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Motivation Learning Achievement in Open Distance Learning (ODL) Environment: Skills, Beliefs, Self-direction and Interaction of University Students

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ABSTRACT

The COVID-19 pandemic in Malaysia has seen the number of positive carriers rise day by day, prompting the government to issue a movement control order (MCO), compelling Malaysians to stay at home to prevent the virus from spreading quickly in the year 2020-2021. The MCO has an impact on students. This situation forces them to stay at home while the learning process continues in Online Distance Learning (ODL) mode. The institution is concerned about the implications of online learning as a teaching technique that is intended to improve students' academic performance by increasing computer self-efficacy and other factors such as student satisfaction and e-learning outcomes. Therefore, this study aims to examine the motivation learning achievement in ODL among university students. A total of 290 volunteer students of both genders with diploma and bachelor degrees students participated in this study. The study found that there were significant relationships between the factors of motivation learning achievement. There were differences in motivation learning achievement (skills, beliefs, self-direction and interaction) between genders. Whilst, there were no significant differences in the factors of motivation learning achievement (skills, beliefs, self-direction and interaction) between diploma and bachelor degree students. Thus, the ODL appears to be new standards that should not obstruct potential interactive learning for optimal academic performance and accomplishment. In other words, this research provides a new perception to lecturers, faculty management, and the institution, as well as serving as the standard practice of ODL in the future.

Keywords: *Academic Performance, Learning Achievement, Level of Education, Motivation, Online Distance Learning*

INTRODUCTION

Motivation to learn is an engagement and dedication to explore and achieve excellence in academic qualifications that will promote students' future careers (Ullah, Sagheer, Sattar, & Khan, 2013). Motivation consists of two forms which are extrinsic and intrinsic that can be related to the students' academic performance. Intrinsic motivation is the internal capabilities of the students in communicating with their environment to achieve necessary and predetermined objectives. In contrast, extrinsic

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motivation refers to the idea of one being motivated by external sources such as rewards and grades (Tanveer, Shabbir, Ammar, Dolla & Aslam, 2012).

One of the most significant factors for learning has always been motivation as it plays a crucial role in e-learning, in particular concerning drop-out and learning efficiency (Cocea, 2006). The measurement of motivation is achieved through the relationship between educators and learners in the classroom or teaching platform. Furthermore, motivation is the process of upgrading the origins of movers or drivers of individual behaviour to satisfy their needs in an accomplishing objective (Cocea, 2006). Therefore, motivation in online learning needs drive, enthusiasm and excitement of intrinsic and extrinsic factors, as such, motivation affect what, how and when individuals learn specifically by engaging with activities, participating, and adopting learning techniques in demonstrating efficiency, resilience and innovation (Ryan & Deci, 2000).

Moving to online learning, in the majority of foreign universities worldwide, e-learning has been adopted as an instrument in the learning process. The word "e-learning" is characterized by "any learning involving the use of the internet or intranet" (Abou El-Seoud, Taj-Eddin, Seddiek, El-Khouly, & Nosseir, 2014). The word e-learning has become more general by stating that it is "anything supplied, enabled, or mediated for explicit learning purposes by electronic technology" (Abou El-Seoud et al 2014). In the previous study, Li and Masters (2009) "e" in e-learning does not stand for electronic; it should be an abbreviation for "evolving, enhanced, everywhere, every time and everybody". In reality, the quote shows many of the benefits for learners and instructors in e-learning. E-learning has grown in significance as an educational tool just like technology has developed and progressed over the years (Li & Masters, 2009). Interestingly, more attempts have been made to advance technology than to try to understand the needs and learning preferences of individual learners and the nature of instruction. With such aspects as the internet and online learning, the 21st century has seen exponential change. Online distance learning is also used interchangeably with terms such as e-learning (Keis, Grab, Schneider & Öchsner, 2017), blended learning (Deschacht & Goeman, 2015), online learning (Wallace, 2010) virtual learning with the main idea stating that any learning activity in an informal form, with the use of any internet tool and little or no physical social interaction with the teacher or lecturer (Kuo, Walker, Schroder & Belland, 2014).

BACKGROUND OF STUDY

Coronavirus disease (COVID-19) is an infectious disease, caused by a new virus outbreak. COVID-19 has spread exponentially across the world, overreaching health systems and intensifying with the confinement of shelters. In early 2020, the COVID-19 outbreak in Malaysia recorded positive carrier statistics increasing day-by-day that had forced the government to take action to enforce movement control order (MCO); Malaysians were ordered to stay at home to prevent the rapid spread of the virus. The MCO affects students at the beginning of a new semester that forces them to stay at home, but learning activities continue through the use of the form of Online Distance Learning (ODL) (Allam, Hassan, Sultan, Mohideen & Kamal, 2020). Online distance learning, however, comes with major obstacles. Firstly, students need to have access to technology as the primary predictor of preparation for online learning. Learners or students also take their learning separately as the teachers/lecturers will also require more time to effectively plan their content delivery as learners would most likely face technological and adaptive challenges. Moreover, the unprecedented crisis in Malaysia has created an incentive for nearly 5 million school students and 1.2 million university students to boost online education (Allam, Hassan, Sultan, Mohideen and Kamal, 2020). Online and web-based learning platforms have become dramatically common because of the pandemic, especially when all educational activities have stopped. It enables universities to adapt rapidly during the pandemic to their traditional blended-based learning. The process of migration to online learning, however, must not be time-consuming and easy to set up (Allam, et al. 2020).

Given the significant mutual link between learning and motivation, (Brophy, 2010) not surprisingly, motivation has been extensively examined across a wide variety of conventional educational environments (Schunk, Meece, & Pintrich, 2012). According to Bekele (2010), studies that examined motivation to learn in online contexts are limited in both numbers and scales. This approach is typical for comparative research between learners online and on-campus (Wighting, Liu, & 2008). The findings indicated that online students are more profoundly motivated than their on-campus peers. Nevertheless, higher dropout rates are associated with online courses compared to comparable face-to-face classes (Park & Choi, 2009), encouraging the perception that motivation is more complicated than the above studies suggested. However, a key factor contributing to high dropout rates has also been recognized (Artino, 2008; Keller, 2008). Performance in an online learning environment is also seen as a key factor of student engagement (Artino, 2008; Keller, 2008) and the key explanation for the current analysis is that these factors point to the need for reconsideration of motivation to learn in environments rich in technology. But, before turning our attention to encouragement, it's important to begin by defining what online distance learning means.

Distance learning (DL) has been a common and growing phenomenon, giving a tremendous boost to the use of information and communication technology (ICT) in tertiary institutions (Means, Toyama, Murphy, Bakia & Jones, 2010). Currently, online is the quickest developing field of higher education gaining popularity both on and off-campus. However, the use of distance learning by colleges and schools has highlighted questions about the quality and reliability of online distance learning concerning conventional trends in education (Markova, Glazkova & Zaborava, 2017). The quality of the teaching offered by distance learning programs remarks the situation that is the case of this current study. Previously, there was a study that showed instructors had conflicting attitudes about teaching distance education (Mahmood, Mahmood & Malik, 2012). This attitude is seldom conducive to a positive academic environment for the students. Additionally, a high internet connection needed for online learning is not well prepared for many students. Because of this, virtual learning and other platforms that require internet connectivity, face difficulties in going live. Besides, the chances of interruption were high. There are high risks of distracting and losing track of deadlines, with no colleagues around for face-to-face interaction and no peers who can help with regular reminders of pending tasks (Kumar, 2015). Furthermore, communication also can be the main problem (Chametzky, 2014). During online learning, students lack productive communication skills. Finally, not all learners are adapted to this method of learning and not all subjects are better taught through this process. Therefore, this research aims to investigate the motivation learning achievement of students in open distance learning.

LITERATURE REVIEW

Bernard, Brauer, Abrami, & Surkes, (2004), examined the study that reported reviews on the creation and predictive validation of an instrument to test the Distance Education (DE)/online learning (OL) progress achievement outcomes. The 38-item questionnaire was generated and given to 167 learners who were about to use the method to embark on an online course. A four-factor solution, translated as “general DE beliefs”, “confidence in prerequisite abilities”, “self-direction and initiative”, and “desire for interaction” was discovered by factor analysis. They noticed that two of these variables predicted achievement success using multiple regression (i.e., Cumulative Course Grade). Comparisons of the questionnaire's pre-test and post-test administrations showed that certain opinion shifts took place between the beginning and the end of the course. In addition, the four variables were correlated with categories of demographic features. The general results indicated that this method had some predictive validity in terms of achievement, but the Cumulative Grade Point Average is a much better indicator (i.e., the record of the overall achievement of the university).

Wongwatkit, Panjaburee, Srisawasdi, and Seprum, (2020) explored gender differences in moderating the connections between the perceived individual learning support and learning advancement of students, and between the intention to use a system and the learning outcomes of users. Two key mechanisms control learning activities: the role of testing and diagnosis, and the function of learning

monitoring. The personalized e-learning system asks learners to take an online logical pre-test in the training and diagnosis feature. Upon finding, the research has led to an improvement in awareness of the variables of customized learning characteristics that could impact the efficiency of learning in such systems. Second, the key study's findings found that gender discrimination has a specific influence on growth in research. As a consequence, the moderating influence of gender on the correlation between perceived personalized support for learning and the decision to use a personalized e-learning system and the success of learning is as follows: The relationship between the perceived utility of the recommendation of conceptual learning and the success of learning is moderated by the students' gender. The gender of the students' moderates the relationship between learning preferential-fit materials and learning efficiency. The gender of the students also moderates the relationship between the perceived utility of mastering learning and learning results. The relationship between the purpose to use the method and the learning success of the students is moderated by the students' gender. A customized e-learning framework was generated in the study by taking into account the to-be improved concepts and learning interests of the students.

DiRienzo, & Lilly (2014) examined two separate traditional face-to-face and online distribution approaches, student learning outcomes of both a “basic” and “complex” assignment across five undergraduate business courses taught at Elon University during the summer of 2007. This research contains data from over 120 students, and the findings showed that the delivery method does not have a substantial difference in student learning after adjusting for other variables known to influence students’ success. In this situation, though, they hypothesized that the cause of the lack of time spent is the motivation factor. This research showed no major difference in the results of student learning from the two different delivery approaches, exploring possible differences in other factors such as interactions between students and teachers, and an avenue for future studies would be the efficiency and consistency of contact and sharing of ideas. They concluded that online and face-to-courses are regarded as similarly challenging by most students. Moreover, as in other experiments aiming to measure mainly contextual factors, such as intrinsic student motivation, the proxies should not be optimal experiments, and these outcomes can also be treated with this note of caution.

Research Framework

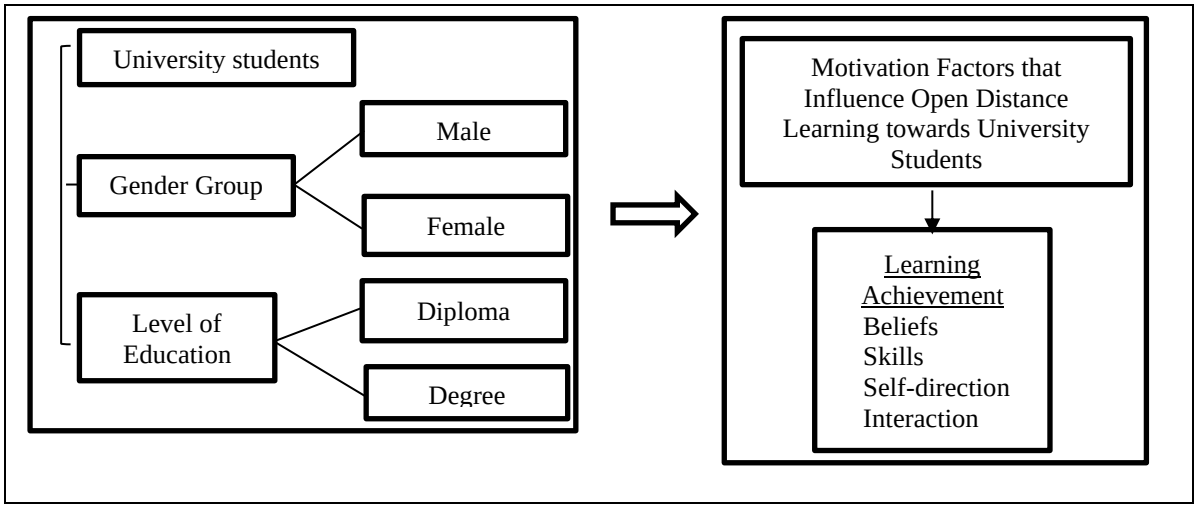

Figure 1: Motivation Factors that Influence Open Distance Learning towards students at university in terms of Learning Achievement.

This framework of the current study explained the procedure of the study. The dependent variables of the study motivation learning achievement are the factors that influence open distance learning toward University Students consisting of gender group and level of education (independent

variables). From the framework, it explained how these motivation factors in learning achievement, for instance; beliefs, skills, self-direction and interaction differentiated in terms of gender groups (male and female) and level of education (diploma and degree).

METHODOLOGY

The main purpose of this study is to examine motivation learning achievement in an open distance learning (ODL) environment. A total of 290 (n = 145 male, n = 145 female) students volunteered to participate in this study. The questionnaire is formed into two main sections. Section A related to the respondent's demographic data. Whilst, section B is related to the factors of motivation learning achievement in an open distance learning (ODL) environment. All of the respondents answered the questions via an online medium set in Google Form. The respondents for this study were students from the Faculty of Sports Science and Recreation (FSR), UiTM Perlis Branch students (n = 51.4% bachelor degree, n = 48.6% diploma) included five programs of students in the faculty. This study also has obtained a university of ethical permission from REC of UITM to conduct the study (Ref: REC/03/2021 (UG/MR/156).

Instruments

For this current study, a questionnaire on the "Readiness for Online Learning Questionnaire" was selected and adapted to fit the purpose of the study. Items are split into two parts. Section A is connected to the demographic characteristics data. Section B is made up of 25 questions assessing four factors: "skills ($\alpha = .84$)", "beliefs ($\alpha = .89$)", "self-direction ($\alpha = .87$)", and "interaction ($\alpha = .78$)" This instrument used the measurement scale taken from Bernard et al. (2004) research on the implementation of a questionnaire for the estimation of the achievement of online learning. The questionnaire used a 4-point Likert scale with the items varying from "strongly disagree" to "strongly agree".

Data Analysis

Table 1: Specification of Measurement Scale and Data Analysis Procedures

Section	Detail of Measurement	Number of Items	Statistics Procedures
A	Demographic Profile	3	Descriptive statistics
B	Motivation Factors (Beliefs, Skills, Self-Direction and Interaction) that Influence Open Distance Learning	25	Descriptive statistics R- Pearson correlation Independent t-Test

Demographic Characteristics of Respondents

Table 2: Percentage of Respondents by Gender Groups (N = 290)

	Frequency	Percent	Cumulative Percent
Male	145	50.0	50.0
Female	145	50.0	100.0
Total	290	100.0	

Table 3: Percentage of Respondents by Level of Education (N = 290)

	Frequency	Percent	Cumulative Percent
Bachelor Degree	149	51.4	51.4
Diploma	141	48.6	100.0
Total	290	100.0	

RESULTS AND DISCUSSIONS

There were significant correlations in the factors of motivation learning achievement (skills, beliefs, self-direction and interaction) in open distance learning among the students. The highest mean reading response from the students is interaction (M = 3.22), followed by skills (M = 3.09), self-direction (M = 3.07) and the lowest mean reading response by the students is beliefs (M = 2.77). (See table 4)

The factor of interaction was the highest for motivation learning achievement. This may be because students preferred to interact with their lecturers and coursemate whether it is face to face or in online open distance learning. They may also feel that face to face contact with their instructor is necessary for learning to occur. Besides, most of the students enjoy working in groups where they also can collaborate during internet activities outside of the class. Group working makes studying more efficient and fun. Working with others enables one to pool ideas and see problems from different perspectives. This finding is supported by Dzemidzic, Burner, & Johnsen (2019), they found that students' interpersonal behaviour, their experiences and active participation in the cooperative learning process, communication and support of one another, and teachers' influence on promoting students' interaction led to successful cooperative learning in small groups. Moreover, these factors may lead to students' deep learning. Baines, Blatchford, and Webster (2015) stated that students sit in groups, but rarely work as a group. Students need to experience positive interdependency with their peers, be aware of individual accountability through a group learning process, encourage their peers face-to-face to interact in a group setting and be reflective about their group dynamics during distance learning.

However, the factor of beliefs was the lowest for motivation learning achievement since students disagree with the statement that they could pass a course on the internet without any teacher assistance. They may perceive that learning is not the same as in class and at home through the medium of online. Specifically, in a classroom, students are often required to speak their minds. They may be required to give presentations or opinions on the topic of discussion. They have to work cooperatively in groups of people with differing viewpoints. Online courses require none of that. Viewing engagement from a motivational perspective opens up the possibility that many of the factors already established as important predictors of motivational development may also serve to support students' classroom engagement (Skinner, 2016). Much of the research examining how students' engagement can be shaped by their interpersonal relationships in school has relied on motivational accounts of the influences of teachers and peers (Martin and Dowson, 2009).

Table 4: Descriptive Statistics, Alpha Coefficient and Correlations among Variables (skills, beliefs, self-direction and interaction) with Gender and Level of Education.

Variables	M	SD	1	2	3	4
1. Skills	3.09	0.47	0.84			
2. Beliefs	2.77	0.61	.643**	0.89		
3. Self-Direction	3.07	0.56	.625**	.655**	0.87	
4. Interaction	3.22	0.45	.622**	.455**	.621**	0.78
5. Gender	1.50	0.50	-.310**	-.379**	-.204**	-.132**
6. Level of Education	1.49	0.50	.094	.019	.018	.085

Note. N = 290. Alpha coefficients (α) are presented in the diagonal (in italic) **. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level.

Second, there were significant differences of motivation factors in learning achievement that influence open distance learning among the students in terms of gender groups. Analysis shows that the mean between gender for skills (Male: M = 2.95: SD = .47, Female: M = 3.24; SD = .42), beliefs (Male: M = 2.54; SD = .57, Female: M = 3.00; SD = .56), self-direction (Male: M = 2.96; SD = .61, Female: M = 3.19; SD = .50) and interaction (Male: M = 3.16; SD = .52, Female: M = 3.28; SD = .36) (See table 5).

Findings stated that both males and females have the highest mean of interaction factors compared to other factors. However, the mean gaps for the four factors did not have large gaps and were closely related. It can be seen that the mean for every motivation factor in learning achievement was led by the female because the mean for reading is the highest compared to males. Studies conducted across the world among students studying at different levels found a significant gender difference in academic performance. Several studies have reported that female students outperform their male counterparts. It was supported by Ghazvini & Khajehpour (2011) further argued that even gender difference exists at the level of cognitive functioning in the academic environment. Females are likely to be more adaptive in learning in a different environment. However, Wangu (2014) in a study conducted among the students of secondary schools in Kenya observed males passing more than females. On the other hand, Goni (2015) in a study conducted among college-going students did not observe significant gender differences in academic performance.

Furthermore, both males and females have the highest mean of interaction factor compared to other factors because online courses usually require little to no face-to-face interaction with classmates and teachers. Student-to-student interaction is a vital part of any course experience. In a distance learning setting, this interaction happens naturally, as students listened to each other's comments, ask each other questions, and build rapport through an online platform. In cooperative learning, Herianto (2017) emphasize that students can learn from interaction with more capable peers. Students are confronted with the learning process with peers. This method is not only effective and open for all students, but also workable and develop the process of thinking. In a cooperative group, students can listen to the discussion in the classroom and they can learn how to employ different ways of thinking to gain success in accomplishing the tasks given.

Table 5: Independent Sample T-Test of Gender for Motivation Factors in Learning Achievement Between Male and Female Students

	Levene's Test for Equality of Variances		t-test for Equality of Means			
	F	Sig.	t	df	Sig.(2-tailed)	Mean Difference
Skills	.000	.995	5.530	288	.000	.28966
			5.530	284.013	.000	.28966
Beliefs	.003	.953	6.957	288	.000	.46552
			6.957	287.697	.000	.46552
Self-Direction	.235	.629	3.540	288	.000	.22931
			3.540	275.962	.000	.22931
Interaction	6.955	.009	2.268	288	.024	.12000
			2.268	257.073	.024	.12000

Note: P < 0.05**. Sig (2-tailed)

Next, (see table 6) there were no significant differences of motivation factors in learning achievement that influence open distance learning between the students in terms of level of education of diploma and bachelor degree students. The components reading of mean between level of education for skills (Diploma: M = 3.14: SD = .47 Bachelor Degree: M = 3.05: SD = .46), beliefs (Diploma: M = 2.78: SD = .67 Bachelor Degree: M = 2.76: SD = .54), self-direction (Diploma: M = 3.08: SD = .53, Bachelor

Degree: M = 3.06: SD = .59) and interaction is (Diploma: M = 3.26: SD = .47, Bachelor Degree: M = 3.18: SD = .44).

The results data of comparison between diploma and bachelor degree students show no significant difference that led to no or slight differences in motivation factors in learning achievement for both levels of education. Both levels of education dimension of motivation for the successful completion of studies is determined by the abilities and the will of a particular individual to cope with the demands of the selected field of study. Some studies had identified that motivation is an important contributor to student success as well as influential in determining student retention in higher education. Student motivation to learn has been undervalued to date though has been identified as an area influencing student success and retention at university. The transition into university has been highlighted as a key period affecting student outcomes as well as well-being. Early identification of those students at risk may assist the transition for many students moving into higher education (Edgar, Carr, Connaughton & Celenza, 2019).

Both diploma and bachelor degree students have the lowest mean of beliefs factor compared to other factors because they disagree that materials through internet course is better prepared than a traditional class. The students receive face-to-face verbal feedback and constructive criticism from their professors, it instils motivation to improve their work and build upon what they've learned. Educational relationships and bonds give in-person learning an advantage over online learning. People are usually strongly motivated to maintain an internal sense of consistency among their beliefs and self-perceptions. When an experience is less optimal than an individual thinks, he or she is capable of achieving, the person will generally experience a pattern of negative emotions, including sadness, dissatisfaction, anxiety, or fear. Such self-discrepancy was addressed by Al-Samarraie, Selim and Zaqout (2016).

Table 6: Independent Sample t-Test Level of Education for Motivation Factors in Learning Achievement between Diploma and Bachelor Degree Students

	Levene's Test for Equality of Variances		t-test for Equality of Means			
	F	Sig.	t	df	Sig.(2-tailed)	Mean Difference
Skills	.513	.474	-1.606	288	.109	-.08811
			-1.605	286.345	.110	-.08811
Beliefs	6.322	.012	-.327	288	.744	-.02362
			-.325	269.369	.746	-.02362
Self-Direction	.610	.435	-.297	288	.767	-.01967
			-.298	287.255	.766	-.01967
Interaction	2.548	.111	-1.451	288	.148	-.07718
			-1.448	283.091	.149	-.07718

CONCLUSION

This study has contributed to the understanding of Motivation in Open Distance Learning (ODL) among students. From the results above, the recommendations can be explained by the fact in including e-learning activities as part of the course assessment components. This represents a direct incentive to engage learners. Then, it's critical to promote instructor-student contact. Instead of merely perusing the course materials and lecture notes, an online discussion board should encourage learners to verbalize and reflect on their thoughts, and instructors should reconsider learning outcomes if they plan to turn a traditional course into an e-learning one. The conclusions of the findings for the three research questions on the Motivation in Open Distance Learning (ODL) are based on the findings of the responses by students from various programs of one faculty of the public university. With the growing demand for flexible delivery of education, online learning or distance learning has become an essential element of

university teaching across the world. It is currently gaining prominence in the educational sector. Because of the globalization of education and the widespread availability of new and appropriate information technology tools, this trend is expected to continue. It provides learners with a place and time flexibility. As the way it is delivered, online learning may present certain difficulties to a difference in gender and level of education. It can cause learners to become demotivated, causing minimal participation, or even withdrawal. As a result, it is critical to identify and address the elements impacting a learner's engagement and motivation in an online course to have a great learning experience. Future research suggests replicating the studies in other universities or fields of study to get the real expectations using ODL as a medium of learning.

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