To evaluate challenges and barriers integrated programs in the classroom of engineering colleges of India in government and private engineering colleges as per professors and students

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Abstract

The objective of this paper is to conduct a comprehensive examination of prior research and methodologies pertaining to the integration of ICT within the context of ELT. This study aims to investigate the impact of technological advancements on the quality of education in classroom settings. However, it is observed that the situation in India does not align with this trend. The integration of ICT in the context of English language instruction facilitates the creation of learning environments that prioritise student-centred approaches. The implementation of these technologies has been shown to enhance the effectiveness of classroom teaching and learning when compared to traditional methods. The main objective of this study is to examine the extent of ICT integration in English language instruction within Indian engineering colleges. ICT is a progressive approach to education that encompasses both learning and teaching methodologies. However, the extent to which ICT is implemented varies across engineering colleges in India. This study aims to examine the various initiatives implemented by both the state and central government in order to improve the quality of English Language Teaching. What is the current state of ICT applications in engineering colleges in India?

Keywords: *English language, engineering students, ICT, English learning, ELT*.

1. Introduction

ICT is a comprehensive term that encompasses the utilization and integration of communication technologies within the field of IT. The initial utilization of the acronym ICT can be attributed to Dennis Stevenson in the year 1997. ICT encompasses various components, including computer hardware, software programs, and the intercommunication between multiple computerized devices. ICT refers to the electronic processing and utilization of data through the use of computer systems. The aforementioned encompasses the processes of

storing, retrieving, converting, and transmitting data. According to Bilyalova(2017), ICT can be defined as a field of engineering that encompasses the utilization of computers and telecommunications devices for the purpose of data storage, retrieval, transmission, and manipulation. ICT is a comprehensive term that encompasses the various components of computing. It is an extension of IT and encompasses all aspects related to computing. The English language assumes a pivotal role across various domains in the contemporary era. The English language has undergone significant transformations in recent years as a result of the emergence of advanced technologies and innovative methodologies. The utilization of various forms of media serves as a means to enhance and refine pedagogical approaches and theories. The efficacy of traditional teaching methods is comparatively lower than that of modern methods. The utilization of cutting-edge technology in ELT has been found to enhance the effectiveness of both teaching and learning processes. Computers facilitate individualized learning by enabling learners to progress at their own pace (Ramya, and Clement, 2020).

ICT, an acronym for "Information and Communication Technology," encompasses a range of technologies that facilitate the acquisition and dissemination of information via telecommunications. ICT can be regarded as a synonymous term for IT. In the period preceding the 1980s, the media primarily depended on conventional print and analogue broadcast mediums, including television and radio. In the last 25 years, there has been a significant expansion in the range of media formats, primarily due to the widespread integration of digital technologies such as the internet and video games. The phrase "revolutions taking place in new media" predominantly refers to the revolution in ICT technologies. ICT is an acronym that may refer to IT, while communication pertains specifically to technologies related to communication. This encompasses a range of communication mediums. The recent notable advancements in Information and Communication Technology (ICT) have resulted in a substantial societal transformation, commonly known as a 'knowledge society'. In this society, information is more widely shared and easily accessible on a global scale, leading to profound impacts on various facets of our lives, particularly in the field of ELT (Jayanthi and Kumar, 2016).

The objective of this study is to examine the impact of ICT on the pedagogy of ELT within the context of engineering colleges in India. In the present era, the incorporation of ICT in the field of education has demonstrated its effectiveness and appeal to both students and educators. Both governmental and private engineering institutions have demonstrated a keen interest in leveraging ICT for educational objectives. Nevertheless, a notable obstacle exists in efficiently overseeing and sustaining the operational facets of this implementation. To effectively respond to the changing demands of the education sector, it is crucial to have highly skilled and knowledgeable educators. There is a pressing need to conduct an inquiry into the language proficiency of students in order to facilitate the incorporation of ICT into the domain of ELT.

2. Literature Review

According to Jayanthi and Kumar(2016) the ELT teaching community has caught up to a lot of topic developments in terms of technology, but there is a shortage of resources and opportunities to apply new ideas. Since the 1960s, the teaching and learning of languages has increasingly integrated the use of technical instruments such as TVs, tape recorders, and video recorders as teaching and learning aids. In the beginning,

there were a lot of difficulties caused by technological tools, and it took about one generation for people to get acquainted with necessary technical abilities and learn to overlook the technical concerns. However, educators face a number of obstacles that prohibit them from using information and communications technology (ICT) in the classroom or generating supplementary resources via ICT. As a result, the purpose of this research is to investigate the assessment of the perspectives held by English instructors on the elements that impact the adoption of ICT to ELT in the classroom. The Technology Acceptance Model (TAM) serves as the basis for a portion of the conceptual framework that underpins the current research endeavour. According to Jayanthi and Kumar (2016), the TAM was developed with the express purpose of explaining individual technology adoption and usage across a broad spectrum of organisational settings, computer systems, and user groups. The TAM postulates two distinct ideas, namely benefit via technology and how easy it is to use, and they were of main significance for computer adoption behaviours. InghamLegris's new TAM model brought to light the fact that even though TAM has been around for a long time and has shown to be a valuable model for analysing how people use information and communication technologies, it still needs to include more characteristics.

The use of ICT into ELT has the potential to not only speed up the process of development but also to bridge the gap between education and technology. It encourages the scientific and technological advancement of civilization. The use of information and communication technology (ICT) may assist teachers of language in developing stronger relationships with their classes. The delivery of the information remains the same, and it is done so via a lecture with the assistance of ICT. When pupils transition between the instructor and the technology, their body language has the potential to become more refined. It is possible to communicate concepts in a manner that is both effective and aesthetically attractive. First and foremost, even those who aren't in class may still make considerable progress since the materials will be available online thereafter. The Central Institute of Technology in Education's (CIET) Swayam Prabha programme is a great example, and it ought to be more well known. Students have the option of either going to the live class or accessing the study material via mobile devices or live channels (Akpabio and Ogiriki, 2017).

Learners of a language, particularly learners of a foreign language, will be motivated to embrace the integration of ICT technologies into the teaching and learning process of ELT by using technologies such as video-conferencing, digital video, and interactive whiteboards. The student's listening skills and speaking ability in the target language increase as a result of face-to-face engagement with the speaker, and the learner also develops their cultural and social awareness as a result of this interaction. The majority of language instructors choose to teach English using the Lecture approach because, in their experience, it is the approach that is both the most successful and the most convenient for both the teaching and the learning process. This approach had a lot of flaws, which made the teaching and learning process more difficult than it should have been. The majority of the time, classroom discussions devolve into monologues, and students continue to be listeners rather than active participants. After around fifteen to twenty minutes, a student's attention span will always begin to decline, regardless of how engaging the subject may be or how well a teacher may be teaching. This is the case regardless of how interesting the topic may be. The use of ICT technologies into ELT classes has the potential to significantly enhance both the teaching and learning experiences of students. However, one of the most

significant challenges that educators have in adapting to ICT is a lack of self-belief and confidence. As a result, the investigator thought there was a need for a research that focused on the perspective of teachers towards the use of ICT in the classroom (Jayanthi and Kumar, 2016).

According to Azmi (2017), the definition of attitude is "a relatively persistent organisation of ideas, attitudes, and behavioural inclinations towards socially relevant objects, people, events, or symbols." Within the context of an educational institution, both instructors and students exhibited a mindset that plays a vital part in the realisation of educational goals. This mindset was characterised by the belief that education is important. About the implementation of new results in the classroom, traditional teaching techniques were being compelled to adjust, although the use of ICT technologies was less popular among instructors in the more rural areas. Both the thoughts and attitudes of teachers play a significant part in the educational interaction that takes place in the classroom, as well as the instructional choices that are made in order to investigate the practical results of imparting the teaching-learning process. The attitudes that educators have towards ICT technologies have shown to be among the most important factors in determining whether or not students are able to successfully use technology in a variety of educational contexts.

According to Ammanni and Aparanjani(2016), in today's world, technology has rapidly become an inseparable component of our everyday lives. The most important pillar of the country is undoubtedly its educational system. Because a learner is someone who follows in a teacher's footsteps, paying attention to instructors is very necessary. Our students are best prepared by our educators. The drive for technological advancement is causing traditional lecture halls to morph into technical project rooms. The educational approach is evolving from more traditional methods to more contemporary ones. The teaching sessions in the classroom are now more engaging than they were before. A teacher is a facilitator who is responsible for providing the necessary facilities for the students. To satisfy the need for technologically advanced classrooms, educators are required to develop new forms of technology. It offers a variety of sources, each of which may help to make classroom sessions more dynamic and interesting topics for discussion. In-service and pre-service training for teachers was provided via specialised programmes that the government established, such as the Bachelor of Education and Master of Education degrees. In addition, students might participate in these classes through online distance learning. These courses assisted educators in becoming familiar with the usage of computers, preparing data sheets and presentations, conducting virtual classes, and deciding whether or not to adopt smart classroom technology (Şahin-Kizil, 2011).

According to Muslem and Juliana (2017), knowledge is disseminated not just among students but also across society, and teachers play an important part in this process. It is important for educators to have a comprehensive understanding of available resources and how to use them. The ability to troubleshoot and fix any sort of problem with either the hardware or the software should be required of all teachers. Because of the unpredictability of the current environment, both students and instructors have embraced the concept of virtual learning, which represents a significant breakthrough in the area of educational technology. ICT makes teachers more competent in teaching methodology and learning objectives; for instance, certain subjects in English

cannot be taught using ICT tools, thus instructors have to teach the same thing using some other approach to build interest among students. ICT makes teachers more competent in teaching methodology and learning outcomes (Tri and Nguyen, 2014). The use of ICT technologies helps to increase computer literacy not just among students but also among instructors. It is difficult to improve a teacher's expertise in a single session of training; constant use of ICT tools has made the instructors more professionally efficient, and continual efforts have led to greater results. The use of TIC contributes to increased self-assurance among educators. They had grown more attractive; in the past, ICT tools were employed for administrative work; however, currently they play a vital part in educational endeavours. Because teachers are the ones who carry the torch for the advancement of the education system, it is imperative that instructors have as much knowledge as possible so that they may pass that knowledge on to their pupils (Sabiri, 2020).

3. Research Methodology

The questionnaire methodology was employed to examine the integration of ICT technologies in ELT within engineering colleges in India. Prior to conducting the final study, preliminary discussions were conducted with senior management in order to obtain their consent. A survey consisting of 30 questions has been developed to evaluate the influence ICT technologies on ELT within 20 engineering colleges in India. The researchers developed structured questionnaires and a personal data schedule specifically designed for ELT students. These instruments were designed to gather information about the students' learning experiences and other relevant factors, in order to fulfil the objectives of the research. A total of 240 respondents were included in the data collection process, wherein Likert's 5-Point Scale was employed to obtain responses from students. The primary aim of the analysis is to evaluate the integration of ICT technologies in enhancing ELT in the classrooms of Indian government and private engineering colleges.

4. Findings

To understand the challenges and barriers integrated programs have been explored in government and private engineering colleges of India as per professors and student's one-way ANOVA had been used. Values between and within the group of each category were as follows: professors from private engineering colleges (0.40, 18.00), professors from government engineering colleges (0.025, 15.75), students from private engineering colleges (5.4, 130.533), students from government engineering colleges (9.204, 254.258). The degree of freedom between the groups was 1 and within the group were 38. The overall degree of freedom was 39. F-values of the table were as follows: professors from private engineering colleges (0.844), professors from government engineering colleges (0.060), students from private engineering colleges (9.846), and students from government engineering colleges (8.616).

| ANOVA							
Category	Engineering Colleges	**Challenges and Barriers Integrated Programs**					
			Sum of Squares	Df	Mean Square	F	Sig.
Professors	Private	Between Groups	0.400	1	0.400	0.844	0.364
		Within Groups	18.000	38	0.474		
		Total	**18.400**	**39**			
	Government	Between Groups	0.025	1	0.025	0.060	0.807
		Within Groups	15.750	38	0.414		
		Total	**15.775**	**39**			
Students	Private	Between Groups	5.400	1	5.400	9.846	0.002
		Within Groups	130.533	238	0.548		
		Total	**135.933**	**239**			
	Government	Between Groups	9.204	1	9.204	8.616	0.004
		Within Groups	254.258	238	1.068		
		Total	**263.463**	**239**			

Table 1: ANOVA

As per the professors in private and government selected engineering colleges in India, challenges, and barrier integrated programs had not been explored in the classroom at 95% confidence level whereas per student's challenges and barrier integrated programs had been explored in the classroom in the engineering colleges of India. Significant or probability value for the professors in private engineering colleges was 0.364 and government engineering colleges were 0.807 and students in private engineering colleges were 0.002 and government engineering colleges was 0.004. Hence, the alternate hypothesis of challenges and barrier integrated programs had been explored in the classroom was significant or accepted for students whereas for professors above hypothesis was not significant or rejected.

Very few studies have been conducted in the India; state concerning how efficient and effective ICT has been integrated to the ELT education system. However, as a part of the study challenges and barriers implementing

education through ELT have shown impact as per the results (student). Challenges like professors are being skilled in using ICT integrated to ELT (mean score 4.5), lack of policies affects the integration of ICT to ELT (mean score 4.3) and distraction by use of technology in class (mean score 4.1) are the main significant challenges faced by the students while implementing ICT in the class as per engineering students.

5. Conclusion

According to the participants, the integration of ICT into ELT is viewed as an innovative approach for improving learning abilities among the respondents. Overall, the students surveyed from the colleges unanimously agreed that the incorporation of ICT technologies into ELT is a highly effective and efficient approach. The research findings suggest that the integration of ICT tools within ELT in the classroom environment poses significant difficulties, especially in government engineering colleges, as reported by both students and teachers. Furthermore, the study illustrates that the Indian government has implemented various initiatives aimed at aiding for ICT technologies. Nevertheless, the successful execution of these initiatives in real-world scenarios continues to present a formidable obstacle, particularly in terms of operational and maintenance aspects. After engaging in discussions with management and educators, it has been ascertained that the integration of highly skilled teachers is crucial for adequately addressing the increasing demand for innovative teaching methods. The implementation of ICT in the chosen engineering institutions in India presents a formidable undertaking. The findings of the study indicate that students in the region of Indian engineering colleges express dissatisfaction with the learning skills and available facilities.
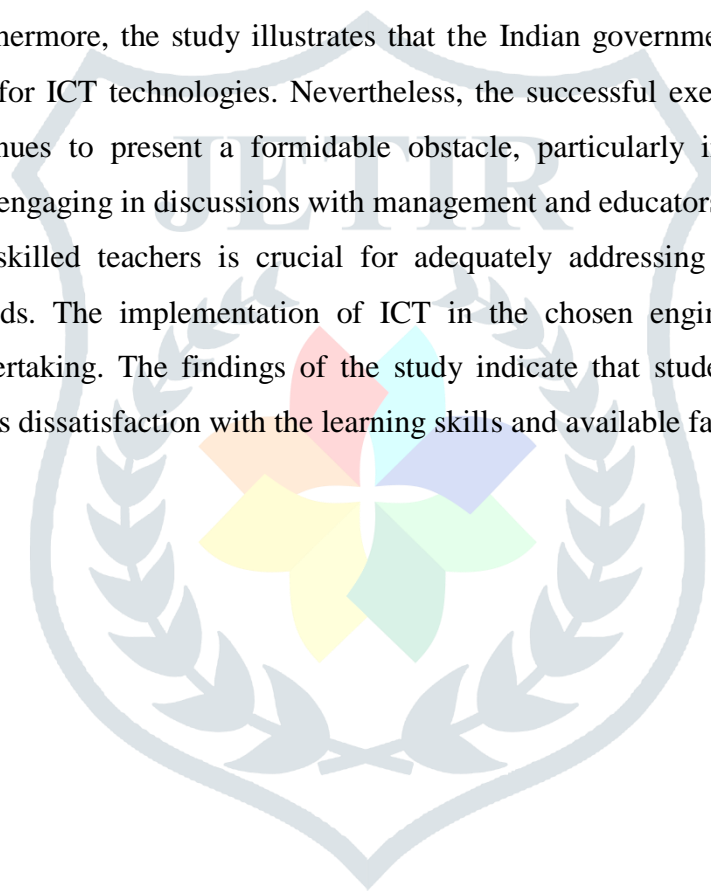
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