

Situational Motivation of Continuing Education Online Learners in Vietnam

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ABSTRACT

With the advancement of digital technology, online learning is no longer merely a potential learning method to enable a diverse range of learners' access to education, but is increasingly becoming a crucial learning method at every school level. The majority of research problems and challenges regarding online learning stems from the question of how learners obtain and maintain positive learning motivation in online learning settings. This study seeks to examine the situational motivation of high school students enrolled in continuing education programs via online learning in Vietnam, thereby examining the differences by genders, groups, online learning duration, and online learning programs. The snowball sampling method was utilized, and the questionnaire was designed using the Google Forms tool. The data set for analysis includes 633 records collected between September 17 and October 10, 2021. The study's findings investigated the situational motivation of continuing education learners in online learning in Vietnam, in which: Situational Motivation Scales varied in factors of Intrinsic Motivation, Identified Regulation, External Regulation, and Amotivation. In addition, the research findings indicate disparities of situational motivation in online learning between male and female learners, by school grades, by learning time, and by learning program. Firstly, the results reveal that there is a difference by gender and duration of online learning between three factors of Intrinsic Motivation, Identified Regulation, External Regulation, and Amotivation. Secondly, the results by school grades show differences in factors within the same grades as well as disparities across grades in the same factor. Third, the findings for SMS of learners enrolled in an online learning program suggest that there is a difference by subject in the same factor and a difference in a subject with various factors. Therefore, these findings are expected to provide critical evidence for academics studying learner motivation in general, and online learners in particular. Furthermore, the findings can help educators and teachers better understand the situational motivation of continuing education learners in the online learning environment, in order to have effective pedagogical and psychological measures in place to encourage effective online learning, increase the quality of online teaching and learning, and move learners toward self-determination.

KEYWORDS: *situational motivation, online learning, self-determination learning, continuing education.*

1. Introduction

The advancement of science and technology, especially the advent of the Internet, has caused a revolution in teaching and learning, resulting in the emergence of an online-based learning method, which is a form of distance learning mediated by Internet-based technologies that connect geographically divided learners, teachers, and institutions (Bates, 2005; Dempsey & Van Eck, 2002; Hartnett, 2016). In recent years, online learning has grown at a tremendous rate (M. K. Hartnett, 2015). The global breakout of the COVID-19 pandemic, in particular, has produced an unprecedented drive to encourage the widespread adoption of online learning in every country across the globe (Pho et al., 2020). Especially in the context of the COVID-19 pandemic, online learning has emerged as a critical approach for safeguarding the learning of learners all over the world (Nguyen et al., 2021).

Online learning not only provides benefits as a vital remedy during the global pandemic crisis, but it also becomes an essential learning method with the same significance as traditional learning methods. However, the transition from conventional face-to-face learning to online learning has presented substantial issues for both learners and teachers (Chiu, 2021). Because there is less instant instruction and adjustment from a teacher with online teaching expertise, online learning requires learners to have a higher degree of autonomy than face-to-face learning in class. (Hartnett, 2016). Meanwhile, extensive research on online learning has indicated that not all learners possess the necessary learning capacities to succeed in an online learning environment (Chen & Jang, 2010; Hartnett, 2015; Chiu & Hew, 2018; Rienties et al., 2012). Furthermore, a series of studies conducted during the COVID-19 pandemic found evidence of a large rise in mental health disorders such as sadness, anxiety, and stress (Bolotov et al., 2021; Fruehwirth et al., 2021; Zhang et al., 2020). With this transformation, it is necessary that learners acquire attributes such as self-regulation, motivation, and positive and proactive learning tendencies (Chen & Jang, 2010; T K F Chiu & Hew, 2018). To sum up, the majority of problems and difficulties in online learning stem from the question of how learners generate positive learning motivation in online learning.

Motivation may influence what an individual learns, how they learn, and when they choose to study (Pintrich & Schunk, 2002; Schunk & DiBenedetto, 2020) and can be regarded as the “engine” of learning activity (Paris & Turner, 1994). It has been found to play a significant impact in determining perseverance, effort, and predicting learning quality, as well as a learner’s capacity to attain learning outcomes in an online environment (Hartnett, 2016).

The self-determination theory of Deci and Ryan (1985, 2002), considered one of the most extensive theories of human motivation currently (Pintrich & Schunk, 2002), is applicable to the study of situational motivation in the context of online learning. It is a macro-level theory of human motivation that attempts to explain the ever-changing needs, motivations, and well-being in the social environment. According to the fundamental principles of self-determination theory, motivation and its underlying factors function on three levels of generality: global, contextual,

and situational (Vallerand, 1997). At the situational level, motivation refers to a person's experience when engaged in a particular activity at a certain time and location (Vallerand, 1997). Consequently, situational motivation as evaluated at a certain time will provide helpful insight into the individual's present self-regulatory mechanisms (Guay et al., 2000).

According to self-determination theory, motivation is a continuum from amotivation through extrinsic motivation to intrinsic motivation when examined at the situational level (Deci & Ryan, 1985). These three categories of motivation provide the most comprehensive explanation of human behavior at any given time (Guay et al., 2000).

Amotivation is mentioned by Ryan & Deci (2000) as "the state of lacking an intention to act". This is the type of motivation characterized by the lowest level of autonomy or self-determination (K.-C. Chen & Jang, 2010). In self-determination theory, amotivation is the opposite of both autonomous motivation and controlled motivation (Ryan & Deci, 2000). A learner exhibits amotivation when he or she has no reason to learn, acts without intention, or is unable to begin learning-related behavior (Cheon & Reeve, 2015) because the individual feels inept or doubts their ability to do the task (M. Hartnett, 2016).

In contrast, "extrinsic motivation is a construct that pertains whenever an activity is done in order to attain some separable outcome" (Ryan & Deci, 2000, p.60). Extrinsic motivation is frequently connected with external sources of influence that encourage an individual to complete an action in order to get a reward or avoid undesirable consequences (Guay et al., 2000). According to the theory of self-determination, this type of motivation can significantly alter the level of that activity. In which, extrinsic motivation can be described by two constructs, namely identified regulation (IR) and external regulation (ER) (Østerlie et al., 2019). ER is defined as behaviors that are performed or adjusted to meet needs, acquire an external reward, or avoid punishment (Ryan & Deci, 2000). IR is a higher level of extrinsic motivation than ER and occurs when a person's conduct is based on their own judgment and perception that the activity is worthwhile to them (Guay et al., 2000); (Ryan & Deci, 2000). For instance, in an online learning context, a person learns how to utilize video conferencing tools because they consider it relevant to their personal online learning, which they deem vital for both their studies and future career.

Finally, a person's intrinsic motivation is defined as 'the doing of an activity for its inherent satisfactions rather than for some separable consequence' (Ryan & Deci, 2000, p.56). This type of motivation typically stems from challenges that inspire, stimulate, or offer pleasure to the individual while undertaking tasks. Intrinsic motivation has been highlighted as one of the most significant attributes for online learners in the online learning environment. In the online learning environment, intrinsic motivation is considered one of the most critical characteristics of online learners (Shroff et al., 2007).

In the field of education, motivation and the learning process are inextricably linked (Gopalan et al., 2017), and motivation has been highlighted as a key

component influencing learning (Lim, 2004). Thus, there are numerous published papers on motivation in learning in general and online learning motivation in particular.

Motivated students are more likely to engage in demanding activities, be actively involved, appreciate and adopt a thorough approach to learning, and display improved performance, persistence, and originality (Ryan & Deci, 2000). Motivation is one of the most crucial aspects of education for enhancing students' academic performance (Firat Sarsar, 2012).

Motivation in face-to-face learning and online learning are not necessarily the same. In online contexts, the characteristics of the learning environment (such as flexibility, accessibility, and tele-communications) and the dynamics of student motivation differ (Chen, 2010).

Online learning environments should place a premium on motivation (Chen, 2010), as the relevance of motivation in online learning is highlighted by Hartnett (2016). According to Artino (2008), student motivation is regarded as an essential component for success in online learning settings.

In recent years, the number of adult learners who participate in online learning has rapidly grown due to online learning's many advantages (Park, J. H & Choi, 2009). With the strong development of the IT platform, especially the impact of the Covid-19 pandemic from 2020 to 2022, online learning in Vietnam has become an irreversible trend. Continuing learners or adults have easy access to learning through online conferencing tools and the support of Centers for Continuing Education.

Due to online learning's numerous benefits, the number of adult learners who participate in online education has increased dramatically in recent years (Park, J. H & Choi, 2009). Online education is also on the rise in Vietnam because of the rapid growth of the country's IT infrastructure, as well as the influence of the pandemic from 2020 to 2022. Through online conferencing technologies and the help of Centers for Continuing Education, continuing learners or adults have convenient access to learning.

Despite barriers to learning for adults such as age, bad experiences, lack of energy, dislike for studying, being bored and tired of schools and lack of knowledge (Sendall, P., Shaw, R., Round, K., & Larkin, 2010), adults should be motivated for learning (Knowles, 1980); because motivation helps them to be present in the class on emotional and physical levels. Knowles, like other educational theorists, believed that adults should be active in the learning environment. Because of this belief, instructional technology specialists have tried to find many ways to engage adults in online learning environments by means of enriched multimedia sources, blended learning and hybrid learning strategies.

Despite challenges to learning for adults such as age, unpleasant experiences, general fatigue, dislike for studying, disinterest in education, and insufficient information (Sendall, P., Shaw, R., Round, K., & Larkin, 2010), adults should be encouraged to learn because motivation helps learners be emotionally and

physically present in class (Knowles, 1980). Like other educational theories, Knowles believed that adults should be actively involved in the learning environment. Based on this view, instructional technology professionals have sought multiple ways to engage adults in online learning settings using enriched multimedia sources, blended learning, and hybrid learning techniques.

Park and Choi (2009) found that dropouts and persistent adult learners had statistically distinct views of family and organizational support, satisfaction, and relevance. Hence, adult online learners require assistance.

Although the learning motivation of continuing education students and adults is crucial in an online setting, research on the topic is limited in terms of both quantity and coverage.

The aim of this study is to explore the situational motivation of Vietnamese high school students enrolled in continuing education programs via online learning, analyzing whether or not there are disparities by gender, school grade, online learning duration, and online learning program. To achieve the aforementioned purpose, the following five research questions will be addressed.

- 1) How is the situational motivation for continuing education online learners in Vietnam?
- 2) Are there any differences between female and male high school students in terms of situational motivation in online learning?
- 3) Are there any differences in situational motivation by school grades of continuing education online learners in Vietnam?
- 4) Are there any differences in situational motivation by learning duration of continuing education online learners in Vietnam?
- 5) Are there any differences in situational motivation by programs of continuing education online learners in Vietnam?

The study seeks to offer significant findings concerning the motivation of learners in general and online learners in particular. In addition, the study hopes to provide valuable recommendations for educators and teachers to better comprehend the motivation of continuing education learners in the online learning environment, enabling them to take optimal measures of pedagogy and psychology, in order to promote effective online learning and enhance the quality of online teaching and learning towards learners' self-determination.

2. Methodology

2.1. Survey instrument

The survey instrument consists of a two-part questionnaire:

Some background information, including gender, school grade, duration of online learning, and learning program.

Situational Motivation Scale (SMS) for online learners. The adapted SMS was developed by Guay et al. (2000).

The SMS consists of 4 factors including: Intrinsic motivation, Identified regulation, External regulation (these two factors measure learners’ Extrinsic Motivation) and Amotivation, in which each factor is measured by 4 specific items from SMS01 to SMS16 according to Table 1. The indicators are measured by the Likert-5 scale with values from 1 (Strongly disagree) to 5 (Strongly agree).

Table 1. Situational Motivation Scale

Variable	Item
<i>Intrinsic motivation</i>	
SMS01	Because I think that this activity is interesting
SMS02	Because I think that this activity is pleasant
SMS03	Because this activity is fun
SMS04	Because I feel good when doing this activity
<i>Identified regulation</i>	
SMS05	Because I am doing it for my own good
SMS06	Because I think that this activity is good for me
SMS07	By personal decision
SMS08	Because I believe that this activity is important for me
<i>External regulation</i>	
SMS09	Because I am supposed to do it
SMS10	Because it is something that I have to do
SMS11	Because I don’t have any choice
SMS12	Because I feel that I have to do it
<i>Amotivation</i>	
SMS13	There may be good reasons to do this activity, but personally I don’t see any
SMS14	I do this activity but I am not sure if it is worth it
SMS15	I don’t know; I don’t see what this activity brings me
SMS16	I do this activity, but I am not sure it is a good thing to pursue it

2.2. Survey sample

Respondents are individuals who have engaged in online learning. The survey area is mostly focused in Hanoi and Ha Nam. Due to the influence of the COVID-19 epidemic, these two provinces have been undertaking online learning. The survey participants are selected using the snowball sampling approach (Pattison et al., 2013). At the conclusion of the study, 633 participants completed the questionnaire. The number of students by gender, school grade, and learning duration is provided in Table 2. The figures indicate that the proportion of male students is greater than that of female students (58.5% vs 41.2%, respectively), with the percentage of students of the “other” gender being 0.3 percent.

Regarding the learning duration, the group of learners that study more than 4 hours/day has the largest proportion (300 people, or 47.4 percent), followed by the group with a learning duration of 2-4 hours/day (264 people, or 41.7 percent), and the group that study less than 2 hours/day (63 people, or 10%).

Regarding the school grades of online learners, there are 261 grade 11 students, accounting for 41,2 percent; 203 grade 10 students, accounting for 32 percent; and 169 grade 12 students, accounting for 26.7 percent.

Table 2. Characteristics of the survey sample

Factor	Frequency	Percentage
Gender	633	100.0
Male	370	58.5
Female	261	41.2
Other	2	0.3
Grade	633	100.0
10	203	32.1
11	261	41.2
12	169	26.7
Learning duration	633	100.0
Less than 2 hrs	63	10.0
From 2 to 4 hrs	264	41.7
More than 4 hrs	300	47.4
Other	6	0.9

The data on the number of learners by programs (see Table 3) indicate that, of the 633 participants, the majority (535 persons, or 84.5 percent) participated in academic programs and vocational programs (266 people, corresponding to 42 percent). Only 8.8 percent of learners study foreign languages and information technology (divided equally between the two programs).

Table 3. Number of students per program

Program	Number	Percentage
Academic subjects	535	84.5
Foreign languages	28	4.4
ICT	28	4.4
Vocational training	266	42.0

2.3. Data collection and analysis

2.3.1. Data collection

The process of data collection is carried out on the Internet. The survey instrument is converted into an electronic form using the Google Forms application. Every question is required to be answered to ensure no missing data. The hyperlink of the questionnaire is sent to the survey participants through Internet-based applications such as email, Facebook messenger, and Zalo. The data collection period is from September 17 to October 10, 2021. After that, the data is downloaded in *.csv format, then imported into SPSS 20 software for data analysis.

2.3.2. Data processing and analysis

The data was processed then analyzed with descriptive statistics. Specifically, descriptive statistical analysis was employed to address research questions concerning the status of SMS of online learners. In addition, Microsoft Excel was utilized to display the data (see Figures 1, 2, 3, 4). The reliability of the scales reported in the section on research findings has been evaluated using Cronbach's Alpha.

3. Results

3.1. Situational motivation of learners in an online learning setting

In the survey instrument, the SMS questions used the Likert 5 scale. Therefore:

$$\text{Interval} = (\text{Maximum} - \text{Minimum}) / n = (5-1)/5 = 0.8$$

Thus, the significance of the levels of interval scale is determined as follows:

Level 1: 1.00 – 1.80: Strongly disagree.

Level 2: 1.81 – 2.60: Disagree.

Level 3: 2.61 – 3.40: Neutral.

Level 4: 3.41 – 4.20: Agree.

Level 5: 4.21 – 5.00: Strongly agree.

The value of Cronbach's Alpha coefficient of the SMS scale in students' online learning is 0.92, and that of the evaluative factors are reliable, specifically: Intrinsic Motivation = 0.94, Identified Regulation = 0.89, External Regulation = 0.82, Amotivation = 0.88.

Descriptive statistical results in table 4 show that the mean value of SMS scale is 3.55 corresponding to level 4 - Agree (in which: the mean value of Amotivation is 3.03 corresponding to level 3 - Neutral; Identified Regulation at 3.62, External Regulation at 3.75, and Intrinsic Motivation at 3.81 - all of which correspond to level 4 - Agree). For SMS01 to SMS16, there is a change of mean value from 2.79 to 3.99 (possible range 1 to 5).

In addition, table 4 also shows the standard deviations. The standard deviations of SMS14, and SMS15 are the highest at 1.60, and the standard deviation of SMS10 is the lowest at 1.34.

Table 4. Situational motivation of learners in online learning setting

Variables	Number	Min	Max	Mean	Standard deviation	Level
SMS (Cronbach's Alpha = 0.92)	633	1	5	3.55	1.00	Level 4
Intrinsic Motivation (Cronbach's Alpha = 0.94)	633	1	5	3.81	1.31	Level 4
SMS01	633	1	5	3.83	1.40	Level 4
SMS02	633	1	5	3.82	1.39	Level 4
SMS03	633	1	5	3.81	1.41	Level 4
SMS04	633	1	5	3.77	1.43	Level 4
Identified Regulation (Cronbach's Alpha = 0.89)	633	1	5	3.62	1.30	Level 4
SMS05	633	1	5	3.75	1.45	Level 4
SMS06	633	1	5	3.47	1.55	Level 4
SMS07	633	1	5	3.63	1.52	Level 4
SMS08	633	1	5	3.65	1.46	Level 4
External Regulation (Cronbach's Alpha = 0.82)	633	1	5	3.75	1.17	Level 4
SMS09	633	1	5	3.63	1.50	Level 4
SMS10	633	1	5	3.99	1.34	Level 4
SMS11	633	1	5	3.88	1.42	Level 4
SMS12	633	1	5	3.51	1.56	Level 4
Amotivation (Cronbach's Alpha = 0.88)	633	1	5	3.03	1.37	Level 3
SMS13	633	1	5	3.21	1.58	Level 3
SMS14	633	1	5	2.99	1.60	Level 3
SMS15	633	1	5	2.79	1.60	Level 3
SMS16	633	1	5	3.08	1.59	Level 3

3.2. Situational motivation of online learners by gender

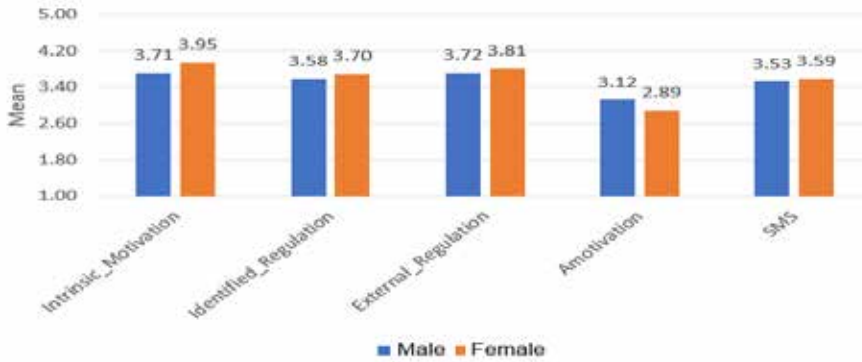


Figure 1. Situational motivation of online learners by gender

The mean values of SMS of males and females are 3.53 and 3.59 respectively. Specifically, Intrinsic Motivation has a mean of 3.71 for male learners, whereas that of the female counterpart is 3.95. The Identified Regulation has a mean value of 3.58 and 3.70 for male and female participants, respectively. Similarly, the External Regulation has mean values of 3.72 and 3.81 for male and female learners, respectively. Amotivation has mean values of 3.12 and 2.89 for male and female groups, respectively.

Thus, Amotivation by gender characteristics has a mean value of 3, indicating that both male and female learners are Neutral regarding SMS13-16; whereas the remaining variables with items from SMS01-12 have a mean value of 4, indicating that both male and female learners are primarily Agree.

3.3. Situational motivation of online learners by school grade

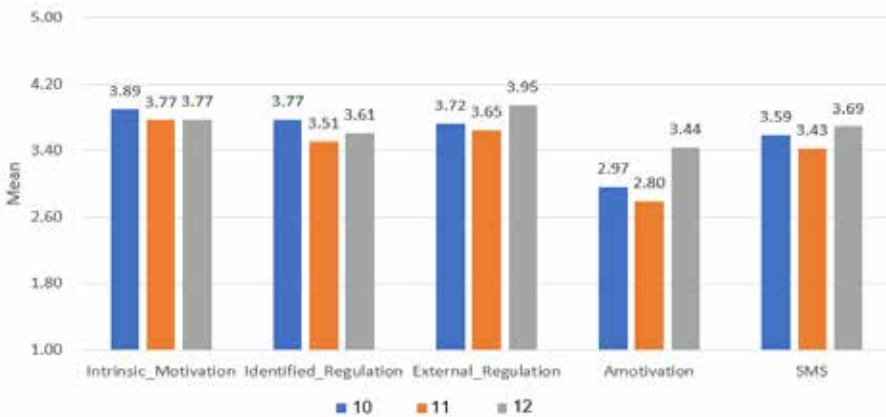


Figure 2. SMS of online learners by school grade

Figure 2. SMS of online learners by school grades of 10, 11, 12 are shown in blue, orange, and grey, respectively. The final three columns on the right display the mean value of SMS for grade 10 students at 3.59, followed by 3.43 for grade 11 and 3.69 for

grade 12. Specifically, for each factor of Intrinsic Motivation, Identified Regulation, External Regulation, Amotivation, grade 10 group in blue has a mean value of 3.89, 3.77, 3.72, 2.97; grade 11 group in orange has a mean value of 3.77; 3.51, 3.65, and 2.80; grade 12 group in grey has a mean value of 3.77, 3.61, 3.95, and 3.37.

Comparing factors inside the grade group reveals the following:

(1) the mean of the Grade 10 group (blue columns) is in the range of 2.97 (corresponding to level 3, i.e. 10th graders are Neutral regarding items SMS13-16 for the Amotivation factor) to 3.89 (corresponding to level 4, i.e. 10th graders are Agree with items SMS01-12 for Intrinsic Motivation, Identified Regulation and External Regulation factors).

(2) The mean value of the Grade 11 group (orange columns) ranges from 2.80 (corresponding to level 3, i.e. 11th graders are 'Neutral' on items SMS13-16 for Amotivation factor) to 3.77 (corresponding to level 4, i.e. grade 11 students are 'Agree' with items of SMS01-12 for Intrinsic Motivation, Identified Regulation and External Regulation factors).

(3) The mean of the Grade 12 group (grey columns) are in the range of 3.44 to 3.95 (corresponding to level 4, i.e. 12th graders are 'Agree' on items SMS01-16).

Comparing the mean values of the groups across Grades 10, 11, and 12 for the same factor, there is no difference in levels for factors of Intrinsic Motivation, Identified Regulation, and External Regulation at level 4, i.e. students in grades 10, 11, and 12 'Agree' with items of SMS01-12. Nevertheless, there is a variation in levels for Amotivation; particularly, the blue and orange columns have mean values of 2.97 and 2.80, respectively, which correspond to level 3, i.e., students in grades 10 and 11 are 'Neutral' about items SMS13-16. In contrast, the grey column has a mean of 3.44, which corresponds to a level 4, indicating that 12th graders 'Agree' with items of SMS13-16.

3.4. Situational motivation of online learners by learning duration

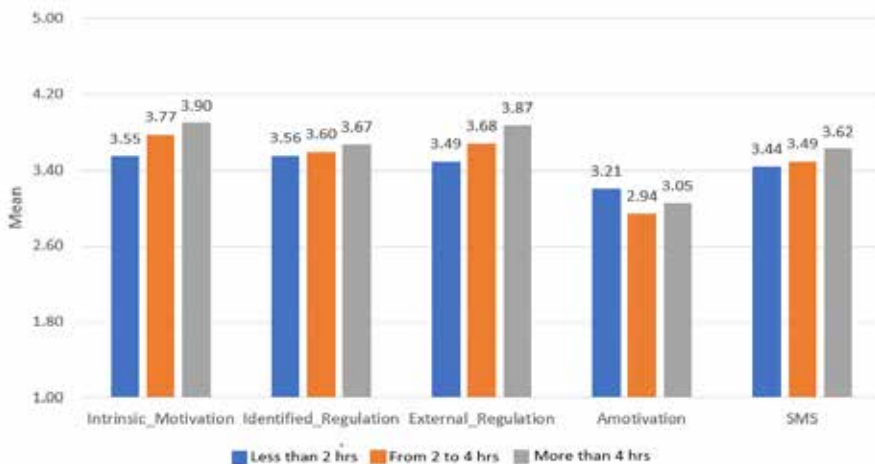


Figure 3. Situational motivation of online learners by learning duration

Figure 3 demonstrates situational motivation of online learners by different learning durations: less than 2hrs/day, from 2 to 4 hrs/day, and more than 4 hrs/day. Specifically, the mean value of SMS is 3.44, 3.49, 3.62, respectively, all of which are corresponding to level 4, i.e. learners 'Agree' with SMS' items in the questionnaire. For each learning duration, Intrinsic Motivation factor has mean values of 3.55, 3.77, and 3.90 respectively; Identified Regulation factor has mean values of 3.56, 3.60, 3.67, respectively; External Regulation factor has mean values of 3.49, 3.68, 3.87, respectively; all of which are corresponding to level 4, i.e. learners 'Agree' with items of SMS01-12. However, the Amotivation factor has mean values of 3.21, 2.94, and 3.05, corresponding to level 3, i.e. learners are 'Neutral' about items SMS13-16.

3.5. Situational motivation of online learners by program

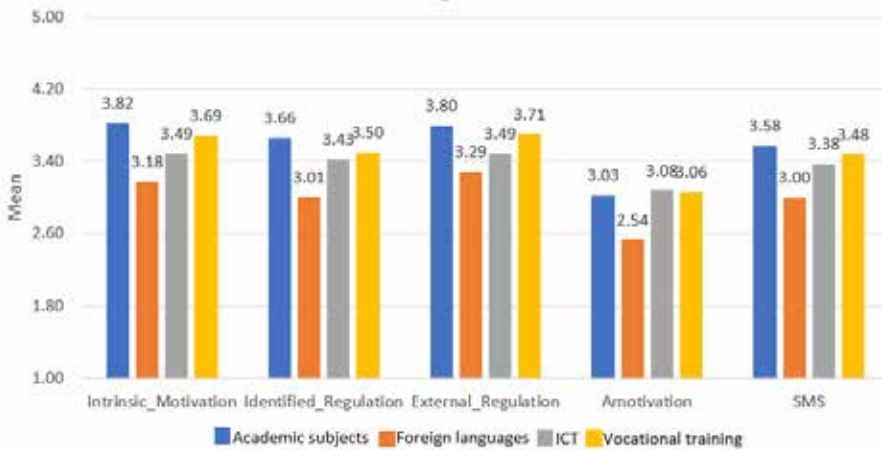


Figure 4. SMS of online learners by program

Figure 4. SMS of online learners by different programs (academic subjects, foreign languages, information technology (IT), vocational training). Academic subjects are shown in the blue column, with the factors of Intrinsic Motivation (3.82), Identified Regulation (3.66), and External Regulation (3.80) at values corresponding to level 4, i.e. learners are 'Agree' with items SMS01-12; the Amotivation factor (3.03) has a value corresponding to level 3, indicating that online learners are 'Neutral' about items SMS13-16 regarding academic subjects.

Online foreign language learning programs (shown in orange in Figure 4) have the Intrinsic Motivation factors (3.18), Identified Regulation (3.01), and External Regulation (3.29) at values corresponding to level 3, which means learners are 'Neutral' about items SMS01-12; Amotivation factor (2.54) has a value corresponding to level 2, suggesting that online learners 'Disagree' on items SMS13-16 when participating in a foreign language program.

For online IT and vocational training programs (shown in grey and yellow in Figure 4), the Intrinsic Motivation factors (3.49 and 3.69), Identified Regulation (3.43 and 3.50), External Regulation (3.49 and 3.71) have values corresponding to level 4, i.e. learners 'Agree' with items SMS01-12; the Amotivation factor (3.08 and 3.06) has a

value corresponding to level 3, indicating that online learners are 'Neutral' on items SMS13-16 concerning IT and vocational programs.

Accordingly, the majority of survey respondents 'Agree' with the scale's provided content. As for the variable of Amotivation, there is a difference compared to the other factors that the mean is only at level 2 (foreign language program learners 'Disagree' with the scale's content) and level 3 (learners of Academic subjects, IT and vocational training programs are 'Neutral' on the content of the scale).

4. Conclusions

This study investigated the situational motivation of continuing education online learners in Vietnam, including different situational motivations such as Intrinsic Motivation, Identified Regulation, External Regulation, and Amotivation. The research results also reveal differences in situational motivations in online learning between male and female students, by school grades, by learning duration, and by program.

Overall, first, the research findings show that Amotivation has the lowest value of the 4 tested factors and is in the range of level 3. This indicates that learners are neutral, or confused, in determining whether they have amotivation or not. Previous research on online learning has established that learners' autonomy and independence play a crucial part in their ability to learn effectively (Thomas K.F. Chiu, 2021; M. Hartnett, 2016). Amotivation should be minimized for students, since it is the type of motivation with the least amount of self-determination (K. C. Chen & Jang, 2010). It is also directly associated with inefficient learning behaviors (Cheon & Reeve, 2015). Likewise, teachers or instructors, who play an important role in generating positive motivation among online learners (M. Hartnett, 2016), should simultaneously increase the satisfaction of psychological needs, including autonomy, competence, and relatedness, and decrease the frustration associated with these psychological needs. According to self-determination theory, this is a fundamental causal pair that determines the amount of amotivation in each learner (Cheon & Reeve, 2015).

Second, the other two types of motivation are rated at level 4 on the 5-point Likert scale. With this level of "agreement", the results indicate that online learners in continuing education had high levels of both intrinsic and extrinsic motivations, with the former being the greatest (mean = 3.81). Due to the necessity for curiosity and self-regulation for online learners (M. Hartnett, 2016), previous studies have also demonstrated that learners have to be intrinsically motivated to be successful in an online learning setting (Huett et al., 2008; Shroff & Vogel, 2009; Wighting et al., 2008). Cerasoli et al. (2014) found that intrinsic motivation is a significant predictor of the performance of learners' learning activities and has a direct impact on the quality of such activities. The findings of Martens et al. (2004) indicate that learners with high levels of intrinsic motivation tend to execute a variety of learning activities concurrently. Thus, it is crucial to foster and promote the intrinsic motivation of students in the online learning environment.

Regarding the results based on the characteristics of the learners, the factors of Intrinsic Motivation and Extrinsic Motivation are equally comparable (level 4) and more significant than Amotivation (level 3). First, both male and female learners experience comparable degrees of situational motivation in the online learning environment. Nevertheless, the results based on the factors revealed that there was a distinction between the four factors of Intrinsic Motivation, Identified Regulation, External Regulation, and Amotivation. In relation to this finding, Johnson et al. (2011) found that there are gender disparities in adolescents' situational motivational profiles during physical education skill assessment. Sinelnikov et al. (2007) noted that all students have high levels of intrinsic motivation and low levels of no motivation or amotivation, regardless of gender or environment. Similarly, the study by Frat et al. (2018) suggested that there was no statistically significant difference in the intrinsic motivation of male and female online learners.

Secondly, comparing various factors within the same school grades reveals that factors within the same school grades differ (Grade 10 and 11: factors of Intrinsic Motivation and Extrinsic Motivation are equally comparable (level 4) and higher than that of Amotivation (level 3)). Comparing the mean values of the groups in grades 10, 11, and 12 for the same factors, there were no differences observed among Intrinsic Motivation factors, Identified Regulation, and External Regulation, which are at level 4, i.e., students in grades 10, 11, and 12 'Agree' with the contents of items SMS01 through SMS12; nonetheless, there is a level discrepancy for the factor of Amotivation. In the study of comparative situational motivation across student groups of varying ages, Lonsdale, C., et al. (2011) found that Identified Regulation and Intrinsic Motivation constructs were not discernible between two groups of students (UK: mean age = 13.71, and HK: mean age = 15.34 years), and that External Regulation scores were inversely correlated to that of Intrinsic Motivation and Identified Regulation factors; however, the learning outcomes of the students were not considered in this study.

Thirdly, depending on learning duration, the results of the study reveal that the mean values of Intrinsic and Extrinsic Motivation are highest among online learners who have studied more than four hours a day (IM: 3.90; IR: 3.67; ER: 3.87). However, learners with 2 to 4 hours a day of online learning time had the lowest mean of Amotivation. Gao et al. (2011) mentioned that different learning durations of learners in different grades would have different learning outcomes, which is evidenced by the fact that the recorded levels of Intrinsic motivation, Identified regulation, External regulation, Amotivation, and physical activity levels are different. This suggests that school administrators, program designers, and teachers should increase the number of time students spend engaging in online learning activities in order to foster the development of intrinsic and extrinsic motivations, as well as minimize amotivation to improve learning outcomes.

Fourth, based on the program, students' situational motivation has the greatest mean value in the academic subjects program (3.58), and the lowest mean value in the foreign language program (3.00). Interestingly, the outcome is the same when

considering the factors of Intrinsic and Extrinsic Motivation. In a study relating to the learning program, Tsai et al. (2008) analyzed German students' interest in three school subjects. The findings of a multilevel modelling analysis revealed that students were more engaged in sessions in which instructors were autonomy-supportive and less engaged in lessons in which teachers were controlling.

Thus, this study investigated the situational motivation of continuing education online learners, and examined the differences in situational motivation with four factors (Intrinsic Motivation, Identified Regulation, External Regulation, and Amotivation) regarding gender, school grade, learning duration, and program. Although our findings are not a major discovery, past studies have often focused on traditional learning methods, whereas online learning approaches have not been thoroughly studied. However, this paper has certain limitations in its study. The study utilized the snowball sampling method. Consequently, there exist disparities across groups (Pattison et al., 2013); for instance, the proportion of female students is greater than that of male students. Second, it is not possible to compare the influence of online learners' situational motivations on learning outcomes within the scope of this study.

The findings of this study are anticipated to provide researchers with helpful information on the motivation of learners in general and online learners in particular. In addition, these results can provide educators and teachers with crucial recommendations for a better understanding of the motivation of continuing education students in the online learning environment, in order to employ effective pedagogical and psychological strategies, thus enhancing the quality of online teaching and learning towards learners' self-determination.

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