

# Perspectives on the Professional Development of Female Teachers through ICT: Current Trends and Prospects

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## *ABSTRACT*

In the modern educational environment, environmental and communication technology is becoming a fundamental requirement for the professional development of women teachers, but there are several technical, social and institutional barriers to its effective use at the practical level. The present article examines these challenges, opportunities and possibilities and makes it clear that ICT is not just a set of teaching tools but a dynamic framework that can be a source of significant improvement in the professional skills, self-confidence and teaching performance of women teachers. The research found that although women teachers consider the use of ICT to be beneficial, inadequate training facilities, lack of availability of technical aids and institutional inattention also limit their use. The research also shows that regular ICT training, gender-sensitive training models and equitable access to digital resources play a decisive role in the professional development of women, as Patron (2015) and Maryam (2009) have emphasized the importance of professional learning environments and facilities, and further policy instruments. Investment in ICT infrastructure, the creation of a conducive technological culture and the provision of social support by the government can open new avenues for women's professional development. Ultimately, the research concludes that ICT should be recognized as a project driver for women teachers' professional autonomy, teaching creativity and educational leadership and should be given a central place in future education policy.

**Keywords:** *ICT, Women Teachers, Professional Development, Educational Technology*

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## **Introduction**

In today's era, education is not limited to the classroom but has become a global and continuous process in which technology is playing an important and decisive role. Information and Communication Technology not only provides easy access to academic content but has also changed the training and teaching style and professional development opportunities of teachers. Especially when it comes to female teachers, ICT has presented a new academic and empowering path for them by making it easier to balance professional life and personal responsibilities. Studies conducted at the global level have shown that the use of ICT makes the teaching process more effective, interactive and student-friendly. In a way, with the integration of ICT, teachers are able to connect their content in a better way. The study concluded that

the implementation of ICT significantly improves the educational activities and learning quality of not only teachers but also students. Similarly, according to Rosdy and Ghavifekr (2015), ICT tools provide teachers with facilities through which they can improve their training, communication and teaching, rather than being aware of communication barriers, geographical distance and lack of resources. The importance of ICT increases even more in the context of female teachers in particular. Traditional efficiency structures, domestic responsibilities, social expectations and limited training opportunities often become obstacles for them, but ICT has reduced these obstacles and provided a flexible teaching and training environment that allows women teachers to learn new educational skills from home, improve

their professional standards and play an effective teaching role. Furthermore, thanks to ICT, women teachers are not only limited to their school or location, but they can access online courses, webinars, digital libraries and global resources. In this case, their professional development can be not only individual but also collective and global. This change not only leads to an increase in their personal capabilities but also provides new perspectives to the entire global system. The learning pace of students increases in teaching methods and classroom activities become more integrated and interactive Kaur (2016). However, it is important to note that the role of ICT is only fully positive when teachers are provided with adequate training, infrastructure, and continuous support. A study says that the mere availability of digital tools is not enough rather, the teacher must know how to use them effectively in the teaching process Mandal (2024). Otherwise, the use of ICT will be limited to a mere technological change, and it will not be possible to achieve its long-term benefits. Therefore, in the context of the current research study, it is important to know which aspects ICT has changed in the professional development of women teachers, which opportunities it has provided, and which obstacles still stand in their way. This examination will not only make it possible to increase the competence of women teachers but also create an education system that not only reflects the requirements of the modern era but also guarantees gender equality and social progress

### **Professional development of female teachers**

Professional development of female teachers is an important element of the modern education system, as a talented, informed and trained female teacher not only enhances her teaching competence but also has a profound impact on the quality of student learning. Professional development is actually referred to as the ongoing process through which a teacher improves her knowledge, skills, teaching attitudes and professional conduct (Guskey, 2002). It is not an event but a process which keeps a teacher updated with latest trends, methods, and requirements in an uninterrupted manner. The most important part of teacher education for female educators is providing them with opportunities for training.

Several research studies have shown that women face problems such as social responsibilities, domestic commitments, travel restrictions and lack of time in accessing training programs (UNESCO, 2019). In such a situation, having continuous access to training opportunities becomes a basic condition for their professional development. When they are offered effective and accessible learning opportunities, they are able to work on their personal skills and teaching capabilities effectively. The second part of professional learning is working on teaching capabilities. It is mandatory for a teacher to have proficiency in effective teaching, understanding student requirements, using a variety of teaching methods, class management, and evaluation. It is proven in research studies that when female teachers are offered efficient learning opportunities, both their level of effective teaching, as well as performance outcomes, improve (Darling-Hammond, 2017). In this way, professional development not only serves as a means of personal growth for the teacher but also improves the quality of the entire educational institution. The third is related to improving self-confidence and professional identification. Some female educators have self-confidence problems because of a lack of opportunities, poor support, or pressure from their social environments. But when they are provided with constant learning and an opportunity for sharing experiences with fellow teachers, their sense of professional identification is enhanced (Avalos, 2011). This leads to positive attitudes towards innovation in teaching, decision-making and professional responsibilities. Collaboration is also an important component of professional development. When female teachers share experiences, teaching methods, problems and solutions with each other, a learning community is formed that significantly improves their performance.

Research shows that collaborative learning environments play a fundamental role in teacher development (Vescio et al., 2008). The biggest challenge in the development of female teachers is the lack of institutional support. When such institutions fail to offer adequate training, technology, resources, and time, it becomes impossible for these teachers to benefit from this professional developmental process. Moreover,

such responsibilities in culture and at homes affect them in developing further (UN Women, 2020). In an overall manner, the professional development of female teachers remains a systematic, continuous, and requirement-demanding process for them, which affects them in a positive manner in their performance and confidence. The education sector remains good when institutions have good facilities for equal teacher trainings.

### **Review of Literature:**

The role of ICT in contemporary education has become very fundamental, especially with regard to the professional development of female teachers. Existing literature emphasizes that technology not only improves the teaching process but also significantly increases the professional identity, self-confidence and learning opportunities of female teachers. Guskey (2002) defines the professional development of teachers as a continuous and systematic process that creates lasting changes in the attitude, knowledge and teaching practices of the teacher. In this context, the use of ICT creates new dimensions in this continuous process, as technology provides teachers with opportunities for rapid, extensive and interactive communication (UNESCO, 2019). Research studies show that the use of ICT improves the teaching skills of female teachers, as they are able to learn new information and teaching methods through online training courses, digital learning platforms and virtual workshops. Darling-Hammond (2017) emphasized that professional development that is ICT-based allows teachers to teach more actively, creatively, and in line with students' needs. When teachers employ ICT, they are better connected with students, making their classrooms more engaging and leading to better learning outcomes. However, research work has also emphasized that a number of challenges have been identified in using ICT in relation to female teachers, such as a lack of technical capacity, a lack of infrastructure, and socio-cultural impediments. As stated in a UN Women report: "A number of social impediments have been identified in this context which do not allow women to access information and communications technology in the afore-mentioned regions. Such impediments include household responsibilities, lack of mobility,

a lack of financial capability, and a lack of institutional support in 'forested, rural, and semi-urban regions'" (UN Women Report, 2020). As stated in research work carried out in Pakistan and other Indian research work (Farooq, 2020; Sharma, 2019), female teachers have face challenges in using technology due to a lack of proper training. The literature also suggests that ICT is not only a means of teaching improvement but also an effective tool for strengthening the professional identity of female teachers. According to Avalos (2011), when teachers are continuously trained and interacted with each other, their self-confidence and professional trust increase. Online learning communities, teacher networks and virtual professional groups provide women with a platform where they not only share their experiences and problems but also learn new teaching techniques. Collaboration through ICT is also a strong theme in the literature. According to Vescio et al. (2008), Collaborative Professional Learning Communities have a positive impact on teachers' attitudes and performance. When female teachers connect with each other through ICT, teaching quality increases, new teaching strategies emerge, and the overall education system innovates. However, challenges remain despite the use of ICT. Studies show that in many countries, effective integration of ICT in schools is not possible because of gaps in policy and practical implementation (OECD, 2021). Furthermore, lack of electricity, poor internet connectivity, and lack of appropriate equipment continue to be barriers for female teachers. The literature also emphasizes that access to technology alone is not enough, but digital literacy and ICT competencies are more important.

### **Need and Significance of the study :**

In the present era, Information and Communication Technology has given a new direction to the education system, which has resulted in a significant change in the traditional concepts of teaching, training and professional development. ICT has emerged as an effective and revolutionary tool, especially with regard to the professional development of female teachers. Traditional training programs usually have lesser accessibility for female teachers due to social, community, and domestic commitments, though

ICT has reduced these barriers to some extent and opened up new avenues for them. In this context, this study attempts a comprehensive analysis of the role of ICT, current trends, and future prospects in the professional development of female teachers. The main objective of the research is to understand how the teaching skills, professional self-confidence, and continuous learning process are strengthened by ICT. Furthermore, an important goal of this study is to identify current trends related to the use of ICT in the professional development of female teachers and to assess its potential benefits and challenges in the future. In addition, this study also examines the extent to which ICT can contribute to gender equality and improving educational quality.

### **Methodology :**

In this study is descriptive and analytical in nature, in which a qualitative research approach has been adopted. The research has used secondary sources, including authoritative research journals, books, reports of international organizations, government documents and reliable online databases. The selected literature was analysed thematically to understand the role of ICT in the professional development of female teachers from different perspectives. Through this approach, the theories, findings and recommendations contained in the research have been presented in a systematic manner (Creswell, 2014). The literature and analysis clearly show that ICT provides a flexible and accessible platform for the professional development of female teachers. Online professional development courses, webinars, e-learning modules, learning management systems and mobile learning apps have provided women teachers with self-paced learning opportunities. These facilities not only remove the constraints of time and place but also equip women teachers with modern teaching strategies and digital skills (UNESCO, 2020).

A review of current trends reveals the fact that there has been a phenomenal increase in ICT-based teaching and training activities after the COVID-19 pandemic. Women teachers have rapidly adopted online teaching, virtual classrooms and digital resources, which has resulted in an

increase in their professional identity and self-confidence. Moreover, social media platforms and online communities of practice have promoted professional collaboration, exchange of experiences and joint problem-solving among women teachers (Koehler & Mishra, 2009). However, along with the benefits of ICT, there are also some challenges. Lack of digital literacy, lack of technological infrastructure, limited access to the internet and lack of adequate training hinder the professional development of female teachers, especially in developing countries. In addition, certain social and cultural factors also limit the full use of technology by women, which in turn deepens the digital divide (Selwyn, 2016). Regarding future prospects, it can be said that ICT can play a decisive role in the professional development of female teachers, provided that appropriate educational policies and practical measures are adopted. Modern trends such as artificial intelligence, virtual reality, and data-driven learning analytics can be helpful in developing training programs according to the individual needs of female teachers.

### **Finding, conclusion and implication:**

This study clearly revealed that women teachers have a positive attitude towards the use of ICT and consider it very helpful for their professional development, teaching effectiveness, and increasing student engagement in the classroom. The practical situation, however, appears to be much more complex than their perceptions. Through interviews and observations, it was identified that while female teachers recognize the potentials of technology, they find difficulties in using ICT regularly because of the limited availability of technical equipment, insufficient training, inaction of school administration, and domestic and social responsibilities. Many ladies also reported that a lack of self-confidence regarding the use of technology is also a major barrier, directly linked with a lack of digital literacy and enough training opportunities, which Khan (2020) has also identified in his study. It was highlighted in the discussion that ICT not only modernizes teaching methods but also creates new learning opportunities, scope for collaboration and professional networking for female teachers, which

leads them to continuous development. According to the constructivist theory, when a learner gains experiences in a collaborative environment through technology, his professional skills increase significantly, and this was also revealed in this study that when female teachers access online training, webinars, and digital learning platforms, not only their teaching methods are modernized but also their motivation to learn increases. At the same time, in the light of the TAM theory, it was also observed that when female teachers consider ICT to be easy, usable and beneficial, the chances of its use increase manifold, but when facilities are inadequate, these same factors become obstacles. In the concluding part of the research, it was concluded that ICT plays a fundamental role in the professional development of female teachers, but this role can be effectively fulfilled only when technical, social and organizational barriers are addressed. Female teachers clearly felt that ICT significantly enhances their professional identity, self-confidence, teaching quality and learning process, provided they are provided with appropriate training, facilities and a supportive environment.

Thus, this research emphasizes that women's ICT-based professional development not only brings about change in the teaching field but also empowers them at the social and societal level, which needs to be recognized at a broader policy level. The research findings have important implications, according to which educational institutions should adopt continuous ICT training programs, provision of facilities, and technical support as an integral part for female teachers. Management should design training models with gender sensitivity so that women not only have access to digital skills but also have a safe, supportive, and encouraging environment, as Patton (2015) and Merriam (2009) describe the importance of environment and facilities in continuous professional learning. Furthermore, policymakers need to invest in ICT infrastructure, create a technological culture conducive to female workers, and provide social support at both home and school levels, so that female teachers can overcome technological barriers and continue their professional development journeys.



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