Learning Motivation: A Correlational Study between Value and Expectancy Components

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Abstract
Students' motivation to learn has been a primary concern in education during emergency remote teaching and learning during the COVID-19 pandemic. Two of the main elements in learning motivation are value components and expectancy components. This paper presents the value components' influence on learning motivation, the expectancy components' influence on learning motivation, the difference in mean score between value and expectancy components, and the relationship between value and expectancy components in learning motivation. This quantitative study used a set of questionnaires with two sections and 19 items. The survey was administered online to 151 respondents from a public university in Malaysia, and the collected data were analysed using descriptive and inferential statistics. Findings revealed that both value and expectancy components received positive responses from students, with value components receiving a higher mean score compared to expectancy components. Meanwhile, correlation analysis revealed a strong positive relationship between value and expectancy components. Therefore, it is suggested that teachers take into account the elements of value and expectancy components in establishing students' learning motivation.
Keywords: Learning Motivation, Value Components, Expectancy Components, Covid-19, Correlation Study.

Introduction
Background of Study

In Malaysia, the Covid-19 outbreak has resulted in a considerable shift towards online learning. The transition has brought new obstacles, including concerns about student motivation. Student motivation to learn is a critical aspect of online learning success. Learning motivation is defined as the factors that initiate, guide, and sustain goal-directed behaviour, including biological, emotional, social, and cognitive forces (Ryan & Deci, 2000) and the degree to which a student is willing to engage in academic activities, such as studying, attending lectures, and participating in discussions, in order to achieve their academic education (Wigfield & Eccles, 2000). Understanding the factors that drive motivation to learn becomes crucial in this environment (Jenal et al., 2022).

Studies conducted in the Malaysian context have found a number of factors influencing learning motivation during Covid-19 in Malaysia, which are technology challenges (Al-Kumaim et al., 2021), teacher-student relationship (Raghunathan et al., 2022), self-regulated learning (Tajudin et al., 2022), learning strategies (Anthonysamy & Singh, 2023), autonomy (Cockburn et. al, 2022), and social support (Tan, 2020). However, some factors also negatively influenced student learning motivation in that period, such as isolation (Ismail & Razak, 2021) and anxiety and stress (Ahmad et al., 2022). Students must be motivated to learn to adjust to the new way of learning. They are also expected to take more responsibility for their learning in the setting of online learning, which can be difficult without appropriate motivation. Therefore, motivation to learn becomes significant in increasing student involvement and interaction, which are vital for optimal learning.

During this time, the studies have also discovered both positive and negative effects of learning motivation on academic achievement. Students with high motivation were discovered to be more likely to involve in online learning tasks, which led to better academic achievement (Anthonysamy & Singh, 2023; Osman et al., 2021), while students with low motivation due to the challenges in online learning were discovered to have poor academic performance during the emergency remote teaching and learning (Anthonysamy & Singh, 2023; Tan, 2020). In conclusion, it was discovered that learning motivation substantially impacted student academic performance in Malaysia during the COVID-19 pandemic. Motivation was discovered to have a beneficial impact on academic achievement, whereas a lack of motivation had a negative effect. In addition, it was also found that the usage of effective self-efficacy (Osman et al., 2021) and self-regulated learning strategies (Tajudin et al., 2022) were predictors of academic achievement.

Statement of Problem

Generally, students must be able to govern their conduct and retain their academic goals to attain academic success amid challenging academic tasks (Pintrich & Zusho, 2007; Richardson et al., 2012; Schunk & Zimmerman, 2006: Virtanen et al., 2013). This situation in which a student feels self-driven to study is referred to as motivation, and it is viewed as an essential factor in obtaining learning results (Schunk, 2012; Alamer & Alrabai, 2022; Wang & Xue, 2022). According to Pintrich and De Groot (1990), a learner's motivation is determined by value and the learner's expectations of what would be acquired through experience. While learners' prior knowledge might influence their values, their expectancy about their potential for success significantly impacts their educational outcomes (Ding et al., 2013). Therefore, motivation is essential in students' long-term development because it allows them to make informed decisions, maintain their focus, and succeed academically. This is explained by the fact that when learners believe they can complete a task and anticipate success, they are

more likely to engage in it, stick with it longer, and thus achieve more outstanding results (Bergey et al., 2018).

The teaching and learning lessons during the COVID-19 pandemic utilised online interaction and permitted a mixed learning environment, but students needed help acclimating to the changes. As a result, instructors must assess students' motivation to cater for a conducive learning environment. This is because instructors' teaching presence and the appropriate aid they provide learners significantly impact them (Lee & Song, 2022). A study by Chin et al. (2022) on the perceived motivational climate, goal orientations, expectancy beliefs, and task values of Malaysian Physical Education trainee teachers corroborated the necessity of expectancy beliefs and task values for learning motivation. Furthermore, it has been demonstrated that trainees' expectations and values are related to their comfort, confidence, fulfilment of their expectations, and knowledge of the curriculum (Chin et al., 2022). Therefore, besides influencing trainees' academic performance, the value and expectation components enhance their appreciation for the course material.

Numerous studies have been conducted to determine the factors and levels of student motivation. However, relatively few studies have examined the extent to which students' expectations and values vary (Dietrich et al., 2017). Constant updates and observations of the information related to the relationship between expectancy and value in Malaysian students' learning motivation are required, especially for undergraduates. Validation of students' values and expectations provides data on students' learning profiles based on current classroom and course demand (Vanslambrouck et al., 2017). In addition, various students may be affected differently by performance factors such as self-efficacy and previous academic accomplishments, making the study on motivation significant (Ivaniushina et al., 2016). Furthermore, theories and studies favourably investigate intrinsic motivations, whereas it is less understood if extrinsic motivation is as essential as intrinsic motivation (Liu et al., 2023), necessitating additional research to determine which motivation aids students in learning. A related study by Jenal et al (2022) focused solely on how value, expectation, and affective components influenced the learning motivation of Malaysian undergraduates during the COVID-19 pandemic. Based on the results, the study demonstrated that extrinsic goal orientation and control beliefs play a crucial role in students' exceptional learning performance. Therefore, it is necessary to investigate the relationship between expectations and values to cast light on students' difficulties and improve their performance. This study investigates whether there is a relationship between the two components of learning motivation, expectancy, and value. The purpose of this investigation is to address the following research questions

- How do value components influence learning motivation?
- How do expectancy components influence learning motivation?
- How do the means differ for value components and expectancy components?
- Is there a relationship between value and expectancy components in learning motivation?

Literature Review
Value Components in Learning Motivation
One of the motivating components is the value component, which comprises students' objectives and opinions regarding the task's significance and appeal (Pintrich & De Groot, 1990). This motivational component is primarily concerned with learners' intrinsic and extrinsic orientations and task value. According to Legault (2016), intrinsic motivation refers

to activities that are inherently satisfying or enjoyable. Intrinsic motivation is non-instrumental in nature, meaning that intrinsically driven behaviour is not contingent on any outcome except from the behaviour itself. Extrinsic motivation refers to behaviour that is primarily dependent on reaching an aim unrelated to the activity. Hence, the extrinsic drive is naturally advantageous, where it is done to reach another objective. A student may, for instance, prepare for an exam to earn an A. Extrinsic motivation is multimodal, spanning from external to internal in nature. In contrast to goal orientation, task value relates to the student's assessment of how entertaining, relevant, and valuable the activity is and with high task value, it should increase one's learning engagement (Jenal et al., 2022).

Expectancy Components in Learning Motivation
The expectancy–value theory is a motivational theory that claims people's expectations for success and the value of tasks are key to predicting their future decisions, participation, continuity, and achievements (Eccles & Wigfield, 2002). Expectancy components include self-efficacy and control beliefs (Pintrich, 2003). Academic self-efficacy means how well a learner thinks he or she can do a given learning task at the required level (Schunk, 2016). Self-belief influences learning motivation that affects how learners deal with goals, challenges, and responsibilities. The difference between strong and low expectancy components among learners is their perceptions of acceptance and perseverance in accomplishing tasks (Hayat et al., 2020; Kurbanoglu & Akin, 2010). It means that students with high value of expectancy components will reflect good performance from their committed effort in completing difficult and complex tasks in their courses. On the contrary, students with low self-efficacy and control beliefs will achieve ordinary grades and goals they set beforehand.

Past Studies
Past Studies of Online Learning Motivation
Many studies have been done on the subject of online learning and motivation. Findings of previous research suggest that online learning does affect motivation positively (Alario-Hoyos et.al., 2017; Lin & Chen, 2017; Gustiani, 2020).
The study by Lin (2017) is done to investigate the positive effects of digital learning on learning motivation and learning outcomes. This quasi-experimental study uses a non-equivalent pretest-posttest control group design involving a total of 116 students, grouped into experimental and control groups, which undergo digital and traditional learning respectively. Factor Analysis, Reliability Analysis, Regression Analysis, and Analysis of Variance are applied to test various hypotheses. It was found that both learning motivation and outcomes are positively affected by digital learning.
Next, the study by Gustiani (2020) also looked at the aspect of motivation and online learning specifically during the Covid-19 pandemic era. 22 students were involved in individual interviews and focus group interviews. Both intrinsic and extrinsic motivation factors were considered during the interviews, and the thematic analysis of the data revealed that students' motivation toward their online learning was more intrinsically affected, specifically by their ambition to learn new knowledge and enjoyment in experiencing new learning method Instrument. However, it is also worth noting that key aspects such as poor external supporting facilities do have negative effects towards students' motivation, The same issues were also highlighted by (Gillett-Swan, 2017; Simamora, 2020; Zainol et al., 2021).
As the aspects of self-efficacy and motivation are concerned, Wei and Chou (2020) in their study involving undergraduate students enrolled in a cross-campus, general education,

asynchronous online course in Taiwan contends that self-efficacy and motivation in online learning positively affect students' performance and overall satisfaction. The result from the structural equation modelling analysis implies that pedagogically, online courses with an emphasis on computers and self-efficacy are important in ensuring students' motivation throughout the learning process.

Conceptual Framework
Figure 1 presents the conceptual framework for the study. This study is adapted from the study by Pintrich and De Groot (1990) who reported that learners are motivated by value and expectancy components. If the knowledge is not of any use to the learner, he/she may not give any attention to its attainment (Rahmat et al., 2021)
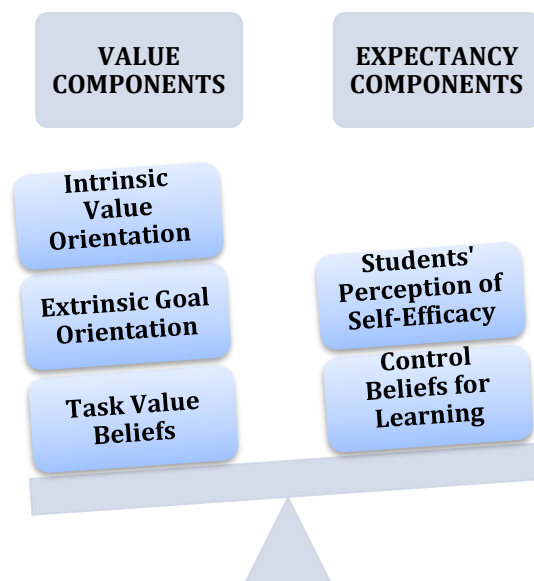

Figure 1- Conceptual Framework of the Study: Relationship between Value Components and Expectancy Components for Learning Motivation

Methodology
This quantitative study is done to investigate. 151 participants were purposely chosen from a public university in Malaysia. The instrument (refer to Table 1). used is a survey adapted from (Pintrich and De Groot, 1990). Apart from the demographic profile in Part 1, there are 4 other sections. Section A 12 items on value components, and section B has 7 items on expectancy component.

Table 1
*Distribution of Items in Survey *Adapted from Pintrich & De Groot (1990)*

SECTION	CONSTRUCT	VARIABLE		No Of Items	Total Items
A	VALUE COMPONENTS	(a)	Intrinsic Goal Orientation	4	12
		(b)	Extrinsic Goal Orientation	3	
		(c)	Task Value Beliefs	5	
B	EXPECTANCY COMPONENT	(a)	Students' Perception of Self-Efficacy	5	7
		(b)	Control Beliefs for Learning	2	
TOTAL NUMBER OF ITEMS					**19**

Data were collected via Google Forms and analysed by using IBM SPSS Statistics 28. Both descriptive and inferential statistics were utilised to present the findings. SPSS analysis revealed a Cronbach's Alpha of .929; thus, showing high reliability for the instrument.

Table 2
Reliability Statistics

Reliability Statistics	
Cronbach's Alpha	**No of Items**
.929	19

Findings
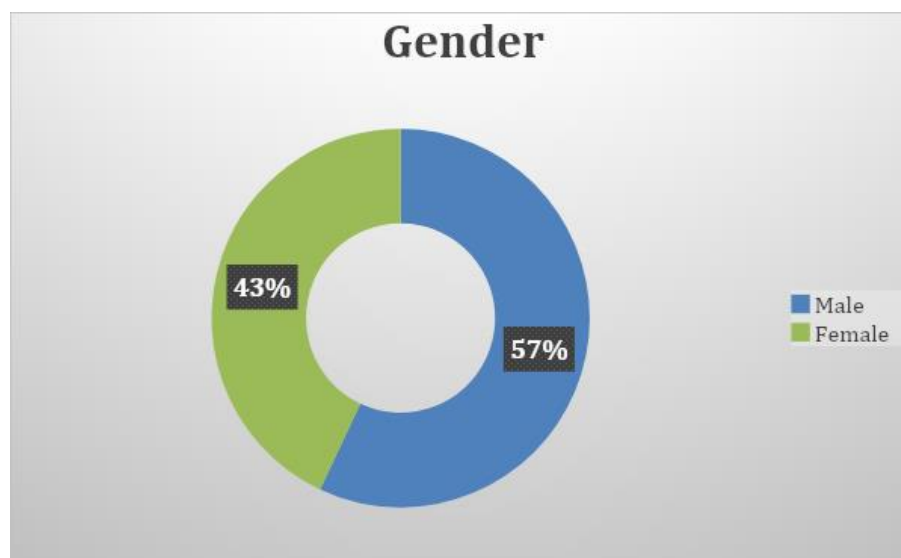Findings for Demographic Profile
Gender

Figure 2- percentage for Gender

Figure 2 shows the percentage of respondents by gender. There were more male respondents in the study (57%) than female respondents (43%).
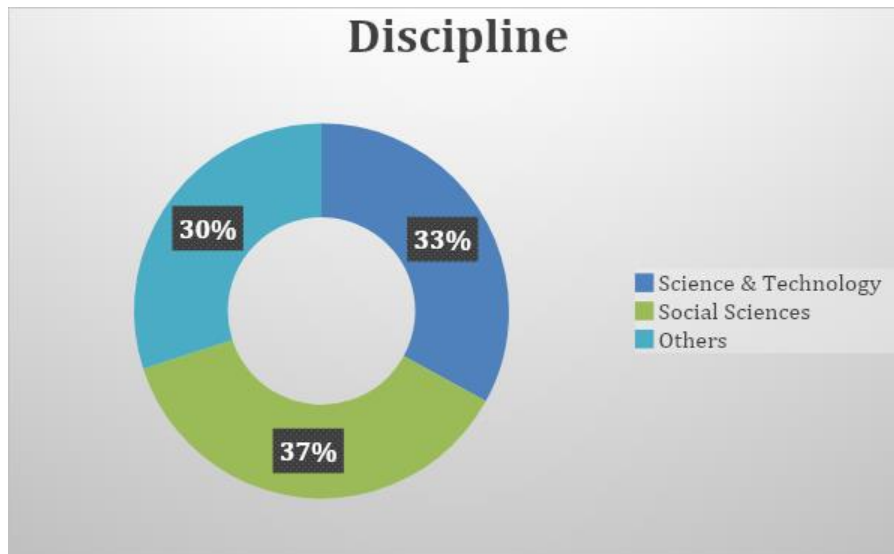
Discipline

Figure 3-Percentage for Age Group
Figure 3 depicts the distribution of differ
rent fields of study that the respondents represented. The area of Social Science was represented by the most significant proportion of participants in this research endeavour (37%): The Science and Technology subject comes in second with 33% of the total respondents. In the meantime, the remaining respondents were categorised as "Others," making up about 30% of the total.

Findings for Value Components
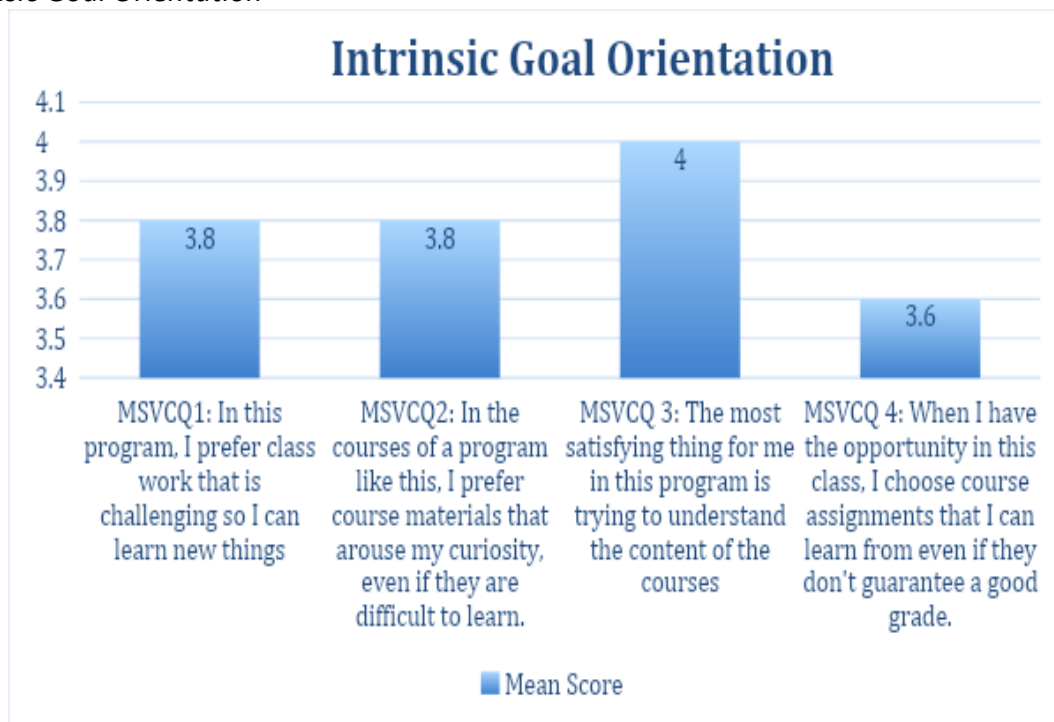*Intrinsic Goal Orientation*

Figure 4- Mean Score for Intrinsic Goal Orientation

Figure 4 shows the mean scores obtained on the intrinsic goal orientation component. All items recorded a mean of 3.5 and above. The highest mean score goes to item MSVCQ

(M=4), indicating agreement towards the most satisfying thing for them in the programme is trying to understand the content of the courses. The least mean recorded is on item MSVCQ 4 (M=3.6) where if they were given an opportunity in the class, they would choose course assignments that they could learn from even if it doesn't guarantee a good grade.
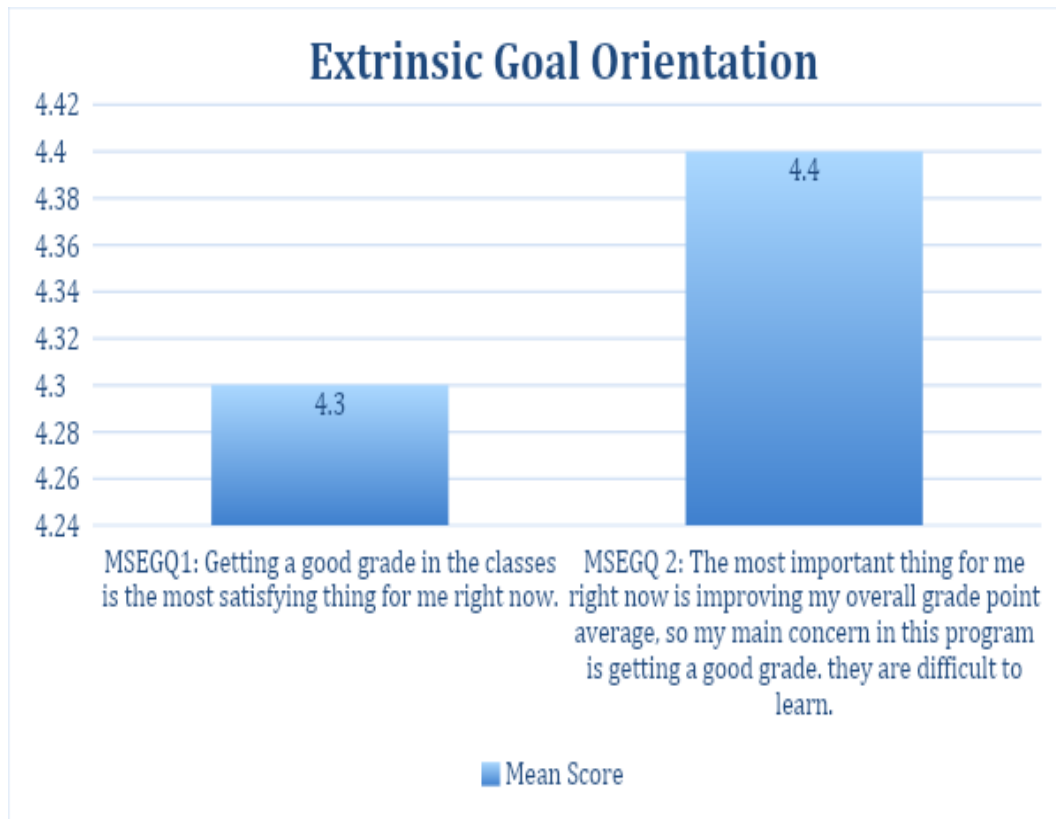
Extrinsic Goal Orientation

Figure 5- Mean Score for Intrinsic Goal Orientation

Figure 5 above shows the mean values for extrinsic goal orientation. Learners agreed with a mean value of 4.3 that getting a good grade in the class is the most satisfying thing. The highest mean value achieved is 4.4, where the main concern for the learners is getting good grades to improve their overall grade point average. The final extrinsic goal orientation, "I want to do well in the classes because it is important to show my ability to my family, friends, or others." has a mean of 4.3.
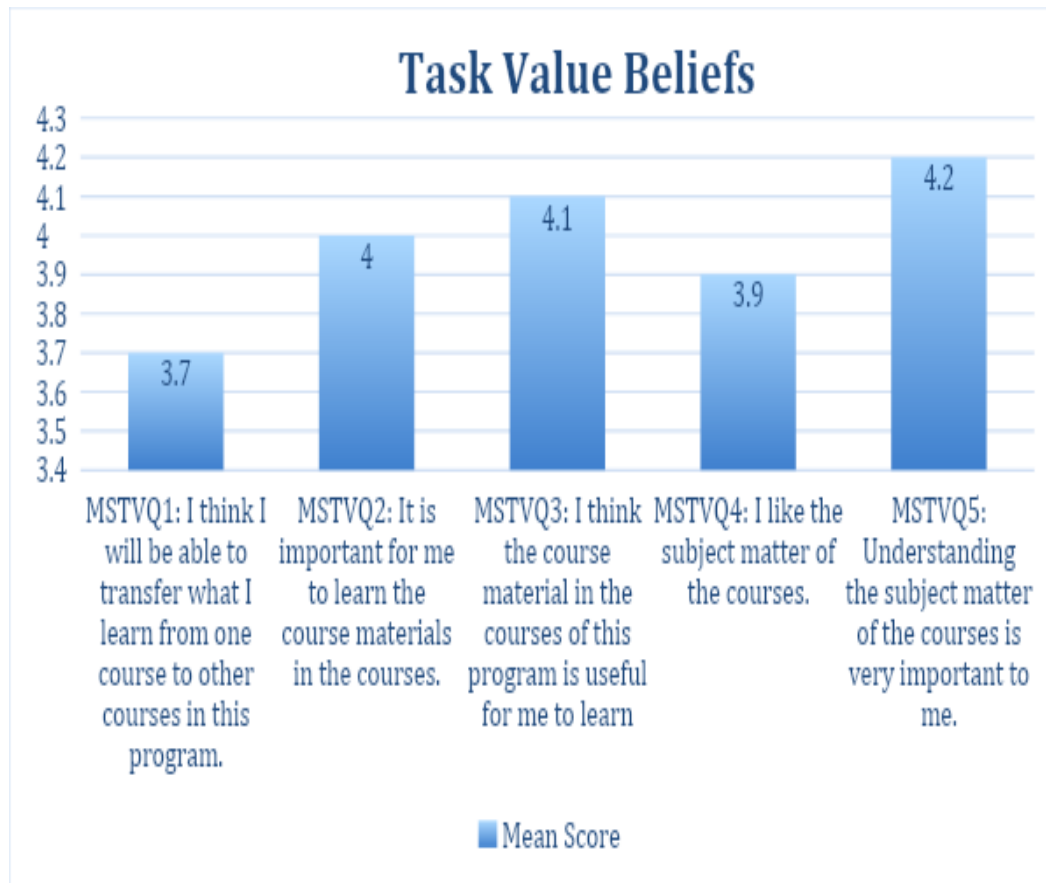
Task Value Beliefs

Figure 6- Mean Score for Task Value Beliefs

Figure 6 presents the means for Task Value Beliefs. All items scored a high mean score. Learners highly agreed that "understanding the subject matter of the courses is very important" (M=4.2) Next, learners think that "it is important for me to learn the course materials in the courses" (M=4). The lowest mean score for task value belief is to item MSTVQ1, " I think I will be able to transfer what I learn from one course to other courses in this programme" (M=3.7)

Findings for Expectancy Components

This section presents data to answer research objective 2: How do expectancy components influence learning motivation? Expectancy components are measured by (i) students' perception of self-efficacy, and (ii) control beliefs for learning.
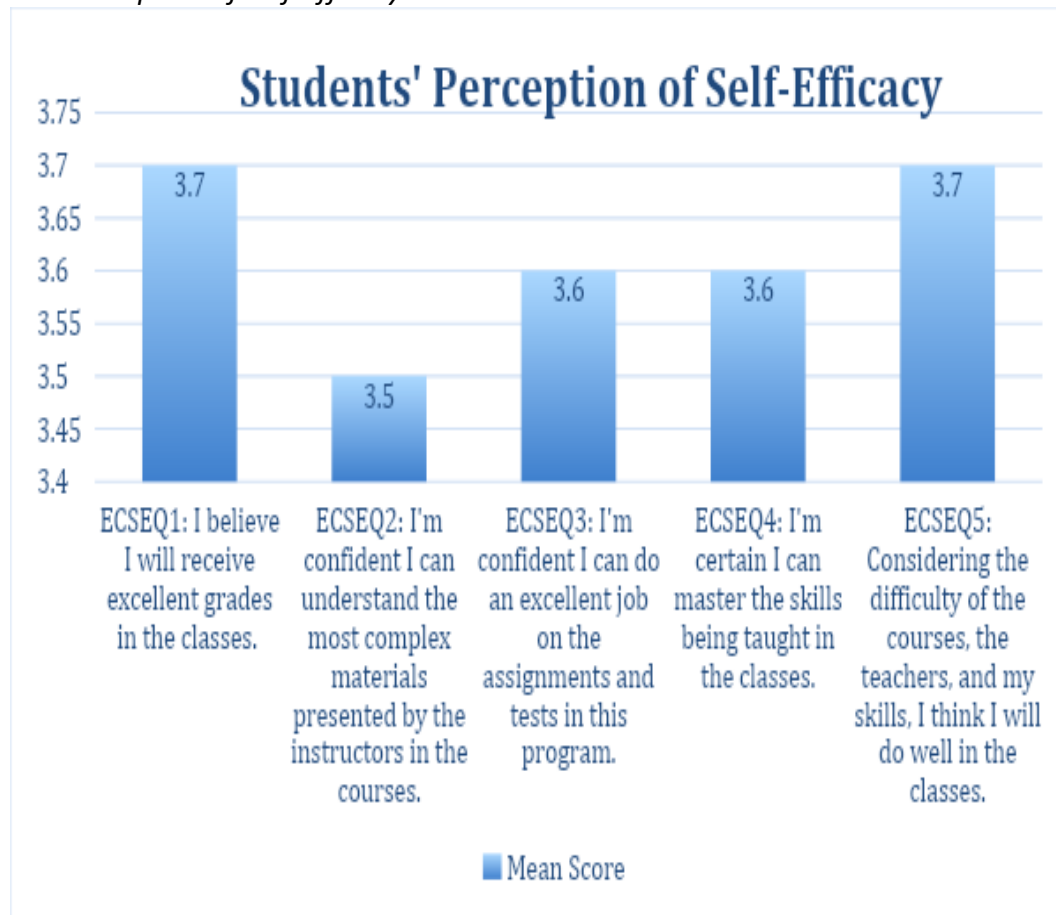
Students' Perception of Self-Efficacy

Figure 7- Mean Score for Students' Perception of Self-Efficacy

The figure above presents the findings for students' perception of self-efficacy. Two items shared the highest mean score, 3.7, namely the item regarding students' belief in getting excellent grades in class and the belief of doing well based on the course difficulty. The second highest mean score is 3.6, which is for two items regarding good performance for assignments and tests, as well as mastering the skills taught in classes. The lowest score, with a 0.1 difference, is on the item regarding students' confidence in understanding complex materials presented in class by the instructors.
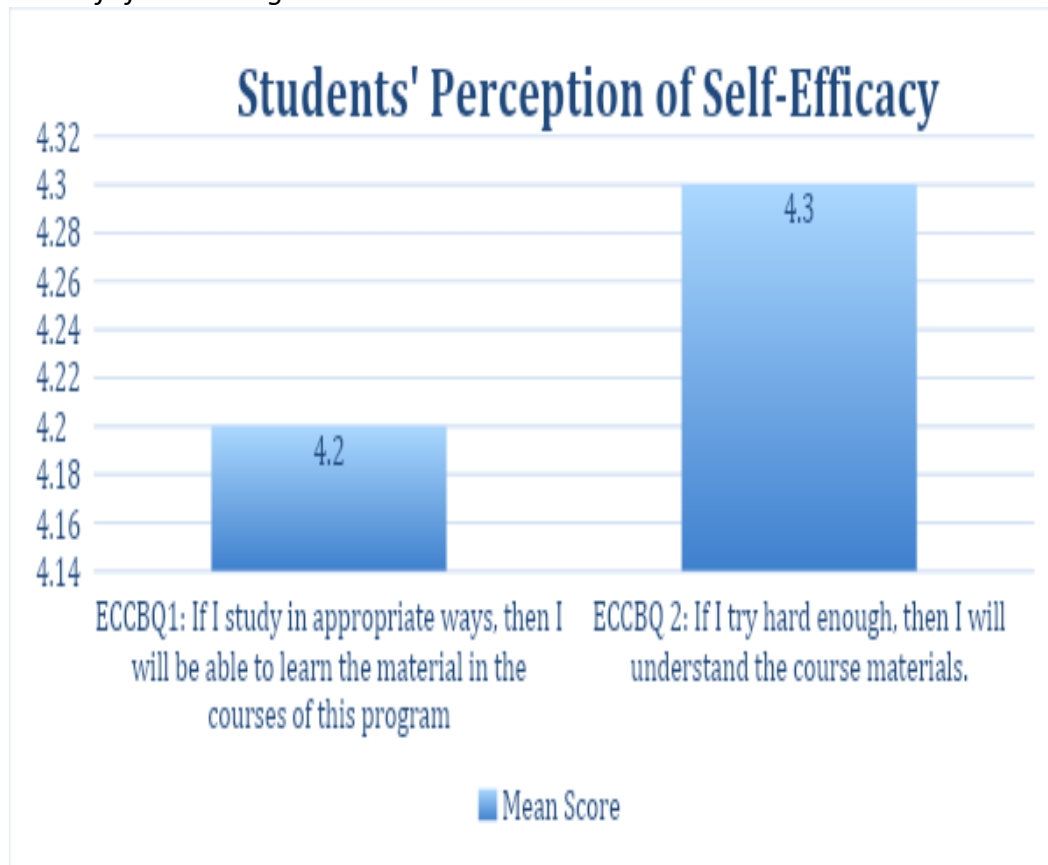
Control Beliefs for Learning

Figure 8- Mean Score for Control Beliefs for Learning

The mean values for control beliefs in learning are shown in Figure 8 above. The first statement achieves a mean of 4.2, where students believe that they will be able to learn the materials in the courses if the study is done in appropriate ways. Learners also agreed that the course materials can be understood if they try hard enough based on the mean value of 4.3.

Findings for mean difference for value and expectancy components

This section presents data to answer research objective 3: How do the means differ for value components and expectancy components?

Table 3

Mean Difference for Value Components and Expectancy Components

Report		
	Total Mean for Value Component	**Total Mean for Expectancy Component**
Mean	4.0006	3.7192
N	151	151
Std. Deviation	.51131	.59804

Table 3 presents the mean difference for value components and expectancy components. Value components scored a higher mean value at 4.0006, as compared to the mean value

scored for expectancy components, 3.7975. As for standard deviation, which measures the range of values for the data points, these two values recorded 0.51131 and 0.59804 respectively, which differ slightly from one another.

Findings for Relationship between Value and Expectancy Components

This section presents data to answer research objective 4: Is there a relationship between value and expectancy components in learning motivation? To determine if there is a significant association in the mean scores between value and expectancy components, data is analysed using SPSS for correlations. Results are presented separately in Table 4 below.

Table 4
Correlation between Value and Expectancy Components

Correlations		Total Mean for Value Component	Total Mean for Expectancy Component
Total Mean for Value Component	Pearson Correlation	1	.758**
	Sig. (2 – tailed)		.000
	N	151	151
Total Mean for Expectancy Component	Pearson Correlation	.758**	1
	Sig. (2 – tailed)	.000	
	N	151	151

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

Table 4 shows there is an association between value and expectancy components. Correlation analysis shows that there is a high significant association between value and expectancy components (r=.758**) 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 value and expectancy components.

Conclusion
Summary of Findings and Discussion
This research paper presents a study on student learning motivation during the COVID-19 pandemic in Malaysia. The first research question addressed how value components influence learning motivation. There were three parts in value components which were intrinsic goal orientation, extrinsic goal orientation, and task value beliefs where all parts received positive responses from the students with the highest mean score recorded in the extrinsic goal orientation item and the lowest mean score recorded in the intrinsic goal orientation item. This finding differed from the conclusion of a past study by Gustiani (2020) whereby the students' motivation toward their online learning was more intrinsically affected. It could be speculated that this difference was caused by the different challenges faced by the different students in different settings that occurred during the emergency remote teaching and learning such as the overwhelming amount of work and information provided by instructors, the unfamiliarity and inadaptability to the new online learning

environment, and personal health difficulties linked to stress and anxiety (Al-Kumaim et al., 2021). However, it must be noted that the difference between the mean scores in this current study has yet to be analysed as significant or not significant.

The second research question addressed how expectancy components influence learning motivation. There were two parts in expectancy components which were students' perception of self-efficacy and control beliefs for learning where both parts received positive responses from the students with the highest mean score recorded in control beliefs for the learning items and the lowest mean score recorded in the perception of the self-efficacy item. Although the lowest mean score was found in the perception of the self-efficacy item, the score was still positive which reflected the importance of self-efficacy in online learning as discovered by Wei and Chou (2020) whereby the students' online discussion score and course satisfaction were positively affected by their computer/Internet self-efficacy and motivation for learning.

Meanwhile, the third research question revealed how the means differ for value components and expectancy components. It was found that value components had higher mean scores compared to expectancy components. However, the fourth research question revealed a strong positive relationship between the value and the expectancy components in learning motivation, which suggested the importance of both components in learning motivation. As explained in previous studies, value components were comprised of intrinsic goal orientation—the tendency to participate in a task because it is inherently attractive, engaging, or rewarding Wigfield & Eccles (2000), extrinsic goal orientation—the tendency to participate in a task in order to receive external rewards or results Ryan & Deci (2000), and task value beliefs—an individual's opinion of the usefulness, significance, and relevance of a particular action or task Eccles & Wigfield (2002); while expectancy components were comprised of perception of self-efficacy—belief in the ability to successfully perform a certain task or accomplish a particular objective Schunk (2016); and control beliefs for learning—belief of having influence over the learning outcomes and that the efforts can affect the academic success (Pintrich, 2003). Thus, all these elements were important in determining the learning motivation among the students during the COVID-19 pandemic in Malaysia.

Pedagogical Implications and Suggestions for Future Research
The study's findings have led to several recommendations for increasing student learning motivation. The first major finding of the study indicates that extrinsic goal orientation is viewed as more desirable than intrinsic goal orientation, therefore, it is essential to accommodate the students by preparing more activities and integrating exciting and active online materials into the classroom to ensure their high participation and personal learning (Ivaniushina et al., 2016). It is suggested that instructors implement and enforce more activities that are tailored to the requirements and objectives of their students. The second major finding of the study indicates that although the perception of the self-efficacy item receives the lowest mean score in the expectancy component scale, it still records a positive response, hence the room for improvement in self-efficacy practices. Thus, instructors must enquire about the activities that can improve students' confidence levels in the subject matter and implement them during lessons in order to help improve students' self-efficacy. In addition, assessments or evaluations of students' self-efficacy and control beliefs may be administered prior to the beginning of the lesson. This enables instructors to employ teaching and material selection strategies; consequently, it improves student performance in the

course. Even though learners are becoming accustomed to adapting and switching from face-to-face to online and vice versa, periodically verifying their preferences and current mental and physical conditions would prevent generalisations and assumptions about the learners. The third major finding of the study indicates a strong positive relationship between the value and the expectancy components in learning motivation. It is suggested that instructors aim to combine all the elements in both value and expectancy components—intrinsic goal orientation, extrinsic goal orientation, task value beliefs, perception of self-efficacy, and control beliefs for learning, turn them into achievable activities, and execute them during lessons in order to motivate students in learning the subject matter.

This study is based on the survey form that was disseminated to respondents. Future researchers are encouraged to include open-ended queries to facilitate the collection of comprehensive data. In addition, future research can invest in employing various data triangulation techniques, such as interviews, in investigating the motivation and perception of students regarding learning. In addition, the research can be expanded to investigate the relationship between motivation, expectation, value, and trauma. In the context of Malaysia, the connection between these elements is not well-developed. Also, trauma experiences have been shown to affect learners' perceptions and behaviours, which can aid institutions, instructors, and parents in observing the growth of their students (Yehuda & Antelman, 1993; Daugherty, 1998; Gorges & Kandler, 2012). The study's findings were limited to university students from a specific university. Even though multiple campuses participated, the results cannot be used to generalise Malaysian undergraduates. Consequently, in the future, researchers can consider including samples of various groups of learners and high educational institutions Gaspard et al 2018) in Malaysia with diverse ethnic, age, and educational backgrounds to enable data generalisation.

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