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Original Article

Teacher Educators' Use of Digital Tools and Needs

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Abstract

Background: Teacher educators are crucial in educating teachers to serve as role models for information- and communication-based education in addition to preparing them to become instructors.

Objective: This paper's main objective was to draw attention to the ways in which teacher educators use digital technology and the consequent requirement for digital competency in higher education.

Methodology: A digital poll was sent through email to each teacher educator from two faculties at two different universities in Karachi. Teachers who are educators reported (multiple answers possible). The instrument has five background variables (sex, age, highest education level, years of employment, and task assignment).

Results: Majority of the study participants found it problematic.

Conclusion: It is concluded that Digitalization is an important aspect of learning and professional growth. Especially in this tech world one who does not adapt themselves with the fast changing environment they will be left far behind. In teacher's learning technology plays a key role. Teachers are building the future of a nation so it is mandatory for them to familiarize themselves with digital tools and equipment. Higher authorities should also play their role in this.

Keywords

Educators, Digitalization, Technology, ICT, Problems.

Introduction

The major goal of this paper was to highlight how teacher educators employ digital technology and the corresponding need for digital competency in higher education. In addition to preparing teachers to teach, teacher educators also play a critical role in preparing teachers to serve as role models for information- and communication-based education, according to Ungar and Baruch¹. When they see the value in using technology in their lessons, teachers are more likely to do so². According to Wisneski, Ozogul, and Bishelmeyer³, digital technologies, in contrast to traditional pedagogical technologies, are protean (i.e., useable in many different ways), unstable (rapidly changing), and opaque (the inner workings are hidden from users). Koehler, Mishra, and Cain⁴ also agree that digitization is diverse, volatile, and ambiguous (the inner workings are hidden from users). So, teacher educators must relate to these three components to integrate more technology into their classrooms.

Koehler et al.⁴ claims that inadequate training and incorrect or inadequate use of digital tools are

common among teachers. The absence of theoretical and pedagogical pillars, long-term integration into official educational institutions, and, in particular, a lack of support and training for teachers, are some of the challenges, though Baran⁵. So, there is a constant need to conduct research, generate ideas, and have conversations about how teachers improve professionally and use technology in the classroom. Finally, it is critical to investigate the most effective strategies for assisting students in becoming productive in online settings.

Methodology

Every teacher educator from two faculties at two distinct universities in Karachi received a digital survey through email. The educator teachers reported (multiple answers possible). There were five background variables in the instrument (sex, age, highest education level, years of employment, and task assignment).

Results

Table 1 shows the multiple answers possible reported by educator teachers.

Table 1: Possible responses by Educator Teachers

How do you rate creating digital learning environments?	n(%)
Problematic	5 (56.3)
Either	3 (31.3)
Unproblematic	2 (12.5)
Total	10 (100.0)

Discussion

The study sought to assess teacher educators' stated use of and needs for digital competency in higher education by examining self-reported use, competence, and need for professional training on digitalization in teaching at two Swedish universities. Two study questions were posed to address the aim: How do teacher educators use digital technologies, and how do they assess their capability to use ICT in educational settings effectively? What kind of training are teacher educators required to give kids the ability to function online? While using digital tools at work,

the majority of respondents indicated in their first response. A small fraction of people uses smart boards at work, while the majority of people use PCs and tablets. Our research's conclusions show that teacher educators use ICT in four various contexts, including teaching, communication, administration, and research.

ICT is generally used as a means of transferring instruction from a physical classroom to a virtual one in one of these four themes—the only one that is directly tied to educational activities. This finding is important because it demonstrates that, even though teacher educators use ICT for a variety of

uses, they do not predominantly use it as a pedagogical tool to improve student teaching and learning. It is undesirable for a teacher education institution to insufficiently integrate ICT and give insufficient training in its programs as teacher candidates are supposed to be equipped to teach with ICT⁶.

The capacity to use ICT effectively in formal educational settings is becoming more and more crucial as society's technological tools evolve swiftly. Thus, ongoing follow-ups through instruction in various practical phases of development in the underlying ICT educational pedagogy are required for ICT training for teaching settings⁷⁻¹². When teacher educators themselves lack sufficient training, we cannot expect teacher candidates to reform and enhance their instruction. Also, the ease with which teachers who report strong ICT proficiency establish digital learning environments should serve as evidence of the value of all teacher educators having a well-planned professional development program for e-learning¹³. The fact that creating digital learning environments is challenging for teacher educators who report having poor competency, however, is both significant and troublesome. This is particularly troubling because so few respondents to our study indicated that they needed pedagogical knowledge. Increased pedagogy training and practical support in teachers' teaching and learning contexts are logically closely tied to developing higher skills in how to construct pedagogical digital learning environments. Also, it is surprising that one in five teacher educators (20%) in our study rate their competence as low and that over a quarter (26%) say they lack the CSE necessary to effectively use ICT in teaching and learning environments. In response to the second question, 87% of respondents stated that pupils need either medium or intensive ICT training to be functional online. Given the obvious need for ICT training, it makes sense to provide coordinated support during their professional development that focuses on both technology and pedagogy¹⁴. Also, the teacher educators claim that CSE (17.5%) is not sufficiently generalizable to link various technologies for educational purposes¹⁵. They

require pedagogical expertise in areas such as subject-matter learning, experimenting with new features, applications, and skills, or technological advancements. The findings reveal a weakness in CSE's ability to master situations and carry out teaching with technology that can address some of the issues students confront when it comes to teacher educators' need for training to improve their competence regarding the digitalization of teaching¹⁵. These findings suggest that they are at ease with their subject-specific pedagogical competence. As a result, the first stage is for teachers to decide what the pedagogical surplus value is in a particular situation.

The second step is to provide practical and efficient ways to implement ICT Baran¹⁰; Ungar & Baruch⁶; Zyad¹⁶, as well as to educate, organize, and encourage online interactions through things like teacher-recorded videos for flipped classrooms, online instructions, and language learning case studies¹⁷. How to effectively integrate ICT, set aside time to comprehend its educational benefits, and adapt to changing student demands are crucial components of ICT professional development Abuhmaid³; Gunter & Reeves¹⁸.

To offer opportunities for learning and growth, mobile digital technologies can support a range of teaching approaches in various contexts, such as in classrooms, on field excursions, or anywhere a learning situation can occur¹⁹. When creating training programs to promote teachers' computer self-efficacy, teacher educators should pay special attention to how to develop teachers' evaluation techniques about digital teaching and how to boost their usage of online searching tactics^{20,21}. A useful suggestion is to organize methodical in-service training to increase the motivation of teacher educators. The mandatory in-service training should offer real-world examples of how to teach and learn in higher education that is presented by seasoned professors who are successful in their fields. The mandatory training would be included in the allotted in-service hours for teachers, thus attending would count as paid time off. Additionally, taking part in such training could create networks of teacher educators

interested in digitalized learning and act as a launchpad for international collaboration, conference attendance, and the presentation of research papers and/or posters to advance the profession and the research area.

Conclusion

The conclusion is that digitalization is a crucial component of education and career advancement. One who does not adapt to the rapidly changing environment, especially in the computer industry, will fall far behind. Technology is important to teachers' learning. Teachers must become familiar with digital tools and equipment since they are constructing the future of the country. Higher authorities ought to participate in this as well.

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