Identification of Information and Communication Technologies’ (ICTs) Needs regarding Professional Development and Modern Teaching Methods for Madarassa Teachers

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ABSTRACT

The study aimed to analyze, “Identification of Information and Communication Technologies (ICTs) Needs regarding Professional Development and Modern Teaching Methods for Madarassa Teachers”. The study was survey and descriptive in nature. The QUAN-qual technique was adopted. The explanatory sequential technique was used. The stratified sampling technique was adopted. The 30 students of madarassa, 3 madarassas’ instructors and one Mohtamim from each of 2 madarassas of all 9 divisions of Punjab. The 2 deoband madarassas were equally selected from each division of Punjab. The questionnaire based on Likert scale and interview protocol based on an open-ended item. The validity of questionnaire was ensured through experts’ opinion and reliability of was calculated through Cronbach Alpha using SPSS-20. The study concluded that majority of students of Shahadat ul alia and Shahadat ul almia viewed that ICTs make it easy to ensure online presence, access to internationally trained teachers facilitates learning methods as a modern teaching style. The study recommended that ICT may be included in teachers’ professional development for effective training and learning of Madrassas’ instructors.

Keywords: ICTs Professional Development Information and Communication Technologies Modern Teaching Methods Madarassas

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1. Introduction

Technology integration in the classroom requires pedagogical integration. It is insufficient to only give teachers and pupils gadgets or software. Technology use must be in line with learning objectives, outcomes, and assessments (Sadaf, Rasheed, & Ahmad, 2024). Furthermore, it is necessary to create a culture of support that encourages creativity, experimentation, and taking risks (Kebritchi, Lipschuetz, & Santiago, 2017; Mumtaz, Zafar, & Andleeb, 2024). By allowing people to share their own information and content, technology can encourage creativity and innovation. Madarassa pupils might be motivated to investigate concepts and find innovative solutions to issues. Madarassa students can use digital storytelling tools to convey their ideas and feelings in a variety of media, including audio, video, and images. Madarassa students can create and develop their own games or applications using programming platforms. The difficulties of incorporating technology into teaching (Ghavifeekr & Rosdy, 2015). In his book "Becoming a Professional School Principal," Mulyasa (2015) lists the duties of a principle as manager, supervisor, educator, innovator, figure, mediator, and motivator. Madarassa’s learners feel anxiety to use technology and are afraid about whether is allowed in our religion or not texture fearful for doing new experiments and technology work. In madrassas, corporal punishment is permitted, and instructors physically discipline students by beating them with sticks. The student's drive and inspiration to pick up new skills are also impacted by this penalty (Rehman, Iqbal, Azam, Iram, & Javed, 2021). The madrassa
schedule is strict, and the professor never makes up for missed or late times. It is challenging for pupils to understand modern education when teachers do not give their students the required attention and focus (Shafqat, Zafar, & Bhadroo, 2024).

In the twenty-first century, lecturers are essential to the delivery of postsecondary education (Berlian, 2018). They strategically support the overall educational system's operations and outcomes (Dukhan, Brenner, & Cameron, 2019). Their professional competency affects their performances, as evidenced by their capacity to support instructional methodology and topic teaching. The duties of lecturers in the twenty-first century are multifaceted and include researcher, technocrats, community developers, adaptors, visionaries, collaborators, risk-takers, learners, communicators, models, and subject matter experts. A well-balanced combination of these responsibilities provides the necessary competencies to allow the lecturer to effectively address the evolving demands of 21st-century learning in this digital age (Gürsoy, 2021). Depending on trainees’ perspectives, professional development programs for lecturers' integration of technology have produced a wide range of outcomes (Nguyen & Doytch, 2022). The goal of Ghana's ICT in education policy was to maximize the benefits of ICTs in educational settings (Maitlo, Shah, & Ahmed, 2024). ICT in education policy included, among other things, the provision of numerous channels for lecturers' professional growth (Zafar, Akram, & Shakir, 2017; Zafar & Ullah, 2020). Education helps students in this digital age gain the necessary and pertinent knowledge, abilities, and attitude to comprehend and successfully navigate their digitally dominated world (Azizah, Djono, & Musadad, 2020).

Change is typically required along various dimensions of education practice when technology is employed to achieve 21st-century educational goals (collaboration, critical thinking, and problem-solving) (Grigoropoulos, 2019; Gürsoy, 2021). Islamic education has its roots in the early days of Islam, specifically in the period of Prophet Muhammad (SAW) (Baiza, 2018). He imparted morality, fairness, and other values to his companions in addition to Islamic teaching and customs. He employed a range of techniques while instructing people, based on factors including age, character, comprehension level, gender, and ethnic background. These techniques included exemplary behavior, mentoring, lectures, gentle reminders, and words of wisdom. He lectured primarily in his Madinah mosque, but he also occasionally went to other locations if he saw an opportunity to impart knowledge, such as the front lines of combat, marketplaces, and other locations. During the time of the Prophet Muhammad (P.B.U.H) friends after his demise, they carried on his bequest (Âşik Ev, 2017). A significant obstacle confronting Islamic education in the modern era is the stagnation of pedagogy and methodology, which is primarily typified by memorization, imitation, harsh and physical punishment, particularly during foundational stages, and the rejection of the concepts of creativity and fostering critical thinking skills in students (Syah, 2016). In order to produce a complete personality, modern methods of teaching Islamic education, such as the use of e-resources and online distance learning, emphasize the learner-centered approach (Mughal, Zafar & Ullah, 2023). Information and communication technology, or ICT, is utilized in almost every industry, and it can support education in a number of ways, including content creation, the search for educational resources, and cooperative learning and teaching (Ghavifekr & Rosdy, 2015; Zafar, Zahid, & Zahid, 2023).

1.1. Research Objectives
Objectives of the study were;

- To identify the ICT needs for Madrassas’ teachers’ professional development
- To find out the ICT needs for modern teaching methods for Madarassa instructors

1.2. Research Questions
Questions of the study were;

1. What are the ICTs needs for Madarassa’s teachers’ professional development?
2. Which modern teaching methods are necessary for Madarassa instructors?

1.3. Research Limitations

- Research is limited only to a Pakistani province Punjab ignoring other provinces.
- Research is limited only to the Madarassa instructors disregarding other institutions.
2. Research Methodology

“The methodical procedure used for data collection to resolve the problem is called research methodology, its function is to provide systematic structure of the research study, moreover its part of study in which the researcher give account of the research methods used in research”(Ahmad, Farhat, & Abbas, 2024). Research design is a logical and systematic plan prepared by the researcher for directing research study, in which researcher give account of methods and techniques used in the research to investigate the stated problem” (Ahmad, Rao, & Rao, 2023; Rasheed & Zafar, 2023). The research study was surveyed and descriptive in nature. The quantitative as well as qualitative (QUAN-qual) technique was adopted. The explanatory sequential method was used for the study. “Population is defined as a set of individuals, data, or items from which a statistical sample is taken” (Younus, Farhat & Ahmad, 2023, p.3523). Population of the study comprised of; Mohtmim, teachers, Sheikh-ul-Hadiths, Islamic scholars, Mu’arrikheen, Mufakkireen, Muhammad, Mufassireen, Muftis and Qur’ra of Madarassas in Pakistan. The stratified sampling technique was adopted. All madrassas’ instructors of 09 divisions of Punjab. Firstly, researcher selected 02 Deoband madarassas from all 9 divisions of Punjab. Researcher applied stratified random sampling and select 30 students of madarassa, 03 madarassa’s instructors and one Mohtamim from each of 02 madarassas of all 9 divisions of Province Punjab. Two Deoband madarassas were equally selected from each division of Punjab through stratified sampling. Instruments perform important role in accumulating correct evidence from the research participants (Jalbani, Ahmad & Maitlo, 2023). The questionnaire based on 5-Point Likert scale, the interview based on open ended questions, and focused group discussion (FGD), and observation sheet. The pilot study was conducted to make sure the validity and reliability of research tools. The researcher ensured validity of the questionnaire through the expert opinions. After development of research tool, it was distributed among senior faculty members, senior scholars and experts for their valuable feedback. In light of the experts’ opinion the questionnaire was refined and modified. The researcher communicated 10 different National experts and circulated a questionnaire to them. On the basis of their replies, the content validity ratio (CVR) and content validity index (CVI) were calculated. Rao, Jeevan, and Ahmad (2023) stated that ethical considerations are accepted norms, keeping this point in mind the researcher seek permission from the concerned authorities to conduct this research.

3. Data Analysis

PART I: Quantitative analysis

<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>Stat.</th>
<th>SA</th>
<th>A</th>
<th>UD</th>
<th>D</th>
<th>SD</th>
<th>Std. D</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ICT makes it easy to ensure online presence</td>
<td>F</td>
<td>41</td>
<td>46</td>
<td>83</td>
<td>190</td>
<td>180</td>
<td>1.21</td>
<td>3.78</td>
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<tr>
<td></td>
<td>Access to internationally trained teachers facilitates learning methods</td>
<td></td>
<td>8</td>
<td>9</td>
<td>15</td>
<td>35</td>
<td>33</td>
<td>1.01</td>
<td>4.10</td>
</tr>
<tr>
<td></td>
<td>as a modern teaching styles</td>
<td></td>
<td>14</td>
<td>33</td>
<td>68</td>
<td>195</td>
<td>230</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>ICT supports the distance education system to enhance the professional</td>
<td>F</td>
<td>23</td>
<td>52</td>
<td>83</td>
<td>220</td>
<td>162</td>
<td>1.09</td>
<td>3.82</td>
</tr>
<tr>
<td></td>
<td>development of teachers</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Wireless media helps teachers to reach students</td>
<td>F</td>
<td>38</td>
<td>45</td>
<td>73</td>
<td>195</td>
<td>189</td>
<td>1.19</td>
<td>3.83</td>
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<td>13</td>
<td>36</td>
<td>35</td>
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</tr>
<tr>
<td>4</td>
<td>ICT plays a central role in making of lesson plans</td>
<td>F</td>
<td>38</td>
<td>54</td>
<td>115</td>
<td>171</td>
<td>162</td>
<td>1.20</td>
<td>3.67</td>
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<td>21</td>
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</tr>
</tbody>
</table>

Table 1 presented needs of ICT in teachers’ professional development. The data analysis indicated that almost 68% (35%+33%) of the respondents were agreed that ICT makes it easy to ensure online presence. Almost 79% (36%+43%) of the respondents were agreed that access to internationally trained teachers facilitates learning methods as modern teaching styles. Almost 71% (41%+30%) of the respondents were agreed that ICT supports the
distance education system to enhance the professional development of teachers. Almost 71% (36%+35%) of the respondents were agreed that wireless media helps teachers to reach students. Almost 62% (32%+30%) of the respondents were agreed that ICT plays a central role in making of lesson plans.

### Table 2: Needs of ICT in Modern Teaching Methods

<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>Stat.</th>
<th>SA</th>
<th>A</th>
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<th>SD</th>
<th>Std. D</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>E-books make it easier for students to access education (%)</td>
<td>14</td>
<td>22</td>
<td>81</td>
<td>197</td>
<td>226</td>
<td>0.97</td>
<td>4.10</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Online mode of teaching provides access to lectures in case of emergency</td>
<td>3</td>
<td>4</td>
<td>15</td>
<td>37</td>
<td>42</td>
<td>0.97</td>
<td>4.13</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Automated Quranic pen plays a role in reading and understanding of the Holy Quran</td>
<td>48</td>
<td>39</td>
<td>77</td>
<td>206</td>
<td>170</td>
<td>1.22</td>
<td>3.76</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Modern technology is the basic requirement to enhance the creativity of students</td>
<td>9</td>
<td>7</td>
<td>14</td>
<td>38</td>
<td>32</td>
<td>1.21</td>
<td>3.80</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>The E-library helps madrassa students to study modern books (%)</td>
<td>7</td>
<td>9</td>
<td>14</td>
<td>35</td>
<td>34</td>
<td>0.96</td>
<td>4.21</td>
<td></td>
</tr>
</tbody>
</table>

Table 2 presented needs of ICT in modern teaching methods. The data indicated that almost 79% (37%+42%) of the respondents were agreed that E-books make it easier for students to access education. Almost 84% (43%+41%) of the respondents were agreed online mode of teaching provides access to lectures in case of emergency. Almost 70% (38%+32%) of the respondents were agreed that automated Quranic pen plays a role in reading and understanding of the Holy Quran. Almost 69% (35%+34%) of the respondents were agreed that modern technology is the basic requirement to enhance the creativity of students. Almost 85% (38%+47%) of the respondents were agreed that the E-library helps madrassa students to study modern books.

**PART II: Qualitative analysis**

1. What are the most important professional needs of madarassa’s teachers according to modern time?

![figure](image-url)

Figure 1 clearly indicates that respondents of each theme about professional needs of madarassa’s teachers according to modern time. The results illustrated, 25 madarassa’s teachers considered use of internet, 14 madarassa’s teachers considered mobile phone technology, 14 madarassa’s teachers considered multimedia projector, 11 madarassa’s teachers considered use of laptop, 8 madarassa’s teachers considered good salary package are most essential professional needs for madarassa's teachers in the modern age.

2. Which modern teaching methods do you recommend for madarassa’s teachers?
Figure 2: Modern teaching methods

Figure 2 clearly indicates that respondents of each theme about modern teaching methods for madarassa’s teachers. The results illustrated, 26 madarassa’s teachers considered use of demonstration method, 23 madarassa’s teachers considered online lecture method, 12 madarassa’s teachers considered workshops and seminars, 7 madarassa’s teachers considered video conferencing, 4 madarassa’s teachers considered micro teaching are most essential modern teaching methods for madarassa’s teachers.

4. Findings

- 35% of the respondents opined that ICT makes it easy to ensure online presence and 33% strongly agreed, while 9% of the respondents were disagreed and 8% respondents strongly disagreed, whereas 15% were undecided. Collectively, (35%+33%) 68% of the respondents were agreed that ICT makes it easy to ensure online presence. Mean 3.78 shows inclination towards agreed and SD 1.21 supported.
- 36% of the respondents opined that Access to internationally trained teachers facilitates learning methods as modern teaching styles and 43% strongly agreed, while 6% of the respondents were disagreed and 3% respondents strongly disagreed, whereas 12% were undecided. Collectively, (36%+43%) 79% of the respondents were agreed that access to internationally trained teachers facilitates learning methods as modern teaching styles. Mean 4.10 shows inclination towards agreed and SD 1.01 supported.
- 41% of the respondents opined that ICT supports the distance education system to enhance the professional development of teachers and 30% strongly agreed, while 10% of the respondents were disagreed and 4% respondents strongly disagreed, whereas 15% were undecided. Collectively, (41%+30%) 71% of the respondents were agreed that ICT supports the distance education system to enhance the professional development of teachers. Mean 3.82 shows inclination towards agreed and SD 1.09 supported.
- 36% of the respondents opined that wireless media helps teachers to reach students and 35% strongly agreed, while 8% of the respondents were disagreed and 7% respondents strongly disagreed, whereas 13% were undecided. Collectively, (36%+35%) 71% of the respondents were agreed that wireless media helps teachers to reach students. Mean 3.83 shows inclination towards agreed and SD 1.19 supported.
- 32% of the respondents opined that ICT plays a central role in making of lesson plans and 30% strongly agreed, while 10% of the respondents were disagreed and 7% respondents strongly disagreed, whereas 21% were undecided. Collectively, (32%+30%) 62% of the respondents were agreed that ICT plays a central role in making of lesson plans. Mean 3.67 shows inclination towards agreed and SD 1.20 supported.
- 37% of the respondents opined that E-books make it easier for students to access education and 42% strongly agreed, while 4% of the respondents were disagreed and 3% respondents strongly disagreed, whereas 15% were undecided. Collectively, (37%+42%) 79% of the respondents were agreed that E-books make it easier for students to access education. Mean 4.10 shows inclination towards agreed and SD 0.97 supported.
• 43% of the respondents opined that online mode of teaching provides access to lectures in case of emergency and 41% strongly agreed, while 4% of the respondents were disagreed and 3% respondents strongly disagreed, whereas 9% were undecided. Collectively, (43%+41%) 84% of the respondents were agreed online mode of teaching provides access to lectures in case of emergency. Mean 4.13 shows inclination towards agreed and SD 0.97 supported.

• 38% of the respondents opined that automated Quranic pen plays a role in reading and understanding of the Holy Quran and 32% strongly agreed, while 7% of the respondents were disagreed and 9% respondents strongly disagreed, whereas 14% were undecided. Collectively, (38%+32%) 70% of the respondents were agreed that automated Quranic pen plays a role in reading and understanding of the Holy Quran. Mean 3.76 shows inclination towards agreed and SD 1.22 supported.

• 35% of the respondents opined that modern technology is the basic requirement to enhance the creativity of students and 34% strongly agreed, while 9% of the respondents were disagreed and 7% respondents strongly disagreed, whereas 14% were undecided. Collectively, (35%+34%) 69% of the respondents were agreed that modern technology is the basic requirement to enhance the creativity of students. Mean 3.80 shows inclination towards agreed and SD 1.21 supported.

• 38% of the respondents opined that the E-library helps madrassa students to study modern books and 47% strongly agreed, while 4% of the respondents were disagreed and 3% respondents strongly disagreed, whereas 9% were undecided. Collectively, (38%+47%) 85% of the respondents were agreed that the E-library helps madrassa students to study modern books. Mean 4.21 shows inclination towards agreed and SD 0.96 supported.

Some of the findings of the present study match with the findings of some previous studies to some extent, similarly some findings differ from the findings of previous researches, which makes the present research valuable in the domain of education field.

5. Conclusion
First Indicator of the study was related to needs of Information Communication Technology (ICT) in teachers' professional development. The study concluded that majority of students of Shahadat ul alia and Shahadat ul almia opined that ICT makes it easy to ensure online presence, access to internationally trained teachers facilitates learning methods as a modern teaching style, ICT supports the distance education system to enhance the professional development of teachers, wireless media helps teachers to reach students and ICT plays a central role in making of lesson plans. There is a significant difference regarding needs of ICT for madarassa teachers’ professional development. Mean results indicated that needs of ICT for madarassa teachers’ professional development is more essential than those of other two (not essential and essential) categories of needs. Second indicator of the study was related to needs of ICT in modern teaching methods. The study concluded that majority of students of Shahada tul alia and Shahada tul almia viewed that E-books make it easier for students to access education, online mode of teaching provides access to lectures in case of emergency, automated Quranic pen plays a role in reading and understanding of the Holy Quran, modern technology is the basic requirement to enhance the creativity of students, E-library helps madrassa students to study latest books. There is significant difference regarding needs of ICT for modern teaching methods for madarassa instructors. Means results indicated that needs of ICTs for modern teaching methods for madarassa instructors are more essential than those of other two (not essential and essential) categories of needs.

5.1. Recommendations
• The ICTs training modules may be developed to fulfill the needs of madarassas’ teachers’ professional development.
• The modern ICTs may be integrated in teachers’ professional development for an effective training and learning of madarassas’ instructors.
• The ICTs training module may be developed as per the needs of madarassas’ teachers’ modern teaching methods.
• The modern teaching methods along with ICTs may be adopted according to the students’ interest and motivation in teaching learning process of madarassas’ learners.
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