

## TEACHERS' PERCEPTIONS OF SMARTPHONE INTEGRATION IN TEACHER EDUCATION: A QUALITATIVE STUDY IN GUJRAT

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DOI: <https://doi.org/10.5281/zenodo.20566306>

Received	Accepted	Published
24 December 2025	08 February 2026	23 February 2026

### ABSTRACT

*This paper examines the teacher perception about smartphone use among teachers through teacher education in Gujrat. With the ubiquity of smartphone in everyday life, there are possibilities, as well as challenges, of using smartphones in the teaching and learning process. A qualitative research design was employed in which semi structured interviews were carried out with teacher educators in order to perceive the benefits, challenges and contextual factors that affect the smartphone use in education. Discovery leads to the realization that, as most teachers identify the pedagogical possibilities of smartphones as a means of professional growth, communication, and access to resources, issues of distractions, the absence of training and policy limitations are still major problems. The challenges hinder the successful adoption of smartphones in learning institutions. According to the results, the paper highlights that correct teacher training and enabling policy should be designed to ensure that the pedagogical benefits of smartphone use in teacher education are maximised.*

### Introduction:

The introduction provides the background of the research by showing the increasing importance of smartphones in the contemporary society and education. Smartphones have a great potential in education sector as they offer instant access to learning tools such as educational resources, interactive applications, online collaborative platforms and networks of learning professionals. The fact that they are becoming more and more a part of academic settings has attracted the concern of teachers and scholars at the global level. Smartphones may be critical in assisting a teacher in instructional practice, lesson planning, classroom management and continuous professional development. They help teacher educators and trainee teachers to

experience update updated material, they can engage in an online discussion hold mixed perception about their value to education and they can take part in reflective learning activities outside the classroom environment. The introduction of smart phones into teacher education is not without its problems, however. It is common among teachers especially because of the fear of distraction to exploit lack of institutional support and ineffective learning. Especially in regions where sustainers are practiced, the point of view of teachers is crucial to learn. Investigating these perceptions is a way of establishing the opportunities and obstacles that are related to the use of smartphones. This knowledge is critical towards coming up with effective strategies, policies and training programs that can foster the intentional and

responsible use of smartphones in teacher education as the case is in Gujrat where learning institutions are experiencing various socio-cultural and technological

### **1.1 Rationale:**

The rationale gives reasons as to why the research is significant and why it is required. Smartphones have a high learning capability since they offer instant access to information, digital educational resources and interactive applications. They may assist in training, lesson planning and continuous professional development in the field of teacher education. Even with these benefits, lots of teachers are still confused about their academic worth particularly in education where there is little infrastructural and formal education. This is a divided perception that generates a disparity between the availability of technology and proper use. The research is thus justifiable since it aims at investigating the actual experiences, perceptions of teachers in a way that can help to explain why smartphones can be used in teacher education in a meaningful and responsible way.

### **1.2 Statement of the problem:**

The research gap that the study intends to close is mentioned in the statement of the problem. Limited empirical studies have been conducted in Gujrat on perception and use of smartphones by teacher educators in training teachers. The lack of clear insight into the attitudes beliefs and challenges of teacher may doom or lead to poor results of smartphone technology implementation in education. The attitudes of the teachers play a significant role in adopting technology in classroom practice. The inability to understand these views presents confusion in policy formulation and curriculum development, and it is time to find out the opinion of teachers in order to develop effective and informed integration ways.

### **1.3 Significance of the study:**

The importance of the study makes it an academic and practical study. The study contributes to the body of research on mobile learning by specifically targeting the field of teacher education in Gujrat, where distinct social-cultural and technological conditions are likely to form the layer of application. Policymakers can use the findings to come up

with realistic and enabling technology policies, guide curriculum developers in integrating mobile learning strategies and teacher trainers in enhancing their professional development initiatives. The study has addressed the opportunities and challenges and will be useful in developing technology-enhanced pedagogies that can be applied to enhance the efficiency of teaching and the quality of education in teacher education institutions.

### **Research Objectives:**

1. To investigate the perceptions of teacher educators with respect to the use of smartphones in teacher education programs.
2. In order to determine the perceived advantages of smartphone use in teaching, learning, and professional development.
3. To focus on issues and problems that teacher educators have in terms of incorporating smartphones in the process of teacher education.
4. To determine the regional and institutional issues that affect smartphone use in teacher education institutes in Gujrat.
5. To propose suggestions in terms of how best and strategically to integrate smartphones in the teacher education depending on the experience of the teachers.

### **Research Questions:**

1. What are the teacher educators perception toward the utilization of smartphones in teacher education programs in Gujrat?
2. Which positive outcomes do teacher educators relate to the use of smartphones in teaching and professional development?
3. What are the difficulties and obstacles that teacher educators encounter in incorporating smartphones in teacher education?
4. What are the institutional and situational conditions that affect the use of smartphones by teachers in teacher education institutes?
5. What are the ways to incorporate the use of smartphones in teacher education programs to support teaching and learning?

### Literature Review:

#### **a. Mobile Learning and Smartphone Technology in Education Idea:**

The high-speed development of the digital technology has practically transformed the character of the educational system in the world. Mobile learning (m-learning) has been a significant paradigm in education that involves the use of mobile devices; particularly smartphones to facilitate learning out of the classroom environment. To support this claim, Crompton (2019) states that mobile learning enables students to access learning materials, communicate with each other and the educators along with being able to engage in the learning process wherever and whenever they want. The most significant factors in supporting m-learning programs have been Smartphones due to their portability and low costs and multi-functional features. The e-learning that is based on the smartphone is more elastic and instantaneous, in contrast to the traditional e-learning systems which are dependent on desktop computers and an Internet connection that is fixed. Smartphones allow the learners and teachers to bridge the formal and informal areas of learning and make sure that the learning materials are always available (Traxler, 2018). The applications, multimedia tools and cloud based platforms are able to facilitate the different strategies of instruction that involve self-paced learning, collaborative learning and experiential learning using Smartphones. However, the issue of smartphone as a learning aid is problematic. Even though the many scholars devote their attention to their capacity to democratize education, the critics assert that smartphones are capable of bringing about distraction, shallow learning and technology reliance. Such contrasting opinions also depict the need to examine the attitude of the teachers towards application of smartphones and mechanisms through which the teachers apply it since they are the deciding factor in the development of meaningful learning experiences.

#### **b. Teacher attitudes and beliefs towards Smartphone use:**

The teachers are known to have attitudes and beliefs that are very important in determining whether technology is adopted in the learning institutions. The Technology Acceptance Model (TAM) which was created by Davis (1989) showed that perceptions of ease of use and perceived usefulness are major determinants of intentions in people to adopt new technologies. In the context of the use of smartphone, the teachers who believe that smartphones can serve to educate and can be easily integrated will be more willing to engage smartphones in teaching. It is empirically proved that the attitude of teachers to smartphones is not always clear. Other educators refer to smartphones as helpful tools to gain information, enhance the interaction between students, and collaborate (Iqbal and Bhatti, 2020). Conversely, other educators have associated the use of cell phones with negative outcomes such as classroom disruption, lack of concentration among learners, academic cheating, and abuse of social media (Khasawneh et al., 2024). These opposite attitudes depend on numerous issues, including digital competence of teachers, their past experiences with technology, organizational culture and possibilities to learn. It has been found out that younger teachers or more digitally literate tend to be more positive about smartphone integration but more experienced teachers may also resist change due to their lack of confidence or training (Lim, 2017). Of particular interest is the need to grasp such beliefs in line with the teacher education institutions, where the educators determine the future teacher approach and technological inclination of the teachers.

#### **c. use of phone in Teacher Education Programs:**

The teacher education programs can play a critical role in equipping pre-service and inservice teachers on how to incorporate technology in their classrooms. Teacher education is starting to use Smartphones, which can be used to facilitate professional learning, reflective practice, and instructional innovation. Smartphones are common among teacher educators as they seek online teaching materials and record micro-teaching lessons, communicate using digital technology, and deliver instructional videos. It has been shown that smartphone use in teacher education can be used to support teacher development through

self-directed learning and reflective practice (Cochrane, 2020). Mobile applications and social network sites also provide teacher trainees with the opportunity to engage in professional learning communities, share their teaching experiences and get prompt feedback. In spite of these benefits, there are a number of difficulties that impede the successful adoption of smartphones in education of teachers. As a result, teacher educators can stick to the traditional teaching approaches to a large extent, and not make the best use of the pedagogical possibilities of mobile technologies. It is thus important to find out the views of teacher educators in order to determine the obstacles and come up with contextually appropriate interventions.

#### **d. The benefits of pedagogical Smartphone Integration:**

An increasing literature reveals many pedagogical advantages connected with the use of smartphones in the educational process. Among the greatest benefits, more improved access to learning materials can be mentioned. Smartphones allow instructors and students to use online libraries, academic articles, educational videos, and open educational resources with the least restrictions (Crompton and Burke, 2018). Communication and collaboration are also made easy with the use of Smartphones. Learning management systems, discussion forums, and messaging applications enable teachers to exchange learning material, to give feedback and to stay in touch with the students even in times outside the classroom. This constant interaction contributes to a positive learning environment and enhances teacher student relationships. In addition, smartphones encourage student-centered and active learning styles. Educational applications, interactive quizzes and multimedia tools facilitate the involvement of learners, creativity and critical thinking. It has been found out that smartphone-based learning can boost motivation, engagement, and digital literacy-abilities without which educators of the 21 st -century cannot do without (Sustainability, 2024) Smartphones are also helpful in the practice of introspection in teacher education as they allow teachers to document teaching

experience, analyze performance, and define professional development needs.

#### **e. Difficulties and Obstacles to Smartphone use in Learning:**

In as much as smartphones have a potential in pedagogy, there are a number of challenges that these devices bring about that negatively affect their application in learning institutions.

Distraction can be considered one of the most often mentioned issues. Educators are usually worried that smartphones make students lose their focus on academic activities due to their social media or gaming, or entertainment activities (Iqbal and Bhatti, 2020). The second significant obstacle is the absence of professional training. A lot of teachers complain that they have not been properly instructed as to how they can use smartphones to do pedagogical integration. In the absence of appropriate training, teachers will find it difficult to match the use of smartphones with the learning goals thereby resulting in an ineffective or inappropriate use. Other obstacles are low internet connectivity, institutional infrastructure inadequacy, devices inequality, and privacy and academic integrity. The tendencies are especially high in developing countries, where the lack of resources significantly contributes to the unwillingness of teachers to implement smartphone-based learning.

#### **f. Professional Development Support:**

Institutional Policies. Policies adopted by institutions are important in forming the practice of teachers concerning the use of smartphones. Well-defined and encouraging policies motivate the use of innovative teaching techniques, and limiting or ambiguous policies can demoralize the use of technology. It has been demonstrated that schools with a solid mobile learning policy and teacher training are more likely to have a high rate of technology integration (Education and Information Technologies, 2025). The professional development programs are important in enhancing confidence and competency of teachers on the utilization of the smartphones. Teachers can use pedagogical and digital tools training and classroom management training to significantly incorporate smartphones into their

classroom work. The willingness of teachers to change to mobile learning processes is also improved in the course of continuous mentoring and institutionalization.

**g. Smartphone usage in emerging countries and the Pakistani example:**

The use of smartphones in developing countries has been increasing rapidly due to the falling prices and expansion of the mobile networks. There has been a great increase in usage of smartphones in Pakistan but not uniform in formal learning. As the research conducted in Pakistan states, teachers see the potential of smartphones in education, and obstacles, such as the lack of preparation, resources, and traditional pedagogical criteria, are becoming obstacles to implementation (Shahid and Ahmed, 2021). The perception of teachers is also influenced by the cultural perception on technology, discipline issues and ambiguity of policies. Basically in a region like Gujrat where the learning institutions are limited either in terms of the infrastructural or even the policy, then learners should learn the experiences of the local teachers so that they can come up with context based solutions

**H. Gaps in research:** Although there is already literature that is available in the use of smartphones in the learning process, gaps still exist. Most of the literature talks about the attitude of students, very little has been done to get the perspective of teacher educator, particularly in the teacher training. In addition, there is a domination of quantitative methods in the field that does not offer much information on lived experience and contextual realities of teachers. Lack of qualitative and region based research in small cities such as Gujrat is very high. To address these gaps, the study at hand is based on a qualitative research approach to examine the perspectives, concerns, and experiences of teacher educators with regard to smartphones usage in teacher learning. In the context of the literature review, the conclusion is as follows: To conclude, one may state that the application of smartphones as a tool of teaching, learning, and professional growth in teacher education has a tremendous potential that can be observed in the literature. Their successful integration but is grossly dependent on the perceptions of the teachers, the institutional policies, the training

of the professionals as well as the issues surrounding them. The present paper will accomplish this gap by considering the views of teacher educators about the application of smartphone in teacher education institutions in Gujrat.

**Research Methodology:**

**a. Research Design:**

the present qualitative research employs a phenomenological design to understand the lived experiences and perceptions of the teacher educators in relation to the use of smartphones. The phenomenological approach is appropriate as it will be able to capture the complexity and depth of the beliefs and perceptions of the teachers concerning integration of technology.

**b. Population:**

It consists of teacher educators that work in teacher education institutes in Gujrat.

**c. Sampling:**

A group of 20-30 students was picked in Gujrat with a variety of teaching experience and subject areas. To have diversity, students of different academic disciplines and years of study were selected.

**Instrumentation:**

**a. Types of Scale:**

There was no numerical scale because this research was qualitative. Instead, a semi structured interview guide was created, which aimed at making responses elaborate.

**Sample questions as:**

What is your experience in using smartphones in teaching? What are the advantages and issues regarding smartphones in teacher education?

**b. Observation Sheet:**

The classroom observations were conducted with the help of an observation sheet which paid attention to the ways in which teachers incorporate smartphones in teaching activities, student engagement and situation-specific dimensions.

**c. Validity:**

Interviews questions were checked by the specialists in the field of educational technology and teacher education to guarantee the content validity. Two teachers were interviewed as pilots in order to optimize the question guide.

#### **d. Reliability:**

The same interview protocol was used to achieve uniformity, which was done through recording of audio-taping and verbatim interviews. Thematic analysis was also pursued in search of inter-coder agreement as a measure of reliability.

#### **Data Collection:**

This study involved the use of qualitative techniques in data collection in order to obtain deep insights concerning the views of teachers on the use of smartphones in teacher education. Primary data collection method was semi structured interviews since it had flexibility and also ensured uniformity among the participants. Purposive sampling was used to select teacher educators in different teacher education institutions in Gujrat to make sure there are different experiences and backgrounds. All the interviews took about 30 to 45 minutes and were taken either in person or through the internet, based on the availability and convenience of the participants. All participants were provided with informed consent before the data collection process and all ethical issues like confidentiality and anonymity were observed. Audio-recorded interviews were transcribed word-to-word with consent and subsequently, the content of the interviews remained untouched to capture the originality of answers. Besides interviews, observational notes were also performed during visits to the classroom where the use of smartphones was observed. These observations were useful in putting the interview data into perspective by giving the real life examples of the teaching practices and teacher-student interactions. The interviews and observations allowed to enhance the credibility of the data and allowed to get a holistic perspective on smartphone integration in teacher education.

#### **Data Analysis:**

The thematic analysis method was used to analyze the qualitative data in order to clearly identify the patterns and themes within the data.

The analysis was based on the six-step model suggested by Braun and Clarke and started with familiarizing the data by repeatedly reading the interview transcripts. Preliminary codes were then created to include important words regarding the perceptions of teachers and their benefits and challenges, and contextual factors of smartphone use. These codes were divided into larger groups and this gave rise to major themes about shared experiences between the participants. Themes were thoroughly examined and analyzed to make sure that they were the best reflection of the data and that they were not similar to each other. In order to maximize reliability, cross-coding was done and inter-coder agreement was obtained where feasible. The analysis also ensured that reflexivity was maintained in order to reduce researcher bias. The last themes were delineated and substantiated with the representative quotations of the answers of the participants. It is through this analytical process that rich and nuanced insights were made on the lived experiences of teachers and meaning was made on how smartphones are viewed and used in teacher education situations.

#### **Discussion:**

The findings are explained based on the objectives of the research and literature. The results indicate that teacher educators are more likely to acknowledge the potential of smartphones as learning tools, particularly, those that revolve around the access to learning materials, better communication, and career development. Those findings align with the literature that is currently available, which introduces smartphones as the tool of facilitating flexible and selfdirected learning. It is also in the study that the ongoing anxieties of being distracted, abusing, and lack of proper training diminish the successful integration. The absence of any formal instructions and institutional guidelines was reflected in the form of the extremely high portion of teachers who were not sure what to do in order to reconcile the use of smartphones with pedagogical purposes. These barriers are in line with the earlier research that concentrates on the importance of teacher training and influence exerted by the institution over adoption of technology. It also comes out in the discussion

that there are contextually specific Gujrat cases such as infrastructural limitation, the socio-cultural attitude towards technology which affects the perception of the teachers. It is a part of the contextualization of the findings into the overall literature and it demonstrates how the study will assist in the understanding of the complex dynamics of smartphone use in teacher education and why context-inclusive integration strategies are needed.

#### Recommendations:

Based on the research findings, certain recommendations are provided to make smartphones a good practice in teacher education. To begin with, opportunities of professional development organized, so that teacher educators could possess skills and pedagogical practices, which would allow them to use smartphones in the meaning they have, must be introduced. The training ought to be focused on the level of instructional design, management both in classroom and the ethical matters of mobile technology. Second, teacher colleges will be required to devise effective policies and guidelines that will define how smartphones should be used in the right and meaningful way. These can help curb abuse and lack of concentration and help in advocating new teaching techniques. Third, tools and online materials that are applicable to the curriculum need to be availed to facilitate the teaching and learning objectives. There should also be institutional support both technically and administrative to enhance the positive attitude towards the integration of the smart phones. Finally, continuous monitoring and evaluation processes to check the effectiveness of smartphone application and address emerging problems should be present. Adhering to these guidelines, it will be possible to transform smartphones into a helpful pedagogical tool, which, in its turn, will result in the improvement of the quality of the educational process of the teachers involved and their professional development.

#### REFERENCES:

Teachers Perceptions of Smartphone Technology Usage in Public Educational Institutes. (2024). *Journal of Media Horizons*. A study on teachers' views of

benefits and drawbacks of smartphones in schools.

- Chindia, B., & Wawire, S. N. (2024). Student attitudes towards smartphone use in a preservice teacher tech course. *Advances in Mobile Learning Educational Research*. Reports students' perspectives and classroom implications.
- Aina, J. K. (2025). Mobile Phone Usage in Higher Education Among Pre-Service Teachers in Nigeria: A Qualitative Study. *Advances in Mobile Learning Educational Research*. Highlights teacher support needs and challenges.
- Smartphones at School: Educators' and Students' Perspectives. (2024). *Education Sciences (MDPI)*. Mixed-methods analysis on mobile phone impacts in classrooms.
- Switching mobile learning on in Pakistan: Students' experiences and perceptions. (2025). *International Review of Education*. Explores mobile learning contexts in Pakistan.
- Smartphone as an educational tool – dental faculty perceptions (2023). *BMC Medical Education (Pakistan)*. Explores higher education faculty views on smartphones as teaching aids.
- Iqbal, S., & Bhatti, Z. A. (2020). A qualitative exploration of teachers' perspective on smartphone usage in higher education in developing countries. *Int. Journal of Educational Technology in Higher Education*. Foundational qualitative insights into teacher perceptions in developing contexts.
- O'Bannon, B. W., & Thomas, K. (2015). Teacher perceptions of mobile phones in classrooms (survey research context). Shows early debates about distraction and instructional value.
- Teacher perceptions of using mobile phones in the classroom (digital native vs. digital immigrant research). Explores how age influences mobile tech perceptions among teachers.
- Teachers' perceptions of mobile devices impacting learning experience (2024). Study links teacher beliefs and digital pedagogy innovations.

- Sung, R., Chang, K., & Liu, T. (2016). Mobile learning in school contexts: review of research trends (often cited in mobile learning literature). Foundational review on educational mobile use.
- Nikou, S. A., & Economides, A. A. (2018). Mobile learning adoption factors in education. Highlights perceived usefulness and challenges of mobile tech integration.
- Kim, M. H., Min, S., Ahn, J. S., An, C., & Lee, J. (2019). Association between adolescent smartphone use and academic outcomes. Shows complexity of smartphone effects in education.

