Introduction

Online learning platforms proliferated during the COVID-19 pandemic. These online learning platforms became the only source for teaching and learning. Every individual and educational institute has completely depended on these platforms. Usually, in regular classroom teaching, students' behavior and learning progress are monitored. But, in the case of online learning platforms, especially when there is a huge number of participants, require the help of artificial intelligence (AI), data analytics, etc. to monitor the learners' behavior and progress. Further, to better engage students and to connect with their instructors artificial intelligence provides good support [1]. Similarly, information and communication technologies have prompted a different learning style on the other side of the classroom [2]-[3]. The advancement of computer technology and education technology (EdTech) products showcased significant effects on school learning [4]. The examination of several education policy issues and complexities for the delivery of EdTech plays a key role [5]. In addition to the specific EdTech products, YouTube also has a significant impact on the learning process in terms of self-directed learning. It provides formal and informal education, but we do not the reliability of the content [6]-[7]. The courses available in online learning platforms are referred to as massive open online courses (MOOCs). There is a dire need for proper learning analytics of MOOCs [8]. To authenticate and proctor the online learning students, a biometric-based technology is implemented [9]. During the pandemic, AI and machine learning have attempted to solve human problems and also supported teachers to assess their students [10]. The importance of e-learning has been emphasized by conducting a comprehensive bibliometric analysis [11]. Discussed the barriers such as connectivity, device access, etc. while integrating technology with special education [12].

The abovementioned works discussed the importance of online learning during a disease outbreak, the implementation of EdTech products, the importance of learning analytics, and the barriers to integrating technology into special education.

State-of-the-Literature Review

The factors that influence the student while adopting the technology were discussed in [13]. Further, the effect on the student's long-term learning by leveraging computer technology in the classroom was discussed in [14]. The online learning behavior in terms of experience, engagement, and the pattern of K12 students in China during COVID-19 were discussed in [15]. A report was prepared based on the experiences of computer science students with emergency remote teaching [16]. To monitor the students' online learning behavior, an

enhanced extended nearest neighbor technique was implemented [17]. The identification of actual online learning behavior of college students based on head gesture recognition was discussed in [18]. The learning analytics was implemented to observe the change in the learning behavior of students in special education [19]. Furthermore, the student behavior analysis was conducted based on self-organizing maps neural networks through the clustering of user settings [20]. The identification of the multidimensional engagement of students in the online learning platform using multi-channel data was discussed [21]. A study was conducted to observe the variances when the students are engaged in traditional learning systems and learning management systems [22]. In addition, early prediction of the students at risk in the e-learning platforms using Hidden Markov Models was discussed in [23]. Besides, the early prediction of student behavior and the support of pedagogical intervention were discussed [24]-[25]. A model was developed to analyze the student learning experiences [26]. As well, the key concepts of building an intelligent education system were discussed in [27].

From this literature works, it is observed that there is a dire need of developing an intelligent virtual learning platform that engages students and analyses their learning behavior during the learning. Further, they emphasized the new pedagogical intervention and practices.

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