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## ABSTRACT

*The greatest challenge for educators during the pandemic Covid 19 situation today is to motivate their students to adopt e-learning. Therefore, it is important for lecturers in higher institutions to understand how to motivate their learners in choosing the types of motivation. Motivation refers to the concern with arousal, direction and persistence of behaviour towards the achievement of a specific goal, which classified into intrinsic and extrinsic. The objective of this study is to explore the types of motivation in adopting e-learning among the student-athletes of Sport Science and Recreation Faculty at University Technology MARA (UiTM), Malaysia. One hundred and twenty student t- athletes participated in this study. They were categorized into four ranking known as national, state, district and university based on their achievement in sports. The overall result showed that the student-athletes have the highest level of motivation in External Regulation (mean= 27.51), followed by Introjected Regulation (mean= 25.74), Identified Regulation (mean= 22.32), Amotivation (mean= 20.34), Intrinsic Motivation to Experience (mean= 17.17), Intrinsic Motivation to Know (mean= 15.31) and Intrinsic Motivation to Accomplish (mean= 12.55). Furthermore, national level athletes scored higher mean in both types of e-learning motivation except for Amotivation. In contrast, university ranking student-athletes scored the lowest on all the types of motivations for e-learning but highest in Amotivation. The findings obtained in this study supported by Self-Determination theory that e-learning involves the interaction of both intrinsic and extrinsic motivation. Therefore, educators should use intrinsic and extrinsic types of motivation to enhance the e learning habits among student-athletes to increase their performance in academic.*

***Keywords:*** *E-Learning, motivation, student-athletes, educators*

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# INTRODUCTION

The greatest challenge for educators, especially lecturers today is how to motivate students to adopt e-learning. There are many rationales for offering and investing in online education, ranging from increasing access, to improving the quality of learning, to reducing costs, preparing students better for a knowledge-based society, responding to market demand, "lifelong" learning opportunity, collaborative learning across the world and to profit making (Dolence & Norris, 1995; Katz & Associates, 1999), especially during this Covid 19 pandemic situation. It is widely known that e-learning is very beneficial than traditional classroom teaching and learning practices. This is based on the statement drawn by Banathy (1994), and Hannum and Briggs (1982), that traditional or face-to-face instructional environments have been criticized for encouraging passive learning, ignoring individual differences and needs of the learners, and not paying attention to problem solving, critical thinking, or other higher order thinking. Contradictory, there are many benefits students can obtain through online learning, which includes, helped ensure remote learning, it was manageable, conveniently access teaching materials, reduced use of traveling resources and other expenses (Khadijah Mukhtar, Kainat Javed, Mahwish Arooj & Ahsan Sethi, 2020). Besides that, students can easily browse e-learning material at home, while traveling or on vacation without time and space limitation. Additionally, e-learning also aid lecturers to complete wide, large and complex topics according to the demand in the syllabus within the allocated credit hours for each course. Therefore, e-learning is the best method to reduce stress among educators in completing syllabus due to time constraint, especially during this lockdown situation.

Regardless, of the many potential benefits of e learning, it is critical that the debate acknowledge potential drawbacks and barriers to the development and implementation of e-learning (Becker, Sawang & Newton, 2013). One of the challenges of online learning relates to students feeling disconnected to their classmates and instructor (Gary & DiLoreto, 2016). Therefore, the number of students actively engaged in e-learning, is still very limited. According to Mandernach et al. (2011), when students are motivated to do well in their courses, involved or invested in their desire to learn, and willing to exert the effort expected by their instructors, they are more likely to be engaged in their education. Furthermore, measuring levels of student engagement allows instructors to adapt their instructional practices in response to changes in students' motivation, involvement, and attitude about their course and educational pursuits (Mandernach et al., 2011). Therefore, it is necessary to find ways to motivate learners to adopt e-learning in order to excel in education.

Wann (1997) define motivation as a process of arousal within an organism that helps direct and sustain behaviour. Daft (1977) define motivation as the forces either within or external to a person that arouse enthusiasm and persistence to pursue a certain course of action. Thus, motivation is concerned with arousal, direction and persistence of behaviour towards the achievement of a specific goal (Pargman, 1998). In other words, motivation is an important concept that is used to facilitate individuals to achieve their specific goals in career, business, education, personal or sports besides leading path to achieve success which at times beyond their intellectual and physical abilities (Ampofo-Boateng, 2009).

Human motivation is complex and it has to be address by a series of theories. One of the well-known theories of motivation is called Self-Determination Theory (SDT) developed by Deci and Ryan (1985). According to this theory, people make choices, develop-competencies and adapt based on the social environment in order to change their own lives. Self-Determination Theory categorized human motivation into three types of motivation such as intrinsic, extrinsic and amotivation. Intrinsic motivation consists of knowledge, accomplishment and stimulation. Whereas, extrinsic motivation is divided into integrated regulation, identified regulation, introjected regulation and external regulation. Figure 1 illustrated the types of Self Determination Theory.

| Self-Determination | | |
|---|---|---|
| + | | - |
| Intrinsic motivation | Extrinsic motivation | Amotivation |
| - Knowledge | - Integrated regulation | - Amotivation |
| - Accomplishment | - Identified regulation | |
| - Stimulation | - Introjected regulation | |
| | - External regulation | |

Figure 1: The self-determination and the different types of motivation. Adapted from Vallerand and Losier (1999).

Intrinsic motivation is internal motivation that lead for personal gain or reward. This motivation intrinsically motivates individuals to work, play, seeking enjoyment, interest, self-expression or challenge. According to Brustad (1988) intrinsic motivation have been found increased enjoyment in performing certain activities. In other words, intrinsic motivation is within an individual and involve their personal interest and enjoyment of the task. Pelletier, Fortier, Vallerand, Tuson, Briere, and Blais (1995) have categorised intrinsic motivation into three subgroups: first, intrinsic motivation towards knowledge that reflects a person's desire to learn new materials and ways to accomplish a task. For example, the intrinsic motivation encouraged the university undergraduates to read more and master the topics in the courses that they had enrolled. Secondly, intrinsic motivation toward accomplishments reflect the students desire to master a particular course or field to seek pleasure gained through achieving a personal goal from that activity. For instance, an undergraduate taking Sport Psychology course spends countless hours exploring past semester questions through e-learning and study all the related text pertaining to the course online. This would increase the student's self-confident in that course towards the end. Lastly, intrinsic motivation reflects the feeling of students experiencing stimulation from physically sensation innate to a specific task. For example, the sensory pleasure or aesthetic experience gained by exploring e-learning.

On the other hand, extrinsic motivation can be defined as motivation that appears from external sources such as participating to gain rewards, usually materialistic and to avoid punishment (Kowal & Fortier, 1999). Ryan and Deci (1985) identified four

subcategories of extrinsic motivation which are integrated, identified, introjected and external regulation. Integrated regulation is the most internalized form of regulation where it assimilated and internally controlled. For example, the learners perceive a lecturer controlling their behavior as being completely consistent with their own aspirations and goals and no longer perceives them as being externally controlling. Identified regulation is when learners manage to "identify" with an extrinsic motivation to the degree that is perceived as being their own. For example, a learner may recognised that by preparing the need of a course by completing assignments and studies by using e-learning are important means to score high grades in examinations. Introjected regulation occurs when learners struggle with the notion of causality but still perceive the motivation as controlling. For instance, a learner regularly read all the materials required through e-learning to avoid negative thought from classmates so that he or she not left behind. Lastly, the most direct extrinsic motivation is external regulation in which a behavior is performed only to obtain external reward or to avoid punishment. For example, a learner worked hard in reading all the materials required through e-learning in order to pass the course and avoid failing or repeating.

Finally, amotivation is the least self-determining motivation where there is no motivation at all. The learners feel not interested in e-learning and often at the end quit the university.

Knowing a learner's motivation for e-learning will help educationist to develop appropriate e-learning programmes for students. However, the types of motivation that the students portrayed in adopting e- learning is still vague and not fully understood. In addition, identifying the range of motivation given by a group of students will aid schools and universities to provide adequate and variety of e-learning programmes to stimulate learners' interest. Understandings learners' choice in e-learning, could unearth great practical value. Motivation research is useful because it provides theoretical and practical insight into why people initiate, regulate, sustain, direct, and discontinue behavior (Clancy et al., 2017).

The present research will evaluate the types of motivation that encourage students to engage in e-learning. There is a need to plan and attract students to engage in e-learning, but this will depend on their motivation. Research in this area is important because it would provide evidence regarding the nature of the motivation portrayed by students, for e-learning. Furthermore, in this serious pandemic Covid 19 situation, Malaysian government imposed a national breakdown, where all the universities and schools were closed, and therefore its necessary students to practice e learning.

**AIM OF THE STUDY**

The objective of this study is to explore the types of motivation evident for e-learning among the student-athletes' in Sport Science and Recreation Faculty at University Technology MARA (UiTM), Malaysia. Specifically, the objectives are as follows:

1. To identify types of motivation for e-learning.
2. To determine the motivation for e-learning that exists between levels of representation in sport according to their rank such as university, district, state and country.

**METHOD**

The respondents for this survey were student-athletes' from the Faculty of Sport Science and Recreation, at University Technology MARA (UiTM), Shah Alam, Malaysia. One hundred and twenty student-athletes' took part in this study. They were categorized into four rank such as university, district, state and national level based on their achievement in sports competition.

The Sport Motivation Scale (SMS-28) was adopted according to the e-learning material and used to assess the student-athletes' motivation (Pelletier, Fortier, Vallerand, Tuson, Briere & Blais, 1995). This SMS which consists of 28 items, is based on Ryan and Deci's (1985) self-determination theory. This questionnaire is presented using the likert scale of 1 (does not correspond at all) to 7 (corresponds exactly). All the 28 items comprised seven groups of four questions each, representing the seven predictor variables as follows: intrinsic motivation to know, intrinsic motivation toward accomplishment, intrinsic motivation to experience stimulation, extrinsic motivation - identified regulation, extrinsic motivation - introjected regulation, extrinsic motivation - external regulation, and amotivation.

**RESULTS**

*Cronbach Reliability Coefficients*

In this study, Cronbach alpha were found ranging from .73 to .89.

*Table 1:    Cronbach Reliability Coefficients*

| Types of sport motivation among undergraduate-athletes | Cronbach's Alpha |
|---|---|
| Intrinsic Motivation to Know | .7312 |
| Intrinsic Motivation to Accomplish | .8744 |
| Intrinsic Motivation to Experience | .7651 |
| Extrinsic Motivation Identified Regulation | .7808 |
| Extrinsic Motivation Introjected Regulation | .8941 |
| Extrinsic Motivation External Regulation | .8587 |
| Amotivation | .8851 |

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*Respondents' Profile*

The e-learning student-athletes' profile described their gender, rank, types of sport involvement and age. Table 2 (pg. 44) showed the overall results of the 75 male and 45 female respondents' profile.

The mean age for overall respondents was 21.08 years old. The age of male varied from 19 to 25 years, where the mean age was 22.28 years old. The age of female respondents ranged from the minimum of 19 to the maximum of 23 years old. The mean age for female respondents was 21.88 years old.

The variable "rank in sports" in this study is categorized into four levels such as university, district, state and country. The result showed that 46 respondents had participated at national level, whilst 27 respondents participate at state level, 20 had participated at district level and 27 respondents participated at university level. The sports category showed that majority of the respondents, 52.50% involved in team sports and 47.50% were individual sport players. The sports category showed that majority of the respondents, 52.50% took part in team sports and 47.50% were individual sport players.

*Table 2: Respondents' profile (n=120)*

| Variables | Frequency | Percentage | Mean | SD |
|---|---|---|---|---|
| **Gender** | | | | |
| Male | 75 | 62.50 | | |
| Female | 45 | 37.50 | | |
| **Rank of athletes'** | | | | |
| University | 27 | 22.50 | | |
| District | 20 | 16.67 | | |
| State | 27 | 22.50 | | |
| National/Country | 46 | 38.33 | | |
| **Sports Involvement** | | | | |
| Individual Sport | 57 | 47.50 | | |
| Team | 63 | 52.50 | | |
| **Age** | | | | |
| Overall | | | 21.08 | 1.97 |
| Male | | | 22.28 | 1.72 |
| Female | | | 21.88 | 1.18 |

*Mean For E-Learning Motivation*

Table 3 (pg.45) showed that the respondents' motivation for e-learning were highest in External Regulation (mean= 27.51), followed by Introjected Regulation (mean= 25.74), Identified Regulation (mean= 22.32), Amotivation (mean= 20.34), Intrinsic Motivation to Experience (mean= 17.17), Intrinsic Motivation to Know (mean= 15.31) and Intrinsic Motivation to Accomplish (mean= 12.55).

*Table 3:   Motivation Mean among student-athletes'*

| Types of motivation | Mean |
|---|---|
| External Regulation | 27.51 |
| Introjected Regulation | 25.74 |
| Identified Regulation | 22.32 |
| Amotivation | 20.34 |
| Intrinsic Motivation to Experience | 17.17 |
| Intrinsic Motivation to Know | 15.31 |
| Intrinsic Motivation to Accomplish | 13.55 |

*Motivation for E-learning Based on Athletes' Rank*

Apparently, significant differences emerged for the student- athletes from different rank in e-learning (Table 4.pg 46)

*Table 4:   Comparison of E-learning Motivation on student-athletes' based on their Rank (n=120)*

| E-learning Motivation | Athletes' Rank | Mean | F Value |
|---|---|---|---|
| Intrinsic Motivation to Know | National | 15.1781 | |
| | State | 13.5312 | 11.001* |
| | District | 12.0031 | |
| | University | 11.7181 | |
| Intrinsic Motivation to Accomplish | National | 17.3317 | |
| | State | 19.2189 | 13.144* |
| | District | 14.1087 | |
| | University | 10.3101 | |
| Intrinsic Motivation to Experience | National | 16.5172 | |
| | State | 15.1212 | 11.417* |
| | District | 13.2107 | |
| | University | 10.1417 | |
| Extrinsic Motivation Identified Regulation | National | 15.3107 | |
| | State | 13.5147 | 12.111* |
| | District | 11.3301 | |
| | University | 10.7181 | |
| Extrinsic Motivation Introjected Regulation | National | 17.4399 | |
| | State | 14.5971 | 13.893* |
| | District | 13.0012 | |
| | University | 11.4751 | |
| Extrinsic Motivation External Regulation | National | 19.5671 | |
| | State | 16.4451 | 16.113* |
| | District | 14.7681 | |
| | University | 11.1146 | |
| | National | 10.4476 | 12.831* |

| | | |
|---|---|---|
| Amotivation | State | 11.0049 |
| | District | 13.1233 |
| | University | 17.8146 |

*$p < 0.05$

## DISCUSSION

*Motivation for E-learning based on student-athletes' ranking*

*National Level Student-Athletes*

Table 4 (pg. 46) showed that national ranking student-athletes scored higher mean in all the motivation for e-learning except Amotivation. However, the highest mean they obtained was for External Regulation (mean = 19.5671). External regulation means that a behavior is directed to obtain external reward or to avoid punishment. This proved that national ranking student-athletes engage in e-learning to get the higher marks or pass in the examination. Most probably, they hate to fail or repeat a subject. As we know that national level student-athletes has a very high prestige and respect in our society. They tend to feel very embarrassed not only loosing in a competition but also fail in an examination. In sport, losing, failing to perform or failing to fill one's role on a team would potentially threaten relationships, as well as, risk the social status, approval, and recognition gained from sport (Correia, Rosado, O Serpa & Ferreira, 2017). Most probably, national level athletes tend to perceive examination as sport competition, where they assumed they should pass not fail. Besides that, according to Conroy, Willow and Metzler (2002), individuals high in fear of failure have learnt to associate failure with aversive consequences and typically perceive failure in evaluative situations as threatening, and believe that aversive consequences will occur after failure.

The present result shows that most probably, national level student-athletes will gain the highest benefit from e-learning compared to state, district and university rank athletes. The benefits are as below:

i. Class work can be scheduled around work, family and friends.
ii. Reduces travelling time and travel costs for off-campus undergraduate athletes.
iii. They can study anywhere they have access to a computer and Internet connection.
iv. Self-paced learning modules allow them to work at their own pace.
v. E-Learning can accommodate different learning styles and facilitate learning through a variety of activities.
vi. Develops knowledge of the Internet and computers skills that will help learners throughout their lives and careers.
vii. Successfully completing online or computer-based courses builds self-knowledge, self-confidence and encourage student-athletes to take responsibility for their learning.
viii. They may have the option to select learning materials that meets their level of knowledge and interest.
ix. Learners can test out materials that they already mastered and concentrate efforts in mastering areas containing new information and/or skills.

*University level student- athletes*

University level student-athletes, which are the lowest rank athletes, scored the lowest on all types of motivation for e-learning, except in Amotivation. It was observed that they scored the highest in Amotivation (mean = 17.8146). This showed that they are not interest in e-learning.

Most probably, university level athletes find e-learning as most boring or stressful aspect. High-level student athletes with strong mastery goals have been found to be less prone to burnout experiences than their more performance goal-oriented counterparts (Sorkkila, Aunola, Samela-Aro, Tolvanen, & Ryba, 2018). Anyway, further research needed to be carried out to determine this. In sport, university rank student-athletes included as the lowest rank athletes because they cannot perform as high as to district, state or national level. Most probably, their motivation is not as high as district, state or national level athletes. The same result was also found in this research that their motivation for e-learning is very low. Besides that, a few researches conducted comparing mental skill on successful and unsuccessful athletes. Şahin (2015) concluded that the degree of mental skills in elite athletes is significantly higher than non-elite karate athletes. Furthermore, according to Quinaud et al., (2019), the mix of academic and athletic responsibilities is a complex task for people engaged in dual careers. To reconcile sports activities with academic responsibilities and vice versa, there are two main psychological qualities to possess, first, how student-athletes define themselves (for example, as students, athletes, or both), and second, how they perceive their own motivation in both contexts.

Most probably, it can be predicted that those university level student-athletes might face problems on:
i. Learners with low motivation or bad study habits may fall behind.
ii. They may get lost or confused about course activities and deadlines.
iii. They may feel isolated from the instructor and classmates.

Therefore, the most challenging task for an educator in Sport Science and Recreation Faculty of Universiti Teknologi MARA (UiTM), will be how to motivate university rank student-athletes to engage in e-learning since the result of this research scored the lowest for all types of motivation.

*State Level Student-Athletes*

State rank student-athletes scored the second highest mean in all types of motivation except in Intrinsic Motivation to Accomplish and Amotivation. They scored the highest in Intrinsic Motivation to Accomplish (mean = 19.2189), which means they have a higher desire to gain mastery over a particular course or field and enjoy the pleasure that comes from reaching that goal. The main objective of this motivation is to gain knowledge about a particular course or field. They gained pleasure by conquering material in e-learning. In other words, the perception that e-learning not only provide knowledge but also it is fun. They are more concern on gaining the knowledge of a course or filed rather than marks or pass the examination. In other words, they are intrinsically motivated to explore e-learning material to master their knowledge without any external rewards.

*District Undergraduate Athletes*

District level student-athletes are the second lowest in all types of motivation but the second highest in Amotivation. This showed that they were having similar behavior towards e-learning as university rank student-athletes. Therefore, educators of Sport Science and Recreation Faculty may face problems on how to engage this rank of student-athletes into e-learning. Most of the district level student-athletes still fail to understand the benefits of e-learning. They still haven't realized that e-learning is the best method of learning in terms of lower costs, faster delivery, more effective learning and lower environmental impact.

**CONCLUSION**

The result showed that the types of motivation among student-athletes' in e-learning were highest in External Regulation, followed by Introjected Regulation, Identified Regulation, Amotivation, Intrinsic Motivation to Experience, Intrinsic Motivation to Know and Intrinsic Motivation to Accomplish. The national student-athletes scored highest mean in all types of motivation for of e-learning except Amotivation. Contradictory, university and district rank student-athletes scored the lowest for all types of motivation for e-learning, except in Amotivation. Therefore, the most challenging task for an educator in Sport Science and Recreation Faculty of Universiti Teknologi MARA, is on how to motivate university and district rank student-athletes to engage in e-learning. Thus, by understanding the nature and processes of motivational determinants, educators can induce positive changes by motivating that will transform into positive outcomes in university and district rank e-learner student-athletes. The findings obtained from the present study have generally provided support for Self-Determination theory that e-learning involves the interaction of intrinsic and extrinsic motivation.

*Conflict of Interest*

No conflict of interest involves in this research among authors or respondents chosen in this research. This research had done without any financial support from any parties, therefore no investments, ownership or directorship of external entities, university consultancies, provision of good or services, receipt of royalties or any other considerations involved in this research. Since all the authors contribute in this research, no conflict of interest arises among staff member working in the same university or different university and family members. The scientific work done throughout this research is unbiased and objective as possible in the sense that non-scientific interests (financial or personal) or any significant role in the way in which the research work is conducted and its results are interpreted and presented. No typical interests taken the form of financial advantages and personal considerations (such as family and friendship relationships or working mates) in this study. Therefore, no conflict of interest involved with family members or close personal relationships with any authors involved in this study.

*Author's Contributions*

All the authors involved in this study contribute in this research like analysis and interpreting the data, methodology, checking grammar and spelling, literature, changing ideas and theories, critical review, discussions, preparing questionnaire and manuscript preparation.   All the authors, made a substantive contribution to this study.

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