

# Exploring The Relationship between Variables for Online Learning Motivation among Undergraduates

Siti Aishah Taib<sup>1</sup>, Norhisyam Jenal<sup>2\*</sup>, Noor Hanim Rahmat<sup>3</sup>

<sup>1</sup>Akademi Pengajian Bahasa, Universiti Teknologi MARA  
Cawangan Johor Kampus Pasir Gudang,  
Jalan Purnama, Bandar Seri Alam, 81750 Masai, Johor, Malaysia  
aishah711@uitm.edu.my

<sup>2</sup>Pengajian Kejuruteraan Mekanikal, Universiti Teknologi MARA  
Cawangan Johor Kampus Pasir Gudang,  
Jalan Purnama, Bandar Seri Alam, 81750 Masai, Johor, Malaysia  
hisyam0324@uitm.edu.my

<sup>3</sup>Akademi Pengajian Bahasa, Universiti Teknologi MARA  
Cawangan Johor Kampus Pasir Gudang  
Jalan Purnama, Bandar Seri Alam, 81750 Masai, Johor, Malaysia  
noorh763@uitm.edu.my

\*hisyam0324@uitm.edu.my

Received: 15 January 2024

Accepted: 25 February 2024

Date Published Online: 1 January 2024

Published: 1 January 2024

**Abstract:** *The absence of human face-to-face communication during the COVID-19 pandemic has raised the concern of online learning motivation among students due to the sudden emergency remote teaching and learning in Malaysia. The three aspects of learning motivation that are often studied in the field of education are value, expectancy, and affective components. Hence, this paper presents the relationship between the three variables for online learning motivation among undergraduates during the emergency remote teaching and learning period. A set of questionnaires comprising three sections and 24 items was employed in this quantitative study. The survey was conducted online to 151 respondents from a Malaysian public university, and the data collected were analysed using descriptive and inferential statistics. Findings indicated that online students provided positive responses for all the three components of online learning motivation: namely, value, expectancy, and affective. Meanwhile,*

*correlations tests yielded a strong positive relationship between value and expectancy components and a weak positive relationship between value and affective components. This paper also discusses pedagogical implications and future research of the study.*

**Keywords:** *Affective Component, Expectancy Component, Learning Motivation, Value Component.*

## 1. INTRODUCTION

The COVID-19 pandemic has significantly shifted educational practices towards online platforms in Malaysia. This transition has made it essential to reevaluate the factors that contribute to student motivation in online settings. Drawing on the theoretical frameworks by Ryan and Deci (2000), student motivation can be understood as a complex interplay of psychological, social, and biological factors that drive and sustain behaviours aimed at achieving academic goals. This complexity is especially relevant in an online learning setting, where students are often required to engage autonomously in academic activities (Jenal et al., 2022).

Research within this particular sociocultural landscape has pinpointed a range of factors affecting student motivation during the pandemic. Notable variables include social support networks (Tan, 2020), technological support (Al-Kumaim et al., 2021), self-regulated learning (Tajudin et al., 2022), and effective learning strategies (Anthonysamy & Singh, 2023). On the other hand, elements such as social isolation (Ismail & Razak, 2021) and increased stress levels (Al-Kumaim et al., 2021) have been found to negatively impact motivation. These latter aspects are crucial, as they highlight the need for students to adapt and assume greater personal responsibility in an online instructional environment.

Additionally, research has revealed a dual impact of motivation on academic outcomes. A positive relationship between higher levels of motivation and better academic performance has been confirmed by some studies (Anthonysamy & Singh, 2023; Osman et al., 2021). On the

other hand, a lower level of motivation, often brought on by the inherent challenges of online education, has been linked to poorer academic results (Anthonysamy & Singh, 2023; Tan, 2020). These findings collectively emphasise that student motivation plays a critical role in shaping academic performance amid the transition to online learning in Malaysia. Factors such as self-efficacy (Osman et al., 2021) and effective use of self-regulated learning strategies (Tajudin et al., 2022) further contribute to this complex relationship and can be predictive of academic success.

In the field of educational psychology, the ability for students to self-regulate and maintain their academic ambitions is crucial for optimal educational performance, especially when tackling complex academic tasks (Pintrich & Zusho, 2007). Central to this self-regulatory function is the concept of motivation, which is closely tied to academic achievement (Wang & Xue, 2022). Student motivation is largely driven by the interplay of two factors: the intrinsic value assigned to academic tasks and the expected likelihood of successfully completing them (Pintrich & De Groot, 1990). Higher levels of motivation typically lead to extended engagement with tasks, which in turn results in better academic outcomes (Berger et al., 2018).

The pedagogical approaches during the COVID-19 pandemic have primarily shifted to online platforms, creating a blended learning environment. This sudden shift has required educators to rethink strategies to maintain a learning environment that is conducive to student motivation (Lee & Song, 2022). Recent empirical work, such as the study by Chin et al. (2022), underscores the importance of expectancy beliefs and task values in influencing the motivational dynamics among learners. These dynamics extend to the emotional, cognitive, and behavioural aspects of the learning experience.

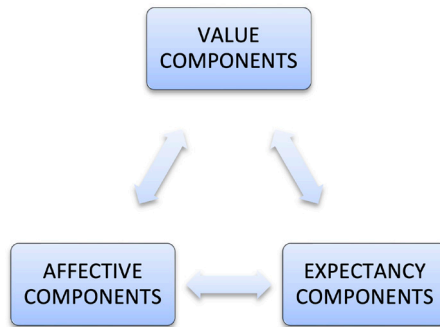
Given the limited research that focuses explicitly on variations in students' expectations and values (Dietrich et al., 2017), an ongoing empirical examination is essential, particularly among undergraduate students. This need is highlighted by the study from Vanslambrouck et al. (2017), which suggests that understanding these motivational variables can provide valuable guidelines for adapting to the changing educational landscape.

Additionally, individual differences in student experiences, shaped by unique factors like self-efficacy and previous academic performance, call for a more nuanced approach to motivational studies (Ivaniushina et al., 2016). Moreover, while much of the existing research has concentrated on intrinsic motivation, there has been less focus on the role of extrinsic motivational factors (Liu et al., 2023). Meanwhile, a study by Jenal et al. (2022) begins to fill this gap by researching the three motivational components during emergency remote teaching and learning during COVID-19 pandemic. Therefore, a more detailed investigation into the relationship across variables for motivational components could help identify obstacles to student success and inform more effective pedagogical strategies. This study aims to delve into the interaction between the motivational elements of value, expectancy, and affective, as outlined through specific research objectives:

- To investigate the influence of value components on learners' motivation
- To investigate the influence of expectancy components on learners' motivation
- To investigate the influence of affective components on learners' motivation
- To investigate the relationship across variables for the motivational components.

## **2. CONCEPTUAL FRAMEWORK**

Figure 1 presents the structure of this conceptual framework that captures the complexity of motivational constructs. It allows for an integrated approach that considers the multifaceted nature of motivation in the context of educational settings. Each component offers a distinct lens through which the dynamics of motivation can be understood, offering a comprehensive framework for subsequent empirical investigation.



**Fig. 1** Conceptual framework of the study: Relationship across variables for motivational components

This study takes inspiration from the work of Pintrich and De Groot (1990), who identified key motivational constructs that include (a) value components, (b) expectancy components, and (c) affective components. The value components can be assessed by focusing on (i) intrinsic goal orientation, (ii) extrinsic goal orientation, and (iii) task value beliefs. On the other hand, expectancy components are gauged by (i) students' perceptions of self-efficacy and (ii) control beliefs regarding learning. Finally, affective components relate to the emotions specifically tied to interest and motivation in the learning process. For many students, employing affective strategies can help alleviate learning-related anxiety (Rahmat, 2018).

### 3. METHODOLOGY

This study employs a quantitative approach to investigate the factors influencing motivation for learning among undergraduate students. A purposive sample consisting of 151 participants was recruited for the survey. The instrument used in this study is a 5-point Likert-scale survey, which is based on the motivational constructs developed by Pintrich and De Groot (1990). These constructs are outlined in Table 1 below. The survey is divided into four sections: Section A focuses on demographic information; Section B contains 12 items related to value components; Section C includes 7 items on expectancy components; and Section D has 5 items concerning affective components.

Section	Construct	Variable		No. Of Items	Total Items
<b>B</b>	Value Components	i)	Intrinsic Goal Orientation	4	12
		ii)	Extrinsic Goal Orientation	3	
		iii)	Task Value Beliefs	5	
<b>C</b>	Expectancy Components	i)	Students' Perception of Self-Efficacy	5	7
		ii)	Control Beliefs for Learning	2	
<b>D</b>	Affective Components				5
<b>Total No. Of Items</b>					<b>24</b>

**Table 1.** Distribution of items in the survey

Table 2 displays the reliability metrics for the survey instrument. The analysis indicates a Cronbach's alpha value of .907, suggesting that the instrument possesses good reliability. To address the research questions of this study, further analyses are conducted using Statistical Package for the Social Sciences (SPSS) software.

Cronbach's Alpha	N of Items
.907	24

**Table 2.** Reliability of Survey

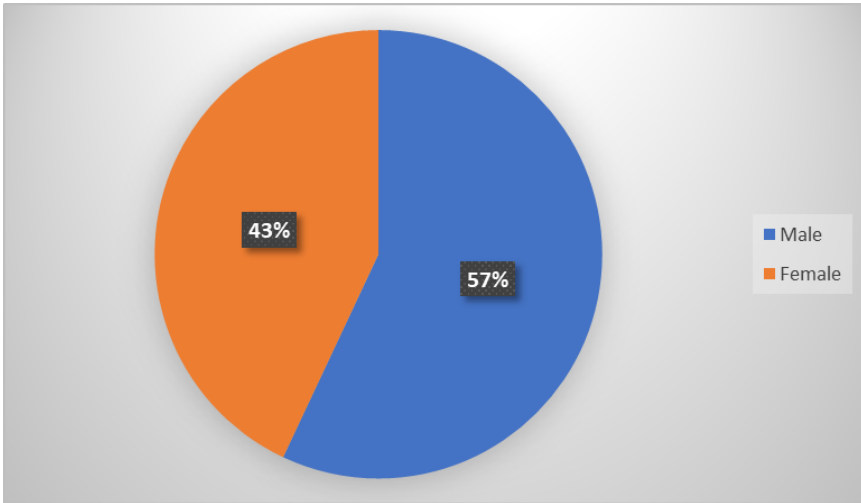
## 4. RESULTS AND DISCUSSION

This section presents the results and discussion of the study.

### 4.1 RESULTS FOR DEMOGRAPHIC PROFILE

There are two questions for this section which are respondents' gender and discipline of study.

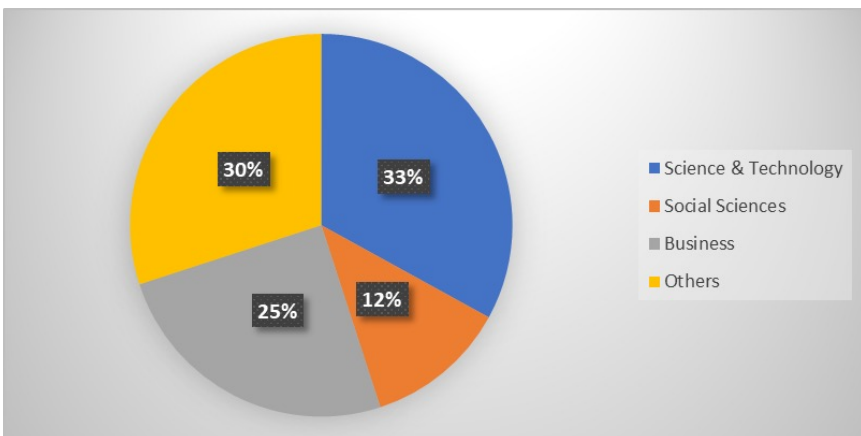
### 4.1.1 GENDER



**Fig. 2** Percentage for Gender

Figure 2 provides the gender distribution among the survey respondents. Specifically, 57% of the respondents are male, while 43% are female learners.

### 4.1.2 DISCIPLINE



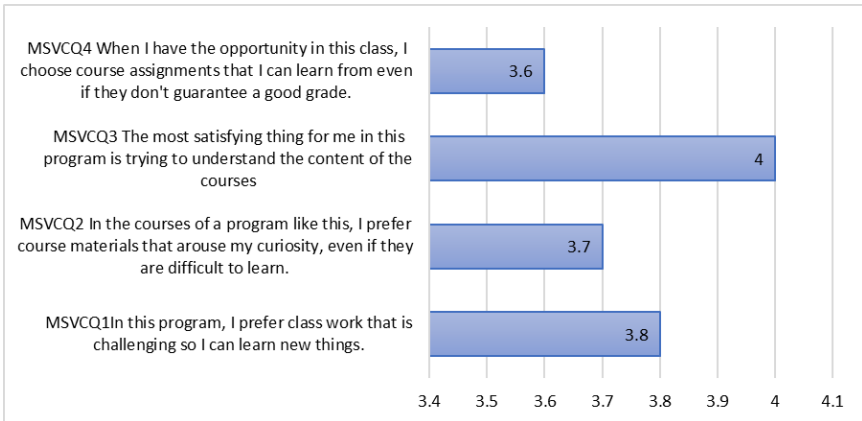
**Fig. 3** Percentage for Discipline

Figure 3 illustrates the distribution of academic disciplines among the survey respondents. Notably, 33% of participants come from the fields of science and technology. On the other hand, the social sciences are represented by a smaller segment, making up 12% of the total respondents. Business-related disciplines account for 25%, while the remaining 30% belong to various other academic areas.

## 4.2 RESULTS FOR VALUE COMPONENTS

This section presents the results pertaining to the first research objective, which aims to investigate the influence of value components on learners' motivation. The scale employed for this objective is divided into three distinct sections: intrinsic goal orientation, extrinsic goal orientation, and task value beliefs.

### 4.2.1 INTRINSIC GOAL ORIENTATION



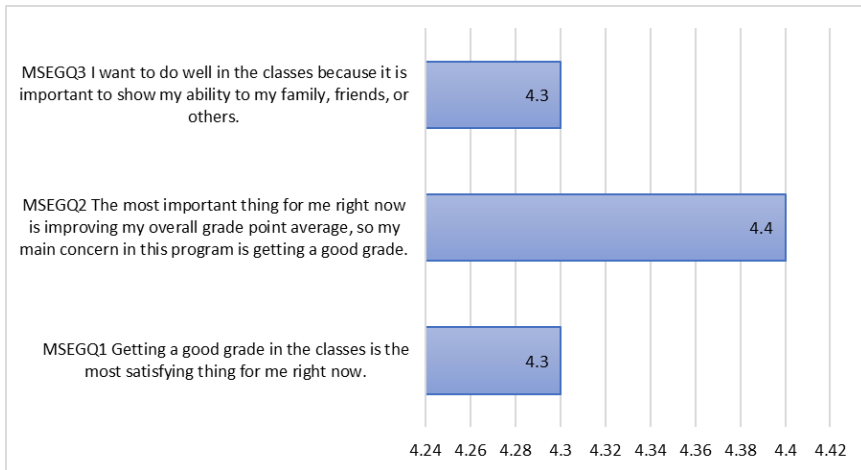
**Fig. 4** Mean scores for intrinsic goal orientation



Exploring The Relationship between Variables for Online Learning Motivation among Undergraduates

Figure 4 provides an overview of the mean scores associated with intrinsic goal orientation, a critical aspect of this study on learners' motivation. Notably, the item "The most satisfying aspect for me in this program is trying to understand the content of the courses" registers the highest mean score of 4. This is followed by the items "In this program, I prefer class work that is challenging so I can learn new things," with a mean of 3.8; "In courses of a program like this, I prefer course materials that arouse my curiosity, even if they are difficult to learn," with a mean of 3.7; and "When given the opportunity in this class, I choose course assignments from which I can learn, even if they do not guarantee a good grade," with a mean of 3.6.

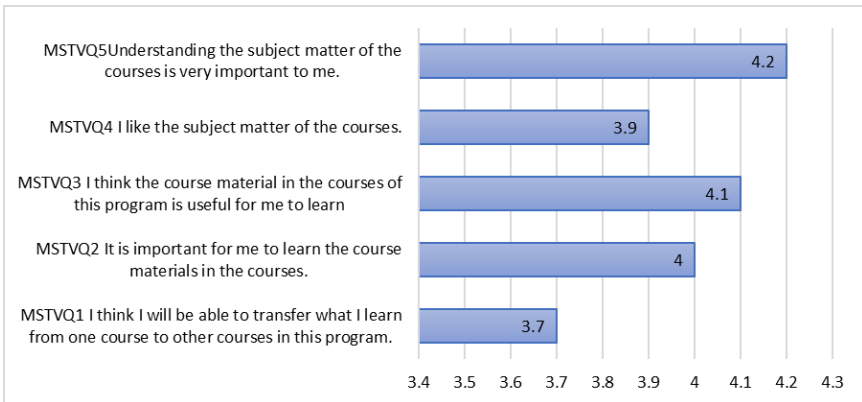
### 4.2.2 EXTRINSIC GOAL ORIENTATION



**Fig. 5** Mean scores for extrinsic goal orientation

Figure 5 presents the mean scores corresponding to extrinsic goal orientation, a key variable in the exploration of learner motivation. The item “The most important thing for me right now is improving my overall grade point average, so my main concern in this program is getting a good grade” records the highest mean of 4.4. It is closely followed by two items with a mean score of 4.3: “Getting a good grade in the classes is the most satisfying thing for me right now” and “I want to do well in the classes because it is important to show my ability to my family, friends, or others.”

### 4.2.3 TASK VALUE BELIEFS



**Fig. 6** Mean scores for task value beliefs

Figure 6 reveals the mean scores associated with task value beliefs, another crucial aspect of the investigation into learners’ motivation. The statement “Understanding the subject matter of the courses is very important to me” garners the highest mean score of 4.2. Following closely are the items “I think the course material in the courses of this program is useful for me to learn” with a mean score of 4.1, “It is important for me to learn the course

materials in the courses” with a mean score of 4, “I like the subject matter of the course” with a mean of 3.9, and finally, “I think I will be able to transfer what I learn from one course to other courses in this program” with a mean score of 3.7.

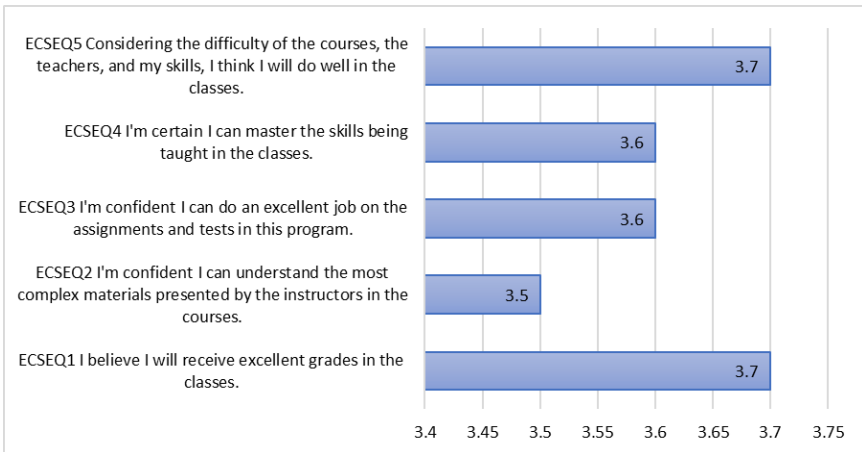
In addressing the first research objective, the study conducted an in-depth analysis of value components, with three key dimensions: intrinsic goal orientation, extrinsic goal orientation, and task value beliefs. Among these, extrinsic goal orientation exhibited the highest mean score, a finding that contrasts noticeably with intrinsic goal orientation, *which demonstrated the lowest mean score. This trend diverges from previous findings by Lee and Song (2022), which emphasized the predominance of intrinsic factors in students’ motivation for online learning.*

This divergence may be attributed to the distinct challenges students faced during the time of emergency remote teaching and learning. These challenges include, but are not limited to, an overload of academic responsibilities, the necessity to adapt to a new learning environment, and psychosocial stressors such as health-related anxieties (Al-Kumaim et al., 2021). Although this divergence offers valuable insights, it is essential to emphasize that the statistical significance of the differences in mean scores in this scale has yet to be conclusively established.

### **4.3 RESULTS FOR EXPECTANCY COMPONENTS**

This section presents the results related to the second research objective, specifically focusing on the influence of expectancy components on learners’ motivation. The scale used to explore this objective is divided into two key sections: students’ perceptions of self-efficacy and control beliefs for learning.

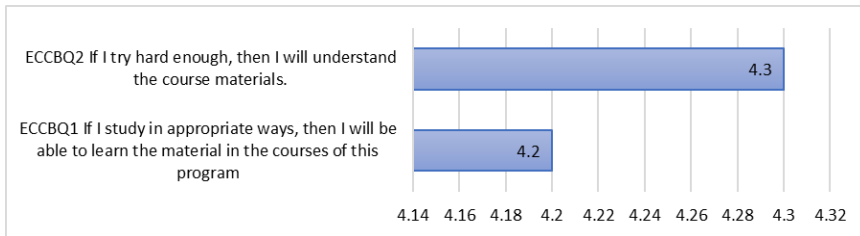
### 4.3.1 STUDENTS' PERCEPTION OF SELF-EFFICACY



**Fig. 7** Mean scores for students' perception of self-efficacy

Figure 7 portrays the mean scores for students' perceptions of self-efficacy, offering another vital layer of understanding regarding motivational dynamics. Two items share the highest mean score of 3.7 each: "I believe I will receive excellent grades in the classes" and "Considering the difficulty of the courses, the teachers, and my skills, I think I will do well in the classes." Following closely are two more items, both with a mean score of 3.6 each: "I am confident I can do an excellent job on the assignments and tests in this program" and "I am certain I can master the skills being taught in the classes." The item with the lowest mean, 3.5, is "I'm confident I can understand the most complex materials presented by the instructors in the courses."

### 4.3.2 CONTROL BELIEFS FOR LEARNING



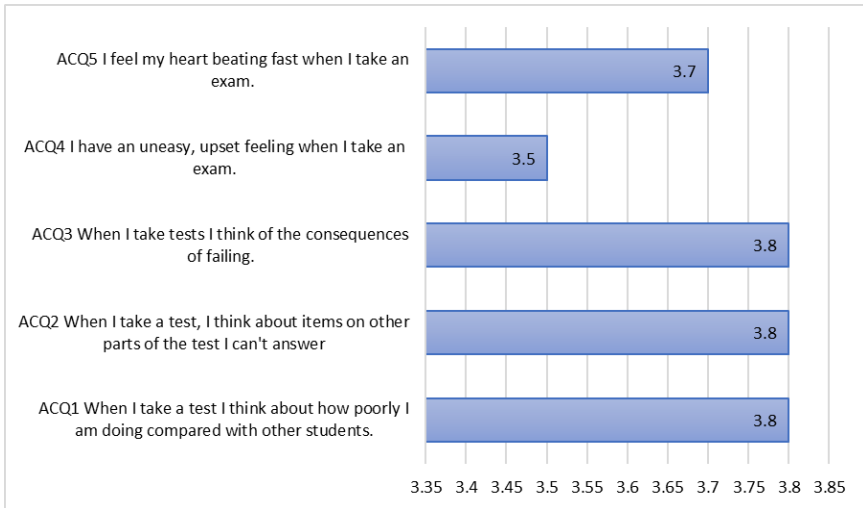
**Fig. 8** Mean scores for control beliefs for learning

Figure 8 presents the mean scores associated with control beliefs for learning, a component of expectancy constructs in the motivational framework. The item “If I try hard enough, then I will understand the course materials” received a mean score of 4.3, suggesting strong agreement among respondents. Similarly, the statement “If I study in appropriate ways, then I will be able to learn the material in the courses of this program” received a mean score of 4.2, indicating a high level of consensus on the role of strategic effort in learning success.

In addressing the second research objective, this study examined two crucial aspects of expectancy components: control beliefs for learning and students’ perception of self-efficacy. Interestingly, control beliefs for learning attracted the highest mean score, in contrast to self-efficacy, which yielded the lowest mean score. However, it is vital to note that even the lowest score in self-efficacy still fell within a positively-evaluated range. This concurs with Osman et al.’s (2021) study, which emphasised the critical intermediary role that self-efficacy plays between peer influence and tutor performance, particularly in shaping the motivational factors of Open Distance Learning (ODL) students amid the COVID-19 pandemic in Malaysia.

#### 4.4 RESULTS FOR AFFECTIVE COMPONENTS

This section presents the results corresponding to the third research objective, which is centered on investigating the influence of affective components on learners' motivation. The scale designed to assess this objective consists of five questions.



**Fig. 9** Mean scores for affective components

Figure 9 presents the mean scores for the affective components of motivation. Three items attain the highest mean of 3.8, each pointing to a heightened emotional response during examination settings. These items are: “When I take a test, I think about how poorly I am doing compared with other students,” “When I take a test, I think about items on other parts of the test I can’t answer,” and “When I take tests, I think of the consequences of failing.” These are followed by a mean score of 3.7 for the statement “I feel my heart beating fast when I take an exam,” and a mean score of 3.5 for the statement “I have an uneasy, upset feeling when I take an exam.”

In addressing the third research objective, these findings illuminate the role of affective states, particularly anxiety and emotional distress, as influential factors in the learners' motivational landscape. The high

mean scores of these affective items suggest that test-related anxiety is a pervasive issue among the students. This concurs with Al-Kumaim et al. (2021) emphasizing the detrimental impact of negative affective states on their online learning motivation during COVID-19 pandemic in Malaysia. Such results underscore the importance of designing pedagogical strategies that not only enhance cognitive engagement but also address emotional and psychological well-being. The elevated mean scores for these items indicate a pressing need for educators to consider the affective dimensions of learning and assessment, and to potentially incorporate interventions that alleviate test-related anxiety.

#### 4.5 RESULTS FOR RELATIONSHIP ACROSS VARIABLES FOR MOTIVATIONAL COMPONENTS

This section presents the results pertinent to the fourth research objective, which seeks to investigate the relationships among the three motivational components under study. To ascertain whether a significant association exists among the mean scores across the three different motivational components, the data were analysed using the Statistical Package for the Social Sciences (SPSS) to conduct correlation analyses. Specifically, two key relationships are discovered and presented: the relationship between value and expectancy components, and the relationship between value and affective components.

##### 4.5.1 VALUE VS EXPECTANCY COMPONENTS

		Total Mean Value Components	Total Mean Expectancy Components
<b>Total Mean Value Components</b>	Pearson Correlation	1	.758**
	Sig. (2-tailed)		.000
	N	151	151
<b>Total Mean Expectancy Components</b>	Pearson Correlation	.758**	1
	Sig. (2-tailed)	.000	
	N	151	151

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

**Table 3.** Correlation for value and expectancy components

Table 3 reveals a substantial association between value and expectancy components of motivation. The correlation analysis indicates a highly significant association between these two constructs, as evidenced by an  $r$  value of .758 and a  $p$  value of .000. According to Jackson (2015), the correlation coefficient is considered significant at the .05 level. Moreover, positive correlations are measured on a scale ranging from 0.1 to 1.0. A weak positive correlation falls within the range of 0.1 to 0.3, a moderate one between 0.3 and 0.5, and a strong correlation is characterized by a value ranging from 0.5 to 1.0. In the context of this study, the observed  $r$  value of .758 suggests a strong positive relationship between value and expectancy components.

#### 4.5.2 VALUE VS AFFECTIVE COMPONENTS

		Total Mean Value Components	Total Mean Affective Components
<b>Total Mean Value Components</b>	Pearson Correlation	1	.245**
	Sig. (2-tailed)		.002
	N	151	151
<b>Total Mean Affective Components</b>	Pearson Correlation	.245**	1
	Sig. (2-tailed)	.002	
	N	151	151

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

**Table 4.** Correlation for value and affective components

Table 4 presents a discernible but modest association between value and affective components within the motivational construct. The correlation analysis yields an  $r$  value of .245 and a  $p$  value of .000, indicating a statistically significant yet weak positive correlation. Referring to Jackson’s (2015) criteria for significance, where the coefficient is deemed significant at the .05 level and utilizing the established scale for positive correlations ranging from 0.1 to 1.0, the present findings fall within the weak positive correlation range of 0.1 to 0.3. This suggests a weak positive relationship between value and affective components.



In addressing the fourth research objective, this study examined the correlation between three motivational components: value, expectancy, and affective elements. The analysis revealed two noteworthy relationships. The first is a strong positive correlation between value and expectancy components, while the second indicates a weak positive relationship between value and affective components.

For the first relationship, the correlation coefficient significantly exceeded the standard threshold for what is considered a strong positive correlation. This finding suggests that value and expectancy are not isolated but are closely related within the context of online learning motivation. In practical terms, an improvement or increase in one of these components is likely to be accompanied by similar changes in the other, underscoring the meaningful and impactful relationship between value and expectancy components.

As for the second relationship, although a statistically significant correlation exists between value and affective components, the strength of this relationship is relatively modest. The components are positively correlated, indicating that changes in one are likely to result in parallel changes in the other. However, the low correlation coefficient suggests that this relationship is not especially robust. Therefore, while value and affective elements are not independent variables within the motivational framework, their relationship appears more nuanced and less direct than one would expect in a stronger correlation.

## **5. CONCLUSION**

The study offers several recommendations to enhance students' learning motivation, particularly in the challenging context of the COVID-19 pandemic. Firstly, given the significant role of extrinsic motivation in driving student learning, educators are advised to integrate elements that bolster extrinsic motivation. These could range from rewards to engaging online materials designed to maintain high levels of student participation (Ivaniushina et al., 2016). However, boosting intrinsic motivation remains

crucial. Implementing interactive and stimulating activities can help cultivate qualities like curiosity, mastery, and challenge, contributing to intrinsic motivation (Pintrich & De Groot, 1990). Secondly, our findings highlight the importance of students' control beliefs for learning. Educators should foster a sense of agency in students, as believing in one's ability to control academic performance often leads to proactive behaviour and better outcomes (Pintrich & De Groot, 1990). Words of encouragement and personalized support can be pivotal in achieving this as educators assist students to believe that they can control their learning process (Jenal et al., 2022). Thirdly, the issue of test anxiety must be addressed. Instructors can alleviate this by providing clear instructions and coping strategies, thereby boosting student confidence during exams.

On the methodological front, future research should consider employing a more diversified array of data collection techniques. While this study was based on survey data, the incorporation of open-ended questions and interviews could yield richer and in-depth insights. Further, the research could benefit from exploring the learning strategies scale (Pintrich & De Groot, 1990) to comprehensively understand students' online learning motivation and how they cope with the learning challenges during the COVID-19 pandemic in the Malaysian context.

Lastly, it is important to note the limitations of this study. The sample was confined to students from a specific university, rendering the findings non-generalizable across the broader Malaysian undergraduate population. Future research should, therefore, include a more diverse set of participants from different educational institutions and backgrounds to allow for broader applicability of the findings.

## **6. ACKNOWLEDGEMENTS**

We would like to thank Universiti Teknologi MARA Cawangan Johor Kampus Pasir Gudang for monetary support in presenting this paper.

## 7. REFERENCES

- Al-Kumaim, N. H., Alhazmi, A. K., Mohammed, F., Gazem, N. A., Shabbir, M. S., & Fazea, Y. (2021). *Exploring the impact of the COVID-19 pandemic on university students' learning life: An integrated conceptual motivational model for sustainable and healthy online learning*. *Sustainability*, 13(5), 2546. <https://doi.org/10.3390/su13052546>
- Anthonymsamy, L., & Singh, P. (2023). *The impact of satisfaction, and autonomous learning strategies use on scholastic achievement during Covid-19 confinement in Malaysia*. *Heliyon*, 9(2). <https://doi.org/10.1016/j.heliyon.2022.e12198>
- Bergey, B. W., Parrila, R. K., & Deacon, S. H. (2018). *Understanding the academic motivations of students with a history of reading difficulty: An expectancy-value-cost approach*. *Learning and Individual Differences*, 67, 41–52. <https://doi.org/10.1016/j.lindif.2018.06.008>
- Chin, N. S., Eng-Hoe Wee, E. H., Kuan, G., & Lim, B. H. (2020). *Expectancy beliefs, task values, achievement motivation and motivation climate in physical education among Malaysian trainee teachers*. *Physical Education in Universities: Researches - Best Practices – Situation*. pp.1- 10. Slovak Scientific Society for Physical Education and Sport and FIEP.
- Dietrich, J., Viljaranta, J., Moeller, J., & Kracke, B. (2017). *Situational expectancies and task values: Associations with students' effort*. *Learning and Instruction*, 47, 53-64. <https://doi.org/10.1016/j.learninstruc.2016.10.009>
- Ismail, N. Z., & Razak, M. R. (2021). *The challenges of learning programming subject in online distance learning (ODL) environment at UiTM Pahang*. *Gading Journal of Science and Technology*, 4(2), 27-31. <https://ir.uitm.edu.my/id/eprint/56616>
- Ivaniushina, V., Alexander, D., & Musabirov, I. (2016). *The structure of students' motivation: Expectancies and values in taking data science course*. *Educational Studies*, 4, 229–250. <https://doi.org/10.17323/1814-9545-2016-4-229-250>
- Jackson, S.L. (2015). *Research methods and Statistics-A Critical Thinking Approach (5th Edition)*. Boston, USA: 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. <http://dx.doi.org/10.6007/IJARBS/v12-i10/14879>
- Lee, Y., & Song, H. D. (2022). *Motivation for MOOC learning persistence: An expectancy–value theory perspective*. *Frontiers in Psychology*, 13, 958945. <https://doi.org/10.3389/fpsyg.2022.958945>
- Liu, Y., Zheng, X., & Hau, K. T. (2023). *Would emphasizing the instrumental value of learning help unmotivated students? Large-scale cross-cultural comparisons*. *Personality and Individual Differences*, 207, 1-9. <https://doi.org/10.1016/j.paid.2023.112148>
- Osman, Z., Piaralal, S. K., & Ahmad, N. (2021). *Enhancing Motivation among Online Distance Learning Students during the Covid-19 Pandemic in Malaysia*. *International Conference on Education (ICE 2021)*. <http://library.oum.edu.my/repository/1406/1/library-document-1406.pdf>
- 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://psycnet.apa.org/doi/10.1037/0022-0663.82.1.33>
- Pintrich, P. R., & Zusho, A. (2007). *Student motivation and self-regulated learning in the college classroom*. *The scholarship of teaching and learning in higher education: An evidence-based perspective*, 731-810.
- Rahmat, N. H. (2018). *Educational Psychology: A Tool for Language Research*. *PEOPLE: International Journal of Social Sciences*, 4(2), pp 655-668. Retrieved from <http://dx.doi.org/10.20319/pijss.2018.42.655668>
- Ryan, R. M., & Deci, E. L. (2000). *Intrinsic and extrinsic motivations: Classic definitions and new directions*. *Contemporary Educational Psychology*, 25(1), 54-67. <https://doi.org/10.1006/ceps.1999.1020>
- Tajudin, A. B., Maulida, C., & Vransiska, R. D. (2022). *Self-regulated learning in online classes: A comparative study between Malaysian and Indonesian students*. *Journal of Educational Management and Instruction (JEMIN)*, 2(1), 1-11. <https://doi.org/10.22515/jemin.v2i1.4965>

Tan, C. (2020). *The impact of COVID-19 on student motivation, community of inquiry and learning performance. Asian Education and Development Studies, 10(2), 308-321.* <https://doi.org/10.1108/AEDS-05-2020-0084>

Vanslambrouck, S., Zhu, C., Lombaerts, K., Pynoo, B., & Tondeur, J. (2017, June). *Adult learner characteristics as predictors of performance, satisfaction and intent-to-persist in online and blended environments. In International Conference on e-Learning (pp. 221-229).* Academic Conferences International Limited.

Wang, Q., & Xue, M. C. (2022). *The implications of expectancy-value theory of motivation in language education. Frontiers in Psychology, 13, 1-8.* <https://doi.org/10.3389/fpsyg.2022.992372>