# Impact of EdTech Usability on Educator Confidence and Adaptation to Online Teaching

## Abstract

## Introduction

When education shifted toward online to covid pandemic, students were able to quickly adapt to online classrooms, assessments. In contrast, many lecturers who were used to traditional form of education for many years faced challenges to adapt themselves to new technologies. One major challenge was usability and accessibility of online tools. As per research, many lecturers faced difficulty in delivering lessons as effectively as traditional form of teaching, which affected the students understanding and performance [1]. Additionally, many lecturers didn’t have prior experience with online teaching tools, which made adaptation difficult. Results of another research showed that inadequate access to personal device and reliable internet this further hindered the adapted during the phase when education was shifting towards online [2].

This problem is worth discussing because education has rapidly shifted towards online during covid pandemic and it has impacted quality of teaching and learning. Although after the pandemic had ended and traditional teaching has resumed demand for online education has not decreased, as online education comes with a lot of benefits. When lecturers have lack of confidence in using online tools, it would affect the quality of learning. A study highlights that lecturer’s difficulty in adapting to online teaching tools has negatively impacted students learning and their ability to engage students [1]. Secondly, sudden requirement to adapted to online teaching has increased stress for lecturers, which indirectly affected lecturers’ performance and job and increased burnouts [2]. Although many lecturers have adapted to these platforms, investigating this problem will help in understanding the future improvements that can be made in online teaching tools.

An article in *Educational Technology Research and Development* analyzed common difficulties that stop educators from effective use of technology. It highlighted usability challenges, alongside institutional constraints and lack of professional development, limiting teachers’ ability to use online teaching tools effectively [4]. One major gap in the literature is the lack of focus on the specific design features of online teaching tools that most affect usability and adaptation. Moreover, there is limited research on how demographic factors, such as age and teaching experience, influence technology acceptance​. Research from the journal *of Educational Computing Research* studied the relationship between lecturers’ confidence and their proficiency with digital tools. It highlighted that lecturers who are trained and have access to user-friendly technology report greater comfort and are more adaptable to teaching tools [3]. However, this study does not investigate long-term impacts increased comfort on teaching performance are sustained over time.

Research questions in this study would address the gaps in studies mentioned in above paragraph and explore the usability aspects of online teaching tools and their impact on lecturers’ confidence and acceptance. Research questions for this study are:

**RQ1:** How well are lecturers adjusted to online teaching tools and their satisfaction with tools they are using?

**RQ2:** How do factors like the ease of use and helpfulness of these tools impact lecturers’ willingness to use new technology?

The first research question would seek to learn the challenges in adapting to online teaching tools and would seek to know current state of adaptation and the satisfaction level, which are important for understanding broader and more sustainable effects. This second question fills the gap left by studies that did not delve into the relationship between technology design features and lecturers' technology acceptance behaviors.

## Methodology

For this study lecturers from different levels of proficiency like pre-school, k-12, bachelor’s have been elected. I have identified lecturers who have minimum experience in traditional teaching for 5 years and had to transition to online teaching due to covid-19 pandemic or technology upgrade by institution. Lecturers from different domains have been selected for this study to get understanding of teaching tools adaptation as per the subject taught. Moreover, while selecting the lecturers it has been taken care the lecturers with and without prior experience with computer technologies are selected to validate how ease was the adaptation with and without any experience. Few exclusions criteria were also made like lecturers who already had good experience with teaching tools which they good through the background history. To reach out the participants for this survey an email method was used and the google survey form has been provided within the mail. Mail was also included with details like the purpose of the search and criteria used for selecting the participants.

## References

[1] *PLOS ONE* (2021). Online education and its effect on teachers during COVID-19—A case study from India.

[2] *International Journal of Educational Technology in Higher Education* (2021). "Shifting online during COVID-19: A systematic review of teaching and learning strategies and their outcomes."

[3] *Journal of Educational Computing Research* (2023). "Teacher Confidence and Technology Integration in the Classroom."

[4] *Educational Technology Research and Development* (2023). "Barriers to Effective Use of EdTech in Higher Education."