

Are You Enjoying it - “Online Learning”? Enjoyment of Study, Study Engagement, Learning Performance, and Informal Learning

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ABSTRACT

Following the increasing use of online learning among academic institutions worldwide, this study examined the relationships between enjoyment of study, study engagement, learning performance, and informal learning. Based on the intrinsic motivation theory, enjoyment of study is posited to motivate students to engage in their studies and affects their learning performance. In this study, study engagement was used as a mediator between enjoyment of study, learning performance, and informal learning. Data were collected from 137 undergraduate students in a Hong Kong university who participated in online learning for an academic semester. The results indicated that enjoyment of study and study engagement were *positively* related to learning performance and informal learning. Study engagement *partially* and *fully* mediated the relationships of enjoyment of study with learning performance and informal learning, respectively. Theoretical and practical implications for enjoyment of study in online learning are discussed.

Keywords: *Enjoyment of study; study engagement; learning performance; informal learning, online learning*

INTRODUCTION

Research has shown that enjoyment motivates students to study and engage in self-learning, for example, through sports activities, dance, and games (McCarthy & Jones, 2007; Ruth & Kasper, 2020). Enjoyment of study is the degree to which students intrinsically find their studies interesting or pleasurable (Johnstone & Johnston, 2005; McMillan, Brady, O’Driscoll, & Marsh, 2002; Spence & Robbins, 1992). In a classroom setting, students and subject lecturers derive interest or pleasure from the nature of study instead of the act of studying (Ng, Sorensen, & Feldman, 2007). Studies have attempted to develop a theoretical integration of positive attitudes and enjoyment of study (Frenzel, Becker-KurzPekrun, Goetz, & Lüdtke, 2018; Yung & Chiu, 2020). Enjoyment of study is significantly associated with students’ positive affect, coping, learning, adaptability, and well-being (Balog & Pribeanu, 2010; Mitchell, Chen, & Macredie, 2005).

Despite the potential research interest in enjoyment of study and its consequences, limited research is available on the impact of enjoyment of study in the context of online learning platforms (e.g., Lin & Gregor, 2006). To fill the gap in the research literature, study engagement was examined as a mediator of the impact of enjoyment of study on learning performance and informal learning. In terms of the theory of intrinsic motivation (Deci & Ryan, 2000), enjoyment of study motivates students to engage in their studies and affects their learning performance and informal learning. The main objective of this study was to examine study engagement as a mediator between enjoyment of study, learning performance, and informal learning.

This study makes two main contributions. First, this study examines how study engagement mediates the effect of enjoyment of study on learning performance and informal learning. The mediating effect of study engagement may explain the impact of enjoyment of study and study engagement on learning performance and informal learning in the teaching and learning literature. This study therefore contributes an explanation of the consequences of enjoyment of study.

Second, previous studies have not considered the enjoyment of study or the explanation of intrinsic theories of teaching and learning in relation to online learning platforms (Dhawan, 2020; Ebrahimzadeh & Alavi, 2016). One exception is Okada and Sheehy's (2020) examination of the factors that supported students' enjoyment of online learning with fun. Therefore, this study contributes to the literature by applying the impact of learning performance to online learning.

LITERATURE REVIEW

In enjoyment literature, enjoyment of work is associated with less stress, increased job attitudes as well as enhanced emotional well-being (Aziz & Zickar, 2006; Burke, Richardsen, & Mortinussen, 2004; Erez & Isen, 2002). Work enjoyment has a positive influence on organizational citizenship behavior (Erdianza, Tentama, & Sari, 2020). According to Davis, Bagozzi & Warshaw (1992), enjoyment refers to the extent to which an activity is perceived to be enjoyable, joy and pleasure, aside from performance consequences. It is an activity-related emotion that allows individuals to experience fun or pleasure (Sweetser & Wyeth, 2005; Vorderer, Klimmt, & Ritterfeld, 2004).

In the academic context, enjoyment of study is associated with students experiencing classes as enjoyable or interesting while they pursue study activities. Deci and Ryan's (1985) intrinsic motivation theory implies that students who enjoy their studies should engage more with an online teaching platform. Enjoyment positively motivates involvement and fulfillment (Buelens & Poelmans, 2004). Enjoyment provides intrinsic motivation to students, leading to better involvement in and engagement with study activities (Deci & Ryan, 2000; Gagné & Deci, 2005; Ryan & Connell, 1989).

THEORY AND HYPOTHESES

Enjoyment of study and learning performance

Empirical studies have examined enjoyment as an antecedent of positive learning attitudes (e.g., Buff, 2014). Enjoyment of study is a positive emotion that leads to high motivation levels, good interpersonal relationships, enhanced creative thinking, and improved coping with stress (Forgas & George, 2001; Lyubomirsky, King, & Diener, 2005). It is one of the experienced achievement emotions among students that can have a positive impact on the use of strategies in cognitive learning (Chatzistamatiou, Dermizaki, Eklides, & Leondari, 2015; Obergriesser & Stoeger, 2020).

Alenezi, Karim, Malek, & Veloo (2010) examined the relationship between the role of enjoyment, self-efficacy, and students' intention to use electronic learning. When students enjoy their studies, they have higher levels of physical strength and emotional energy. Enjoyment of study is related to students' performance of learning and academic achievements (Ahmed, Van der Werf, Kuyper, & Minnaert, 2013). Holmes (2018) determined that enjoyment plays an important role in students' approaches to learning. As such, enjoyment of study is expected to be positively associated with learning performance.

Hypothesis 1: Enjoyment of study is positively related to learning performance.

Enjoyment of study and informal learning

Students who enjoy their studies are more likely to attend, respond positively to, and participate in informal learning experiences. Among different learning environments, a strong correlation has been found between the learning styles of students and their enjoyment (Simpson & Du, 2004; Tamborini, Bowman, Eden, Grizard, & Organ, 2010). Study engagement is a specific study experience that may positively trigger students' emotional experiences. Students are more likely

to experience fun, enjoy their study, and enhance commitment to work, and motivate learning (Lumby, 2011; Niemi, Nevgi, & Aksit, 2014). Good academic achievement increases students' interest and motivation to learn. Therefore, enjoyment of study is expected to be positively associated with informal learning.

Hypothesis 2: Enjoyment of study is positively related to informal learning.

Study engagement as a mediator

Studies have demonstrated that students who engage in the learning process have increased attention, developed better critical thinking, and enjoy more meaningful learning experiences (Ghorbani, Noohpisheh, & Shakki, 2020). Students are more likely to engage in learning when their behaviors create feelings of engagement (Mcmaster, 2019). Intrinsic motivation may explain how study engagement mediates the effect of enjoyment of study on learning performance and informal learning.

The theory of intrinsic motivation (Deci & Ryan, 1985) indicates that enjoyment of study is an internal motive for the sake of students' satisfaction. Students are intrinsically motivated when they are engaged with their own learning because they enjoy their studies. Students desire to learn, as they want to explain their knowledge and gain mastery of a subject. Different students have different experiences of enjoyment of study in the context of online teaching. Study engagement creates an incentive for students to enjoy the learning experience (Orji & Ogbuanya, 2022). Study engagement is proposed as a mediator between enjoyment of study and (a) learning performance and (b) informal learning.

Hypothesis 3: Study engagement mediates the relationships between enjoyment of study, learning performance and informal learning.

The research framework is shown in Figure 1 and presents a theoretical model of enjoyment of study, study engagement, learning performance, and informal learning.

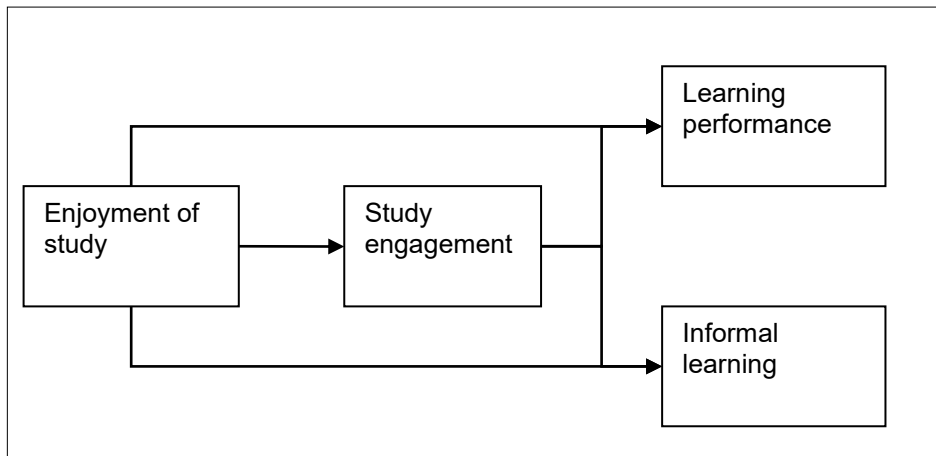


Figure 1: Research Framework

METHODOLOGY

Sample

The sample consisted of undergraduate students enrolled in a management-related subject as part of a bachelor's degree at a university in Hong Kong. The students regularly participated in online teaching and learning for a semester of an academic year, and they had the opportunity to study and work with their classmates through an online teaching platform by discussing, communicating, and presenting their subject knowledge.

The researcher invited students to visit a Web link to complete an online survey during a regular online session. Instructions on the design and purpose of the research study were given to the participants. Their participation was voluntary and anonymous. Data collected were treated in strict confidence.

In total, out of 159 students, 137 completed and returned the questionnaire, representing a response rate of 86.2%. Female (76) and male (61) students constituted the sample. There were 57 responses from year 1 students, 71 responses from year 2 students and 9 responses from year 3 and year 4 students respectively. There were 58 students in Management, 63 students in Marketing and 16 students from other programmes.

Measures

The measurements were revised from the existing literature to fit the context of online learning. Two academic colleagues were invited to review and comment on the questions. The items in the questionnaire were reworded according to their feedback. Exploratory factor analysis with oblique rotation was used to assess the construct validity of the independent variables.

The questionnaire items, which addressed the constructs of enjoyment of study, study engagement, learning performance, and informal learning, were originally in English. All items were translated and back-translated from English to Chinese and Chinese to English by two bilingual academic colleagues to ensure accuracy (Brislin, Lonner, & Thorndike, 1973; Cohen & Cohen, 1983).

Enjoyment of study. Shortened versions of enjoyment of work scales from McMillan et al., (2002), Spence & Robbins (1992) and Graves, Ruderman, Ohlott & Weber (2010), were amended to the context of enjoyment of study. Enjoyment of study was assessed by 7 items rated on a 5-point scale (1 = strongly disagree; 5 = strongly agree). The following items were included: "My study is so interesting that it doesn't seem like study," "My study is more like fun than study," "Most of the time, my study is very pleasurable," "I like my study more than most people do," "I seldom find anything to enjoy about my study," "I do more study than is expected of me strictly for the fun of it," and "Sometimes when I get up in the morning I can hardly wait to get to study." The Cronbach's alpha coefficient of enjoyment of study was calculated as 0.92.

Study engagement. The Schaufeli, Bakker & Salanova (2006) scale was used to measure study engagement. It was measured by 9 items rated on a 5-point scale (1 = never; 5 = always). The following items were included: "At study, I feel bursting with energy," "At study, I feel strong and vigorous," "I am enthusiastic about my study," "My study inspires me," "When I get up in the morning, I feel like going to study," "I feel happy when I am studying intensely," "I am proud of the study that I do," "I am immersed in my study," and "I get carried away when I'm studying." The Cronbach's alpha coefficient of study engagement was calculated as 0.86.

Learning performance. The MacGeorge et al., (2008) scale was used to measure students' learning performance. It was measured by 3 items rated on a 5-point scale (1 = strongly disagree; 5 = strongly agree). The following items were included: "The use of online teaching has improved my comprehension of the concepts studied in class," "The use of online teaching has led to a better learning experience in this module," and "The use of online teaching has allowed me to better understand the concepts in this module." The Cronbach's alpha coefficient of learning performance was calculated at 0.92.

Informal learning. The Noe, Tews & Marand (2013) scale was used to measure informal learning. It was measured by 9 items rated on a 5-point scale (1 = never; 5 = all the time). The items included "reflecting about how to improve my performance," "experimenting with new ways of performing my work," "using trial and error strategies to learn and better perform (learning from oneself)," "interacting with a mentor," "interacting with my supervisors," "interacting with my peers (learning from others)," "reading professional magazines and vendor publications," "searching the Internet for job-relevant information," and "reading relevant books (learning from non-interpersonal sources)." The Cronbach's alpha coefficient of informal learning was calculated at 0.87.

Control variables. Gender, year of study, and online teaching experience were used as the control variables. Dummy variables were used to represent gender (1 = male; 2 = female) and program of study (1 = Management; 2 = Marketing; 3 = other). The year of study was measured as year 1, year 2, year 3, and year 4.

Data analysis

Multiple regression analysis was used to test the hypotheses 1 and 2 in the study. The analysis encompasses linear regression with multiple explanatory variables. It helps to assess the strength of the relationship between independent variables on mediating variables and dependent variables. The parameter estimates of the regression model predicted enjoyment of study, study engagement, learning performance, and informal learning.

To test the mediation model of hypothesis 3, the procedure was followed in three steps (Baron & Kenny, 1986). At first, the impact of the independent variable was examined on the mediating variable. Then, the independent variable was tested on the dependent variable. Lastly, the mediating variable was tested on the dependent variable, with the independent variable controlled for in the model. Therefore, study engagement was added as an hypothesized mediator between enjoyment of study, and learning performance as well as informal learning.

FINDINGS

Descriptive statistics

The means, standard deviations, and zero-order Pearson correlations of all the key variables are presented in Table 1 below.

Table 1: Means, standard deviations, correlations and reliability of measures

Variables	Mean	SD	1	2	3	4	5	6	7
1. Gender	1.55	.49	--						
2. Year of study	1.65	.60	-.18*	--					
3. Program	1.69	.67	-.13	.35*	--				
4. Enjoyment of study	3.49	.74	.05	.11	.10	.92			
5. Learning performance	4.32	.48	.07	.18*	.17*	.42**	.86		
6. Informal learning	3.85	.78	-.07	-.07	-.04	.34**	.43**	.92	
7. Study engagement	3.70	.55	.01	.10	.22**	.22**	.31**	.56**	.87

Notes:

^a $N = 137$ ^b Correlation coefficients are significant at * $p < .05$, ** $p < .01$.^c Reliability coefficients appear along the diagonal.

Tests of hypotheses

Hypothesis 1 predicted that enjoyment of study is positively related to study engagement. After all the control variables had been entered, enjoyment of study was found to be positively related to learning performance ($\beta = .37$, $p < .001$). Hypothesis 1 was supported. Hypothesis 2 predicted that enjoyment of study is positively related to informal learning. After entering all the control variables, the results indicated that enjoyment of study was positively related to informal learning ($\beta = .20$, $p < .01$). Hypothesis 2 was supported.

Hypothesis 3 predicted that study engagement mediates the relationships between enjoyment of study, learning performance, and informal learning. Following Baron & Kenny's (1986) three steps of testing a mediation model, after the control variables had been added, the results indicated that enjoyment of study was significantly related to study engagement ($\beta = .39$, $p < .001$), fulfilling the first requirement for mediation. As shown in Table 2 and the results pertaining to Hypothesis 1, the results indicated that enjoyment of study was positively related to learning performance ($\beta = .37$, $p < 0.01$) and informal learning ($\beta = .20$, $p < .01$), fulfilling the second requirement for mediation. As in the previous step, study engagement was significantly related to the relationships between enjoyment of study and learning performance ($\beta = .39$, $p < .001$) and enjoyment of study and informal learning ($\beta = .26$, $p < .001$). The results confirmed the hypothesis that study engagement mediates the relationships between enjoyment of study, learning performance, and informal learning. Thus, Hypothesis 3 was supported.

Table 2: Tests of enjoyment of study, student engagement, learning performance, and informal learning

Variables	<u>Study engagement</u>				<u>Learning performance</u>				<u>Informal learning</u>				
		Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
<u>Control variables</u>													
Gender	.08	-.09	-.12	.09	-.15	.01	.00	.01	.02	.01	.00	.01	.02
Year of study	.15	.29	-.37	.29	.43	.15	.11	.08	.07	.15	.11	.08	.07
Program	.01	.22	.25	.22	.25	.05	.03	.04	.10	.05	.03	.04	.10
<u>Independent variable</u>													
Enjoyment of study	.39***		.37***		.21**		.20**		.10				
<u>Mediating variable</u>													
Study engagement			.47***		.39***			.30***				.26***	
N	137	137	137	137	137	137	137	137	137	137	137	137	137
Df	3	3	1	1	1	3	1	1	1	3	1	1	1
R ²	.20	.02	.15	.23	.27	.01	.06	.10	.11	.01	.06	.10	.11
Δ r ²	.16	.02	.13	.21	.12	.01	.05	.09	.05				

Notes:
*p < .05, ** p < .01, *** p < .001

DISCUSSION

Online learning has become more popular and accepted by academic institutions and students. The literature review indicates that enjoyment of study plays an important role in the engagement of study and students' learning performance. This study examined a mediation model of enjoyment of study in an online teaching context wherein study engagement mediated the relationships between enjoyment of study and learning performance and informal learning.

First, the results confirmed earlier literature that enjoyment of study was significantly associated with learning performance (Alenezi, Karim, Malek, & Veloo, 2010; Ahmed, Van der Werf, Kuyper, & Minnaert, 2013). Intrinsic motivation theory premised a positive connection between students' enjoyment of and engagement in their studies. Students who are motivated to learn enjoy their studies. They find their studies more enjoyable when they are willing to engage in the learning process and increase their learning performance. Consistent with the literature, examining how enjoyment of study and study engagement influence learning performance and informal learning broadens the understanding of teaching and learning research in the context of online learning (Bhatt, Bhatt & Thanki, 2021; Okada & Sheehy, 2020).

Second, study engagement mediated the relationship between enjoyment of study and informal learning. In line with previous research work, the findings supported the view that students should enjoy a meaningful learning experience in online learning environments (Ghorbani, Noohpisheh, & Shakki, 2020). The higher students' study engagement, the more effective their informal learning. Students who experienced better use of cognitive learning strategies are more likely to enjoy informal learning and engage more with their studies.

Limitations and future research

There are several limitations in the design of this study. First, this study was designed to collect data at the end of the semester, after engagement in the online teaching experience. Future research could focus on data collection over more than a year by using longitudinal designs (Pan & Zhang, 2021). Second, this study examined the direct impact of enjoyment of study on study engagement, learning performance, and informal learning. Future research could consider other

potential mediating effects of these relationships for further investigation. Lastly, because the raw data were collected during only one semester of online teaching and learning activities, the study cannot fully be generalized. A wider application of enjoyment of study in online learning over time can be further examined.

CONCLUSION

In sum, this study provides important insights into the effects of enjoyment of study and study engagement on learning performance and informal learning in an online learning context. The motivational role of enjoyment of study has raised the awareness for both academic institutions and students. This study extends the engagement literature in the format of online learning, and increasingly engaging students to enhance their learning practices. Given the new trend of using online learning among academic institutions, the results indicated support for the enjoyment of study and study engagement. Enjoyment of online study could help to improve students' learning performance and informal learning.

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