

CHAPTER - 2
Review of related literature

2.0 Review of related literature

There are three major types of classrooms that exist in the educational system across the world. The first is the traditional classroom where textbooks, notebooks, pens, blackboards, etc., are used as teaching aids. The second one is the modern classroom in which the classroom is provided with whiteboards, audio-visual displays, digital boards, and overhead projectors. The third one is the latest which is the virtual classroom where online education is carried out using information and communication technologies (ICTs) to assist learning from different remote locations. It includes audio, video, and text communication using different software with access to the internet (Basilaia&Kvavadze, 2020).

Online learning appeared as a major revolution in the modern educational system across the sphere during the 21st century. Online learning or e-learning offers flexible modes of learning without physical presence of individuals in the traditional classroom. The virtual classroom environment provides an opportunity for students to become independent learners using innovative, efficient, informative, and effective tools of online learning. Effective content delivery, interactivity, collaboration, assessment, and evaluation are the pillars of a virtual classroom environment. Virtual classroom demands different modes of interaction such as peer-peer interaction, student-instructor interaction, and student-content interaction. Various technological aids need to function efficiently for effective implementation of online learning system, and students must know why, how, and when to employ online learning to get maximum benefits of the system (Subramaniam&Kandasamy, 2011).

From a learning point of view, the technologies used in the virtual classroom are far more beneficial as compared to a conventional classroom. The

interactive learning methodologies and web-based tools provide additional benefits to the students which are not the part of traditional classroom. It facilitates communication between teachers and students using multiple communication tools such as video conferencing provided with the online whiteboards, screen sharing, and real-time opportunity for video participation through which students can get the utmost input. Activity groups can also be created to promote coordination among peers (Haq, Shahzad, Ahmed, Hussain, & Sajid, 2018).

Virtual classrooms (VCR) are provided with more interactive facilities such as presentation tools, screen sharing, online whiteboard, real-time videos etc. Employing these facilities help the instructor and the student to communicate using multiple faces. The VCR is advanced with the facilities of group communication as well as the method of submitting assignments, managing quizzes, and conducting exams. The whole information about learners and instructor is stored in the database to make VCR more effective. To get maximum output, activity groups are formed which provide an online discussion platform (Haq et al., 2018).

No doubt, the introduction of information technology and the internet in the field of education is an important development, but the virtual classroom cannot be the replacement of the traditional classroom. There is a complementarity between virtual classroom and traditional classroom (Razak, Yassin, & Maasum, 2020). The findings uncovered that traditional classroom is the best option for anyone willing to be educated. As a matter of fact, both learning methods are discrete in nature and are equally important. When both are employed in combination, the better outcomes can surely be expected (Yan & Song, 2013).

Online learning provides an increased access to updated information along with mutual interactions and collaboration. Some latest internet tools such as WebQuest and WebCT are now frequently employed in teaching to promote active learning among the learners. However, in online learning, a number of available links and related information might overwhelm and confuse the users which may be considered as a perceived disadvantage of the web-based technology. On the other hand, there is an element of increased reliance in traditional modes of teaching based on printed materials. Traditional learning is a socially acceptable pattern encompassing bulk amount of knowledge and information in the form of textbooks. Now Web-based courses are also being designed and introduced in virtual classrooms to improve learning outcomes (Mubaslat, 2012).

Since the mid-1990s, there have been numerous studies investigating various aspects of online education. The vast majority of those studies have been conducted to examine the educational advantages of online learning and to explore effective design strategies.

A review of early studies (Capper & Fletcher, 1996; Carter, 1996; Chu & Schramm, 1975; Clark, 1985, 1994; Kozma, 1994; Kulik et al., 1985; Moore & Thompson, 1997) comparing the effectiveness of distance education with that of face-to-face instruction or the effectiveness of different technologies leads to the conclusion that:

- In many instances, distance education is as effective as conventional classroom teaching and shows no differences in learning outcomes; and
- There is no general learning superiority for one type of technology over another.

However, in some studies (Daugherty & Funke, 1998; Hiltz, 1994; Jonassen et al., 1999), online instruction has led to significantly better results on

examinations, in solving complicated problems, and in perceived learning outcomes. In addition, Thompson (1996), based on a review of comparative studies, found that online distance education was better in regard to students' acquisition of information technology skills and increased familiarity with technology. In her extensive evaluation studies regarding the effectiveness of online education, Hiltz (1994) found that:

- Mastery of course material was equal or superior to that of conventional courses.
- Students reported improved access to instructors and educational experiences.
- Student participation in courses increased.
- Students reported higher satisfaction with courses in general.
- Students' ability to synthesize information and deal with complex problems improved.
- Level of interest in the content of courses increased.

But these results were not true of all the courses. Hiltz explained these different results by pointing out that instructor and student factors affected the effectiveness of the online courses. That is, the online treatment outperformed the conventional treatment when it incorporated more appropriate instructor interventions, depending on students' characteristics, than the competing treatment. All the studies that have examined the effectiveness of online education remind us of Clark's argument that the way the medium is used determines the effectiveness, not the medium itself (Clark, 1983).

Many of the articles reviewed on the topic of effective learning refer to the seven principles stated by Chickering and Gamson (1987): (1) Facilitating contact between student and faculty academic and non-academic staff; (2) Encouraging collaboration between students; (3) Encouraging student engagement and active learning; (4) Giving meaningful and timely feedback; (5) Emphasizing time on task; (6) Communicating high expectations and (7) Respecting diverse talents and ways of learning (Gorsky and Blau, 2009). These principles hold in the context of online education as well, and much of the discussion around the quality of the online education process revolves around these performance criteria. Making the online educational process as effective as possible could be beneficial for both students and educational institutions, since students of online programs can overachieve and outperform on-campus students (Connolly, et al., 2007). For example, a study conducted by McCarthy, Kusaila and Grasso (2019) on accounting education, regarding the impact of online, blended and face-to-face learning, finds that (1) none of them is superior to the others and (2) both accounting and auditing students studying in online and hybrid setups outperformed students from face-to-face and hybrid and face-to-face modes, respectively.

Various studies have been carried out regarding online learning while pandemic COVID 19 occurs. RoidaPakpahan, YuniFitriani (2020) conducted a study entitled "Analysis of the Utilization of Information Technology in Distance Learning in the Middle of Corona Covid-19 Pandemic Virus" The use of information technology has a very important role in the implementation of distance learning amid the coronavirus pvidemic19, the process learning can run well with the existence of information technology that has developed rapidly at this time including *e-learning*, *google class*, *WhatsApp*, *zoom*, and other information media and internet networks that can

connect lecturers and students so that the learning process can run properly as it should be although amid the coronavirus pandemic Covid-19.

Despite the advantages of e-learning, there are a number of challenges that have never been faced by the students in their traditional learning environment. The difficulties encountered in an online learning system could negatively impact students' educational performance. These difficulties may include their cognitive issues, technical anxieties, learning style preferences, etc. However, the studies unveiled that the use of effective and efficient tools, and suitable online learning strategies would lead to better educational achievements (Kuama, 2016). An online learning system is a bit thorny to adopt in the countries where it is new or not practised, however, little effort in understanding this system can provide countless benefits as compared to the conventional system. The only need is to train both the teachers and the students at school, college, and university levels to get used to employing the latest technological tools to develop an effective online teaching-learning system (Wan, 2020).

In an online class, there is less room for teaching interaction, and the teacher's input teaching is the main teaching mode. Study shows that users' personal factors have no direct influence on user satisfaction, whereas platform availability has the greatest influence on user satisfaction (Chen et al., 2020). During outbreaks, individuals are put under extremely stressful conditions resulting in higher risk of developing anxiety and depression particularly for students and healthcare professionals (Naser et al., 2020). In India exams have been postponed, college admissions are delayed with uncertainty (Economicstimes. Indiatimes, 2020) and a host of other confusions have led to a disruption in the education of a student. The closure of schools, has affected the education of more than 1.5 billion children and youth worldwide due to the coronavirus COVID-19 pandemic. Although many

parents with access to technology and internet are increasingly turning to online education technology to keep their children learning at home, a large number of parents are not able to do so. According to a survey done by Oneindia, 89% of respondents believe that their children's learning will be affected by delay in lifting the coronavirus lockdown. Basic Internet access to students is the biggest hurdle. Most parents cannot afford internet recharges and/or the child doesn't get access to the device in rural areas. In many cases, the family may not even own a smartphone (Oneindia, 2020). Although a possible path was available for educational activities through online network, there also exist multiple complications in various areas of online activities that result in educational disruption. UNESCO has introduced the term 'educational disruption' for the effects of the crisis on education systems (Karalis, 2020). This study aims at identifying the main areas that cause educational disruption outside traditional teaching, among the north-eastern states of India during COVID-19 pandemic.

To conclude, the forced switch to online teaching caused by the current COVID-19 pandemic caused disruptions in the educational process in universities around the world (Bao, 2020; Greene, 2020; QS, 2020), which might have affected the effectiveness of the educational system.

A number of authors, on the basis of their observations and experiences, have their own opinion about the effectiveness of online learning system. It is an ongoing debate for the last many years that cannot be concluded overnight. The current study is an exertion to tread on the same track to highlight the importance and effectiveness of the online system during the present crisis due to COVID-19 all around the globe.