

Reluctance of Teachers to Use Information and Communication Technology (Ict) in Classroom: A Study on the Selected Government Colleges of Khulna City, Bangladesh

Md. Nazmul Hossain
Lecturer, Department of Marketing
Azam Khan Govt. Commerce College, Khulna
E-mail: nazmulmktdu90@gmail.com

Abstract: Though ICT integration into government college education is the prime consideration, it is being challenged by the teachers' reluctance. The aims of this study are to explore the causes of teachers' reluctance to use ICT in classroom teaching and the possible approaches to overcome the identified challenges. A quantitative research method was conducted on the government college teachers of Khulna division, Bangladesh. A physical survey was completed by 100 teachers with heterogeneous teaching experiences. The data were analyzed using SPSS software. The study has revealed some specific causes of teachers' reluctance, despite their willingness. Specifically, the study has explored that the teachers' fear of using ICT, lack of technical skills, and difficulties in ICT integration are more prevalent than inadequate training, being accustomed to traditional lectures, or time constraints to prepare for ICT based lessons. Moreover, this study has suggested the teachers' motivation, training, and administrative support as the major solutions. Therefore, the results of this study can contribute to making decisions regarding the challenges of ICT integration in government colleges and the approaches to overcome them.

Keywords: Information & communication technology, reluctance to Use ICT.

Introduction

Teachers are fundamental agents of societal transformation. In an era dominated by rapid advancements in information technology, their role becomes even more critical in shaping a competitive new generation. Despite the adaptability shown by university educators, government college teachers in Bangladesh have struggled to fully integrate Information and Communication Technology (ICT) into their teaching practices (Khan et al., 2012). This paper explores the main reasons behind this reluctance and proposes actionable solutions to enhance ICT usage in these institutions.

ICT has revolutionized the educational landscape, creating dynamic learning environments and reshaping the instructional methodologies across the globe (Volman & Eck, 2001). In recent years, the integration of ICT in education has surged, particularly in developed nations which have prioritized establishing ICT-based learning settings (Hamidi et al., 2011). Bangladesh, with its burgeoning ICT infrastructure, has made significant strides and now serves as a model for ICT inclusion in education (Khan, 2014). Despite this progress, government

colleges lag significantly behind their university and private counterparts in adopting these technologies.

This paper examines the specific challenges that contribute to the reluctance of government college teachers to embrace ICT. Key barriers include a lack of basic ICT skills, inadequate infrastructure, and a preference for traditional teaching methods (Asan, 2003; Yousuf, 2005). Additionally, many teachers exhibit a fear of technology, which further hinders ICT integration (Kumar & Kumar, 2003). By adopting a quantitative research approach, this study aims to understand the factors that deter or facilitate the adoption of ICT among educators.

Incorporating ICT tools like computers, projectors, and internet connections into classrooms not only makes learning more engaging but also enhances the educational experience for both teachers and students (Singh & Chan, 2014). Despite these benefits, the use of ICT in government colleges remains sparse (Khan et al., 2012). This paper aims to pinpoint the precise causes of this hesitancy and provide recommendations to foster a more ICT-inclusive educational environment in government colleges.

The objectives of this paper are twofold:

1. To investigate the reasons behind teachers' reluctance to utilize ICT in classrooms.
2. To evaluate initiatives that could motivate teachers to incorporate ICT into their teaching methodologies.

This research also seeks to answer the following key questions:

1. Why are teachers in government colleges reluctant to use ICT?
2. How can these teachers be encouraged to adopt ICT in their classrooms?

Given that government colleges in Bangladesh cater to a substantial number of students, enhancing the quality of education through ICT is crucial. This study will outline the underlying causes of teachers' reluctance and propose necessary measures to promote the use of ICT, thereby ensuring a higher standard of education. However, limitations such as budgetary constraints, time, and the sample size of 100 respondents, selected through convenience and purposive sampling, may affect the study's outcomes. The responses, particularly from senior teachers who are less familiar with ICT, presented challenges in data collection and interpretation.

2.0 Literature Review

2.1 Chapter Outline

In our rapidly evolving world, technology enhances efficiency and requires students to apply their knowledge and skills in dynamic contexts (Partnership for 21st Century Skill, 2002). Teachers are crucial in transforming these "raw materials" — the students — into well-prepared graduates who are proficient in

modern technologies. Without teachers who are equipped, trained, and willing to use Information and Communication Technology (ICT) in classrooms, students will struggle to adapt to a dynamic global environment (Khan et al., 2012).

2.2 Definition of Information and Communication Technology (ICT) and Its Tools

ICT combines Information Technology (IT), which involves the collection, processing, and dissemination of information, with Communication Technology, which focuses on the transmission of information across various platforms (Kozma, 2003; Ratheeswari, 2018; Mwalongo, 2012). UNESCO (2007) defines ICT as a discipline and management technique crucial for handling information and its societal, economic, and cultural implications.

Common ICT tools in education include computers, projectors, interactive whiteboards, digital cameras, and various online platforms, facilitating a multimedia-rich classroom environment that significantly enhances the learning experience (Samuel & Zaitun, 2007).

2.3 Role of ICT in the Education System and Teaching

The internet has revolutionized communication and learning, providing platforms where students can interact with global knowledge resources and experts (Ratheeswari, 2018). ICT not only supports traditional educational practices but also promotes literacy, distance learning, and inclusive education by creating participatory learning environments and enhancing pedagogical methods (Kementerian Pendidikan Malaysia, 2012; Suryani, 2010).

2.4 Causes of Teachers' Reluctance to Use ICT in Teaching

Despite the clear benefits of ICT, many teachers in government colleges in Bangladesh are hesitant to integrate these technologies into their teaching due to several factors:

- **Insufficient Resources and Infrastructure:** Many government colleges, especially in rural areas, lack the necessary infrastructure and resources, such as stable electricity and internet connections, to support ICT-based learning environments (Pelgrum, 2001).
- **Training and Skill Gaps:** There is a significant gap in ICT skills among teachers, with many lacking even basic computer skills. The training opportunities available are often insufficient to meet the demand due to the high number of teachers relative to the number of qualified trainers (Rosnaini & Arif, 2010).
- **Difficulties in Changing Traditional Teaching Methods:** Integrating ICT into teaching is a significant shift from traditional methods. Many senior teachers are comfortable with their established methods and may be resistant to adopting new technologies (Samuel & Zaitun, 2007).

- **Negative Attitudes Towards ICT:** Some teachers have negative perceptions of ICT, believing that it may not be worth the time investment or fearing the complexities it brings to the classroom (Khan et al., 2012).

This literature review establishes the groundwork for understanding the reluctance of government college teachers in Bangladesh to embrace ICT. The following research will delve into these causes in more detail, aiming to quantify the extent of each factor's impact on ICT adoption.

3.0 Research Methodology

3.1 Chapter Outline

This section elaborates on the key components of the research methodology, including the research approach, design, methods, instruments, sampling, data collection, validity and reliability, data analysis, and ethical considerations involved in this study.

3.2 Research Design

Research design acts as a blueprint for conducting research, guiding the researcher through the processes of inquiry, data collection, and data analysis to effectively answer the research questions. A quantitative approach was chosen for its ability to generalize findings across a larger population through statistical analysis (Reichardt & Cook, 1979; Creswell, 2009). This study utilized a structured questionnaire to collect primary data, which was then analyzed using statistical tools to interpret and present findings quantitatively.

3.3 Methods and Instruments

A survey was conducted with 100 government college teachers in Khulna city, Bangladesh, to assess their usage of technology in educational activities. The choice of a survey method was due to its cost-effectiveness, flexibility, and reliability. The instrument used was a structured questionnaire, which included sections on background information, ICT knowledge and resources, causes of reluctance, and potential motivators for ICT use.

3.4 Sampling

The study targeted government college teachers in Khulna city, with a total sample size of 100 respondents. This size was deemed sufficient given the proximity of the respondents and their availability. A combination of convenience sampling and purposive sampling was used to select participants, ensuring the sample reflected the study's focus while also being practical and economical to reach.

3.5 Validity and Reliability

To ensure the validity of the questionnaire, it was reviewed by three experts and revised based on their feedback. A pilot test was then conducted with 20 respondents to refine the instrument further. The reliability of the questionnaire was confirmed through a Cronbach's alpha test, which yielded a coefficient of 0.824, indicating high internal consistency (Creswell & Miller, 2000; Murray et al., 1985).

3.6 Ethical Consent

Ethical considerations were prioritized throughout the research process. Approval was obtained from relevant authorities, and participants were informed about the study's purpose and assured of their anonymity through a General Information Sheet and an ethical consent form. All data were collected and analyzed with honesty and integrity (Lincoln, 2009; Creswell, 2009).

3.7 Data Collection

Data were collected using a structured questionnaire designed based on the Technology-Enabled Learning Implementation Handbook (Kirkwood & Price, 2016) and validated by faculty members at the University of Nottingham, Malaysia. Data collection was conducted in person, ensuring a comprehensive understanding of the participants' responses.

3.8 Data Analysis

Data were analyzed using descriptive statistics, including percentages and means, to summarize trends and compare relationships between variables. This approach facilitated a clear understanding of the data and helped in addressing the research questions effectively (Vogt, 2005).

4.0 Findings and Discussions

4.1 Chapter Outline

This section analyzes data from a survey divided into three main parts: respondents' background information, basic ICT knowledge, and factors contributing to the reluctance to use ICT in classrooms. It also explores potential strategies to enhance ICT utilization among teachers.

Background Information:

Analysis of the respondents' teaching experience indicates a predominance of relatively newer teachers with less than four years of experience, constituting 36% of the sample. In contrast, senior teachers with over twelve years of experience represent only 13% of respondents, primarily due to availability during the survey period and a general reluctance to participate (Singh & Chan, 2014).

ICT Knowledge and Resources:

The survey reveals a significant gap in ICT training among teachers, with 25% having no ICT training and 68% having less than thirty days of training. Despite 92% of teachers owning smartphones, only 19% use them for teaching purposes, indicating a discrepancy between possession of technology and its educational use.

Causes of Reluctance to Use ICT:

Several key issues emerge from the data:

- A majority of teachers are not utilizing ICT tools due to insufficient training and a lack of comfort with integrating technology into their teaching practices.

- Concerns about the time consumption and privacy violations associated with internet use discourage ICT usage.
- The infrastructure for supporting ICT in education, such as multimedia classrooms and maintenance facilities, is inadequate.

4.2 Analysis of Research Questions

Research Question 1: Why are teachers reluctant to use ICT in classrooms?

Data indicate that traditional teaching preferences, insufficient training, and difficulties in integrating ICT into the curriculum are major factors. Fear of technology and a lack of troubleshooting skills also contribute significantly to this reluctance. This aligns with findings by Mahmud and Ismail (2010) that suggest training as a critical factor in ICT adoption.

Research Question 2: How can teachers be encouraged to use ICT in classrooms?

Responses suggest that enhanced administrative support, reduced teacher-student ratios, and alleviation of excessive workload could significantly encourage ICT use. Moreover, ensuring adequate training and institutional mandates for ICT use are seen as crucial steps toward greater adoption (Table 12).

4.3 Discussion

The reluctance of teachers to integrate ICT into their teaching practices stems largely from a lack of training and infrastructure, compounded by traditional teaching biases. The findings suggest that targeted interventions aimed at increasing ICT training, improving classroom infrastructure, and adjusting workload and administrative support could mitigate these barriers.

The preference for traditional teaching methods is notably strong among senior teachers, who may benefit from tailored training programs that address specific barriers to ICT adoption. Additionally, promoting a school culture that values continuous professional development and technological innovation could further encourage reluctant teachers.

5.0 Conclusion and Recommendations

5.1 Conclusion

This study has revealed that government college teachers in Bangladesh exhibit a general willingness to integrate ICT into their teaching practices; however, several significant barriers prevent its effective implementation. Despite possessing the requisite devices, teachers often refrain from using them for educational purposes due to inadequate training, insufficient resources, and prevailing attitudes favoring traditional teaching methods. Concerns about privacy, the perceived risks of technology, and the lack of time for developing ICT-based lesson plans further contribute to their reluctance.

It is evident that with appropriate support and resources, the current barriers to ICT usage can be overcome, enabling teachers to enhance the educational experience for their students. Addressing these issues requires a multifaceted

approach that includes improving infrastructure, providing ongoing professional development, and fostering a supportive administrative environment.

5.2 Recommendations

In alignment with the Sustainable Development Goals, particularly the objective to ensure inclusive and equitable quality education, the following specific actions are recommended to facilitate a transition towards a more ICT-integrated educational environment in Bangladesh:

1. **Continuous ICT Training:** Authorities must provide ongoing and comprehensive ICT training for teachers to ensure they are capable of integrating technology effectively into their teaching.
2. **Enhanced Resources and Infrastructure:** Institutions should ensure the availability of necessary resources such as multimedia classrooms, computer labs, reliable internet access, and adequate electrical infrastructure.
3. **Mandatory ICT Usage:** ICT integration should be made mandatory across educational institutions, with clear guidelines and support for teachers to transition from traditional methods.
4. **Skill Development:** Both teachers and institutions should actively work on improving computer-related skills, with a particular focus on integrating ICT into the curriculum.
5. **Curriculum Transformation:** Traditional lecture methods should be adapted to incorporate ICT, making lessons more interactive and engaging.
6. **Workload Management:** Institutions should consider teachers' workloads to allow sufficient time for preparing ICT-based lessons.
7. **Optimal Teacher-Student Ratios:** Maintain teacher-student ratios that support effective learning and allow for personalized attention, which is crucial when implementing new technologies.
8. **In-house Training and Support:** Continuous in-house training should be provided, along with IT support from experts to assist teachers in troubleshooting and maintaining ICT equipment.
9. **Administrative Support and Motivation:** High levels of administrative support are essential. Teachers should be motivated through recognition, incentives, and clear communication about the benefits of ICT.
10. **Ensuring Accessibility:** Accessibility to ICT resources for both teachers and students should be a priority to foster an inclusive learning environment.

If these recommendations are implemented effectively, it is anticipated that the reluctance among teachers to use ICT can be significantly reduced, leading to an enhanced educational environment that leverages modern technology to its fullest potential.

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