The variables affecting students' enthusiasm for studying in virtual settings: A review

H. Chaye

1British University in Dubai, Dubai, United Arab Emirates

ABSTRACT

Schools all across the world have been forced to close due to the coronavirus issue. Educational stakeholders had responded to this challenge admirably by using virtual learning and by enhancing their virtual learning environments in order to prevent interruptions to their students' studies (VLEs). As a result, the VLEs have specific requirements that must be fulfilled in order to support students' learning in a reliable and effective manner. Through a descriptive study, this research sought to critically examine the influencing elements of learning in VLEs. The results showed that characteristics connected to student motivation for learning in a VLE include teacher personality, student autonomy, ICT, and course design. These results are regarded as significant contributions for educational stakeholders to address the educational, psychological, social, and technological demands of students in VLEs that have partially or completely replaced traditional educational methods in most academic institutions across the world.

KEYWORDS

Online learning; virtual space; motivation

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Introduction

As a precaution against the spread of the infection, the coronavirus (COVID-19) situation has forced the closure of educational institutions all over the world. As a result, this epidemic has put unprecedented and exceptional demand on schools' ability to continue delivering their curricula. Educational stakeholders and communities have responded admirably to this challenge by switching to virtual learning and enhancing their virtual learning environments in order to prevent interruptions to their students' studies (VLEs). All teachers and professors have been participating in online training on effective and efficient online delivery as a result of schools and universities all over the world moving their instruction online (IBMSU, 2020). This has allowed them to continue engaging students in interactive dialogues, whether synchronously using web meeting tools like Zoom and Microsoft Teams or asynchronously using discussion boards (Crawford et al. 2020). Thus, in order to adapt students' learning and experiences and to meet their educational needs with reliable and effective learning, educational stakeholders must take into account specific aspects of virtual learning. For example, engagement and anxiety are regarded as the most important variables for the academic performance of online students. According to Fulcher and Miller (2000) and Reis (2009), learning in a virtual environment requires higher levels of student motivation than education conducted on-site because of the feeling of isolation caused by the physical distance between the teachers and the students and the difficulties encountered in managing the learning itself because of the logistics of the environment. According to Harknett and Hartnett (2011), whether students are learning in traditional classroom settings or online, motivation is a crucial component of growth. However, little is known about the elements that influence, create, develop, and support student motivation in their virtual learning environments (VLEs) (Turley & Graham, 2019).

Despite its enormous and obvious effects on learning outcomes, motivation has not received considerable attention in online learning (Jones & Issroff, 2005). Teachers' attention to students' cognition while ignoring their affective and socioemotional processes may be a factor in why they don't take motivation seriously in online learning (Krejins et al. 2003). As a result, the attrition rates of students in online learning grew, illuminating a poor indication of online motivation, which emerged as an urgent issue of online learning and the primary worry of online teachers (Clark, 2003). In order to improve the teaching-learning process in the online course and lower the attrition rates of the student, the determinants of motivation in online learning became a significant topic for the researchers to examine and analyze, including its qualifications and effects. In fact, the degrees of focus, dedication, and learning increase as the level of online motivation increases (Selvia, 2010).

The COVID-19 virus is a serious threat to our health, safety, and lives because of its persistent global spread. To lessen the disruption to education around the world, educational organizations, schools, and universities were urged to transition to online learning through VLEs and communication platforms. In order to meet students' needs for online education and to improve their educational experiences in this pressing scenario, the researcher determined
that it was important and necessary to critically analyze the aspects that influence students' desire for learning in virtual environments.

The primary goal of the researcher was to conduct a descriptive study by critically evaluating a sample of the published literature on the factors affecting student motivation for learning in virtual learning environments (VLEs) from 2004 to the present. This literature was published in reputable journals or peer-reviewed professional journals, and it was chosen because it addressed the study's central question: What are the factors affecting student motivation for learning in VLEs? by outlining, analyzing, and clarifying the key elements that affect students' motivation for learning in VLEs.

In the past few years, because online learning courses have such a high attrition rate, significant focus has been placed on the function of motivation in VLEs. This elevated attrition rate is a poor indication of motivation, according to Chen and Jang (Chen & Jang, 2010). Additional empirical research is required to assess motivation theories and constructs in VLEs, according to Miltiadou and Savenny (Miltiadou & Savenny, 2003). They made this claim in order to lower the attrition rate of students and ensure that they achieve their educational goals. Thus, the researcher will gain a deeper understanding of elements that affect students' motivation in VLEs and, consequently, their academic accomplishment by examining the factors impacting their motivation for learning in those environments. The results of this study will also alert educational stakeholders, policymakers, curriculum developers, and educators to the crucial considerations that must be made in online learning or VLEs in order to inspire students to continue their online learning journey and, in turn, assist them in achieving a better experience and an improved educational understanding.

**Literature review**

**Self-determination theory**

Researchers asserted that motivation theories founded in face-to-face classrooms cannot be directly transferred to the online learning setting with no authentication as the features of the learning setting and the scholar motivation such as flexibility, accessibility, and CMC differ between the two settings (Mullen & Tallent-Runnels, 2006). Yet, among the motivation theories, the self-determination theory (SDT) is the utmost comprehensive and empirically supported one. It had been portrayed by Pintrich and Schunk (Pintrich & Schunk, 2002) and effectively applied to an array of online settings as health care (William et al., 2006) and general education (Niemiec et al., 2006). Moreover, it had been recognized and applied in online learning to observe online discussions (Xie et al., 2006) and the e-learning endurance intention in workstations (Rocca & Gagne, 2008).

Chen and Jang (Chen & Jang, 2010) claimed that SDT theory functions as a proper framework to tackle learner motivation in online learning setting as it is a broad theory of motivation that purposes to methodically elucidate the dynamics of human needs like motivation and well-being within the direct social setting. Self-determination term was well-defined by Deci and Ryan (1985), the founders of the SDT theory, as a feature of human performance that comprises the experience of choice, in other words, to be capable to choose between different options and be determinant of one's action.

SDT suggests that human beings have three common basic needs which are (1) autonomy, defined as the sense of control; (2) competency, defined as being capable to accomplish chores and activities; and (3) relatedness which is defined as being able to be involved and allied with others. A human deprived or unable to meet his/her three basic needs will suffer from isolation and will be extremely broken and over-sensitive. Whereas, being able to satisfy the three basic needs, an individual will experience an expanded sense of self and attain superior phyiological well-being (Chen & Jang, 2010). Moreover, SDT hypothesizes and categorizes human motivation into three key categories in opposite to Bandura's social cognitive theory which considers human motivation as a single colossal construct. The SDT's three main categories as per Ryan and Deci (Ryan & Deci, 2000) are the (1) intrinsic (complete a chore as it is enjoyable, challenging, and pleasing), the (2) extrinsic (achieve a chore as it leads to a discrete result), and the (3) amotivation (being aimless and senseless to act) which all are enumberated on a gamut of self-determination where the intrinsic motivation denotes the utmost self-determined type of motivation while the amotivation denotes the slightest self-determined type of motivation. Accordingly, the two researchers assert that intrinsic motivation or the self-determined type of motivation leads to positive outcomes while non-self-determined motivation or amotivation results in negative outcomes. Further, they added that contextual sustenance and encouragement are key concepts in SDT where people engross nutrients from social interaction which offers support for the three human basic needs (autonomy, competence, and relatedness). Therefore, along with the contextual support, students will be able to satisfy their basic needs, develop confidence, and become self-determined. Consequently, they will be able to realize greater psychological well-being.

**The interaction equivalency theorem**

Within the same framework, the social interaction can be reconsidered through the interaction equivalency theorem which was suggested by Anderson (Anderson, 2003) and built on Moore's (Moore's, 1989) three-part model of interaction. In this theorem, Anderson (Anderson, 2003) proposed learning effectiveness is attained once the instructional designer plans the educational unit with at least one of the three types of interaction which are student-teacher, student-student, and student-content interaction at a high level. In case the educational unit offers numerous types of interaction, all at high levels, it will augment the student motivation and therefore the student satisfaction of learning. Miyazoe and Anderson (Miyazoe & Anderson, 2010) proposed a model of an online course with high levels...
of student-content and student-teacher interactions. Results showed that although this design increased the workload and time commitment for the students and the teacher, it generated higher students’ motivation and satisfaction with their learning compared to an online model which focused on student-content interaction at a high level.

Methods

In this study, the researcher pursued a descriptive study by following Elo and Kingsa (Elo & Kingsa, 2008) design which consists in preparing (deciding on data), organizing (generating categories under headings), and reporting high-quality data which are related to factors that influence the student motivation to learn in VLEs by reading a sample of articles published in peer-reviewed professional journals to meet the purpose of the study. The ERIC, PsycINFO, OECD, WorldCat, BUIID electronic library, and Google Scholar along with other managers’ databases compiled between the year 2004 to date were used to search for keywords such as “student motivation”, “motivation factors”, and “online/virtual/distance learning”. Once selected, the related article was read carefully and to be included in the study, it had to be relevant to the factors that influence the student motivation to learn in VLEs. If not, the document was expelled as it did not encounter the selection criteria. The final chosen data was presented and arranged in a concise, classified, and analytical way to be analyzed. More, the data was judged by the researcher who obtained a sense of the whole by reading and rereading the data. Lastly, the researcher was able to generate significant meanings which was the final product of the analysis (Polit & Beck, 2003). The quality of findings was judged by whether or not new comprehensiveness were provided to the reviewed phenomenon and if so, the knowledge of the researcher and the intended audience of this particular phenomenon would be increased (Krippendorff 2004; Loeb et al. 2017).

A descriptive study is generally classified as a category of narrative analysis. It is valued in the knowledge that can generate. It is considered a way that displays and handles research methods as living entities that go beyond simple categorization to generate meanings and concrete findings (Sandelowski, 2010). The descriptive study is defined as a methodological coding and classifying approach used to explore numerous textual information in an inconspicuous way to delineate trends and patterns of the recurrent utilized words as well as how they are related and structured (Gbrisch, 2007). The purpose of a descriptive study is to define the characteristics of content in a document by investigating what is said, by whom it is said, and what is the effect of what was said (Bloor & Wood 2005). Descriptive analysis aims to describe a phenomenon of interest or a narrative material in a clear, detailed, accurate, sensible, and comprehensible way (Loeb et al. 2017) and to study it in an analytical method by dividing a full text into separated and smaller content entities to be able to submit them to descriptive treatment (Sparkers, 2005).

The purposeful sampling technique had been valuable and practical in descriptive analysis to attain wide-ranging insights and rich information (Neergaard et al. 2009). For example, PubMed, Google Scholar, The ERIC, PsycINFO, OECD, and WorldCat and along with other managers’ databases were used to search good quality data published in peer-reviewed professional journals, with specific publication years, to meet the purpose of the descriptive analysis study. Once reviewed, the explored data of the main articles had to be related to the specific terms or themes of the descriptive study to be selected in order to be beneficial, credible, and able to be included in the analysis (Sandqvist & Carlsson, 2014). In case it did not match the selection criteria, the selected article or data was expelled from the analysis report (Vaismoradi et al. 2013). In this study, The ERIC, WorldCat, BUIID electronic library, and Google Scholar compiled between the years 2004 to date were used to search related articles on the factors influencing the student motivation for online learning by using keywords such as “student motivation”, “motivation factors” and “online/virtual/distance learning”.

Synthesis of factors affecting student learning in virtual settings

In a descriptive analysis design, planning and data collection sections postulate a significant guarantee of the quality of the research. However, the critical test lies in the analysis part. The analysis of the data collected throughout the research is a central part as it frequently derives from a great quantum and in a multiplicity of formats that any significant understanding and analysis cannot be attained promptly. Thus, categorizing, classifying, and summarizing are means to a meaningful analysis as they aid to lessen the massive data into interpretable and comprehensible forms. More, they help to answer the research question or to elucidate a phenomenon and to envisage occurrences (Rabha, 2015).

Graphical methods had been always used in data analysis as they have attention-getting power by being able to catch the eye and grasp the attentiveness and seek to decipher the wordy descriptions or facts often abstract and hard to interpret into more concrete and comprehensible form. In the present study, the outcomes of the descriptive study had been graphically represented where the researcher used a graphical representation in the form of a smartart diagram to represent a synthesis of the factors influencing student motivation in a VLE (Fig. 1).
Discussion

While investigating the factors influencing student motivation in a VLE, the narrator found a satisfactory number of electronic studies and articles associated with the topic. No descriptive study can assemble all that was issued, reviewed, considered, and discussed. However, from the latest and chosen articles published in peer-reviewed journals, the year 2004 to date, the researcher concluded that many factors can affect student motivation in a VLE. For instance, most of the studies revealed that the teacher plays the most significant role in motivating the students in a VLE. Therefore, an enthusiastic, motivated, friendly, and cooperative teacher with collaborative conduct and a positive attitude is highly mandatory to deliver an online course in a VLE. Further, the teacher, family, peer, and the institution support are found to be significant in influencing the student motivation in a VLE, especially if they are aligned with regular feedbacks and followed with positive reinforcement and praises. Besides, the studies point out that flexibility, deliverability, freedom, and independence are main motivators for an online student in an online learning environment. Additionally, a well-planned online course that is relevant to students’ experiences and lives, delivered with numerous instructional techniques, along with real, concrete examples, and clear objectives and goals can involve the students in an online classroom and therefore enhance their motivation to proceed in their learning. Additionally, the student’s behavior, responsibility, capability of self-regulation/self-efficacy, and interaction with teachers, peers, and content seem to be noteworthy in motivating them, especially the student-teacher interaction and the student-student interaction which require more communication and collaboration in a VLE. Lastly, the online technical infrastructure along with the practice and the progression of an online course/activity, besides its measurement, evaluation, enhancement, and re-evaluation are pointed out to be beneficial motivators in a VLE, together with the continuous technological student support and the usage of the proficient technological tools.

Conclusion

Online learning appears to be more motivating to the student than the traditional education approach does as it shows better positive effects on students’ learning outcomes if all motivation factors are met in the VLE (Lin, Chen & Liu, 2017). Therefore, in such a critical situation caused by the COVID-19 pandemic that affected the whole world educational system where the online learning through VLEs replaced the traditional educational system due to the shutting of all the educational institutions around the world, educational stakeholders, ICT engineers, teachers, and psychologists are required to cooperate and collaborate to design online courses that motivate the students in their VLEs, based on the factors influencing their motivation in a VLE to meet their psychological, educational, sociological, and technological needs. In this way, students will be perceiving the online learning experience as just right for them and they will be motivated to pursue their online courses especially in this critical period.
By narrating the above descriptive analysis, the author realized that online teachers and VLE designers need to elucidate the factors influencing the student motivation in a VLE as motivation is a vital feature in online learning-teaching and practice and the stronger the motivation is in a VLE, the higher the student attention and engagement are. Therefore, the researcher found it significant and beneficial to give some valuable recommendations based on the latest studies and literature to be followed by the teachers, the ICT engineers, and the students in the aim to increase the student motivation level in a VLE and consequently encourage the student to pursue his/her online learning and so to diminish the attrition rate in VLEs.

1. Enhance the student motivation with regular feedbacks, positive reinforcements, and praises.
2. Make sure to deliver relevant and useful course content with different instructional techniques along with multiple activities that stimulate and engage the students.
3. Motivate the students to work in collaboration and ask parents to monitor and help their kids in their VLEs.
4. Motivate the student to be involved, independent, and self-regulator in a VLE by providing him/her the flexibility and the capability to be free and responsible for his/her learning.
5. Design an attractive, organized, and qualified stress-free online classroom with clear objectives and goals for the students to navigate in.
6. Measure, evaluate, enhance, and re-evaluate the online environment infrastructure, regularly.
7. Support and motivate teachers to be friendly, collaborative, and cooperative with the students.
8. Provide the teachers and the students with workshops centered on technology skills to ease the teacher's chore and the student learning in a VLE.

References


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