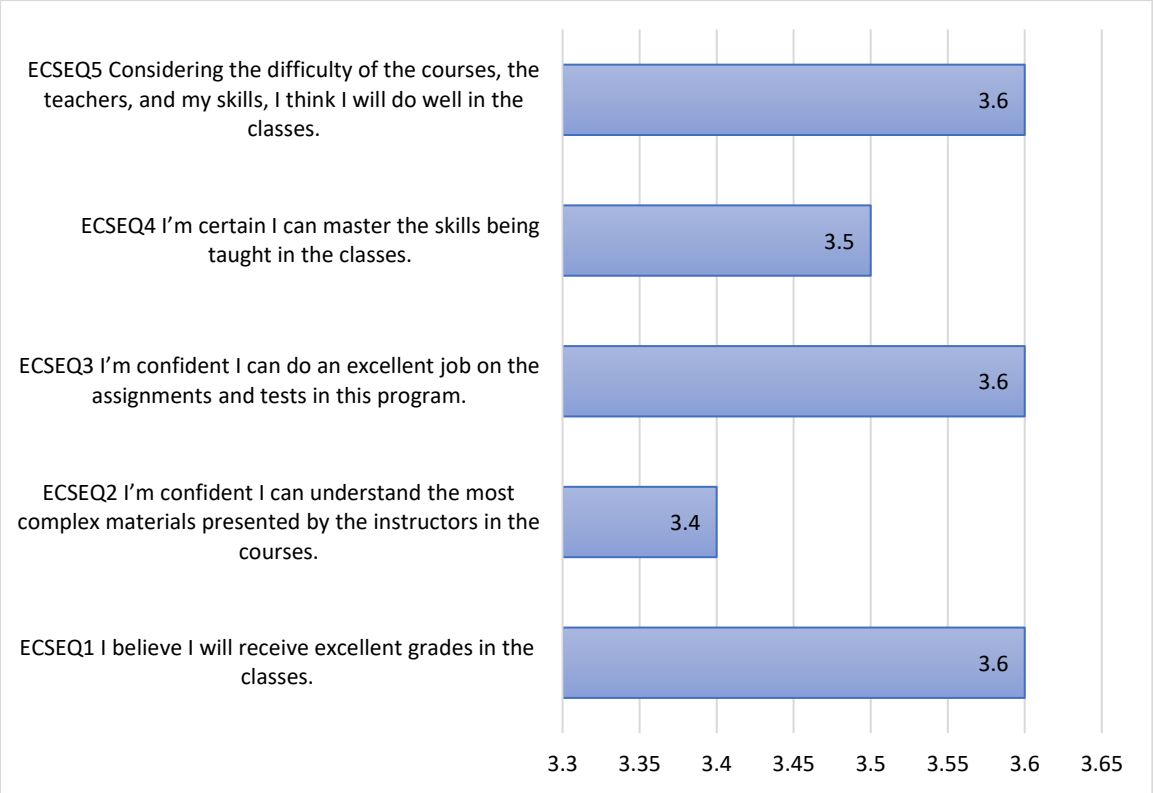

Figure 9- Mean for Learners' Perception of Self-Efficacy

Figure 9 illustrates the results for the mean score of the learners' perception of self-efficacy. A mean score of 3.6 for the first item indicates respondents had a moderately positive attitude towards the statement. Some believed they would receive excellent grades, while others were uncertain. The second item has a mean score of 3.4, suggesting that respondents were unsure they could understand the most difficult topics that instructors offer. On the other hand, the third, fourth, and last items indicate a neutral response (mean scores of 3.6, 3.5, and 3.6, respectively). Here, the respondents were moderately confident in completing assignments and passing exams with flying colours. The respondents also had a neutral response to their ability to master the skills being taught and to do well in class.

(ii) Control Beliefs for Learning (2 items)

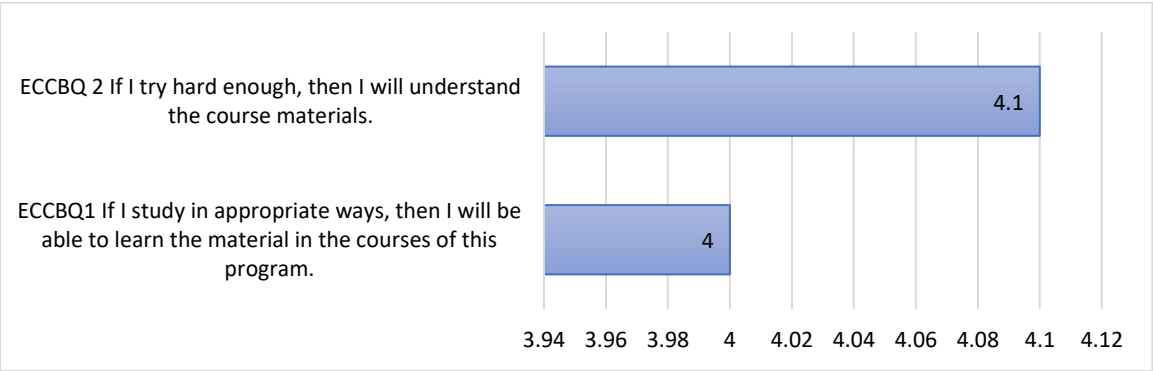

Figure 10- Mean for Control Beliefs for Learning

Regarding Figure 10, most respondents believed that their ability to learn the material in the program's courses depended on their choice of an appropriate study method (mean value of 4). The respondents also believed their best efforts would determine their ability to understand the course materials (4.1).

Findings for Valence

This section presents data to answer research question 3: How does valence influence the learners' motivation? In the context of this study, valence is measured by affective components.

Affective Component -reversing (5 items)

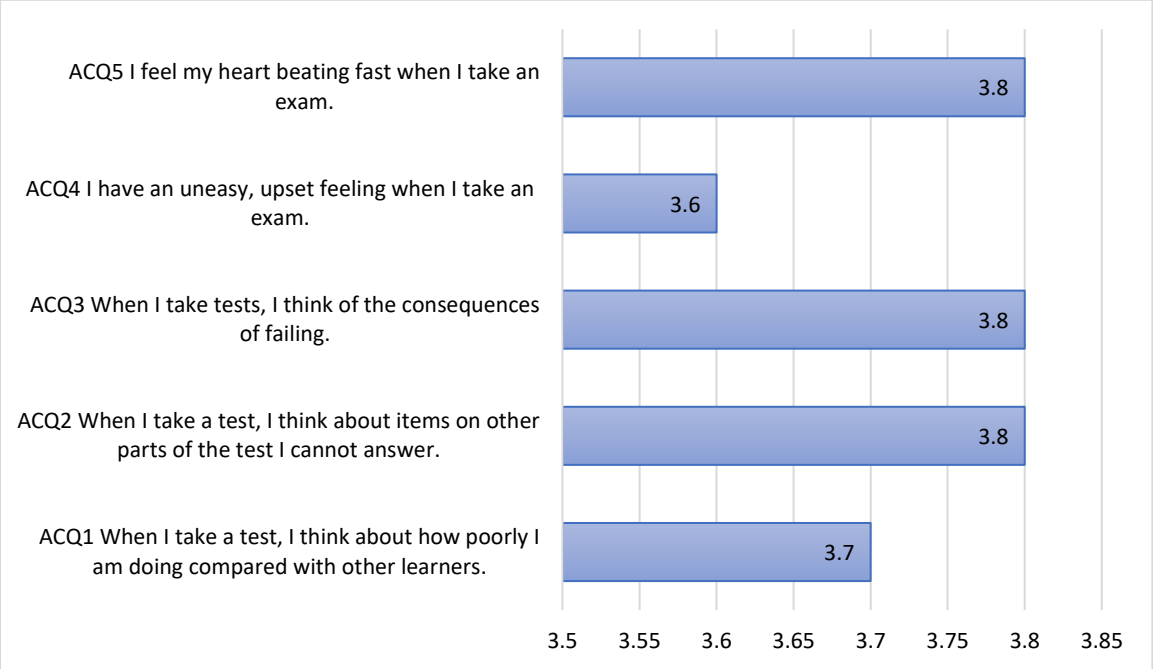

Figure 11- Mean for Affective Components

Figure 11 depicts the mean value for affective components. Most commonly, the respondents compared their performance with other learners (mean value of 3.7). Most of them agreed that while taking a test, they thought of the parts they could not answer (3.8). The respondents also considered the consequences of failing (3.8) and experienced a fast heartbeat while taking tests (3.8). Some respondents even experienced uneasy and upset feelings when they sat for exams (3.6). Hence, the results demonstrate that most learners are moderately affected by the affective component.

Findings for Relationship between Motivation Components

This section presents data to answer research question 4: Is there a relationship across all three motivators?

To determine if the mean scores across all three motivational components are significantly associated, data is analysed using SPSS for correlations. Results are presented separately in Tables 3, 4, and 5 below.

Table 3
Correlation between Instrumentality and Expectancy

Correlations

		TOTALINSTRUMENTALITY	TOTALEXPECTANCY
TOTALINSTRUMENTALITY	Pearson Correlation	1	.653**
	Sig. (2-tailed)		.000
	N	310	310
TOTALEXPECTANCY	Pearson Correlation	.653**	1
	Sig. (2-tailed)	.000	
	N	310	310

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

Table 3 depicts a positive association between instrumentality and expectancy components. Correlation analysis suggests a highly significant association between instrumentality and expectancy components (r=0.653** and p=0.000). According to Jackson (2015), the coefficient is significant at the 0.05 level, and a positive correlation is measured on a 0.1–1.0 scale. A weak positive correlation would be in the range of 0.1–0.3, a moderate positive correlation falls within 0.3–0.5, and a strong positive correlation falls within 0.5–1.0. This implies a strong positive relationship between instrumentality and expectancy components.

Table 4
Correlation between Instrumentality and Valence

Correlations

		TOTALINSTRUMENTALITY	TOTALVALENCE
TOTALINSTRUMENTALITY	Pearson Correlation	1	.104
	Sig. (2-tailed)		.067
	N	310	310
TOTALVALENCE	Pearson Correlation	.104	1
	Sig. (2-tailed)	.067	
	N	310	310

Table 4 demonstrates a positive association between instrumentality and valence. However, correlation analysis suggests no significant association between instrumentality and valence.

Table 5
Correlation between Expectancy and Valence

Correlations

		TOTALEXPECTANCY	TOTALVALENCE
TOTALEXPECTANCY	Pearson Correlation	1	-.030
	Sig. (2-tailed)		.603
	N	310	310
TOTALVALENCE	Pearson Correlation	-.030	1
	Sig. (2-tailed)	.603	
	N	310	310

Table 5 illustrates a negative association between expectancy and valence. However, correlation analysis reveals no significant association between expectancy and valence.

Conclusion

Summary of Findings and Discussions

This study aims to explore the perception of learners on their employment of learning strategies. The findings of this study reveal that there is mixed result on the relationship between Vroom's component that affect learners' motivation. The results show a highly significant positive association between the instrumentality and expectancy components. This result is consistent with Amali et al (2023), who examined the learners' motivation to learn a foreign language. However, there is no relationship between instrumentality and valence, while expectancy and valence have a negative association. These findings indicate that the learners' motivation can be enhanced when expectations of the results and rewards are matched. These results are inconsistent with the study conducted by Siddiqui et al (2021) on hybrid learning.

Furthermore, this study also focuses on the component of Pintrich and De Groot's (1990) motivational scale that can be aligned with Vroom's component of motivation. Three research questions have been answered by calculating the mean score of the components. In answering the first research question on how instrumentality influences learners' motivation, the results suggest that instrumentality (represented by value and task value belief) positively influences the learners' motivation. The study found that the highest value of intrinsic goal orientation is trying to understand the contents of the program. For extrinsic goal orientation, getting a good grade in class provides the highest mean. Both results for intrinsic and extrinsic goal orientation are consistent with the studies done by Amali et al (2023); Hariri et al (2021); Jenal et al (2022), in which the other items also provide a positive rating. The primary goal for learners is to achieve excellent results and to demonstrate their ability to others (Jenal et al., 2022). For task value beliefs, the importance of learning the course materials and understanding the subject course represented the highest means. These results are also consistent with the study done by (Jenal et al., 2022).

To answer the second research question on how expectancy influences the learners' motivation, expectancy moderately affects the learners' motivation. All items were positively rated under the learners' perception of self-efficacy and their control beliefs for learning. Some of these findings are consistent with (Amali et al., 2023; Jenal et al., 2022). Moreover, Hariri et al (2021) explained that the learners' belief in their capacity to perform the

assessments and the worth of learning influences their participation in self-regulated learning. Learners must have the will and skill to have successful outcomes.

The results of the third research question on how valence influences the learners' motivation demonstrate that the affective component moderately influences most learners. The results indicate potential adverse outcomes of failing the evaluation may lower the learners' motivation. Some of these findings are consistent with (Amali et al., 2023; Jenal et al., 2022). The results of this study add to the body of knowledge on motivation among undergraduate learners. Thorough knowledge of the elements influencing motivation to learn among university learners can be achieved by combining Vroom's (1964) expectancy theory and Pintrich and De Groot's (1990) motivational scale. Motivation among undergraduate learners in Malaysian universities may increase once they know the value of the knowledge and the rewards they will get.

Implications and Suggestions for Future Research

This study was designed to enhance motivation based on diverse learning approaches adopted by the learners of higher learning institutions in Malaysia. It focuses on the relationship between Vroom's expectation theory and motivation among undergraduate learners in Malaysian universities. The findings are beneficial to enhance the learners' performance. Appropriate teaching and learning approaches will help the learners continuously strive to succeed. Educators should ensure that the outcome of their course aligns with the learners' expectations. This effort will foster the learners' desire to perform in their studies and achieve the university's objectives.

Due to the lack of literature incorporating Vroom's theory and learning approaches, future research can focus on the effects of the three components on the learners' learning styles and academic performance. In addition, comparing the results based on gender and discipline will be beneficial to assess whether motivational levels differ among diverse learners. Furthermore, the mixed method approach could be adopted to obtain rich information on the different results for each of Vroom's components.

References

Amali, N. A. K., Seng, H. Z., Rahmat, N. H., Mustafa, N. C., & Ibrahim, I. W. (2023). An investigation of learners' motivational drive to learn foreign language: A look at Vroom's expectancy theory. *International Journal of Academic Research in Business and Social Sciences*, *13*(3), 580–596.

Arora, V., & Iyer, E. (2020). A study on knowledge, skill and attitude for bridging the employability gap between the industry and academia in higher management education in India. *International Journal of Innovation in Management, Engineering and Science*, *5*(4), 52–60.

Atkinson, J. W. (1957). Motivational determinants of risk-taking behavior. *Psychological Review*, *64*, 359–372. https://doi.org/10.1037/h0043445

Chiu, T. K. F., Lin, T.-J., & Lonka, K. (2021). Motivating online learning: The challenges of COVID-19 and beyond. *The Asia-Pacific Education Researcher*, *30*(3), 187–190. https://doi.org/10.1007/s40299-021-00566-w

Chung, E., Subramaniam, G., & Christ Dass, L. (2020). Online learning readiness among university students in Malaysia amidst Covid-19. *Asian Journal of University Education*, (2), 45–58. https://doi.org/10.24191/ajue.v16i2.10294

Daniels, L. M., Goegan, L. D., & Parker, P. C. (2021). The impact of COVID-19 triggered changes to instruction and assessment on university students' self-reported motivation, engagement and perceptions. *Social Psychology of Education*, *24*(1), 299–318. https://doi.org/10.1007/s11218-021-09612-3

Dong, L., Liu, M., & Yang, F. (2022). The relationship between foreign language classroom anxiety, enjoyment, and expectancy-value motivation and their predictive effects on Chinese high school students' self-rated foreign language proficiency. *Front Psychol*, *13*, 860603. https://doi.org/10.3389/fpsyg.2022.860603

Duy, N. B. P., Binh, L. C., & Giang, N. T. P. (2021). Factors affecting students' motivation for learning at the Industrial University of Ho Chi Minh City. In K. Arai, S. Kapoor, & R. Bhatia (Eds.), *Proceedings of the Future Technologies Conference (FTC) 2020* (Vol. 2, pp. 239–262). Cham: Springer.

Edgar, S., Carr, S. E., Connaughton, J., & Celenza, A. (2019). Student motivation to learn: Is self-belief the key to transition and first year performance in an undergraduate health professions program? *BMC Medical Education*, *19*(1), 111. https://doi.org/10.1186/s12909-019-1539-5

Ferrer, J., Ringer, A., Saville, K., A Parris, M., & Kashi, K. (2022). Students' motivation and engagement in higher education: The importance of attitude to online learning. *Higher Education*, *83*(2), 317–338. https://doi.org/10.1007/s10734-020-00657-5

Filgona, J., Sakiyo, J., Gwany, D., & Okoronka, A. (2020). Motivation in learning. *Asian Journal of Education and social studies*, *10*(4), 16–37.

Hariri, H., Karwan, D. H., Haenilah, E. Y., Rini, R., & Suparman, U. (2021). Motivation and learning strategies: Student motivation affects student learning strategies. *European Journal of Educational Research*, *10*(1), 39–49. https://doi.org/10.12973/eu-jer.10.1.39

Jackson, S. L. (2015). *Research methods and statistics: A critical thinking approach* (5th ed.). Cengage Learning.

Jenal, N., Taib, S. A., Iliyas, S. M. M., Sa'adan, N., Saleh, N. S., & Noorezam, M. (2022). Investigating students' learning motivation based on value, expectancy and affective components. *International Journal of Academic Research in Business and Social Sciences*, *12*(10), 641–661.

Li, G., Luo, H., Lei, J., Xu, S., & Chen, T. (2022). Effects of first-time experiences and self-regulation on college students' online learning motivation: Based on a national survey during COVID-19. *Education Sciences*, *12*(4), 245. https://www.mdpi.com/2227-7102/12/4/245

Martin, A. J. (2004). School motivation of boys and girls: Differences of degree, differences of kind, or both? *Australian Journal of Psychology*, *56*(3), 133–146. https://doi.org/https://doi.org/10.1080/00049530412331283363

Min, H., Tan, P. X., Kamioka, E., & Sharif, K. Y. (2020). Enhancement of study motivation model by introducing expectancy theory. *International Journal of Learning and Teaching*, *6*(1), 28–32.

Oliver, R. L. (1974). Expectancy theory predictions of salesmen's performance. *Journal of Marketing Research*, *11*(3), 243–253. https://doi.org/10.1177/002224377401100302

Parijat, P., & Bagga, S. (2014). Victor Vroom's expectancy theory of motivation–An evaluation. *International Research Journal of Business and Management*, *7*(9), 1–8.

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. https://doi.org/https://doi.org/10.1016/B978-012109890-2/50043-3

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. https://doi.org/https://doi.org/10.1037/0022-0663.82.1.33

Rahmat, N. H. (2019). An investigation of self-determination factors among postgraduate students. *American Journal of Education and Learning*, *4*(1), 135–146.

Rasheed, R. A., Kamsin, A., & Abdullah, N. A. (2020). Challenges in the online component of blended learning: A systematic review. *Computers & Education*, *144*, 103701.

Rayat, R., & Gupta, A. (2021). Motivation theories: A review and its implications in improving organisational health. *International Journal of Management*, *12*(1), 435–442.

Rehman, S., Sehar, S., & Afzal, M. (2019). Performance appraisal; Application of Victor Vroom expectancy theory. *Saudi Journal of Nursing and Health Care*, *2*(12), 431–434.

Siddiqui, S., Soomro, N. N., & Thomas, M. (2021). Is hybrid learning a source of satisfaction or distraction? An experimental study conducted in the light of Vroom's expectancy elements. 34th ANNUAL CONFERENCE OF THE ASIAN ASSOCIATION OF OPEN UNIVERSITIES (AAOU 2021), Colombo, Sri Lanka.

Vroom, V. H. (1964). *Work and motivation*. Wiley.

Yoes, M., & Silverman, M. J. (2020). Expectancy theory of motivation and substance use treatment: Implications for music therapy. *Music Therapy Perspectives*, *39*(1), 61–68. https://doi.org/10.1093/mtp/miaa019

Yunos, N. M., Thangal, T. B. T., Sharif, N. F. M., Rashid, N. R. A., & Rahmat, N. H. (2021). Exploring motivation to learn mathematics through Vroom's theory. *European Journal of Education Studies*, *8*(11), 122–139. https://doi.org/http://dx.doi.org/10.46827/ejes.v8i11.3976

Zboja, J. J., Jackson, R. W., & Grimes-Rose, M. (2020). An expectancy theory perspective of volunteerism: The roles of powerlessness, attitude toward charitable organizations, and attitude toward helping others. *International Review on Public and Nonprofit Marketing*, *17*(4), 493–507. https://doi.org/10.1007/s12208-020-00260-5