

CHAPTER - 1

INTRODUCTION

1.1 Introduction

The research's introduction, background information, and study hypothesis are all covered in this chapter. Before getting to the issue statement, objectives, research questions, and thesis conclusion, it begins with a secondary data-based description of how students use technology.

Even though the Indian educational system has advanced significantly and is heading towards modernity, there are still a lot of problems that need to be resolved. A few of the challenges that need to be resolved include having a large number of kids in a small classroom, discipline problems, teacher absenteeism, dirty blackboards, and political pressures (Newman-Carlson et al., 2000). Both the dreaded year-end test and rote learning (learning via repetition) are still widely used.

As a result of technological advancements, education has developed into a priceless source of knowledge and communication. While it is indisputable that technology has an impact on higher education in India, students continued to complete their coursework online while at home during the outbreak. Investigating the effectiveness of technology's current position as a learning facilitator and enhancer, as well as its possible future function in this regard, will be helpful as a consequence.

There aren't many empirical studies that examine how technology affects student engagement in India's higher education system because it wasn't widely used in that system prior to the pandemic. (N. G. Barnes & Lescault, 2011) found that all US educational institutions employ technology, with Facebook and Twitter being the most popular with 98 percent and 98 percent usage, respectively (used by 84 percent). In a different study, Greenberg (2013) found that networked learning (Facebook) helped shy students feel more comfortable participating in class, extended the time for discussion, and allowed for more reading of postings from peers.

The goal of this study is to examine how effectively technology has affected India's higher education system as well as its potential future function as a learning facilitator and enhancer. Is it possible to integrate technology in the same way that children use it on a personal level into the congested classrooms and large student population of the Indian educational system? If educational institutions are fully utilising the same channels for increased student participation while employing technology (social media marketing) to publicise their courses, this is another area of inquiry. Our environment serves as the context for this investigation into how educational technology affects student engagement, self-directed learning, and academic success.

Until recently, students could only use desktop and laptop computers to access technology (Rosen, Whaling, et al., 2013). While analysing the link between media and technology consumption behaviours and academic success, we cannot ignore recent technological advancements. Mobile gadgets like smartphones, tablets, and iPads are becoming more and more popular. Everyone can now complete things that were previously only possible with desktop computers thanks to these portable technologies. These portable devices are suitable for both instructional and recreational uses because they no longer have time or location restrictions. (Terry et al., 2016).

Due to the proliferation of cellphones among young people, more of them now have internet access (Anderson et al., 2017). Students and the younger generation are heavily reliant on technology, as shown by their use of Twitter, Facebook, and other social media platforms. They would rather post comments on social networking sites than make phone calls. Young people now routinely fall asleep with their iPhones vibrating by their sides thanks to the Wats app (Rosen, Mark Carrier, et al., 2013). Since the younger generation was exposed to and raised with a variety of media and technologies, they have received a variety of labels.

The MTV Generation, Generation X, Generation Y/Millennials, Generation Z, Digital Natives, Net Generation, and Homo Zappiens are a few of these cohorts (Prensky & Berry, 2001). They have little trouble using "any sort of electronic medium," and they are "master multi-taskers, social networkers, electronic communicators, and the first to accept any new technology" (Rosen, 2010). The current situation, in which the younger generation is strongly exposed to technology and often uses various media

and technologies, leads to the following issues: What effects does using technology or gadgets with an internet connection have on academic performance?

Is it true that employing technology in the classroom helps or hurts academic performance? Is it also feasible to use technology to predict self-directed learning, student engagement, and academic performance?

1.2 Usage of internet enabled devices and performance of students in academics

Research on the effects of both general and specialised technology on academic achievement has so far produced a confusing array of findings. Several studies have found that using digital technology to educate and study has both positive and negative effects on learning Beetham, Beetham, Beetham, Sharpe, & Beetham (2013). On the other hand, a number of studies suggest using technology with caution because it might distract children. Asghar & Rashid (2016) Lei and Zhao (2007) claim that by effectively using technology for academic purposes only, students' academic performance can be improved.

They noticed during their investigation that technologies that boosted academic success were less popular and less frequently used. Drain et al. (2012) claimed that the amount of time spent on computers or the Internet had an impact on academic achievement. Suhail and Bargees (2006) claim that if students use the internet with caution and just for academic purposes, their reading, writing, and information processing abilities will increase, as will their academic performance.

Several studies found little evidence of a connection between technology use and academic success. Hunley, (2005). According to Englander et al. (2010), students who use the Internet more frequently each week do worse on tests because they get sidetracked and don't use it wisely to accomplish their academic goals. Numerous studies have examined the relationship between particular technologies and academic achievement among students.

According to Hunley et al. (2005), there is no link between the use of particular technologies and academic achievement. In addition, calling, texting, and GPA were all found to be negatively related by Jacobsen & Forste (2011).

As in the previous study, there was a negative correlation between mobile phone use and GPA as well as a negative correlation between texting and GPA; however, there was a positive correlation between anxiety and GPA (Boumosleh & Jaalouk, 2018). According to certain research, pupils' academic performance will decrease if they use instant messaging (IM) extensively or become addicted to it.

(Junco & Cotten, 2011) the study found that playing video games has a negative impact on academic accomplishment but has a considerable positive impact on visuospatial skills (Jackson et al., 2011). Another study was conducted to determine whether there was a relationship between student performance and social media use, and it was shown that academic performance and Facebook usage time have a negative relationship (Junco, 2012). Similar findings were made by Kirschner and Karpinski (2010), who discovered that Facebook users have worse GPAs and devote less time to their studies than non-users.

1.3 Usage of technology, self-directed learning and student engagement

Due to students' extensive use of technology in many spheres, higher education institutions have integrated technology into their infrastructure and instruction. Technology presents students with a variety of tools that are quite useful. They may use these tools to exchange notes, participate in various discussion forums, and access a variety of other resources that aid in a thorough understanding of a subject topic. Students are in constant contact with one another and with the faculty as a result of these technologies, which improve student engagement and self-directed learning (SDL). When kids are willing to work hard in their academics, there is student involvement. Self-directed learning is the capacity to decide what to study, when to study it, and how long to study it for.

1.4 Problem statement

The results of past studies are similar. An examination of the literature reveals that there is a substantial and ongoing interest among researchers in analysing the use of technology as well as its outcomes and impacts on student academic attainment. The literature makes it clear that the outcomes are ambiguous and inconsistent. While reviewing the literature, various gaps were discovered. Regarding the effects of technology use on self-directed learning, there is a dearth of empirical data. While there are a plethora of studies on student participation in the classroom and student engagement with technological tools, little has been done on how the two interact. Research has been done on the use of a single or a few technologies, but not on the use of a diversity of technologies. Today's students are surrounded by a multitude of technologies, and they have access to these technologies whenever and wherever they want, thanks to contemporary technology like smartphones. This study intends to determine the association between technology usage and academic performance in order to better understand the relationship between the utilisation of various types of technology and students' academic performance in India. In addition to this association, two additional significant and related variables, student involvement and self-directed learning, were also examined.

1.5 Research Questions

The research question expresses a concern regarding the study's topic or subject. It is the initial phase in the research process. The research question has led to the formulation of a hypothesis. Unlike hypothesis, it is not a declarative statement, but rather a particular question that the researcher is posing during the project's execution. The entire purpose of the research endeavor is to find answers to the research questions listed below.

- Does their constant interaction with technology help or hinder their learning and academic performance?
- Is there a link between continued use of technology and academic performance?
- Is the use of technology beneficial to student engagement?
- Does technology make self-directed learning easier?

- Is the sample data compatible with the predicted model?

1.6 Aim and Objectives of the study:

Having created the problem statement, well-stated goals and objectives are highly important in order to find the best solution to a problem that has been well identified. The purpose of the research and the research question are closely related. The objective is more focused than the aim, which is general in nature. Numerous gaps have been found after analysing the literature. The following objectives of the study have been defined in light of the gaps:

The following research goals were suggested to be carried out based on the gaps.

1. To determine the impact of ICT on students' academic performance.
2. To determine the impact of ICT on self-directed learning.
3. To determine the impact of ICT on student engagement.
4. To test the interrelationship between ICT use, student engagement, self-directed learning and academic performance.

The third chapter discusses research methodology, including the suggested research design for the study, sampling design with sample size justification, analysis of the pilot study, details of the constructs, details of statistical tools and techniques used for analysis, and finally, the conceptual framework to test the hypothesis.

Data analysis and interpretation are covered in Chapter 4. Both descriptive and inferential statistics were used to analyse the data.

In the fifth chapter, the results and their implications are provided, along with a conclusion. The survey questionnaire and a bibliography are on the final pages. (Appendix-I).

1.7 Structure of the thesis

There are a total of five chapters, each of which has a number of sections and subsections. An outline of the study subject is provided in the first chapter. The study's context, which addresses topics like technology use, student interaction, and self-directed learning, is then given. A list of goals that must be achieved before doing research finishes the first chapter. A complete analysis of the literature is covered in the second chapter.