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STUDENTS MOTIVATION AS PREDICTORS OF LEARNING SATISFACTION IN A SYNCHRONOUS HYBRID LEARNING SPACE

(Motivasi Pelajar Sebagai Peramal Kepada Kepuasan Pembelajaran Dalam Ruang Pembelajaran Hibrid Segerak)

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Abstract

Although student motivation competencies were observably strong predictors of student learning satisfaction in the wholly on-site or online contexts, the relationship between student motivation and student learning satisfaction in synchronous hybrid learning spaces was understudied. Consequently, the purpose of this study was to investigate student motivation as the learning competences that predict student learning satisfaction in synchronous hybrid learning space. This study utilized a descriptive research design to gather quantifiable data from the 169 respondents from a Technical and Vocational Education and Training (TVET) institute located in Kuching, Sarawak. These respondents' motivation competencies and learning satisfaction in synchronous hybrid learning space were investigated and the data collected was statistically analysed to investigate the extent to which student motivation affects student learning satisfaction in a synchronous hybrid learning space. The study's findings demonstrated that student motivation namely, intrinsic goal orientation, extrinsic goal orientation, and self-efficacy, can predict student learning satisfaction in synchronous hybrid learning spaces in addition to traditional on-site and online learning settings. In order to add value and further support the potential of this learning environment, the results of this study were meant to guide practice and policy relating to the design and implementation of synchronous hybrid learning.

Keywords: Student Motivation, Student Learning Satisfaction, Synchronous Hybrid Learning Space

Abstract

Walaupun kecekapan motivasi pelajar adalah peramal yang kuat untuk kepuasan pembelajaran pelajar dalam konteks sepenuhnya di tapak atau dalam talian, hubungan antara motivasi pelajar dan kepuasan pembelajaran pelajar dalam ruang pembelajaran hibrid segerak kurang dikaji. Oleh itu, tujuan kajian ini adalah untuk menyiasat motivasi pelajar sebagai kompetensi pembelajaran yang meramalkan kepuasan pembelajaran pelajar dalam ruang pembelajaran hibrid segerak. Kajian ini menggunakan reka bentuk kajian deskriptif untuk mengumpul data yang boleh diukur daripada 169 responden daripada institut pendidikan dan latihan teknikal dan vokasional (TVET) yang terletak di Kuching, Sarawak. Kompetensi motivasi dan kepuasan pembelajaran responden dalam ruang pembelajaran hibrid segerak ini telah dikesan dan data yang dikumpul dianalisis secara statistik untuk menyiasat sejauh mana motivasi pelajar mempengaruhi kepuasan pembelajaran pelajar dalam ruang pembelajaran hibrid segerak. Dapatan kajian menunjukkan motivasi pelajar iaitu orientasi matlamat intrinsik,

orientasi matlamat ekstrinsik, dan efikasi kendiri, boleh meramalkan kepuasan pembelajaran pelajar dalam ruang pembelajaran hibrid segerak di samping tetapan pembelajaran tradisional di tapak dan dalam talian. Bagi menambah nilai dan seterusnya menyokong potensi persekitaran pembelajaran ini, hasil kajian ini bertujuan untuk membimbing amalan dan dasar yang berkaitan dengan reka bentuk dan pelaksanaan pembelajaran hibrid segerak.
***Kata Kunci**: Motivasi pelajar, kepuasan pembelajaran pelajar, ruang pembelajaran hybrid segerak*

1.0 INTRODUCTION

Increasing academic achievement and the effectiveness of online learning, as well as a significant positive impact on students' intentions to continue learning online after switching from traditional teaching are consistently linked to student learning satisfaction based on existing research. (Dhaqane & Afrah, 2016; Rajeh, Abduljabbar, Alqahtani, Waly, Alnaami, Aljurayyan, & Alzaman, 2021; She, Ma, Jan, Nia, & Rahmatpour, 2021). In both offline and online contexts, many studies have looked at the variables that affect students' satisfaction with their learning. Motivation competencies namely intrinsic goal orientation, extrinsic goal orientation, and self-efficacy are shown predictive of learning satisfaction in traditional offline learning and online learning modalities (Erhuvwu & Adeyemi, 2019; Law, Geng, & Li, 2019; Obiosa, 2020; She et al., 2021; Wang & Chui, 2016). In other words, being able to boost student motivation will drive students to be satisfied with learning. In contrast, a study by Xiao, Sun-Lin, Lin, Li, Pan and Cheng (2020) found that student motivation, which has been shown to be a predictor of student learning satisfaction in general learning and online learning environments, does not significantly predict hybrid learner satisfaction. In a synchronous hybrid scenario when in-person and remote students are present at the same time, there are insufficient studies to examine the relationship between student motivation and student learning satisfaction. (Raes,2021; Rajabalee & Santally, 2020; Wang, Quek, & Hu, 2017; Xiao et al., 2020). Hence, it would be beneficial to study the extent to which student motivation affect student learning satisfaction in a synchronous hybrid learning space to substantiate this new norm of learning.

Since the COVID-19 pandemic, synchronous hybrid learning has attracted much interest, and most of the studies published have looked into the benefits, problems, and design guidelines regarding technological and pedagogical support for this relatively new learning model (Raes, Detienne, Windey, & Depaepe, 2019). However, a study to examine the extent to which factors related to learning competencies influence students' learning satisfaction in synchronous hybrid learning is still in the infancy stage (Xiao et al., 2020). Hence, it would be beneficial to study the extent to which student motivation affects student learning satisfaction in a synchronous hybrid learning space. This study will examine student motivation competencies including intrinsic goal orientation, extrinsic goal orientation, as well as student learning self-efficacy, as adapted from the Motivated Strategies for Learning Questionnaire (MSLQ) Manual developed by Pintrich, Smith, Garcia, and Mckeachie (1993) and student learning satisfaction adapted from the Hexagonal E-Learning Assessment Model (HELAM) proposed by Ozkan and Koseler (2009) to investigate the significant influence of student motivation on student learning satisfaction in a synchronous hybrid learning space. In order to answer the research questions and test the study's null hypotheses, a quantitative study was conducted to examine the motivation competencies of 169 students at a Technical and Vocational Education and Training (TVET) institute in Kuching, Sarawak. The study measured the student learning satisfaction in a synchronous hybrid learning space.

2.0 RESEARCH QUESTIONS

a) How does student motivation influence student learning satisfaction in a synchronous hybrid learning space?
b) How does intrinsic goal orientation influence student learning satisfaction in a synchronous hybrid learning space?
c) How does extrinsic goal orientation influence student learning satisfaction in a synchronous hybrid learning space?
d) How does self-efficacy influence student learning satisfaction in a synchronous hybrid learning space?

3.0 RESEARCH HYPOTHESES

From the research questions identified, the following is a list of null hypotheses of this study:

a) Ho: There is no significant influence of student motivation on student learning satisfaction in a synchronous hybrid learning space.
b) Ho1: There is no significant influence of intrinsic goal orientation on student learning satisfaction in a synchronous hybrid learning space.
c) Ho2: There is no significant influence of extrinsic goal orientation on student learning satisfaction in a synchronous hybrid learning space.
d) Ho3: There is no significant influence of self-efficacy on student learning satisfaction in a synchronous hybrid learning space.

4.0 LITERATURE REVIEW

4.1 Synchronous Hybrid Learning

Through the use of a learning management system that alternates between physical learning sessions and online learning where students can engage with content asynchronously, hybrid learning combines the best features of both offline and online learning to give students the best learning experience possible (Boyarsky, 2020; Wang et al., 2017). Overall, the purpose of hybrid learning is to merge online and offline media into a single learning experience that is flexible and free of limitations. (Boyarsky, 2020). In order to prepare students for future workplaces and to remain relevant in modernity, a more versatile learning concept of synchronous hybrid learning has become necessary. Later, the word "synchronous" was added to describe synchronous hybrid learning, which is when in-person and remote learning take place simultaneously in a hybrid classroom where both in-person and online students receive their courses simultaneously (Wang et al., 2017). Synchronous hybrid learning has attracted much interest, and most of the studies published have investigated the benefits, problems, and design guidelines regarding technological and pedagogical support for this relatively new learning model (Raes et al., 2019). Until today, the synchronous hybrid learning environment has progressed quickly, blending the advantages of online classrooms such as video conferencing technologies, online tutorials, LMSs, online exercises, online discussion forums, pre-recorded video instruction, and webinars, with the advantages of traditional classrooms to deliver a high-quality interactive learning experience that improves students' learning outcomes (Eliveria, Serami, Famorca, & Cruz, 2019; Raes, 2021). Existing research found that synchronous hybrid learning offers organisational benefits such as, increasing recruitment promoting a multifaceted student population, and

promoting student retention; increased collaboration and connection amongst online students, offline students, and lecturers; a better sense of control over learning; flexibility in course attendance; enhanced exposure to technical skills that can prepare students for careers in technology-rich society (Raes et al., 2019). Similarly, Wang et al. (2017) stated that the advantages of synchronous hybrid learning spaces include increasing affordability and flexibility, lowering educational institute costs and students' commute costs (Wang et al., 2017). However, a study to examine the extent to which factors related to learning competencies influence students' learning satisfaction in synchronous hybrid learning is still in the infancy stage (Xiao et al., 2020).

4.2 Student Motivation

According to Motevalli, Perveen, and Michael (2020), student motivation is one of the aspects that encourages students to acquire new skills and knowledge. Motivation can be defined as an internal process that stimulates, guides, and sustains behaviours over time (Pintrich et al., 1993), it can also mean being persistent, ambitious, goal-orientated, and self-perception oriented (Erhuvwu & Adeyemi, 2019). Motivation is defined as the desire to attain goals and the process of sustaining that desire. Existing studies have identified that student motivation is an important contributor to student academic achievement as well as a predictive of student learning satisfaction in general classroom learning or e-learning setting (Erhuvwu & Adeyemi, 2019; Law et al., 2019). Additionally, in a synchronous hybrid learning space, student motivation and student results seem to be higher or at the same level as those found in traditional face-to-face courses (Raes et al., 2019). In a blended learning setting, recent research studying student enrolment, motivation, and learning performance discovered that student motivation plays a critical role in increasing enrolment, and promotes active learning, favourably impacting both cognitive and social presence (Law et al., 2019). According to Law et al. (2019), cognitive presence has a strong impact on student learning performance, but social presence has a weak impact because interaction and discussion are less directed in a blended setting. As a result, teaching presence is critical in facilitating social interactions among lecturers, and remote students; as well as to direct students to achieve learning goals.

The level of student motivation can be measured based on the dimensions of student motivation with three categories: (1) intrinsic goal orientation, (2) extrinsic goal orientation, and (3) self-efficacy, as adapted from the student motivation scale developed by Pintrich et al. (1993). Intrinsic goal orientation refers to motivation that stems from primarily internal reasons such as curiosity, challenge, and mastery of the content that motivates students to finish tasks and show better performance; extrinsic goal orientation refers to motivation caused by primarily external reasons such as good grades, rewards, competition, evaluation by others, and performance to motivate learning; and self-efficacy refers to self-appraisal of one's ability to master a task (Duncan, Pintrich, Smith, & Mckeachie, 2015; Law et al., 2019).

4.3 The Influence of Student Motivation on Student Learning Satisfaction

Student motivation is associated with student learning satisfaction in the field education context according to Wang and Chui (2016). In other words, being able to boost student motivation will drive students to be satisfied with learning. In addition, student motivation is a moderately good predictor of student learning satisfaction; however, when combined with student engagement, these learning competencies become a significantly stronger predictor of student learning pleasure satisfaction based on Obiosa's (2020) study which looked at student motivation, engagement, and learning satisfaction about on-site lecture instruction in higher education. Whereas She et al. (2021) discovered that one of the dimensions of student motivation,

self-efficacy, is a predictor of student learning satisfaction in Massive Open Online Courses (MOOCS). Students with strong self-efficacy for learning are more intrinsically motivated, resulting in positive learning outcomes and a higher likelihood of experiencing learning satisfaction; students with low self-efficacy for learning, on the other hand, are more academically disengaged (She et al., 2021). Student motivation, which has been reported to be predictive of student learning satisfaction in general learning and online learning settings in the literature, does not significantly predict hybrid learner satisfaction, according to a study by Xiao et al. (2020). Xiao et al. (2020) findings indicated students do not need to possess specific competencies in order to engage in satisfying hybrid learning because hybrid learning keeps all options open. Instead, students should possess cognitive engagement competence, which is linked to learners' cognitive capacity to choose the best combination of learning options (Xiao et al., 2020). However, Xiao et al. (2020) have also highlighted that the study's findings may be biased because of the research limitation that participants' learning satisfaction may only reflect fully on-site learning or online learning instead of hybrid learning since participants can freely choose between offline, online, or hybrid learning spaces based on their preferences.

4.4 Conceptual Framework

The expected relationship between the variables is depicted by a conceptual framework. It outlines the pertinent goals for the investigation process and shows how the variables connect to provide cohesive conclusions (Swaen, 2022). Figure 1 shows a conceptual framework developed based on the literature review of existing studies to present an expected relationship between student motivation and student learning satisfaction in a synchronous hybrid learning space. The independent variable is student motivation whereas, student learning satisfaction is the dependent variable.

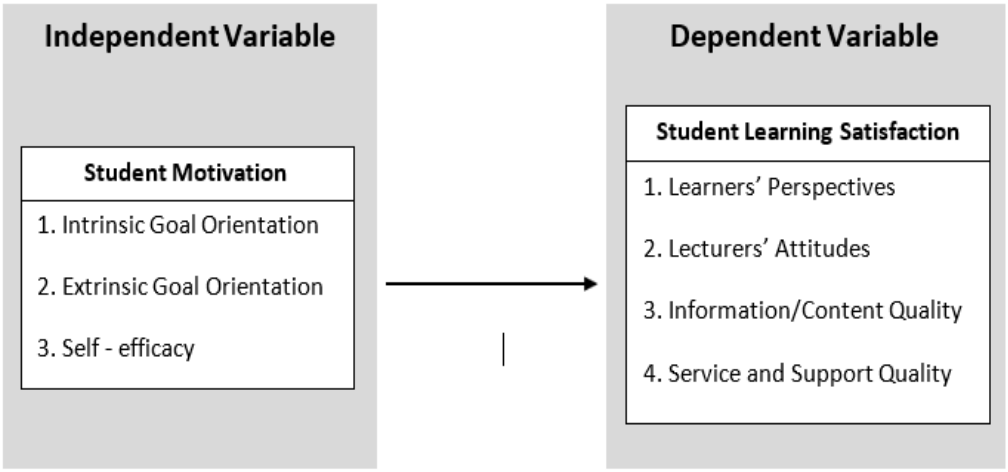

Figure 1: Conceptual Framework

4.5 Maslow's Hierarchy of Needs

In the 1940s, famed psychologist Abraham Maslow introduced Maslow's hierarchy of needs which heralded a change away from emphasising human flaws to focusing on human potential (Panka, 2022). Maslow looked at how and what inspired people like Albert Einstein, Eleanor Roosevelt, Frederick Douglass, Jane Addams, and the healthiest and highest-achieving 1% of the college student population to reach a level of fulfilment in their life, or 'self-actualisation,' as Maslow defined it (Peachey, n.d.). Maslow's Hierarchy of needs has been increasingly used to motivate learners in education and has the potential to have a protracted positive impact on students

learning (Kurt, 2021; Zoya, 2018). The hierarchy is divided into five levels, from the bottom to provide basic needs to the top to attain full potential: physiological needs of food, water, air, and health; shelter need for safety and shelter stability; social need of love, belonging, and inclusion; Ego needs of self-esteem, power, control, and recognition; and the top level is self-actualization need for development, creativity, and growth (Maslow, 1943; Peachey, n.d.). Maslow's concept is useful in predicting students' needs and the learning environment should be tailored to trigger student motivation to study and learn by providing as many of the safety, belonging, and esteem needs for a more successful learning process (Motevalli et al., 2020; Zoya, 2018). On the contrary, if Maslow's hierarchy of needs fails to be provided in the learning process, students will be unable to prioritize education. As a result, it is critical for lecturers and educational institutions to understand Maslow's theory and structure lessons and learning environments to meet as many of the students motivating needs as possible, particularly safety, belonging, and esteem, to improve students' capacity for learning and achievement in the classroom, allowing each student to reach their educational potential. (Kurt, 2021; Motevalli et al., 2020; Zoya, 2018).

5.0 METHODOLOGY

In order to determine the degree to which student motivation affects student learning satisfaction in synchronous hybrid learning spaces, this study employed a descriptive research approach to collect quantifiable data from the population sample and statistically analyse the data obtained. Quantitative data were collected using a cross-sectional approach from a sample of 169 TVET students from Kuching, Sarawak, at a certain moment. The relationship between the variables of student motivation and student learning satisfaction in the synchronous hybrid learning environment was investigated using a 6-point Likert scale online questionnaire with descriptive references ranging from strongly disagree to strongly agree. Whereas, and the quantitative data regarding student learning satisfaction will be analysed using a 6-point Likert scale with descriptive references ranging from strongly dissatisfied to strongly satisfied. The student-motivated strategies for learning questionnaire (MSLQ) created by Pintrich et al. (1993) and the hexagonal e-learning assessment model (HELAM) created by Ozkan and Koseler (2009), which were both valid and reliable, were adapted into the online questionnaire to examine the relationship between the variables of student motivation and learning satisfaction. The online questionnaire includes three major components: (a) students' profile, (b) dimensions of student engagement, and (c) dimensions of student learning satisfaction. The first component is a brief survey of students' profiles including three items namely (1) academic department, (2) academy programme, and (3) gender. Whereas the dimensions of student motivation will be grouped into three 3 subscales: (1) Intrinsic goal orientation comprised of four items, (2) Extrinsic goal orientation consisted of four items, and (3) Self-efficacy contained 8 items, as adapted from Pintrich et al. (1993). Whereas, the dimensions of student learning satisfaction will be measured based on four categories: (1) Learners' perspectives comprised of ten items, (2) Lecturer attitudes consisted of twelve items, (3) Information content and quality comprised of fifteen items, whereas (4) service and support quality contained ten items, as adapted from Ozkan and Koseler (2009). Before proceeding with the actual data collection, a pilot test was conducted to ensure the study instrument's reliability is satisfactory. The online questionnaire was determined to have a Cronbach's alpha reliability of. 972. Thus, the study instrument's high level of reliability was confirmed.

Approaching the target TVET institute's director and department heads to request permission to collect data from students in the mathematics, science, and

computer departments was the initial stage in the data collection process. After receiving consent, the target participants were told of the study's objectives and given the option to agree or disagree to participate. The course lecturers who teach mathematics, science, and computing received an email with a link to the online questionnaire and a brief explanation of the study's goals. Next, the students who agreed to take part in the study were given access to the online questionnaire weblink, which was made available for two weeks, by the course instructors via the CIDOS e-learning portal, email, and WhatsApp Web. The quantitative data was organised and subsequently analysed with the Statistical Package for Social Sciences (SPSS)after being collected via Google Forms.

6.0 RESULT

6.1 Respondent Profile

Table 1 reveals the Electrical Engineering Department had the greatest number of student respondents (21.9%, N=37). The Commerce Department, on the other hand, exhibits the lowest number of student respondents (7.1%, N=12). Additionally, students enrolled in the academy programme Diploma in Information Technology (Digital Technology) had the highest percentage of student participation (16.6%, N=28), whereas students from the academy programme Diploma in Business Studies had the lowest percentage of student participation (3.0%, N=5). Male students made up the majority of the 169 students that responded to the online survey (52.7%, N=89) while female students had a slightly lower percentage of student participants (47.3%, N=80).

Table 1: Respondent Profile (N=169)

Profile	Description	Frequency	Percentage
Academy	Civil Engineering Department	35	20.7%
Department	Electrical Engineering Department	37	21.9%
	Information Technology and Communication Department	28	16.5%
	Mechanical Engineering Department	41	24.3%
	Commerce Department	12	7.1%
	Petrochemical Engineering Department	16	9.5%
Academy	Diploma in Civil Engineering	12	7.1%
Programme	Diploma in Building Services Engineering	11	6.5%
	Diploma in Geomatics	12	7.1%
	Diploma in Electronic Engineering (Communication)	18	10.7%
	Diploma in Electrical & Electronics Engineering	19	11.2%
	Diploma in Information Technology (Digital Technology)	28	16.6%
	Diploma in Mechanical Engineering	8	4.7%
	Diploma of Mechanical Engineering (Automotive)	11	6.5%
	Diploma in Mechanical Engineering (Manufacturing)	6	3.6%
	Diploma in Mechanical Engineering (Air Conditioning and Refrigeration)	16	9.5%
	Diploma in Accountancy	7	4.1%
	Diploma in Business Studies	5	3.0%
	Diploma in Process Engineering (Petrochemicals)	16	9.4%
Gender	Male	89	52.7%
	Female	80	47.3%

6.2 Inferential Findings of Student Motivation on Student Learning Satisfaction in Synchronous Hybrid Learning Space

The inferential findings of student motivation on student learning satisfaction in a synchronous hybrid learning space were displayed in Table 2. Based on the analysis, the predictor variable, namely intrinsic goal orientation, was included in the regression

model at $p<.05$. The correlation between the predictor variable and student learning satisfaction in synchronous hybrid learning space was .853. Further, $R^2 = .728$ showed that 72.8 percent of the changes in student learning satisfaction in synchronous hybrid learning were due to intrinsic goal orientation. At the $p<.05$ level of significance, the ANOVA test results revealed a significant correlation between the predictor variable and student learning satisfaction. For intrinsic goal orientation, test results are significant [$F(1, 167) = 447.11$, $p<.05$].

Next, the findings for extrinsic goal orientation, were included in the regression model at $p<.05$. The correlation between extrinsic goal orientation and student learning satisfaction in synchronous hybrid learning space was .903. Further, $R^2 = .815$ indicated that 81.5 percent of the changes in student learning satisfaction were due to extrinsic goal orientation. The ANOVA test results showed that there was a significant relationship between the predictor variable and student learning satisfaction at the $p<.05$ level of significance. For extrinsic goal orientation, test results are significant [$F(1, 167) = 734.72$, $p<.05$].

Finally, the findings for self-efficacy, were included in the regression model at $p<.05$. The correlation between self-efficacy and student learning satisfaction in synchronous hybrid learning space was .890. Moreover, $R^2 = .792$ indicated that 79.2 percent of the changes in student learning satisfaction were due to self-efficacy. The ANOVA test results showed that there was a significant relationship between self-efficacy and student learning satisfaction at the $p<.05$ level of significance. For self-efficacy, test results are significant [$F(1, 167) = 636.36$, $p<.05$].

Table 2: Coefficient value for the influence of student motivation on learning satisfaction

Independent variable	**Dependent Variable: Learning Satisfaction**		
	β	**β**	**β**
Intrinsic Goal orientation	.853		
Extrinsic Goal orientation		.903	
Self-efficacy			.890
R	.853	.903	.890
R2	.728	.815	.792
Adjusted R2	.726	.814	.791
F value	447.11*	734.72*	636.36*
Durbin Watson	2.07	1.98	1.23
Note: *Significant at the level of .05			

6.3 Hypotheses Result of Student Motivation on Student Learning Satisfaction in a Synchronous Hybrid Learning Space

Table 3 reported the hypotheses findings of student engagement on student learning satisfaction in a synchronous hybrid learning space. As presented early, the analysis found that there is a positive and significant correlation between intrinsic goal orientation and student learning satisfaction in synchronous hybrid learning space ($R=.853$, $p<.05$). Therefore, the null hypothesis Ho2(a) "There is no significant influence of intrinsic motivation on student learning satisfaction in a synchronous hybrid learning space" was rejected. Next, extrinsic goal orientation was also found to be positively and significantly associated with student learning satisfaction in synchronous hybrid learning space ($R=.903$, $p<.05$). Based on the analysis found, the null hypothesis Ho2(b) "There is no significant influence of extrinsic motivation on student learning satisfaction in a synchronous hybrid learning space" was also rejected. Finally, the analysis also discovered a positive and significant correlation between self-efficacy and student learning satisfaction in synchronous hybrid learning space ($R= .890$, $p<.05$). Hence, the null hypothesis Ho2(c), "There is no significant influence of self-efficacy on student learning satisfaction in a synchronous hybrid learning space" was rejected as well.

Table 3: Hypotheses result from student motivation in student learning satisfaction

Hypotheses	Description	Result
Ho1	There is no significant influence of intrinsic goal orientation on student learning satisfaction in a synchronous hybrid learning space.	Rejected
Ho2	There is no significant influence of extrinsic goal orientation on student learning satisfaction in a synchronous hybrid learning space.	Rejected
Ho3	There is no significant influence of self-efficacy on student learning satisfaction in a synchronous hybrid learning space.	Rejected

7.0 DISCUSSION

7.1 The Influence of Student Motivation on Student Learning Satisfaction in a Synchronous Hybrid Learning Space

The findings of this study are in line with previous studies that suggested student motivation during general classroom learning or in an e-learning setting positively impacts student learning satisfaction (Erhuvwu & Adeyemi, 2019; Law et al., 2019). Furthermore, the findings are in line with Obiosa's (2020) study which looked at student motivation, engagement, and learning satisfaction about on-site lecture instruction in higher education, and She et al.'s (2021) study to investigate online learning satisfaction during the COVID-19 pandemic. Obiosa (2020) reported that student motivation is a moderately good predictor of student learning satisfaction; however, when combined with student engagement, these learning competencies become a significantly stronger predictor of student learning satisfaction.

Congruent with previous studies (Erhuvwu & Adeyemi, 2019; Law et al., 2019; Obiosa, 2020; She et al., 2021), this study revealed that extrinsic goal orientation has a pronounced impact on hybrid learners' learning satisfaction was 81.5 percent of changes in student satisfaction were due to students' extrinsic goal orientation. This can be linked to Chyung et al., (2010) and Duncan et al. (2015) defining extrinsic goal orientation as primarily external factors such as getting good grades, competing with others and seeking approval or rewards. Hence, student motivation derives from the factors of getting good grades, rewards, and acknowledgements that will positively impact student learning satisfaction in an asynchronous hybrid learning space.

Next, this study found that 79.2 percent of the changes in hybrid learner learning satisfaction were due to self-efficacy. According to Zhen et al. (2017) reported that students with a greater level of self-efficacy engaged in more learning strategies to deal with learning challenges to attain specific academic goals. In line with the finding of this study, She et al. (2021) discovered that self-efficacy is a predictor of student learning satisfaction. She et al. (2021) stated that students with higher self-efficacy reflect higher confidence and belief in their ability to control their desire to compete and master learning tasks in Massive Open Online Courses (MOOCS), which in turn contribute to an increase in learning satisfaction. Consistent with She et al. (2021), this study further provides evidence that self-efficacy is important in synchronous hybrid learning spaces which required a higher level of technical competency and proficiency (Ashraf et al., 2021; Weitze & Ørngreen, 2014) where students from both on-site and online, engage in learning in a shared learning space via multiple modes of delivery to grasp key concepts, to meet students' diverse needs, to promote student-faculty interaction and to deepen students' collaboration (Eliveria et al., 2019; Walker et al., 2020; Wilson, 2008). Therefore, students must possess a high level of self-efficacy to confidently explore and deal with the challenges associated with the different hybrid learning strategies; master the skills being taught; understand the complex materials presented simultaneously to both remote and online students in synchronous hybrid learning.

Moreover, this study found that 72.8 percent of the changes in hybrid learners' learning satisfaction were due to intrinsic goal orientation. It could be inferred from the findings that students who are being curious, want to challenge, and want to master the learning content (Chyung et al., 2010; Duncan et al., 2015) will gain higher learning satisfaction in a synchronous hybrid earning space.

However, student motivation competencies which are reported to be predictive of student learning satisfaction in general learning and online learning settings in most of the literature, do not predict hybrid learner satisfaction, according to the study 'What makes learners a good fit for hybrid learning? Learning competencies as predictors of experience and satisfaction in hybrid learning space' by Xiao et al. (2020). Xiao et al. (2020) have found that student motivation namely intrinsic goal orientation, extrinsic goal orientation, and self-efficacy has no significant influence on hybrid learner satisfaction. Xiao et al. (2020) argued that the flexible features of synchronous hybrid learning provide all offline and online learning options among which students can choose one with which they are satisfied, hence student motivation competencies do not significantly predict student satisfaction. Discrepant results reported can be due to the several discrepancies detected between the study by Xiao et al. (2020) and this present study such as different samples, course levels, different instructors, curriculum, and course quality (Jasper, 2021; Xiao et al., 2020). Considering the discrepancy in the findings, it is worth discussing Ji et al. (2022) study to investigate the link between engagement, readiness, and satisfaction in a synchronous online second language learning environment from the beginning of the semester through the end of the semester at the early phase of COVID-19 pandemic. The findings of Ji et al. (2022) study has revealed that engagement namely emotional, cognitive, and behavioural are significant predictors of learning satisfaction at the end of the semester but not at the start, hence readiness plays an important role in synchronous online course satisfaction. The discrepancy in the results may be caused by the fact that the Xiao et al. (2020) study was carried out during the early phases of the COVID-19 pandemic, whereas the current study was carried out in the endemic phase of the pandemic in mid-2022. Thus, the respondents' varying levels of readiness may influence student motivation which in turn contributes to the discrepancy in the findings.

Based on the findings of this study, it can be reported the student motivation dimensions examined in this study namely intrinsic goal orientation, extrinsic goal orientation, and self-efficacy predict synchronous hybrid learners' satisfaction. In other words, students who are being curious, want to challenge; respond to learning tasks by focusing on improving grades, receiving rewards, and receiving recognition; as well as students who are confident in their capacity to manage their desire to perform, complete, and master learning, will reflect higher levels of learning satisfaction in synchronous hybrid learning spaces (Chyung et al., 2010; Duncan et al., 2015). Hence to improve synchronous hybrid learner satisfaction, educational institutions and lecturers should comprehend the students' level on Maslow's Hierarchy of Needs, a theory of motivation that identified physiologically, safety, love, self-esteem and, self-actualization as five basic needs that can trigger student motivation (Maslow, 1943). Subsequently, educational institutions and lecturers can contribute to these needs, helping students to progress through the hierarchy for a more satisfying synchronous hybrid learning experience.

8.0 CONCLUSION

According to existing literature, both in traditional offline and online contexts, student motivation is found to be a predictor of student learning satisfaction. It could be

concluded that there were significant effects of student motivation namely intrinsic goal orientation, extrinsic goal orientation, and self-efficacy, on student learning satisfaction in a synchronous hybrid learning space based on the research findings and discussions provided. Thus, the research's findings suggest that student motivation is a key predictor of student learning satisfaction in a synchronous hybrid learning environment, offering insights to guide policymakers, educational institutions, and lecturers in their decisions regarding the development, design, and enhancement of synchronous hybrid learning space. This study suggests that in order to improve student learning satisfaction in synchronous hybrid learning spaces, it is essential to investigate the many dimensions of student motivation for institutions and lecturers to identify areas where enhancements are required to meet the needs of the students. This study also discovered that TVET student motivation has been positively benefited by professors with high levels of competency in planning and conducting synchronous hybrid learning courses, which contributes to student learning satisfaction. As a result, it's essential to raise the calibre of lecturers by providing lecturers with training specifically designed for teaching in synchronous hybrid learning space. In addition, this current study has some limitations, which should be considered in future studies. Researchers are encouraged to replicate this study for greater validity to the findings and expand this study using mixed methods research, as well as a larger and more diverse sample. Additionally, this study only examines the level of student motivation based on three dimensions: (1) intrinsic goal orientation, (2) extrinsic goal orientation, and (3) self-efficacy, adapting from the student motivation scale developed by Pintrich et al. (1993). The other dimensions of student motivation developed by Pintrich et al. (1993) are worth discussion as well, such as task value, control of learning beliefs and test anxiety. Furthermore, future studies should examine other predictor variables such as student readiness for a fuller understanding of synchronous hybrid learning space.

9.0 REFERENCES

Boyarsky, K. (2020, June 12). What is hybrid learning? Here's everything you need to know. Owl Labs. https://resources.owllabs.com/blog/hybrid-learning

Dhaqane, M. K., & Afrah, N. A. (2016). Satisfaction of students and academic performance in Benadir University. Journal of Education and Practice, 7(24), 59–63.

Duncan, T., Pintrich, P., Smith, D., & Mckeachie, W. J. (2015). Motivated strategies for learning questionnaire (MSLQ) manual. ResearchGate. https://doi.org/10.13140/RG.2.1.2547.6968

Eliveria, A., Serami, L., Famorca, L., & Cruz, J. D. (2019). Investigating students' engagement in a hybrid learning environment. IOP Conference Series: Materials Science and Engineering, 482, 012011. https://doi.org/10.1088/1757-899x/482/1/012011

Erhuvwu, O. S., & Adeyemi, F. T. (2019). Achievement motivation as a predictor of academic achievement of senior secondary school students in mathematics. European Journal of Educational and Development Psychology, 7(3), 36–45.

Kurt, S. (2021, January 30). Maslow's hierarchy of needs in education. Education Library. https://educationlibrary.org/maslows-hierarchy-of-needs-in-education/

Law, K. M., Geng, S., & Li, T. (2019). Student enrollment, motivation and learning performance in a blended learning environment: the mediating effects of social, teaching, and cognitive presence. Computers and Education, 136, 1–12. https://doi.org/10.1016/j.compedu.2019.02.021

Maslow, A. H. (1943, July). A theory of human motivation. Psychological Review, 50(4), 370–396. https://doi.org/10.1037/h0054346

Motevalli, S., Perveen, A., & Michael, M. T. A. (2020). Motivating students to learn: an overview of the literature in educational psychology. International Journal of Academic Research in Progressive Education and Development, 9(3), 63–74. https://doi.org/10.6007/ijarped/v9-i3/7779

Obiosa, N. (2020). Effects of students' motivation and engagement on students' satisfaction in a lecture: An empirical analysis. International Journal of Instruction, 13(3), 861–876. https://doi.org/10.29333/iji.2020.13357a

Ozkan, S., & Koseler, R. (2009). A multi-dimensional evaluation of e-learning systems in the higher education context: an empirical investigation of a computer literacy course. 2009 39th IEEE Frontiers in Education Conference. https://doi.org/10.1109/fie.2009.5350590

Panka, L. (2022, February 3). Maslow's hierarchy of needs in schools. CSA Education. https://csaedu.com/maslows-hierarchy-of-needs-in-schools/

Peachey, N. (n.d.). Applying Maslow's hierarchy of needs to the use of educational technology. PeacheyPublications. https://peacheypublications.com/applying-maslows-hierarchy-of-needs-to-the-use-of-educational-technology

Pintrich, P. R., Smith, D. A. F., Garcia, T., & Mckeachie, W. J. (1993). Reliability and predictive validity of the motivated strategies for learning questionnaire (MSLQ). Educational and Psychological Measurement, 53(3), 801–813. https://doi.org/10.1177/0013164493053003024

Raes, A., Detienne, L., Windey, I., & Depaepe, F. (2019). A systematic literature review on synchronous hybrid learning: gaps identified. Learning Environments Research, 23(3), 269–290. https://doi.org/10.1007/s10984-019-09303-z

Raes, A. (2021). Exploring student and teacher experiences in hybrid learning environments: Does presence matter? Postdigital Science and Education, 4(1), 138–159. https://doi.org/10.1007/s42438-021-00274-0

Rajabalee, Y. B., & Santally, M. I. (2020). Learner satisfaction, engagement and performances in an online module: Implications for institutional e-learning policy. Education and Information Technologies, 26(3), 2623–2656.

Rajeh, M. T., Abduljabbar, F. H., Alqahtani, S. M., Waly, F. J., Alnaami, I., Aljurayyan, A., & Alzaman, N. (2021). Students' satisfaction and continued intention toward e-learning: a theory-based study. Medical Education Online, 26(1). https://doi.org/10.1080/10872981.2021.1961348

She, L., Ma, L., Jan, A., Nia, H.S., & Rahmatpour, P. (2021). Online learning satisfaction During COVID-19 pandemic among Chinese university students: the serial mediation model. Frontiers in Psychology, 12. https://doi.org/10.3389/fpsyg.2021.743936

Swaen, B. (2015, December 7). Developing a conceptual framework for research. Scribbr. https://www.scribbr.com/methodology/conceptual-framework/#:%7E:text=A%20conceptual%20framework%20illustrates%20what,represented%20in%20a%20visual%20format.

Wang, Q., Quek, C. L., & Hu, X. (2017). Designing and improving a blended synchronous learning environment: An educational design research. The International Review of Research in Open and Distributed Learning, 18(3), 99–118. https://doi.org/10.19173/irrodl.v18i3.3034

Wang, Y., & Chui, E. (2016). An exploratory path model of social work students' satisfaction with field education experience in China. Social Work Research, 40(3), 135–145. https://doi.org/10.1093/swr/svw010

Xiao, J., Sun-Lin, H., Lin, T., Li, M., Pan, Z., & Cheng, H. (2020). What makes learners a good fit for hybrid learning? Learning competencies as predictors of

experience and satisfaction in hybrid learning space. British Journal of Educational Technology, 51(4), 1203–1219. https://doi.org/10.1111/bjet.12949

Zoya. (2018, January 3). Maslow's hierarchy of needs for learners. The E-Learning Network. https://www.eln.co.uk/blog/maslows-hierarchy-of-needs-for-learners#:%7E:text=When%20all%20levels%20of%20Maslow's,will%20experience%20more%20effective%20learning