



Students' Motivation in Distance Learning: How it would be affected and why it matters?

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Abstract. The widespread use and introduction of distance education have led to a large number of novel theoretical and empirical studies. The potential impact of distance learning on student motivation and academic performance is very important, especially these days due to the pandemic. Most studies have investigated the effectiveness of distance learning and the relationship between student motivation and academic achievement. After article screening and quality assessment, the article presents a systematic review of 28 studies that investigated the relationship between student motivation and academic achievement, as well as student motivation in online settings. Through the systematic review, this article synthesizes the empirical findings of the existing literature and examines efforts to elucidate the link between student motivation and academic performance in distance education. Finally, the paper discusses the implications of distance education and student motivation and offers some suggestions for future research.

Keywords: Distance learning, Distance education, Students' motivation, academic performance, the COVID-19 pandemic

1 Introduction

Recent years have witnessed a massive surge in online learners. According to UNESCO and UNICEF, more than 1.5 million school and university students worldwide have been affected by institutional closures as a result of the COVID-19 pandemic [1, 2]. The evidence of the pervasiveness of online learning in the majority of student's life is hard to miss these days. The pandemic revealed the use of alternative educational methods, which intervened to address the problems in education caused by COVID-19. Although various methods and technologies have been applied, this epidemic has completely changed the level of education and eliminated the face-to-face educational environment.

Collectively, the majority of these studies outline a critical role of motivation. Hence, an important question in this stream of research concerns the effects of students' motivation on academic outcomes. Much of the prior work on distance learning research has indeed proceeded from and focused on the link between the motivation of students and academic performance. However, within this stream of work, the link between motivation and academic performance in distance learning is unstable and widely

contested because of the mixed findings within published results. Research surrounding how student motivation changes during distance learning remain limited and the effectiveness of distance learning is hotly debated. As a consequence, a closer look at the literature about the relationship between motivation and students' academic performance in an online environment and a systematic and theoretical analysis are highly necessary.

The remainder of the article proceeds as follows. The review methodology will be presented and expounded on. A summary of articles included in the review along with the results of the analysis would be demonstrated. Following this, findings from a wide range of essays would be explained and some important limitations of the present review would be stated as well as some suggestions for future research.

2 Theoretical framework

There are different theories related with motivation, including achievement-goal theory and expectancy-value theory. The central hypothesis of achievement-goal theory is that different achievement goal orientations generate different motivational systems (e.g., processing self-related and task-related information, inferences about one's abilities, standards), which lead to different cognitive, affective, and behavioral consequences [3]. In recent years, researchers have distinguished two types of performance goals: performance proximity goals and performance-avoidance goals [4-7]. Specifically, students motivated by achievement goals improve themselves by building an advantage over others. Such students expect to succeed; They usually think they are very capable and see the school situation as an opportunity to show their good performance and high level of ability relative to others. Conversely, students motivated by achievement avoidance goals perceive their chances of success as low and perceive the school climate as a threat that may expose their inadequacies. As a result, they tend to avoid showing low ability.

The expectancy-value theory suggests that individual choices, adherence and performance can be explained by their beliefs about their performance in an activity and the value they place on it [8]. In other words, how well a person performs on a task depends on how high their expectations of success are and how they rate task success.

In addition, ARCS (Attention, Relevance, Confidence, Satisfaction) is an incentive model proposed by John Keller [9]. ARCS model effectively promotes online learning motivation, achievement and self-directed learning [10]. First, in order to motivate students, teachers or teaching materials should be able to attract and hold their attention. In addition, the learning content should meet the needs of learners and be relevant to them. In addition, students can be motivated when they gain confidence through successful classroom task experiences. Finally, when students are satisfied with their achievements and their efforts are consistent with their expectations, their motivation will be maintained [11-13].

3 Method

To find and identify the existing evidence base for this review, the general guidelines recommended by Kitchenham which is to plan, perform, analyze, and report are followed [14]. In the beginning, the main articles to be reviewed were searched in the ERIC database by identifying the keywords in the title and abstract. Specifically, the keywords were entered in the form of ("distance learning" or "distance education" or "online learning") and "motivation". The search yielded an initial pool of 72 candidate articles. To limit the scope of the review and to make the target topics more concise and specific, the second selection was based on a set of search criteria, including. 1. the articles were written in English; 2. the study investigated and examined the impact of distance learning on students; 3. they are empirical articles and the purpose or problem of the study was clearly stated. Following the screening, 21 articles were excluded because their quality or focus did not match this literature review paper. The full text of the articles was then read and vetted to ensure that they are suitable for further review. This screening then narrowed the pool of studies down to 22 articles. To build a more solid review base, we searched for additional articles from other academic databases (e.g., sci-hub) by snowballing.

4 Discussion & Result

4.1 Effectiveness of distance education and its relations with motivation

In the 19th century, distance education methods were applied by a number of organizations in the U.S. through the use of correspondence teaching tools. In the late 20th century, distance education practices also emerged in Asian, African and South American countries [15]. Whether distance education is equally effective and whether face-to-face instruction will maintain its dominance in content delivery are two topics that have been widely discussed recently [16,17].

On this topic, Xie and Ke noted that motivation plays an important role in distance education. Student motivation can be influenced positively and negatively by the learning environment [18,19]. Several lines of evidence suggest that motivation could be influenced by the change in teaching mode. For example, in terms of motivation, online environments are effective. Online learning enables students to develop digital experiences that motivate them to achieve their goals [20]. Furthermore, the fact that this environment is more suitable for interaction may have increased student motivation [21]. Similarly, Hrastinski also showed that synchronous learning reduced isolation and increased motivation [22]. Ozer and Badem also highlighted that online instruction creates some extra time for students and self-aware students can benefit from time management and self-paced learning, which is in line with Laachir and Mohammadi et al. [23-25]. Cakir et al. reported from their high motivation level group that distance education is not limited by time and space for review sessions in addition to providing effective learning and meeting the requirements of this information age [26]. Moreover, students are less stressed in the online environment and less negatively influenced by

disruptive classmates. These results seem to be consistent with the current study in terms of the flexibility offered by online courses. Most college students said that the online mode of instruction is more flexible and free, allowing them to make full use of their spare time for other things. In terms of communication, the majority of college students said that online learning and communication are more convenient and not limited by time and space, so they can communicate with teachers and classmates anytime and anywhere. Students are also more willing to speak because there is no pressure on their eyes and environment [27]. Misaghi et al. observed that student-instructor and student-student integration also improved [28]. In the same way, Tas et al. found that most teachers believed that live classes contributed to meaningful student learning [15]. Tang and Osman's study showed that the COVID-19 pandemic did not affect student motivation, which is consistent with Belousova et al.'s findings, who noted that students were significantly more inclined to point to no change or increase in motivation in the distance format [29,30].

Despite the fact that many studies have been conducted to examine the effectiveness of distance education, the debate remains. When it comes to the efficiency of distance education, some teachers believe that distance education is not as effective as face-to-face education. It has been observed that there are problems with student participation and motivation in distance education. A significant number of participants responded that they were not satisfied with the use of asynchronous education [31]. A key feature common to all themes was that students preferred face-to-face learning if given the choice, and they perceived both in-class and out-of-class interactions to be limited in online learning. As a result, students have a generally negative attitude toward learning and are reluctant to actively participate [23]. Similarly, the findings of Tas et al. revealed that the vast majority (93.54%) of teachers believe that distance learning is less effective than face-to-face education, which is corroborated by the findings of, who reported that students believe that the online learning model is a waste of time and that students are not motivated and have difficulty concentrating. Furthermore [15, 27], Almazova et al. showed that there is a lack of "live" communication between learners during the educational process and that communication failures always occur frequently in distance learning [32]. In addition, most students had positive attitudes towards distance education but were not willing to voluntarily continue studying in this format. Belousova et al. also reported that most education students did not consider distance education conducted asynchronously to be more effective than face-to-face instruction [30]. In fact, students indicated that distance education is not a substitute for face-to-face instruction and that they would not prefer distance learning options if they did not experience a pandemic. Participants also reported that distance education does not provide motivation because it does not allow them to take an active role in the course.

Although the literature compiled here is stating that student motivation in online classrooms is increased, they are not uniform in their temporal context, and most are not specific to the influence of teachers. Also, the sample size of some research is small. Therefore, more research should be conducted.

4.2 Student motivation and academic performance in distance learning

Motivation is a powerful factor in explaining learner performance in distance education [33, 34]. That is, in most cases, it is the person's motivation that evokes the action of learning. One variable associated with academic performance is a student's level of motivation. This view is supported by Zhang, who argues that a lack of motivation will lead to lower learning outcomes. Similarly, when students are motivated, they are more willing to learn and they are more willing to participate, implying that motivation is one of the key factors that may directly contribute to people's academic achievement [35-37].

Students' motivation to begin and continue learning is critical to achieving positive learning outcomes. Findings suggest that student's motivation to learn in online environments was an important determinant of successful and satisfying learning outcomes during the COVID19 pandemic, which is complemented by Liou's study, which also found that online learners generally found these environments to be exciting and entertaining [38,39]. Correspondingly, Misaghi et al. indicated that most students were satisfied with their online learning experience [28]. Furthermore, highly motivated students were more successful in online environments compared to low motivated students [40,41]. In the same way, Laachir found that participants preferred online learning compared to traditional learning, which is consistent with Schunk & Usher's study, which found that highly motivated learners were more willing to face challenges in learning and were more actively engaged in the learning process [24,42]. In other words, students' motivation can be increased when taking courses online. The results of the study showed that during Covid-19, students were able to learn through virtual lectures. They were more motivated and had better academic performance, which is supported by Nonetheless, some students reported that their motivation decreases and their academic performance gets worse when they switch to online learning [43-47]. Besides, Whittington indicated that there was no significant link between motivation and students' academic performance [48].

However, the main limitation of some studies is the sample size, which is not that big. Also, much of the literature essentially focuses on only one type of population, such as college students, students in specific disciplines, which would generalize the result. In addition, there are variables such as psychological factors, such as traumatic reactions to catastrophic events, that have not been investigated or controlled for.

4.3 Effective intervening strategies to boost motivation in distance learning

Effective strategies are needed, as some evidence suggests that changes in instructional models may have a significant impact on student motivation, and the effectiveness of distance education remains controversial. Sogunro investigated some factors that can increase student motivation, such as course quality, interactive classrooms and effective management methods, progressive assessment and timely feedback, and a conducive learning environment [49]. In addition, planning for distance education should consider not only instructional processes such as organizational structure, but also learning

processes such as identifying various student needs, motivations, learning styles, and learning climates [50]. For example, regular management of virtual classrooms can increase motivation for distance learning and reduce student isolation. Kılıç et al. also noted that social rewards as mental motivators that help students feel good, such as laughter and eye contact, which participants in the current study reported as a drawback because online classrooms lack such elements [51]. This is corroborated by the study by Rinekso and Muslim, who reported that participants felt that teachers' attitudes and social interactions in the classroom influenced their overall motivation, which is crucial when teachers make the classroom fun and engaging [52]. Based on the ARCS model, strategies of concentration are the most frequently employed strategies [53]. Successful instruction depends heavily on capturing students' attention and maintaining it [54]. Another way to increase student motivation is to provide feedback that corrects students' knowledge and skills. Feedback from both the instructor and peer students can be effective [53]. Despite communication is of great importance throughout the learning process, it has been argued that communication in a distance learning environment is only effective in small groups [55]. In this study, the groups consisted of an ideal number of students, which suggests that a good communication environment was formed. If the groups are crowded, it is likely that an appropriate communication environment will not be created [56]. Rapanta et al. study also highlighted the importance of interactive learning activities and self-paced tasks, as well as the responsibility of teachers to mediate the use of digital resources [17]. Therefore, teachers should take full advantage of the features included in applications for online learning in order to increase communication among students as well as to make distance learning efficient. Finally, Liberman et al. argued that formative assessment is crucial during the COVID-19 pandemic because teachers need to know if students are absorbing the content delivered to them in different formats [57].

5 Conclusion

The purpose of this review is to focus on the literature on distance learning and student motivation in COVID-19. An updated review of 26 studies is expected to provide a cumulative and coherent understanding to help guide the debate and advance efforts aimed at unraveling the mechanisms of this connection. For our guiding question - how does student motivation change in distance learning in COVID-19? - this review highlights the fact that researchers have so far been unable to come up with consistent answers. The lack of consensus among researchers in this emerging stream of work may be a result of the early exploratory phase of this scholarship and/or the complexity of this phenomenon. Motivational research has played an important role in the development of distance learning. However, the lack of a nuanced understanding of the relationship between student motivation and academic performance in distance learning requires more specific analysis based on an awareness of the limitations of existing scholarship. Thus, a key conclusion of our review is that, despite the contributions of existing research, academic disagreements provide tremendous opportunities for further theoretical and empirical research to help advance our understanding. Research on

student motivation and academic performance in online learning is still in its infancy, and much of the existing research relies on qualitative studies of context-specific coding schemes. Future research should combine both quantitative and qualitative approaches to understanding student motivation, especially in technology-rich environments where interactions may differ significantly from face-to-face communications. Also, it is now time to shift the focus to creating a motivating online environment where both teachers and learners can thrive, persist, and benefit from distance learning.

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