

## Exploring Students' Fatigue: Is there a Relationship between Outcome with Effort and Performance?

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### Abstract

Research on students' fatigue in universities may emerge as one of the interesting fields of exploration in higher education for some reasons. It is associated with unfavourable outcomes such as diminished engagement, achievement and motivation, which may result in dropout. By investigating the connection between students' effort and their outcome and performance, this study aims to shed light at identifying the perception of learners on burnout as the outcome of effort and how it might affect students' performance. The sample size consisted of 100 students of UiTM Centre of Foundation Studies from different programmes namely Engineering, Science, TESL and Law. The quantitative survey used in this study is adapted from the instrument of 5 Likert-scale pioneered by Vroom (1964), Campos, et.al (2011) and Pintrich & De Groot (1990), and comprises six sections: Demographic Profiles, Motivational Scales, Expecting Component, Affective Component, Burnout-Exhaustion and Burnout-Disengagement. A total of 40 items were employed in this survey. The findings reveal that there is significantly low relationship between outcome (burnout) and effort, effort and performance as well as performance and outcome (burnout), respectively. This study is believed to have further significant implication for both educators and learner if the practical consequences for reducing academic burnout and increasing students' self-determination are expanded.

**Keywords:** Burnout, Fatigue, Motivation, Effort, Performance

**Introduction****Background of Study**

Fatigue is a pervasive issue affecting individuals across various domains of life, and students are of no exception. Fatigue and burnout are one of the emotional exhaustions experienced by an individual other than frustration and discontent (Neumann et al., 1990). Initially, researchers were attracted to the study of fatigue and burnout by focusing mainly on individuals from different occupational backgrounds. According to Herbert and Freudenberger (1974), fatigue and burnout was initially characterised as a syndrome after investigating the symptoms of exhausted health care practitioners who were suffering from consequences of extended job stress. However, as time evolves, greater numbers of researchers are becoming conscious of the issue of exhaustion and burnout among students, even those in higher education.

In the realm of education, understanding the complex interplay between students' motivation and their experiences of burnout has garnered significant attention. Motivation serves as a vital driving force behind students' engagement, achievement, and overall well-being (Deci & Ryan, 2000). On the other hand, burnout, characterized by chronic exhaustion, cynicism, and reduced efficacy, can severely undermine students' academic performance and psychological health (Maslach et al., 2001). Exploring the dynamic relationship between motivation and burnout is critical for educators, researchers, and policymakers in their pursuit of creating supportive learning environments that foster students' success and well-being.

As has been discussed previously, fatigue among students is a pervasive issue worldwide, with implications for their academic outcomes and performance. In the context of Malaysia, where academic excellence is highly emphasized, students are subjected to high expectations and heavy academic pressure, which might contribute to greater fatigue. It is critical to understand the impact of fatigue on Malaysian students in order to promote their well-being and academic achievement.

**Problem Statement**

Exploring the connection between student burnout, effort, and performance is an essential area of study. Burnout is a state of physical, emotional, and mental exhaustion caused by protracted stress and is frequently characterised by cynicism, depersonalization, and diminished personal achievement (Maslach & Leiter, 2016). It can have a significant impact on an individual's health, functioning, and academic performance.

In contrast, effort refers to the quantity of energy and resources students invest in academic activities (Levi et al., 2014). This includes researching, attending classes, completing assignments, and other academic activities. The needs for attaining academic success and maintaining high levels of performance require lots of effort that can lead to burnout.

Even though it is known that a student's effort affects how well they do in school, the relationship between the two is still a source of discussion. We don't know enough about the relationship between student effort, which can be judged by study habits, time spent on learning activities, and levels of engagement, and their academic success. Over emphasis on effort to produce desirable performance may lead to burnout (Usan et al., 2022).

The source and perception of academic exhaustion by students can vary, but there are common themes in how they may perceive and experience it, such as extreme physical and mental fatigue (Sharififard et al., 2020). Reductions in motivation, engagement, and self-efficacy are additional causes (Pisarik, 2009). It is essential to recognise that student perceptions and experiences of burnout can vary. Others may have difficulty identifying and

attributing their symptoms to fatigue. In addition, the causes and severity of burnout can vary based on factors such as burden, personal expectations, support systems, and coping strategies. Thus, it is important to vary the research on the relationship between effort, performance and burnout.

### **Objective of the Study and Research Questions**

This study is done to explore perception of learners on learning motivation as well as causes of burnout. Specifically, this study is done to answer the following questions;

- How do learners perceive their outcome in learning?
- How do learners perceive their effort in learning?
- How do learners perceive their performance in learning?
- Is there a relationship between outcome with effort and performance?

### **Literature Review**

#### **Students' Motivation**

Motivation has been identified as an important contributor to student success, an essential ingredient in effective teaching and learning. Motivation impacts the desired effect of learning by the student, including goals, effort, persistence, and performance. Student motivation is defined as the ability to manifest a good attitude toward the learning process and able to attain short and long-term academic objectives. Motivated students are much more likely to achieve their potential and find success. Students who are motivated display goal-oriented behaviours. They take initiative, show resilience, harness their curiosity and care for and respect their work. Motivation also leads to increased effort and energy and determines whether a student will pursue a task with enthusiasm or a lacklustre attitude.

Burnout among students is a pervasive issue with significant implications for their well-being and academic performance. Research by Leiter and Maslach (2016); Wong and Kwong (2020) has revealed high prevalence rates of burnout among university and secondary school students. Factors such as excessive academic workload, high expectations, and personal characteristics like perfectionism contribute to burnout. The consequences of burnout include increased symptoms of depression and anxiety, as well as decreased motivation and academic achievement (Salmela-Aro et al., 2009; Reis et al., 2021). Understanding and addressing burnout among students is crucial for promoting their overall well-being and fostering academic success. Effective interventions and support systems should be developed to mitigate burnout and ensure students' flourishing in educational settings.

#### **Past studies on students' motivation**

There has been a great amount of research carried out in the past with the purpose of gaining an understanding of students' motivation and its impact on the psychological aspects of the student, including the behaviour of burnout. These researches have been connected to a variety of different hypotheses of motivation. The Self-Determination Theory, the Achievement Goal Theory, and the Expectancy-Value Theory are some of the most prominent ones.

According to the Self-Determination Theory (Deci and Ryan, 2012) students' engagement and achievement are directly related to their levels of intrinsic motivation. According to a number of studies, students' levels of motivation and performance improve when they have increased feelings of autonomy, competence, and connection to others.

Based on the Achievement Goal Theory (Maehr & Zusho 2009), students' goal orientations are a major factor in their intrinsic motivation. Both mastery objectives (which prioritise learning and improvement) and performance goals (which emphasise outperforming others) have been identified by researchers. Students who set their sights on mastery rather than mere performance have been shown to be more motivated and successful in the classroom.

Students' motivation is impacted by their ideas about their potential to succeed (expectancy) and the value they place on the activity or subject, according to Expectancy-Value Theory (Wigfield et al., 2009). According to research, students who have high self-efficacy beliefs and see the value in what they are learning are more motivated and achieve better academic performance.

According to Menges et al (2017), motivation improves performance by increasing the amount of effort that an individual puts forth. These researchers drew on theories of prosocial motivation and action identification to suggest that motivation is especially important when an individual's intrinsic drive is lacking.

The research conducted by Yukhymenko-Lescroart (2011) utilised a dualistic model of passion and the self-determination theory in order to evaluate student-athletes' perceived efforts in the athletic and academic arenas. The researchers concluded that sport motivation is the primary driver of athletic effort.

Filgona et al (2020) sum-up motivation is related to the amount of intellectual effort used in learning activities, and this led to a belief that motivation is what causes a person to want to know, act, understand, believe, or gain particular knowledge, skills, attitude, or values.

According to the findings of Yunus and Ali's (2009) research on the effects of motivation on the acquisition of mathematical knowledge, there was a positive correlation between students' average mathematical achievement and their level of effort, self-efficacy, and motivation.

### **Past Studies on Causes of Students' Burnout**

Liu's (2023) study looked at the association between student burnout and two major characteristics, perceived school atmosphere and growth mindset, in the context of English as a foreign language (EFL) acquisition among Chinese students. The proposed model was then tested using structural equation modelling (SEM). According to the findings of the SEM, both perceived school climate and growth mindset had a substantial favourable impact on EFL student burnout, with perceived school climate having a higher effect than growth mindset. According to the findings, maintaining a positive school climate and encouraging a student growth mentality can assist prevent student burnout in EFL settings.

A cross-sectional study using structured questionnaires and the Maslach Burnout Inventory General Survey Studies by Liu et al (2023) was done with the aim to evaluate the current state of academic burnout among Chinese college students and its influencing factors. The result shows that students with academic burnout accounted for 59.9%. Male students had higher burnout scores than female students, upper-grade students had higher burnout scores than lower-grade students, and students who smoked had higher burnout than non-smokers during the school day.

Miltojevic et al (2022) look into burnout among master's students. The study's goal is to investigate the relationships between key sociodemographic characteristics and burnout dimensions among master's degree students. The research instrument is the School Burnout

Inventory (SBI-U 9). The findings suggest that there is a link between students' gender, tuition fee status, and burnout. Gender is linked to weariness and a sense of inadequacy, but tuition fee status influences all three characteristics.

Rahmatpour et al (2019) The current study investigated the academic burnout score and its associated factors in undergraduate students of medical sciences. According to the findings of the current study, marital status, GPA, having interest in field of study, and time of study were associated with the incidence of academic burnout among undergraduate students of medical sciences. Students with academic burnout were unwilling to participate regularly in classes and contribute to class activities; also, they showed an inability to learn new lessons and a feeling of meaninglessness.

Research by Zeinab (2015) on the relationship between self-efficacy and academic burnout shows that students who do not have self-efficacy easily burnout and have less ability to adapt. High self-efficacy helps create calmness when facing hard assignments and activities and hence prevents burnout.

Cazan (2015) studies on learning motivation, engagement and burnout among university students shows that there is a significant and negative relationship between burnout and engagement. Students who are successful in achieving their goals feel more motivated and engaged in learning activities and hence they experience positive feelings and positive attitude towards their studies which lead to lower levels of burnout.

Nikodijević (2012) The objective of this research was to investigate the risk of burnout among students and to analyse the relationship between gender and grade point average with three dimensions of burnout. Maslach Burnout Inventory – Student Survey, the most common instrument for measuring burnout, was used for this purpose as it was created and validated for the student population. The research was conducted on a sample of 376 management and IT students in Serbia in the second to the final years of studies. The results show that 174 (46.3%) of the total sample of students are at risk of burnout, and 78 (20.7%) are at high risk of burnout. There is no significant correlation between gender and risk of burnout. There are higher percentages of students with low grade point average than students with high grade point average in both risk of burnout (54.4%) and high risk of burnout (26.6%) categories.

Ertugut and Soyekercib (2010) investigated burnout levels among second-year vocational school students using the Maslach Burnout Inventory as the survey measure. The survey results show that burnout is common among vocational high school students. Female students experience more burnout than male pupils. There is no difference in burnout levels among vocational school students based on socioeconomic background. The results also suggest that the majority of students receiving vocational and technical education are dissatisfied with their placement in a vocational school.

### **Conceptual Framework**

Figure 1 shows the conceptual framework of the study. This study explores the relationship of outcome (burnout) with effort and performances in learning. According to Vroom (1964), work motivation depends on Effort, Performance to reveal the outcome. In the context of this study, Vroom's (1964) concept of work if equated to learning behaviour among undergraduates. In addition to that, Rahmat et.al (2021) reports that what the learners give attention to becomes their motivation.

With reference to figure 1, the outcome learning is the student's burnout. According to Campos,et.al. (2011), there are two causes of burnout and they are (i) exhaustion and (ii)

disengagement. Learners face burnout not only because of overwhelming learning tasks, they also face burnout when the learning activities make them feel disengaged. Next, According to Vroom (1964), motivation can derive from effort. In the context of this study, effort is seen through the learners' value components (Pintrich & De Groot, 1990) such as (i) intrinsic goal orientation, (ii) extrinsic goal orientation, and (iii) task value beliefs. Motivation can also come from the learners' view of their performance. In the context of this study, this is seen through expectancy and affective components. Expectancy components are measured by (i) students' perception of self-efficacy and (ii) control beliefs for learning.

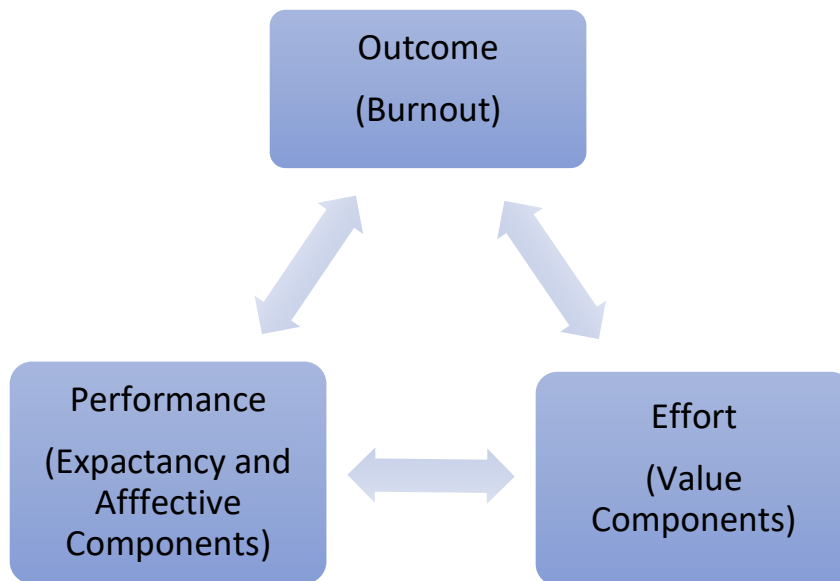


Figure 1- Conceptual Framework of the Study-  
Is there a relationship between Outcome with Effort and performance?

### Methodology

This quantitative study is done to explore motivation factors for learning among undergraduates. This study is done to explore perception of learners on learning motivation as well as causes of burnout. A purposive sample of 100 participants responded to the survey. The instrument used is a 5 Likert-scale survey and is rooted from Vroom (1964); Campos, et.al (2011) Pintrich & De Groot (1990) to reveal the variables in Table 1 below. The survey has 4 sections. Section A has items on demographic profile. Section B has 12 items on effort. Section C has 12 items on performance. Section D has 16 items on outcome.

Table 1

*Distribution of items in the survey*

SECT	WORK MOTIVATION (Vroom, 1964)	CONSTRUCT		VARIABLE	No Of Items	Total Items
B	EFFORT	VALUE COMPONENT	(i)	Intrinsic Goal Orientation	4	12
			(ii)	Extrinsic Goal Orientation	3	
			(iii)	Task Value Beliefs	5	
C	PERFORMANCE	EXPECTANCY COMPONENT	(i)	Students' Perception of Self- Efficacy	5	7
			(ii)	Control Beliefs for Learning	2	
		AFFECTIVE COMPONENTS				5
D	OUTCOME	BURNOUT- EXHAUSTION				8
E		BURNOUT- DISENGAGEMENT				8
		TOTAL NO OF ITEMS				40

Table 2 below the reliability of the survey. The analysis shows a Cronbach alpha of .868, thus, revealing a good reliability of the instrument chosen/used. Further analysis using SPSS is done to present findings to answer the research questions for this study.

Table 2

*Reliability of Survey*

Reliability Statistics	
Cronbach's Alpha	N of Items
.868	40

## Findings

### Findings for Demographic Profile

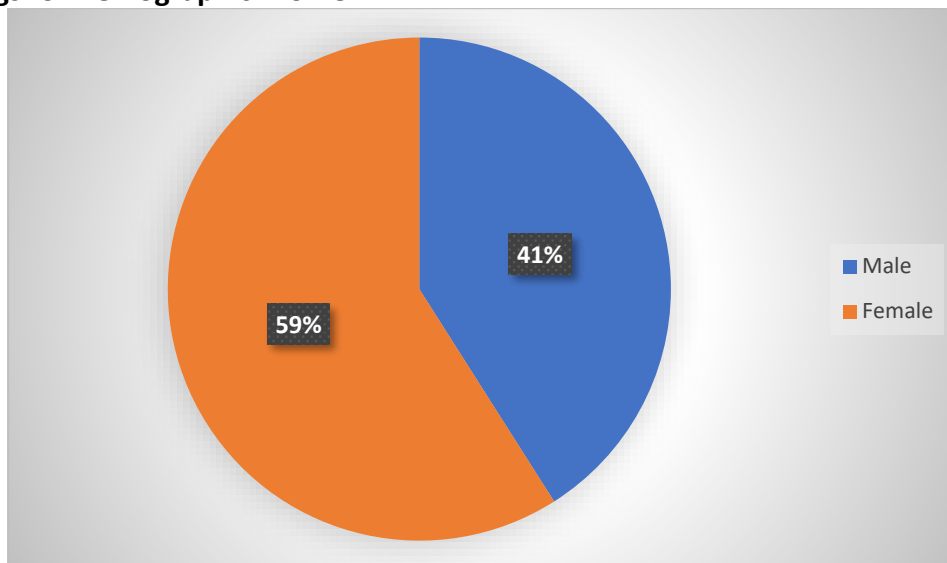


Figure 2- Percentage for Gender

The sample (figure 2) for this research was carried out in the Centre for Foundation Studies of UiTM in Dengkil Campus. According to Table 3 above, 41% of the respondents were male students, meanwhile 59% of the respondents were female students.

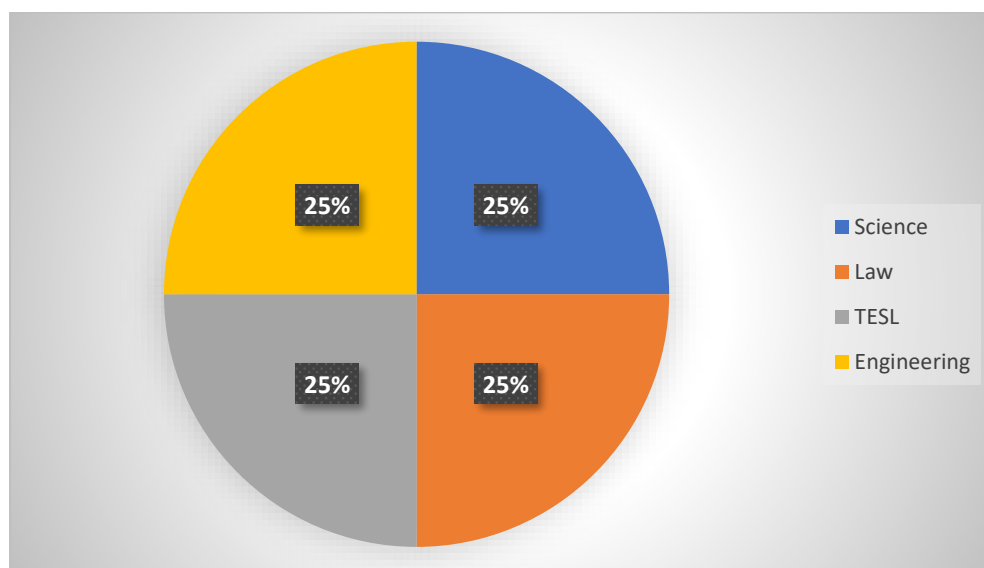


Figure 3- Percentage for Programme

The surveys (refer to figure 3) were distributed evenly among the students enrolled in each course offered by UiTM's Centre for Foundation Studies. Science, Law, TESL, and Engineering were among the courses offered. As a result, each programme contributed around 25% to this research.



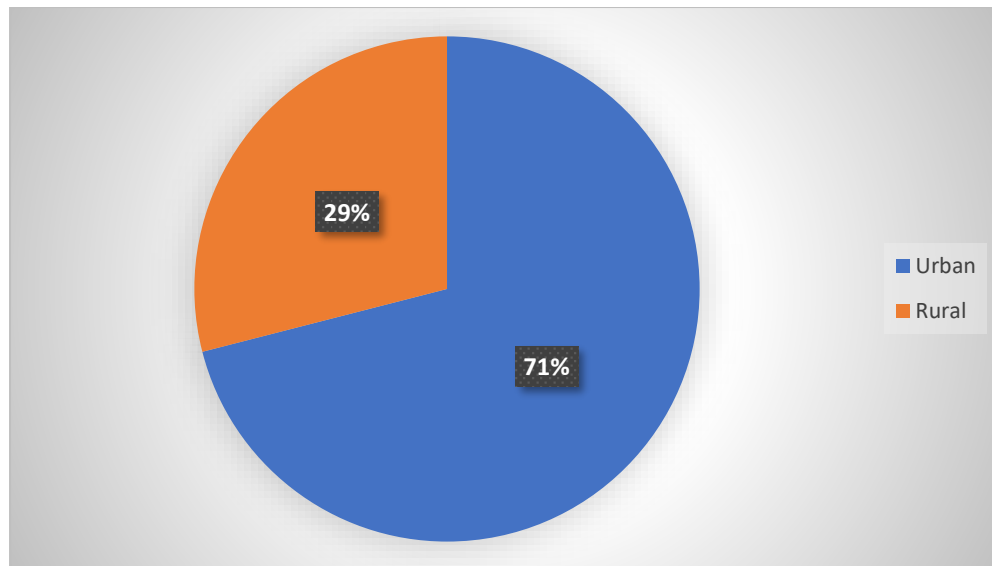


Figure 4- Percentage for Location

One of the sections from the questionnaire is about the samples' location of permanent residents. The location is divided into urban and rural areas. It can be seen in figure 4 that the majority of the respondents were coming from the urban area with the percentage of 71%, while the minority with 29% were coming from the rural areas.

### Findings for Outcome

This section presents data to answer research question 1: How do learners perceive their outcome in learning? In the context of this study, outcome is measured from causes of burnout such as (i) exhaustion and (ii) disengagement.

#### *Burnout (exhaustion)*

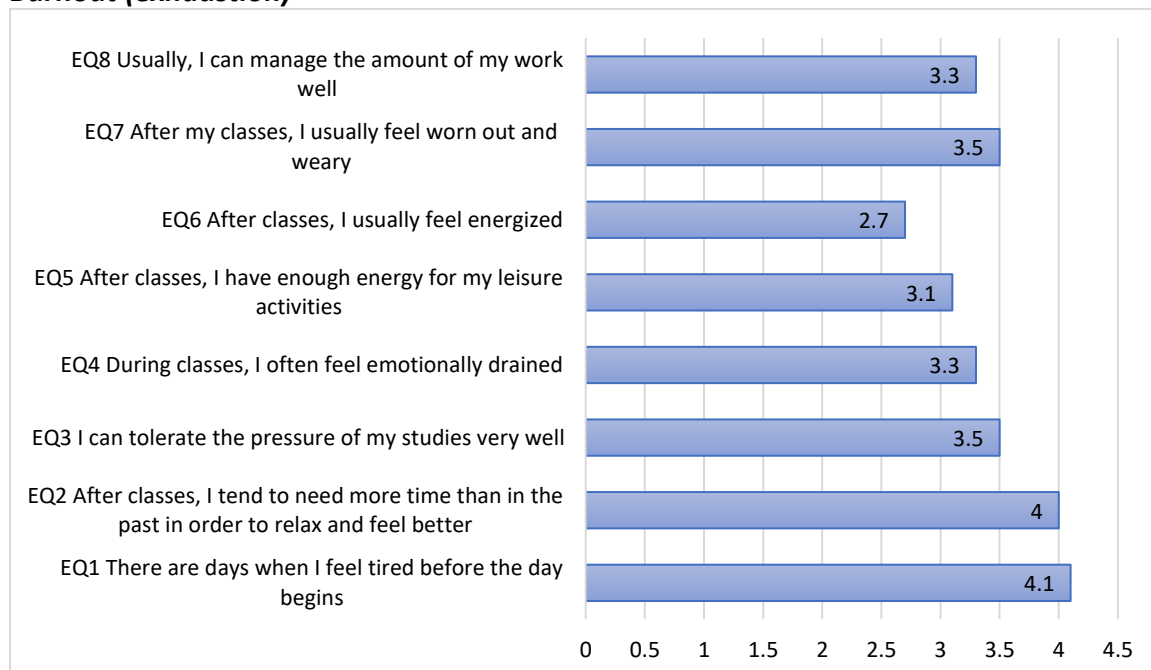


Figure 5- Mean for burnout (Exhaustion)

Burnout and exhaustion are caused by two factors, according to (Campos et al., 2011). In this study the construct for exhaustion (refer to figure 5) is measured by 8 items. The mean with the highest score of 4.1 is for item 'There are days when I feel tired before the day begins'. The item 'I can tolerate the pressure of my studies very well' is in second place with the mean of 4. The item 'After classes, I usually feel energized' has the lowest mean which is 2.7.

### Disengagement

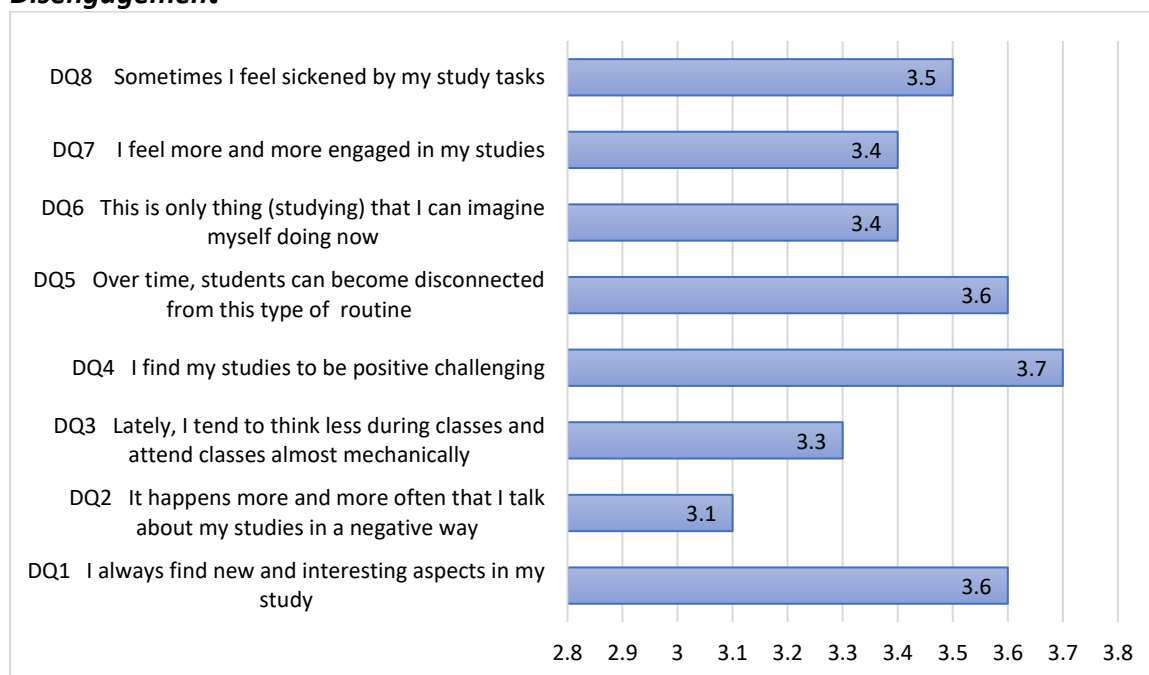


Figure 6- Mean for disengagement

In the meanwhile, a questionnaire consisting of eight items is used to measure the concept of disengagement (refer to refer 6). With a mean of 3.7, the response "I find my studies to be positive challenges" received the highest mean score out of all the responses. With a mean score of 3.6, the items "I always find new and interesting aspects in my study" and "Students can become disconnected from this type of routine over time" tie for second place. The statement 'It happens more and more often that I talk about my studies in a negative way' has the lowest mean score, which is 3.1.

### Findings for Effort

This section presents data to answer research question 2: How do learners perceive their effort in learning? In the context of this study, effort is measured by value components such as (i) intrinsic goal orientation, (ii) extrinsic goal orientation and (iii) task value beliefs.

Students are motivated by either intrinsic or extrinsic factors. Intrinsic motivation means they're genuinely interested in the subject matter and feel it's relevant to their lives. Extrinsic motivation, on the other hand, is driven by external factors such as grades, parental expectations or future earning potential.

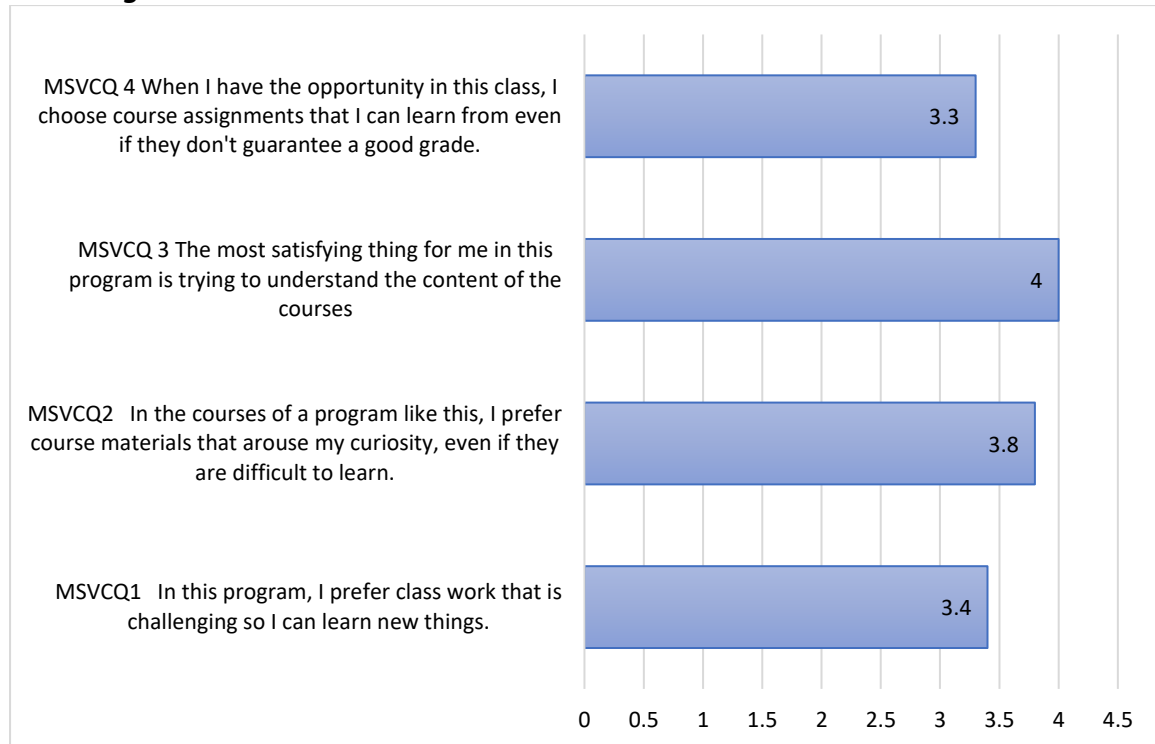
***Intrinsic goal orientation***

Figure 7- Mean for intrinsic goal orientation

Intrinsic goal orientations (refer to figure 7) are measured using four items. The highest mean among the items is of value 4 for item 'The most satisfying thing for me in this program is trying to understand the content of the courses. The second highest is the item of 'In the courses of a program like this, I prefer course materials That arouse my curiosity, even if they are difficult to learn' with a mean score of 3.4. While the lowest mean score is for the item "When I have the opportunity in this class, I choose course assignments that I can learn from even if they don't guarantee a good grade" with mean score of 3.3.

**Extrinsic Goal Orientation**

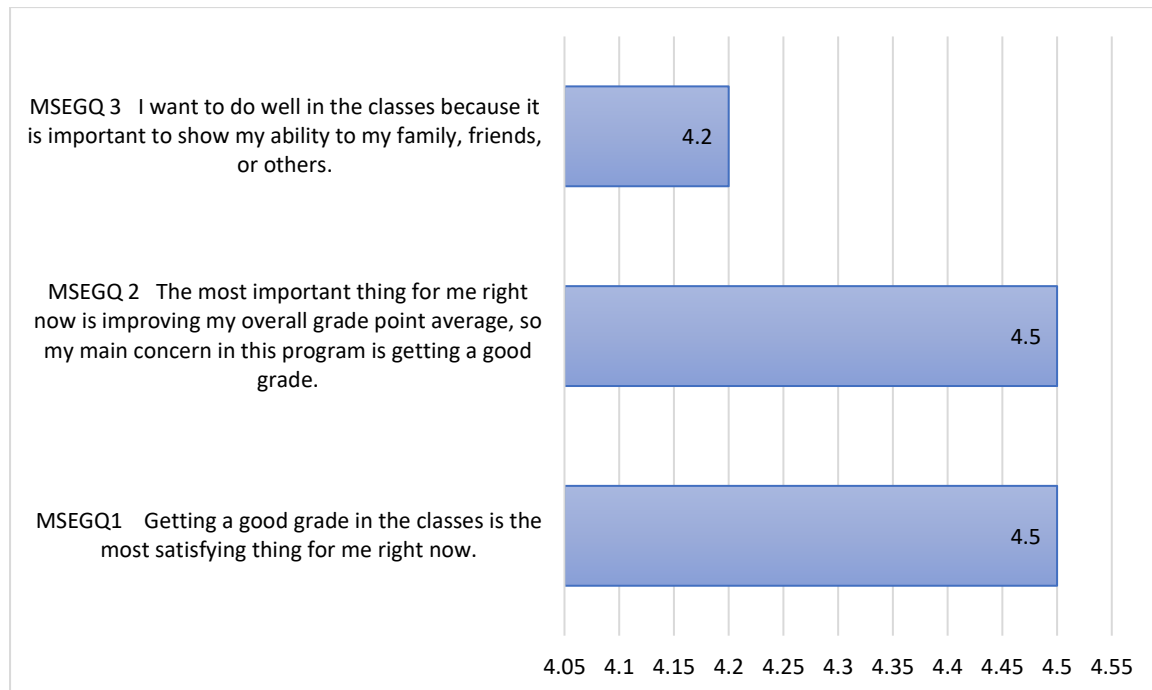


Figure 8- Mean for extrinsic goal orientation

Extrinsic goal orientation (refer to figure 8) is measured using three items. Both question 1 and 2 have the same mean score of 4.5 followed by item ‘I want to do well in the classes because it is important to show my ability to my family, friends, or others. with the lowest mean score of 4.2.

**Task value beliefs**

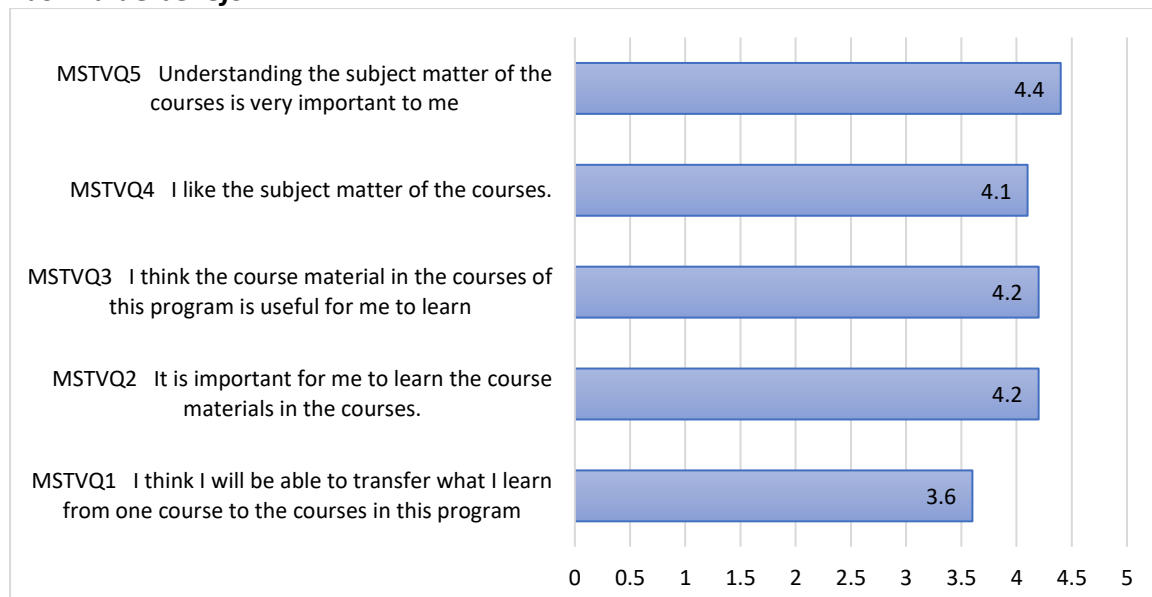


Figure 9- Mean for task value beliefs

Task beliefs are measured using five items. According to figure 9, the highest mean score is 4.4 for the item ‘Understanding the subject matter of the courses is very important to me’. There are two items that score the same mean value of 4.2 and ranked second highest mean

score which are 'It is important for me to learn the course materials in the courses' and 'I think the course material in the courses of this program is useful for me to learn.' The lowest mean score goes to the item "I think I will be able to transfer what I learn from one course to other courses in this program" that has the mean score of 3.6

### Findings for Performance

This section presents data to answer research question 3: How do learners perceive their performance in learning? In the context of this study, this is measured by expectancy and affective components. Expectancy components are sub-categorised as (i) students' perception of self-efficacy and (ii) control beliefs for learning.

#### Expectancy component

##### Students' perception of self-efficacy

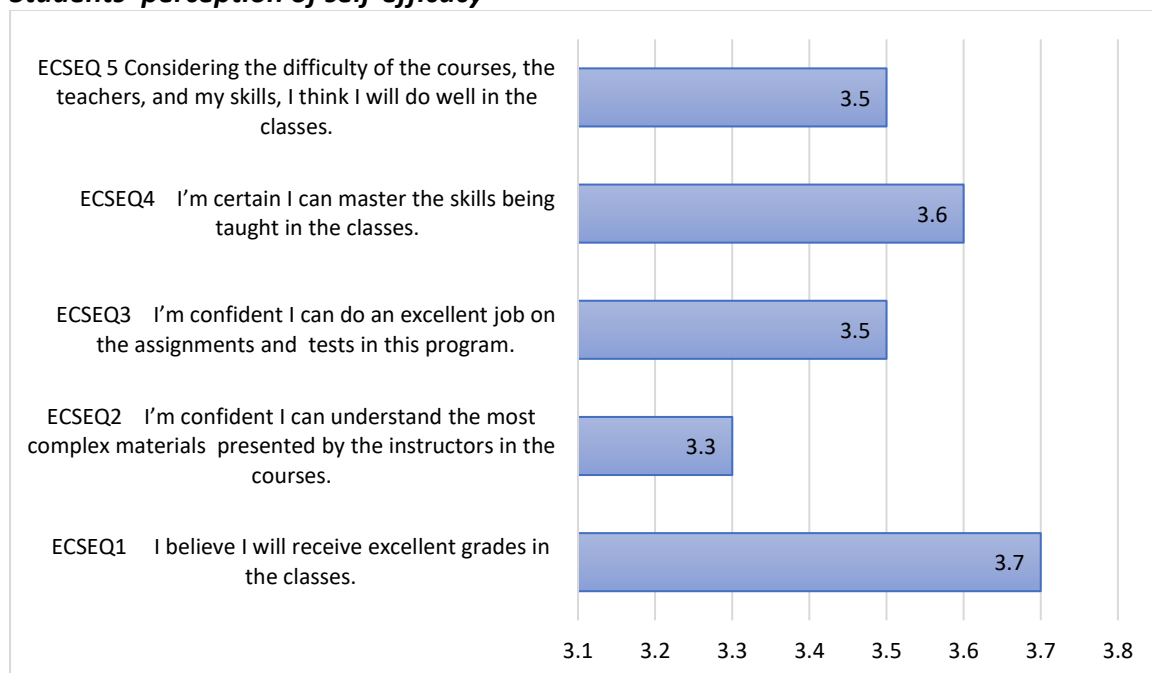


Figure 10- Mean for Students' perception of Self-Efficacy

A section in the questionnaire consisting of five questions is used to gauge the level of self-efficacy (figure 10) that students have. The comment that "I believe I will receive excellent grades in the classes" received the highest mean score out of all of the responses with a mean score of 3.7. The statement that "I'm certain I can master the skills being taught in the classes" has a mean score of 3.6, which places it in second place among the items. The statement that received the lowest mean score was "I'm confident I can understand the most complex materials presented by the instructors in the courses." This statement had a score of 3.3.

**Control beliefs for learning**

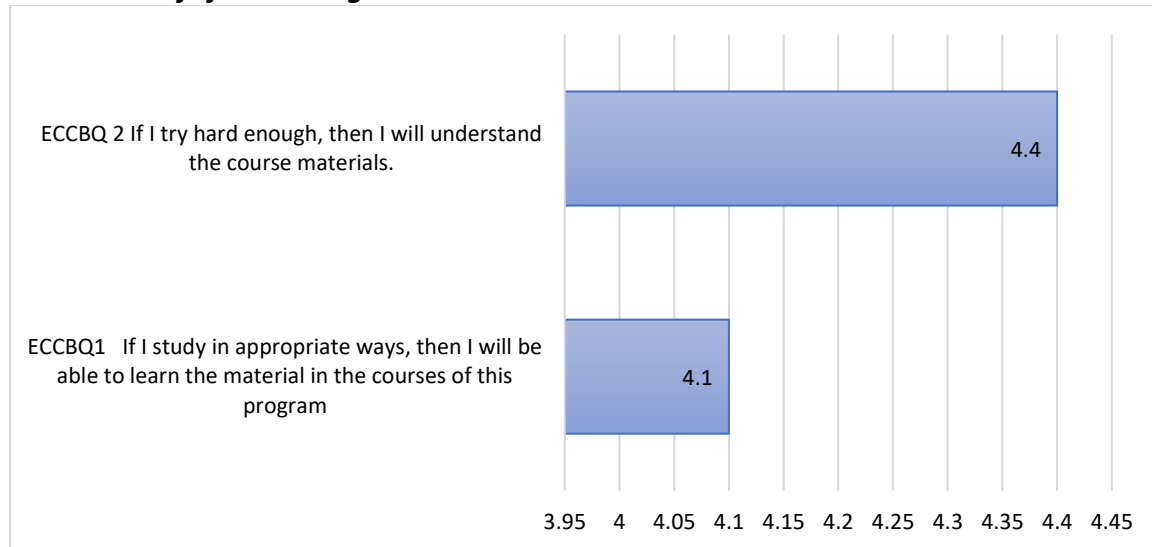


Figure 11- Mean for Control Beliefs

A section in the questionnaire consisting of two items is used to assess one's control beliefs towards the learning process (refer to figure 11). Item 'If I work hard enough, then I will understand the stuff presented in this class' and the item 'If I study in appropriate methods, then I will be able to learn the information in the courses of this programme' has mean 4.4 and 4.1 correspondingly.

**Affective component**

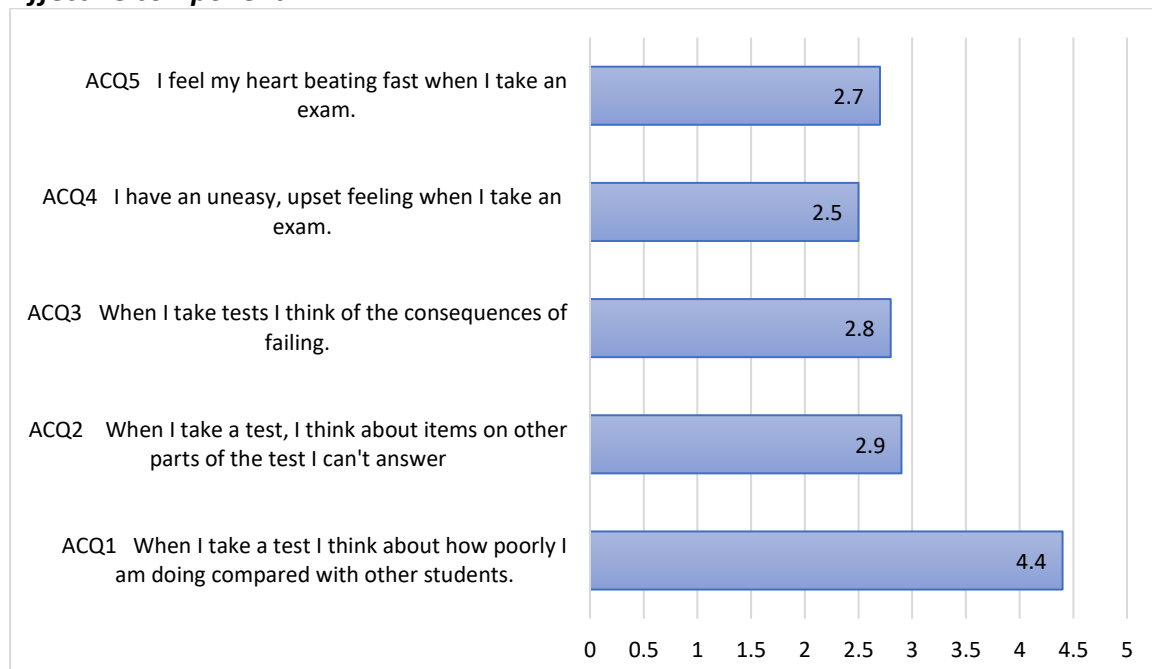


Figure 12- Affective Component

Affective components are measured by using five items. It can be seen from figure 12, there is a major gap between the first place and the rest. The question of “When I take a test I think about how poorly I am doing compared with other students” represents the highest

mean with 4.4. This indicates that students are highly and constantly compare themselves to others and perceiving a lower performance can lead to self-critical thinking patterns. Such negative self-evaluation can increase mental fatigue, as it drains cognitive resources and creates a negative mindset that hampers concentration and performance. On the other hand, "I have an uneasy, upset feeling when I take an exam" represents the lowest mean with 2.5. This suggests that students were having low uneasy feelings during exams that may indicate the presence of exam-related anxiety and stress.

### Findings for Relationship between Outcome with Effort and Performance

This section presents data to answer research question 4: Is there a relationship between outcome with effort and performance? To determine if there is a significant association in the mean scores between outcome, effort and performance, data is analysed using SPSS for correlations. Results are presented separately in table 3, 4, and 5 below.

Table 3

#### *Correlation between Outcome and Effort*

		<b>OUTCOME</b>	<b>EFFORT</b>
<b>OUTCOME</b>	Pearson Correlation	1	.398**
	Sig. (2-tailed)		.000
	N	100	100
<b>EFFORT</b>	Pearson Correlation	.398**	1
	Sig. (2-tailed)	.000	
	N	100	100

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

Table 3 shows there is an association between outcome and effort. Correlation analysis shows that there is a low significant association between outcome and effort ( $r=.398^{**}$ ) 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 weak positive relationship between outcome and effort.

Table 4

#### *Correlation between Effort and Performance*

		<b>EFFORT</b>	<b>PERFORMANCE</b>
<b>EFFORT</b>	Pearson Correlation	1	.307**
	Sig. (2-tailed)		.002
	N	100	100
<b>PERFORMANCE</b>	Pearson Correlation	.307**	1
	Sig. (2-tailed)	.002	
	N	100	100

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

Table 4 shows there is an association between effort and performance. Correlation analysis shows that there is a low significant association between effort and performance ( $r=.307^{**}$ ) 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 weak positive relationship between effort and performance.

Table 5  
*Correlation between Performance and Outcome*

		PERFORMANCE	OUTCOME
<b>PERFORMANCE</b>	Pearson Correlation	1	.342**
	Sig. (2-tailed)		.000
	N	100	100
<b>OUTCOME</b>	Pearson Correlation	.342**	1
	Sig. (2-tailed)	.000	
	N	100	100

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

Table 5 shows there is an association between performance and outcome. Correlation analysis shows that there is a low significant association between performance and outcome ( $r=.342^{**}$ ) 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 weak positive relationship between performance and outcome.

## Conclusion

### Summary of Findings and Discussions

The results of this study basically measure the relationship between outcome with effort and performance among students in UiTM Dengkil Campus. The first variable is outcome, and is represented by exhaustion and disengagement. In answering how students perceived their burnout in learning, the result shows that exhaustion and disengagement are significant contributors. This is supported by the item of exhaustion, where 'There are days when I feel tired before the day begins' represents the highest mean. As for the disengagement, the item 'It happens more and more often that I talk about my studies in a negative way' has the lowest mean.

Effort is the second variable which is represented by the value components. It consists of intrinsic goal orientation, extrinsic goal orientation and task-value belief. In answering the question of how learners perceive their effort in learning, the result shows that three factors play an important role. This is supported by the item 'The most satisfying thing for me in this program is trying to understand the content of the courses' which has the highest mean value for intrinsic goal orientation. Furthermore, for extrinsic goal orientation, the item 'Getting a good grade in the classes is the most satisfying thing for me right now' has the highest mean score. As for the task value belief, the item 'Understanding the subject matter of the courses is very important to me' received the highest mean among other items for students in all programmes in UiTM Dengkil.



As for the last variable which is performance, this variable is represented by affective components and expectancy components. In answering the research question of how do learners perceive their performance in learning, results show that the item 'I believe I will receive excellent grades in the classes' has the highest mean to represent student's efficacy aspect while item 'If I try hard enough, then I will understand the course materials' has the highest mean to represent students' control belief in learning. On the other hand, as for the affective component, item 'When I take a test I think about how poorly I am doing compared with other students has the highest mean score'.

Lastly, in answering the research question regarding the relationship between outcome with effort and performance, it is found that there is a low significant correlation between outcome and effort, outcome and performance as well as effort and performance. This finding is supported by a study done by Goodman et. al (2011), where the empirical results indicated a significant relationship between effort and academic performance. Other study of burnout and motivation among medical students done by Hwang, et. al (2019), the findings show that over-commitment significantly accounted for engagement. However, it did not significantly account for burnout. The outcomes of over-commitment may be explained by medical students' specific traits. Another comparative research done by Cazan (2015), which studied the engagement and burnout among university students revealed that students with high academic performance (first year) and low academic performance (second year) experienced burnout. These findings are in line with current study that shows a positive and low significant value between performance and burnout.

### **Implications and Suggestions for Future Research**

This study contributes to the current research with respect to academic burnout. This study is the first in Malaysia to examine the relationship between effort, burnout, and academic performance at the pre-degree level. It is a stage that acts as a link between the school phase and the higher education level. The information regarding the relationship between these three variables might help students to develop resilience and adaptability. By understanding how overwork might lead to burnout and performance, students can learn from their experiences and develop the skills needed to overcome obstacles in their academic journey.

This study also provides insight to the policymaker about academic burnout due to the load faced by the students which can lead to negative performance since burnout is of significant concern to educators and administrators. Various stakeholders such as the Ministry of Education, school administrators, and parents might develop a better plan and ways to reduce the number of students with burnout problems. Institutions should take various actions to promote intrinsic motivation and efficacy belief guiding the students in their development of positive learning and coping strategies.

In the future, it would be interesting to explore other factors apart from the effort which can lead to burnout. Further research can explore the mediating effect of motivation on the relationship between effort and burnout. Furthermore, longitudinal studies might provide a better view regarding effort, burnout, and academic performance. Not only that, for future research, it is suggested to have a bigger sample size from various universities offering pre-degree programmes in order to obtain a more reflective and significant result.

In conclusion, it would be interesting to explore whether innovative learning environments, such as online curricula or part-term classes versus full semesters, are

beneficial in minimising the competing pressures of academics, potentially resulting in a lower risk of burnout.

## References

- Campos, J. A. D. B., Zucoloto, M. L., Bonafe, F. S. S., Jordani, P. C., and Maroco, J. (2011) Reliability and Validity of Self-Reported Burnout in College Students: A Cross Randomized Comparison of Paper-and-Pencil vs. Online Administration. *Computers in Human Behavior*, 27, 1875-1883. <https://doi.org/10.1016/j.chb.2011.04.011>
- Cazan, A. M. (2015). Learning motivation, engagement and burnout among university students. *Procedia-Social and Behavioral Sciences*, 187, 413-417.
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behaviour. *Psychological Inquiry*, 11(4), 227-268.
- Deci, E. L., & Ryan, R. M. (2012). Self-determination theory.
- Erturgut, R., & Soyseker, S. (2010). An empirical analysis on burnout levels among second year vocational schools students. *Procedia-Social and Behavioral Sciences*, 2(2), 1399-1404.
- Filgona, J., Sakiyo, J., Gwany, D. M., & Okoronka, A. U. (2020). Motivation in learning. *Asian Journal of Education and social studies*, 10(4), 16-37.
- Goodman, S., Jaffer, T., Keresztesi, M., Mamdani, F., Mokgatle, D., Musariri, M., ... & Schlechter, A. (2011). An investigation of the relationship between students' motivation and academic performance as mediated by effort. *South African Journal of Psychology*, 41(3), 373-385.
- Hwang, J. E., Kim, N. J., Kwon, N., & Kim, S. Y. (2019). An effort-reward imbalance model to study engagement and burnout: a pilot study. *Journal of Education and Development*, 3(2), 1.
- International Journal of Cognitive Research in Science, Engineering and Education (IJCRSEE)*, 10(2), 219-229.
- Jackson, S. L. (2015) *Research methods and Statistics-A Critical Thinking Approach (5th Edition)* Boston, USA:: Cengage Learning.
- Jagodics, B., & Szabó, É. (2022). Student burnout in higher education: a demand-resource model approach. *Trends in Psychology*, 1-20.
- Lee, M. Y., Lee, M. K., Lee, M. J., & Lee, S. M. (2020). Academic burnout profiles and motivation styles among Korean high school students. *Japanese Psychological Research*, 62(3), 184-195.
- Levi, U., Einav, M., Ziv, O., Raskind, I., & Margalit, M. (2014). Academic expectations and actual achievements: the roles of hope and effort. *European Journal of Psychology of Education*, 29, 367-386.
- Liu, X. (2023). Examining student burnout causes among English as a foreign language student: focus on school climate and student growth mindset. *Frontiers in Psychology*, 14, 1166408.
- Liu, Z., Xie, Y., Sun, Z., Liu, D., Yin, H., & Shi, L. (2023). Factors associated with academic burnout and its prevalence among university students: a cross-sectional study. *BMC Medical Education*, 23(1), 317.
- Maehr, M. L., & Zusho, A. (2009). Achievement goal theory: The past, present, and future.
- Maslach, C., & Leiter, M. P. (2016). Burnout. In *Stress: Concepts, cognition, emotion, and behavior* (pp. 351-357). Academic Press.

- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52(1), 397-422.
- Menges, J. I., Tussing, D. V., Wihler, A., & Grant, A. M. (2017). When job performance is all relative: How family motivation energizes effort and compensates for intrinsic motivation. *Academy of Management Journal*, 60(2), 695-719.
- Miltojevic, V. D., Krstic, I. L., & Orlic, A. N. (2022). Burnout among students of technical faculties in Serbia – A case study,
- Neumann, Y., Finaly-Neumann, E., & Reichel, A. (1990). Determinants and consequences of students' burnout in universities. *The Journal of Higher Education*, 61(1), 20-31.
- Nikodijevic, A., Labrovic, J. A., & Dokovic, A. (2012). Academic burnout among students at faculty of organizational sciences. *Journal for Theory and Practice Management*, 64, 64-53.
- Pintrich, P. R., & De Groot E. V. (1990). Motivational and self-regulated learning Components of classroom academic performance. *Journal of Educational Psychology*, 82(1), 33-40. Retrieved from <https://psycnet.apa.org/doi/10.1037/0022-0663.82.1.33>
- Pisarik, C. T. (2009). Motivational orientation and burnout among undergraduate college students. *College Student Journal*, 43(4), 1238-1253.
- Rahmat, N. H., SUkimin, I. S., Sim, M. S., Anuar, M., & Mohandas, E. S. (2021) Online Learning Motivation and Satisfaction: A Case Study of Undergraduates Vs Postgraduates. *International Journal of Asian Social Science*, Vol 11(2), pp 88-97. <http://dx.doi.org/10.18488/journal.1.2021.112.88.97>
- Rahmati, Z. (2015). The study of academic burnout in students with high and low level of self-efficacy. *Procedia-Social and Behavioral Sciences*, 171, 49-55.
- Rahmatpour, P., Chehrzad, M., Ghanbari, A., & Sadat-Ebrahimi, S. R. (2019). Academic burnout as an educational complication and promotion barrier among undergraduate students: A cross-sectional study. *Journal of education and health promotion*, 8.
- Reis, A., Soares, D., Ferreira, T., & Santos, T. (2021). Burnout in higher education students: A systematic review. *Education Sciences*, 11(1), 35.
- Salmela-Aro, K., Kiuru, N., Leskinen, E., & Nurmi, J. E. (2009). School burnout inventory (SBI) reliability and validity. *European Journal of Psychological Assessment*, 25(1), 48-57.
- Sharififard, F., Asayesh, H., Hosseini, M. H. M., & Sepahvandi, M. (2020). Motivation, self-efficacy, stress, and academic performance correlation with academic burnout among nursing students. *Journal of Nursing and Midwifery Sciences*, 7(2), 88-93.
- Usan, P., Salavera, C., Quilez-Robres, Q., & Lozana-Blasco, R. (2022). Behaviour Patterns between Academic Motivation, Burnout and Academic Performance in Primary School Students. *International Journal of Environmental Research and Public Health*.19(19):12663. <https://doi.org/10.3390/ijerph191912663>
- volumVroom, V. (1964) *Work and Motivation*. Wiley and Sons, New York
- Wigfield, A., Tonks, S., & Klauda, S. L. (2009). Expectancy-value theory.
- Wong, W. O., & Kwong, W. M. (2020). Examining the sources and impact of school burnout among secondary school students in Hong Kong: A mixed-methods study. *School Psychology International*, 41(3), 204-222.
- Yukhymenko-Lescroart, M. A. (2021). The role of passion for sport in college student-athletes' motivation and effort in academics and athletics. *International Journal of Educational Research Open*, 2, 100055.
- Yunus, A. S., & Ali, W. Z. W. (2009). Motivation in the Learning of Mathematics. *European Journal of Social Sciences*, 7(4), 93-101.