Teachers' Attitude and Behavioral Intention toward Online Teaching

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Online teaching, with its potential to provide accessible, flexible, timely, and lifelong learning opportunities, is considered an essential approach for achieving sustainable learning and education. Because university faculties' attitude toward online teaching and behavioral intention for online teaching directly affects the motivation, effort, and success of online teaching, this is crucial for the sustainable development of online education; even in the post-pandemic era, where online learning is no longer a requirement, college teachers with a positive attitude and behavioral intention will continue to attempt online teaching activities during the teaching process, thus transforming online learning or blended learning into the new norm in higher education. Therefore, online teaching attitude and behavioral intention research merits the special attention.

1. Introduction

Although online teaching initiatives such as online courses, e-learning programs, and massive open online courses (MOOCs) have witnessed a steady increase in the higher education sector since 2000 [1][2][3], the COVID-19 pandemic in spring 2020 induced a rapid transition from face-to-face lessons to online teaching at colleges and universities globally [4][5][6]. While some researchers labeled online teaching during COVID-19 as emergency remote teaching because it was temporary and lacked careful planning [7][8], others argued that the online teaching experience would have a lasting effect on both teachers and students and that it would continue in the post-pandemic era in the forms of blended, flipped, or virtual classrooms [9][10][11].

However, despite the various proven advantages of online teaching, such as enhanced accessibility, flexibility, convenience, and efficiency, its sustained adoption and routine implementation in higher education institutions remain challenging. As predicted by scholars such as Daniel [12] and Hargreaves [13], the cessation of the pandemic has already led many universities to revert to their offline teaching norms [14]. This reverse transition can cause many issues for sustainable learning and education. (1) It hinders the sustainable development of students' key competencies, such as lifelong learning and digital literacy; (2) it results in significant wastage of accumulated online resources and technological tools; (3) it forfeits the unique benefits of online teaching for delivering more equitable, flexible, and personalized education; and (4) it leaves universities vulnerable to similar crises or emergencies in the future. Therefore, it is highly necessary to sustain online teaching in the post-pandemic era.

The continued application of online teaching in higher education relies heavily on teachers' favorable attitude toward online teaching and strong behavioral intention. Teachers' attitude toward online teaching reflects their overall disposition toward online teaching, including their openness to computer-mediated communication and digital technologies [15]. A positive attitude toward online teaching is often associated with increased motivation and achievement goals in designing effective online courses [4][16]. Behavioral intention, in contrast, concerns teachers' willingness to engage in online teaching and directly impacts the frequency of actual practice [17][18]. Teachers with a strong online teaching intention tend to report higher levels of work engagement and satisfaction [19][20].

2. Online Teaching

Online teaching is conducted in an online environment through the use of the Internet for teaching and learning, allowing for interactions between students and teachers [3], and it transcends physical location and time constraints, providing a flexible, convenient mode for learning. While online teaching was performed in colleges before the COVID-19 pandemic, the outbreak of the pandemic accelerated the development and adoption of online education, introducing it to a vast number of students, teachers, and parents. According to the Global Education Monitoring Report summary released by

the United Nations Educational, Scientific, and Cultural Organization (UNESCO), the number of students participating in massive open online courses (MOOCs) increased from 0 in 2012 to at least 220 million in 2021. Globally, the proportion of Internet users rose from 16% in 2005 to 66% in 2022. In 2022, about 50% of middle schools worldwide had Internet access for teaching purposes [21]. Moreover, 186 countries had implemented distanced learning programs, ensuring the continuity of education during the COVID-19 pandemic to some extent [22]. As noted in the global education monitoring report summary, the COVID-19 pandemic can be viewed as a natural experiment, with learning throughout the education system being moved online almost overnight [21].

In the post-pandemic era, despite students' return to traditional physical classrooms, online teaching still holds potential for sustainable development. Online teaching offers many advantages, such as flexibility [23], by allowing teaching to break time and space constraints, and convenience [24], by enabling students to easily contact teachers and use resources. During the lockdowns, both students and teachers agreed that online learning had fostered student-centered learning. With the flexibility of asynchronous learning, students have become autonomous learners who are able to study at any time of day [24][25]. In the post-pandemic era, online learning, combined with traditional classrooms, has spawned many new teaching models, transferring these advantages into blended learning and flipped classrooms and becoming part of regular teaching. Additionally, some universities utilize the summer vacation to offer online courses, giving greater flexibility to students who work full time or have temporarily relocated, enabling them to maintain or even accelerate their degree progress [26]. Online teaching can also be applied in emergency situations [10], such as future pandemics, earthquakes, or other school disruptions. In these times, online teaching is the best choice for continuing instruction [27].

3. Teachers' Attitude toward Online Teaching and Behavioral Intention

Attitude can be reflected through emotions, cognition, and behavior [28], but holding a particular attitude does not always translate into a corresponding behavior. Therefore, researchers tend to measure attitude from affective and cognitive perspectives. For instance, Crites et al. [29] emphasized the importance of affective and cognitive attributes in attitude measurement. Researchers have also recognized the positive impact of attitude on behavioral implementation [30] and have conducted numerous studies on the topic of attitude. For example, many researchers have aimed to develop reliable and comprehensive tools to measure the attitude toward computer use or the use of information and communication technologies [31][32][33]. Moreover, teachers' attitude toward online teaching encompasses their cognitive evaluation and emotional response toward online teaching. Most studies have not directly explored college teachers' attitude toward online teaching, instead focusing on the attitude toward the sudden shift to online teaching during the COVID-19 pandemic [4][34].

Behavioral intention denotes the degree to which individuals consciously choose to engage in a specific future activity [35]. In this research, teachers' behavioral intention for online teaching is focused on, which refers to the extent to which they are willing to continue engaging in online teaching activities. In recent years, research on teachers' behavioral intention for online teaching has mainly been based on supplementing or extending the technology acceptance model, exploring the relationships between factors such as the perceived usefulness and perceived ease of use of online teaching technologies, attitude, subjective norms, and their impact on behavioral intention to teach online [17][36][37].

Attitude significantly influences behavioral intention [38] because a more positive attitude strengthens the intention to take action [39]. Despite the strong link between attitude and behavioral intention, there are several differences between online teaching attitude and behavioral intention. First, as mentioned earlier, attitude is usually a broader concept, involving teachers' overall cognition, emotion, and behavioral tendency toward online teaching, while behavioral intention is more specific, involving teachers' specific decision about whether to engage in online teaching. Second, the formation of attitude can be influenced by various factors, including personal experiences, educational backgrounds, and professional motivations, among others. In contrast, behavioral intention may be more constrained by practical situations and external conditions. This is similar to the phenomenon whereby many consumers hold a positive attitude about products, but do not ultimately purchase them [40].

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