EFFECTIVENESS OF ICT IMPLEMENTATION IN FACE-TO-FACE TEACHING

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Abstrak: Penelitian ini mengkaji efektivitas penerapan Teknologi Informasi dan Komunikasi (TIK) dalam pengajaran tatap muka pada Program Pendidikan Bahasa Inggris UIN Tulungagung. TIK telah terbukti meningkatkan pengalaman belajar dengan menciptakan lingkungan kelas yang interaktif dan menarik, yang pada gilirannya meningkatkan partisipasi dan pemahaman siswa. Metode penelitian yang digunakan adalah pendekatan deskriptif kuantitatif dengan melibatkan 39 mahasiswa semester lima melalui angket tertutup. Hasilnya menunjukkan bahwa mayoritas mahasiswa berpandangan positif terhadap penerapan TIK, merasa memudahkan komunikasi dengan dosen, dan meyakini bahwa pemanfaatan TIK menjadikan pembelajaran lebih menarik dan efektif. Namun, tantangan seperti kurangnya pelatihan bagi pendidik, masalah teknis, dan penolakan terhadap perubahan juga teridentifikasi. Studi ini menyimpulkan bahwa meskipun TIK memiliki potensi besar untuk mengubah praktik pendidikan melalui pendekatan pedagogi yang inovatif, pengembangan profesional berkelanjutan bagi para pendidik sangat penting untuk memastikan integrasi TIK yang efektif dalam pengajaran. Menjaga keseimbangan antara penggunaan teknologi dan interaksi pribadi sangat penting untuk menciptakan lingkungan belajar yang optimal dan kondusif bagi siswa.

Kata Kunci: Teknologi Informasi dan Komunikasi (TIK), Pengajaran Tatap Muka, Persepsi Siswa, Teknologi Pendidikan, Efektivitas Pengajaran.

Abstract: This study examines the effectiveness of the implementation of Information and Communication Technology (ICT) in face-to-face teaching at the English Education Program at UIN Tulungagung. ICT has proven to enhance the learning experience by creating an interactive and engaging classroom environment, which in turn increases student participation and understanding. The research method used is a descriptive quantitative approach, involving 39 fifth-semester students through closed-ended questionnaires. The results show that the majority of students have a positive view of the application of ICT, feel it facilitates communication with lecturers, and believe that the use of ICT makes learning more engaging and effective. However, challenges such as the lack of training for educators, technical issues, and resistance to change were also identified. This study concludes that although ICT has great potential to transform educational practices through innovative pedagogical approaches, ongoing professional development for educators is crucial to ensure the effective integration of ICT in teaching.

Maintaining a balance between the use of technology and personal interaction is essential to create an optimal and conducive learning environment for students.

Keywords: Information and Communication Technology (ICT), Face-to-face Teaching, Student Perception, Educational Technology, Teaching Effectiveness.

INTRODUCTION

The aim of the teaching-learning process is to enable students to earn livelihoods for themselves and become valuable members of society. In primitive societies, this process was centered on conformity with existing conditions. The success of education depends on the degree of interaction and communication between teachers and learners, as effective communication forms the foundation of meaningful learning experiences (Woolfolk, 2004). This interaction becomes even more critical in today's educational landscape, where technology integration has transformed traditional methods of teaching. Teachers are no longer mere providers of information; instead, they act as guides and counselors, supporting students to learn independently and collaboratively in dynamic environments (Kochar, 1992).

Information Communication Technology (ICT) is a major factor in shaping the global economy and driving rapid societal changes. Its scope is unprecedented, providing access to information, communication, knowledge, and entertainment. ICT has revolutionized how people communicate and interact, bringing transformative impacts across various fields such as industry, agriculture, medicine, business, and engineering (Safdar, 2011). In education, these transformative capabilities of ICT are reflected in how it reshapes face-to-face teaching. ICT tools enable the creation of interactive and engaging learning environments that cater to diverse learning needs. For instance, digital presentations, online collaborative platforms, and multimedia resources make teaching more dynamic and flexible, fostering active student participation and enhancing the overall effectiveness of classroom instruction.

By integrating ICT, face-to-face teaching evolves to meet the demands of a technology-driven world. It allows teachers to leverage technological advancements to enrich interactions with students, making learning not only more effective but also more aligned with the digital competencies required in the modern era. This paper explores the effectiveness of ICT

implementation in face-to-face teaching, focusing on its benefits, challenges, and its role in transforming educational practices.

LITERATURE REVIEW

Effectiveness of ICT Implementation in Face-to-Face Teaching

The integration of Information and Communication Technology (ICT) in education has become a pivotal aspect of modern teaching methodologies. This literature review examines the effectiveness of ICT implementation in face-to-face teaching, focusing on its benefits, challenges, and transformative role within classroom settings.

Benefits of ICT in Face-to-Face Teaching

ICT tools significantly enhance the teaching and learning process by creating more interactive and engaging classroom environments. According to Wong et al. (2006), the use of multimedia tools such as videos, animations, and interactive simulations can cater to diverse learning styles, leading to improved student engagement and motivation. Specifically, in face-to-face teaching, technology serves as a medium to bridge the gap between abstract concepts and practical understanding. For instance, the use of smartboards and classroom response systems allows teachers to deliver lessons dynamically, fostering active participation among students (Kochar, 1992; Woolfolk, 2004).

Moreover, ICT enables personalized learning experiences in face-to-face settings. Students can use digital resources to access tailored content that meets their individual needs, improving their understanding and retention of knowledge. Dawes (2001) argues that ICT creates opportunities for differentiated instruction, allowing teachers to address varying levels of student ability. Additionally, effective ICT integration facilitates better communication between teachers and students, strengthening their interactions and creating a more conducive learning environment (Plump et al., 2009).

Challenges in ICT Implementation

Despite its advantages, the implementation of ICT in face-to-face teaching is not without challenges. One of the primary barriers is the lack of adequate training and support for teachers.

Wong et al. (2006) highlight that many educators lack the confidence and competence to utilize ICT tools effectively, particularly in real-time classroom interactions.

Infrastructure also poses a significant challenge. Safdar (2011) emphasizes that inadequate technical support and unreliable access to technology hinder teachers' ability to use ICT effectively in classrooms. The unavailability of appropriate software or educational platforms further exacerbates the issue, making it difficult for teachers to align ICT tools with their lesson plans. Moreover, resistance to change among educators and institutions adds to the complexity of implementing ICT, particularly in traditional teaching environments (Barreh, 2013).

The Transformative Role of ICT

ICT has the potential to transform traditional teaching methods by introducing innovative pedagogical approaches. Problem-based learning (PBL), for instance, leverages ICT to encourage critical thinking and collaboration among students. Albion and Gibson (2000) argue that PBL, supported by ICT, enhances engagement and helps students connect theoretical concepts with real-world applications. This approach is particularly effective in face-to-face classrooms, where teachers can guide discussions and facilitate group work using digital tools.

The COVID-19 pandemic further underscored the transformative role of ICT in education. As schools transitioned to online learning, the use of ICT became indispensable in maintaining continuity. However, even in face-to-face settings, the rapid adoption of tools like Google Meet and classroom management platforms demonstrated the versatility of ICT in enhancing in-person teaching. This shift emphasizes the need for ongoing professional development to equip educators with the skills necessary to integrate technology effectively in their teaching practices.

RESEARCH METHOD

This study uses a descriptive quantitative approach to measure the effectiveness of the implementation of Information and Communication Technology (ICT) in face-to-face teaching. This approach was chosen for its ability to provide a clear overview of students' perceptions and experiences through numerical data that can be analyzed statistically (Creswell, 2014). The subjects of this study are one class of fifth-semester students from the English Language Education Program at UIN Tulungagung, consisting of 39 students. The sample for this study was selected

using total sampling technique, where the entire population of the class is involved in the study. Data were collected using a closed-ended questionnaire designed with a five-point Likert scale.The questionnaire covers three main aspects: (1) students' perceptions of the effectiveness of ICT in enhancing learning, (2) the benefits of ICT in supporting interaction between students and lecturers, and (3) the challenges students face in using ICT. The questionnaire has been tested for validity and reliability through a pilot test with a small group of students to ensure the accuracy of the measurement tool. The questionnaire was distributed online via Google Forms to facilitate easy access and completion by the respondents. Each student was given one week to complete the questionnaire. The data collected were analyzed statistically using descriptive analysis methods. The Likert scale results were processed to calculate mean values, frequency distribution, and percentages of responses for each question category. This analysis aims to provide a quantitative overview of the effectiveness of ICT implementation in face-to-face teaching.

RESULT AND DISCUSSION

In this section, the results from the questionnaire distributed to 39 students will be presented in the form of tables and diagrams to facilitate understanding. The following tables show students' perceptions regarding the implementation of Information and Communication Technology (ICT) in face-to-face learning.

Table 1: Students' Perceptions on Effectiveness of ICT in Learning

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
ICT makes learning more engaging and easier to understand	69%	23%	5%	2%	0%
ICT helps me understand the material being taught	72%	21%	5%	2%	0%
I feel more prepared for exams after using ICT	59%	31%	5%	3%	2%
Learning is more dynamic and interesting when ICT is used	64%	28%	5%	2%	0%

Table 2: The Benefits of ICT in Supporting Interaction Between Students and Lecturers

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
ICT makes it easier for me to communicate with my lecturer outside class hours	77%	18%	5%	0%	0%
I feel the quality of discussions with my lecturer improves due to ICT	69%	26%	3%	2%	0%
Communication through ICT feels less personal compared to face-to-face interaction	13%	18%	21%	38%	10%

Table 3: Challenges Faced by students in Using ICT

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I often face technical issues such as poor internet connection	46%	28%	15%	8%	3%
I feel insufficiently trained in using ICT for learning	38%	28%	20%	12%	2%
Additional materials or tutorials on using ICT are very helpful for me	64%	31%	3%	2%	0%
I feel more confident in using ICT after receiving additional guidance from lecturers	67%	26%	5%	2%	0%

Based on the results obtained, the majority of students showed positive perceptions about the effectiveness of ICT in face-to-face learning. The responses in Table 1 indicate that students believe ICT makes learning more engaging, helps them understand the material, and prepares them better for exams. For example, 69% strongly agreed that ICT makes learning more engaging, and 72% strongly agreed that it helps them understand the material better. These results support the

claim that ICT enhances students' learning experiences, as noted by Wong et al. (2006), who argued that technology can improve learning by catering to different learning styles.

In Table 2, the data reveals that students find ICT beneficial for communication with lecturers, especially outside of class hours. A significant 77% strongly agreed that ICT made it easier to communicate with lecturers beyond class time, indicating that ICT enhances communication and interaction in the educational setting.

However, several challenges were identified in Table 3. A notable portion of students reported facing technical difficulties, such as poor internet connections, with 46% strongly agreeing and 28% agreeing that these issues often occur. This aligns with Safdar (2011), who mentioned that technical barriers can hinder the effective use of ICT in education. Additionally, although the majority of students agreed that additional materials and guidance improved their confidence in using ICT, some students (38%) felt insufficiently trained in using ICT for learning.

Another challenge highlighted by students is the perceived lack of personal interaction when using ICT for communication. While the majority of students agreed that ICT improved communication with lecturers, 38% disagreed that communication through ICT felt as personal as face-to-face interaction. This points to the need to balance technological use with personal, face-to-face communication in learning environments.

CONCLUSION

The conclusion highlights the efficacy of Information and Communication Technology (ICT) implementation in face-to-face teaching. ICT has proven to enhance the learning experience by creating interactive and engaging classroom environments. The survey results demonstrate that most students perceive ICT positively, believing it makes learning more engaging and improves their understanding of the material. Furthermore, ICT facilitates better communication between students and instructors, both during and after classes.

However, despite its benefits, there are challenges associated with ICT implementation. Many educators lack sufficient training and support to utilize ICT tools effectively, particularly during real-time classroom interactions. Additionally, infrastructure issues such as unreliable access to technology hinder teachers' ability to integrate ICT into their lessons. Resistance to

change among educators also complicates the adoption process, especially within traditional teaching environments.

While ICT has transformative potential by introducing innovative pedagogical approaches like problem-based learning, it requires ongoing professional development to ensure effective integration. Balancing technological use with personal interaction remains crucial for maintaining a conducive learning environment.

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