



Factors Influencing Students' Self-Efficacy as the Key to Successful Distance Learning: According to Previous Studies

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ARTICLE INFO

Article history:

Received May 22, 2022

Revised May 29, 2022

Accepted July 14, 2022

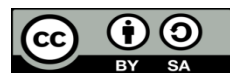
Available online July 25, 2022

Kata Kunci:

Efikasi Diri, Pembelajaran Jarak Jauh, Efikasi Diri Siswa

Keywords:

Self-Efficacy, Distance Learning, Students' Self-Efficacy



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ABSTRAK

Self-efficacy mungkin lebih menantang untuk dicapai dalam konteks pembelajaran jarak jauh ketika siswa mengandalkan guru mereka sebagai sumber belajar mereka. Penelitian ini bertujuan untuk menganalisis pentingnya efikasi diri siswa dalam keberhasilan pembelajaran jarak jauh mereka. Penelitian ini mengadaptasi model penelitian perpustakaan ke dalam desain kualitatif, penelitian ini menggunakan pendapat para ahli dan penelitian sebelumnya sebagai sumber data untuk menjawab bagaimana efikasi diri siswa mempengaruhi keberhasilan mereka dalam pembelajaran jarak jauh. Sumber data dipilih dari artikel konseptual dan penelitian tentang topik terkait, yang diterbitkan pada 2016-2022 di jurnal bereputasi internasional dan jurnal nasional yang diakreditasi oleh SINTA. Pemilihan menggunakan kata kunci tertentu dan serangkaian proses inklusi/eksklusi. Dua puluh enam artikel dimasukkan sebagai sumber data yang relevan untuk menjawab pertanyaan penelitian. Pembacaan kritis menyebabkan sintesis selama analisis, yang menghasilkan kesimpulan bahwa faktor-faktor yang mempengaruhi self-efficacy, seperti keakraban dengan pembelajaran jarak jauh, umpan balik dan penghargaan, motivasi dan sikap mempengaruhi keberhasilan pembelajaran jarak jauh siswa. Ini menyiratkan bahwa kematangan metakognitif, seperti self-efficacy, memainkan peran penting dalam keberhasilan akademik siswa dalam pembelajaran jarak jauh struktural (STVA) secara bersama-sama berpengaruh terhadap nilai pasar.

ABSTRACT

Self-efficacy may be more challenging to achieve in the context of distance learning when students rely on their teachers as their learning source. This study aims to analyze the importance of students' self-efficacy in their distance learning success. This study adapting library research model into the qualitative design, the present study used experts' opinions and previous studies as data sources to answer how students' self-efficacy affects their success in distance learning. Data sources were selected from conceptual and research articles on related topics, published in 2016-2022 in international reputable journals and national journals accredited by SINTA. The selection used specific keywords and a series of inclusion/exclusion processes. Twenty-six articles were included as relevant data sources to answer the research question. Critical readings led to synthesis during the analysis, which resulted in the conclusion that factors affecting self-efficacy, such as familiarity with distance learning, feedback and rewards, motivation and attitude affect students' distance learning success. It implies that metacognitive maturity, such as self-efficacy, plays a vital role in students' academic success in distance learning.

1. INTRODUCTION

During the outbreak of Covid-19, almost every learner experienced distance learning when the stay-at-home policy forced them to learn without on-site face-to-face meetings. In such a situation, students' lack of self-efficacy may result in students encountering the typical challenges of distance learning, i.e., boredom, resistance, distraction, and limited understanding (Almanar, 2020; Apriyanti, 2020; Armstrong-Mensah et al., 2020; Kusmaryono et al., 2021; Lase et al., 2021). Students' control of their efficacy becomes

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a key factor affecting their success in distance learning (Boekaerts, 1992; Gomes et al., 2019; Kröner et al., 2017; Morshedian & Hemmati, 2016). Self-efficacy refers to one's belief in one's ability and confidence to plan and carry out specific activities. It is mentioned that self-efficacy depends on four main factors: successful mastery experience, vicarious experience, verbal persuasion, and physiological and affective states (Phan & Ngu, 2016; Sandholtz & Ringstaff, 2014). Mastery experience refers to the individual's success in facing a new challenge, which raises their confidence in learning new things. The vicarious experience involves social role models where individuals view their similar qualities with the models as a motivation to achieve a similar feat. One's self-efficacy is also affected by verbal persuasion through positive feedback to kindle one's motivation to succeed. Furthermore, self-efficacy is also affected by their emotional state, where individuals can boost their self-efficacy when they positively perceive themselves.

Distance learning was intended to provide access to learning for the broader community with limited access to education (Martin et al., 2019; Saykılı, 2018; Shams & Zafar Iqbal, 2018), including those who are economically deprived and those who cannot attend classes due to other social obligations. Distance learning was conducted through broadcasting systems, such as radio and television, to approach a wider audience. Later, with the development of audio/video conferencing, distance learning became one of the superior learning modes in terms of flexibility, where synchronous communications between students and teachers can be maintained through various digital platforms to complement its mainly asynchronous nature (Setiadi et al., 2021; Trilling & Fadel, 2009; Zheng et al., 2017). Despite the potential benefits of technology and e-learning, previous study state there has been plenty of evidence of failures of online courses due to poor implementation, high cost of technology utilization, difficulties in accepting the new technology and resistance to change in the mode of learning, and students' lack of motivation (Day et al., 2021; Kulal & Nayak, 2020; Morgan, 2019). While other study also state that motivation plays a vital role in students' success in learning, it is particularly critical in distance learning, where students' self-efficacy is needed to help them regulate their learning goals and progress, including the learning strategies that they deem most suitable for them (Alqurashi, 2016; Bartimote-Aufflick et al., 2016; Ernesto Panadero et al., 2016). The present study analyses on the close relationship between self-efficacy and the success of distance learning. Thus, it aimed to elaborate on factors affecting students' self-efficacy in the context of distance learning. In the context of the COVID-19 Pandemic and the growing interest in online learning, the elaborations can act as a reference for teachers conducting online learning to reflect on how teachers can inspire students' self-efficacy.

2. METHOD

The present study is library research model as adapted into a qualitative study (Ariantini et al., 2021; George, 2008). The research procedures are illustrated in Figure 1.

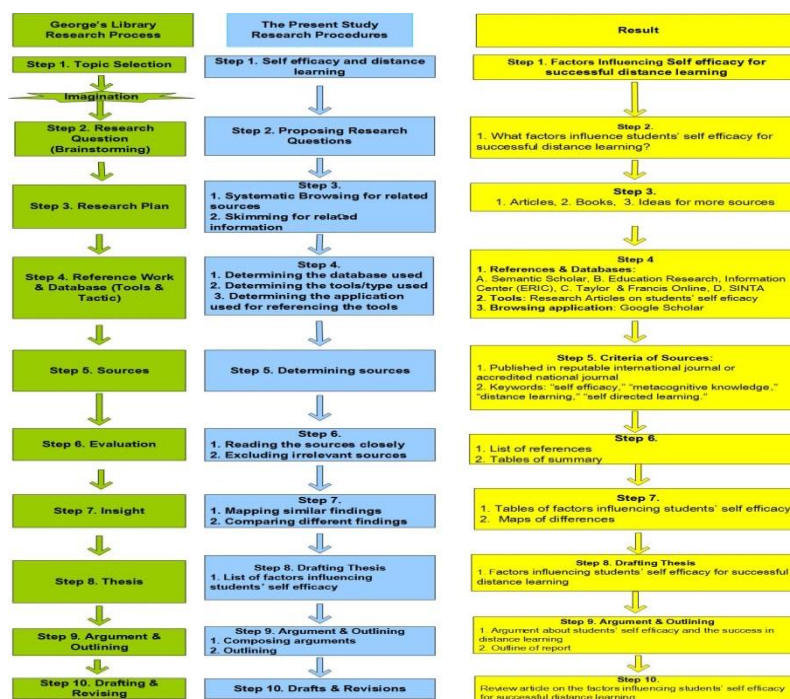


Figure 1. Library Research Process

Based on Figure 1, the first step in this study identified the research topic: students' self-efficacy and success in distance learning. After the topic was chosen, the research question was proposed: the factors influencing self-efficacy and successful distance learning. The next step was to determine where the data came from, secondary data from earlier studies, including articles, books, and other sources. The information was compiled using keywords like 'self-efficacy,' 'metacognitive knowledge,' 'distance learning,' and 'self-directed learning' from open access research repositories like ERIC, ResearchGate, and Google Scholar. The journal articles and proceedings were taken from a well-known international journal indexed by SCOPUS and national accredited journals indexed by SINTA published between 2016-2022. This process resulted in thirty prospective articles as the source of data. They were further whittled down by only choosing those that contained data and information relevant to the research questions. This process omitted four articles from the thirty articles selected, leaving twenty-six papers as the data source. These articles were then critically read, and topics from the results of previous studies were coded. The results of previous studies were then classified using these codes to discover a pattern of data and information that could be used to answer the research questions. The conclusions were then organized based on theme unity and comparisons of each subject to create a detailed report on factors influencing students' self-efficacy for distance learning success. After that, an outline of the argument was developed into a review article which later was given feedback and revised accordingly to form the present article.

3. RESULT AND DISCUSSION

Results

The mapping of the experts' opinions and previous studies on the relationship between self-efficacy and the success of distance learning is presented in the Figure 2.

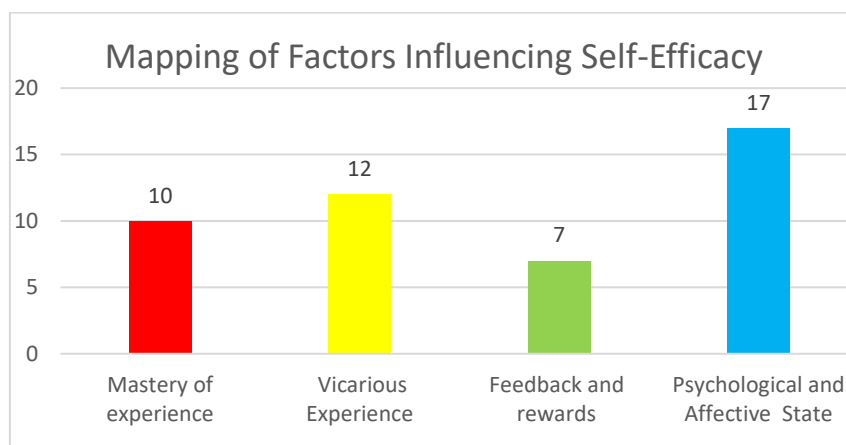


Figure 2. Factors Influencing Self-Efficacy

Figure 2 summarizes the result of the data source regarding the factors influencing self-efficacy in distance learning. Most of the twenty-six studies being reviewed mentioned the latest as the factors influencing self-efficacy. In terms of distance learning, ten studies say that distance learning strengthens the mastery of experience, especially with personal innovation and computing experience. Meanwhile, high quality and frequent interaction as students' vicarious experience is supported by twelve studies. Only seven studies mention sufficient supervision, monitoring, and feedback influencing self-efficacy. The last factor is building students' motivation and attitude as support for their psychological and affective state, which is supported in seventeen studies.

Discussion

Mastery of Experience to Support the Success of Online Learning

Enactive mastery experiences have strengthened self-efficacy attitudes in various school assignments (Hong et al., 2022; C. S. Lai et al., 2021). The general sense of self-efficacy seeks to give students a broad and consistent understanding of their ability to deal effectively with stressful situations (Özüdoğru, 2021; Phan & Ngu, 2016). Students' self-efficacy is strongly affected by their enactive experience, where they actively participate in the experience (Alamri, 2021; Kreth et al., 2019). When they feel familiar with the experience, they will have more confidence in repeating a similar experience (Poh & Kanesan Abdullah,

2019; Punjani & Mahadevan, 2022). In the present-day context of distance education, distance learning is conducted through online learning with various digital devices. To be engaged in the online classroom, students must develop positive perceptions of the role of technology in their learning process (Kreth et al., 2019; Zheng & Huang, 2016). Thus, students' self-efficacy in distance learning can be supported by mastery of using computers and the various online learning application. Mastery of experience using information technology allows students to use various features provided by the online learning platform, adding to their confidence when joining distance learning (C. S. Lai et al., 2021; Renes & Strange, 2010). Furthermore, online learning platforms offer features that allow students to work in groups, promoting collaborative learning. In such a situation, students with mastery of the technology may have greater self-efficacy in their collaborative distance (Owusu-Agyeman, 2021; Ramsin & Mayall, 2019). Familiarization with technology implementation helps students adapt to the flexibility and cooperation offered in online learning (Punjani & Mahadevan, 2022; Vastyanov et al., 2021). Thus, experience using various online learning platforms and previous successes in online learning technology can lead to a greater sense of self-efficacy, while poor past performance can lead to a lower sense of self-efficacy (Hong et al., 2022; C. S. Lai et al., 2021). Self-efficacy can act as an intermediary to establish positive relationships, linking academic impressions of Internet learning cooperation with academic achievements.

Vicarious Experience for Better Process of Online Learning

Students learn through trial and error, through which they recognize the best process suitable for them, including online learning (Jolley et al., 2020; Setiawan, 2020). In distance learning, students will have to take a classroom course after learning the basic policies and procedures, enabling them to practice complex management scenarios such as designing performance strategies, performing performance assessments, and adapting to performance challenges (Amri & Alasmari, 2021; Zhou et al., 2020). Students who receive early training in using online learning tools from their teachers have a greater level of self-efficacy than students who do not receive such training (Sun & Rogers, 2021; Vagg et al., 2020). However, when distance learning is conducted without previous experience on the part of the students, as what happened during the outbreak of the Covid-19 Pandemic, then the students need to have strong models of how distance learning should be conducted successfully (Blaine, 2019; Brown, 2016; Sun & Rogers, 2021). With the proper example of how distance learning can be conducted effectively, students can train to utilize distance learning tools, which is essential to develop students' trust in their efficacy (Aktaruzzaman & Plunkett, 2016; Amri & Alasmari, 2021). Moreover, a set of sequential activities that students use to fulfill educational requirements is needed for effective distance. Besides, self-verbalization, self-attributions, and proximal goal-setting are considered a few of the explicit training practices that enhance students' self-efficacy toward distance learning (Jaradat & Ajlouni, 2020; E. Panadero et al., 2017). Role-playing, case studies, and other discovery learning help develop students' self-efficacy through modeling experience and mastery of procedures in real-world management scenarios (Darmawan et al., 2021; Jaradat & Ajlouni, 2020). When students are familiar with the basic management policies and processes of distance learning, they will integrate what they have learned. Previous research believe that such integration of vicarious distance learning experience can be further strengthened through online discussions with fellow students to compare their models and their learning plans (Lin et al., 2017; Schoor et al., 2015; Wise & Hsiao, 2019). With strong modeling and imagined experience of online learning, students can build their confidence in planning and conducting their distance learning, rendering more successful distance learning for them.

Verbal Feedback and Rewards for Inspired Online Learning

Since personal expectations for achievement are considered significant factors in actions by several analytical approaches, adults' subjective expectations of good results are one of the strongest predictors of later performance (Punjani & Mahadevan, 2022; Rahim, 2022). Students' self-efficacy in distance learning can be developed by giving feedback and rewards for their learning process and how they conducted their distance learning. Rewards and verbal feedback can foster habits that will positively affect their self-efficacy. Teachers who choose not to use rewards may need to give students detailed guidance on accomplishing their objectives (Susilowati & Suyatno, 2021; Zhou et al., 2020). Teachers can provide convincing verbal persuasion to students orally to inspire them to improve their distance learning (Darmawan et al., 2021; Rahim, 2022). This insight can be the most significant in the early stages of skill development, where children lack knowledge of task experience and ability performance. Self-efficacy is also improved more by reward, mainly when the reward is linked to real achievement because it represents progress (Bartimote-Aufflick et al., 2016; C. S. Lai et al., 2021). When the children complete tasks and track their success, they feel more successful, which helps to maintain motivation and development skills as their vicarious experience, which is also significant for strengthening students' self-efficacy. Students' participation can be affected by the sufficient supervision, monitoring, and feedback given by the teachers

in distance education (Brown, 2017; Zhou et al., 2020). More opportunities for increased engagement were achieved when a feedback and self-monitoring system was included, and a form of cognitive apprenticeship (i.e., coaching) was used to facilitate the integrated learning environment (Mithen et al., 2021; Owusu-Agyeman, 2021). Feedback and rewards can also prevent the formation of undesired habits that may negatively affect the students' self-efficacy (Darmawan et al., 2021; Jaradat & Ajlouni, 2020; Zhou et al., 2020). A higher level of commitment, improved coursework, and exam grades are associated with a positive appraisal at the course's start (Darmawan et al., 2021; Jaradat & Ajlouni, 2020). It allows them to get instant input and make fascinating reinforcements to help them boost their self-efficacy beliefs and learning interest.

Positive Attitude To Motivate Engagement in Online Learning

Motivation is the "fuel" of learning. Learning materials, learning strategies, and the time students allot for studying are all influenced by motivation factors (Boekaerts & Niemivirta, 2000; C.-S. Lai et al., 2021). Motivated students are more likely to partake in challenging tasks, regularly participate, follow in-depth learning strategies, and demonstrate better success, perseverance, and creativity (Jaradat & Ajlouni, 2020; Kreth et al., 2019). Distance learners have long been associated with qualities such as flexibility, self-direction, and intrinsic motivation. The success of distance learning leans heavily on the learners' motivation as self-regulated learners (Albelbisi & Yusop, 2019; Panadero et al., 2016). Motivational skills are essential for planning effective goals and developing strategies to overcome the challenges of distance learning (Albelbisi & Yusop, 2019; Panadero et al., 2016). Previous research argue that in the context of technology-assisted distance learning, motivation is significantly mediated by interaction in technology environments leading to an attitude toward self-directed learning activity (Hong et al., 2022; C. S. Lai et al., 2021). Students' attitudes toward technology use were affected by their views about its usefulness (Amri & Alasmari, 2021; Mentz et al., 2019). Although attitude toward technology use was described as an individual's overall affective reaction to using a technology device, it also reflected an individual's emotional experience with technology (Alamri, 2021; Kreth et al., 2019). The perceived utility and ease of use of technology were shown to significantly impact people's attitudes toward using technology, which was hypothesized to influence their behavioral intention to use technology and actual use (Aktaruzzaman & Plunkett, 2016; Pan, 2020; Raaij & Schepers, 2008; Santoso et al., 2014; Unal & Uzun, 2021). Thus, the success of distance learning depends strongly on the students' attitude toward technology. A positive attitude toward technology will positively affect technology-assisted distance learning.

The implication of this study students get benefit from the present study by identifying factors affecting their self-efficacy when enrolled in any distance learning form. Teachers can also use the results of this study as an illustration of knowledge related to student self-efficacy during distance learning. This research still has limitations because this study belongs to the library research model as adapted into a qualitative study. It is hoped that further research will be able to further deepen and expand the topic related to self-efficacy when enrolled in any distance learning form, considering the urgency of this research.

4. CONCLUSION

Due to distance education technologies, students may benefit from the ease and versatility of taking courses at their speed and time. Although distance education is convenient and allows for the use of a wide variety of digital materials, there are still concerns with student involvement in the learning process, which is greatly affected by students' self-efficacy. The present study concluded that students' self-efficacy in distance learning is significantly affected by mastery of experience in distance learning. Thus the success of technology-assisted distance learning is affected by mastery of online learning technology. When students lack direct experience of distance learning or technology of online learning, exposure to vicarious experience can build students' self-efficacy by providing them with models and procedures of successful distance learning. Furthermore, as students are positively affected by feedback and rewards, teachers' feedback and rewards on students' progress in their distance learning, as well as their experience in using technology that supports distance learning. In the end, motivation to learn and to master technology plays a significant role in students' success in learning, especially during distance learning, where the absence of teachers and peers should not weaken students' motivation in their distance learning. In turn, students' motivation in technology-assisted distance learning is further affected by their mastery of technology and their experience in using online learning technology.

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