

## **CHAPTER 5**

### **CONCLUSION**

#### **5.1 Introduction**

The pervasive utilization of mobile phones in the educational sphere has catalysed a surge in interest and engagement among educators and learners alike in recent years. The emergence of Mobile-Assisted Language Learning (MALL) has been facilitated by advancements in web and telecommunication technologies, coupled with the evolution of mobile devices. As Çakmak aptly notes, “With the availability of the web and telecommunication technologies and the advent of mobile devices, there has been growing interest in partaking in language learning more flexibly. This approach is known as Mobile-Assisted Language Learning (MALL)” (37). Additionally, Arvanitis and Krystalli highlight the myriad functionalities of mobile phones, such as audio-video features, high-speed internet connectivity (4G and 5G), hotspot capabilities, Bluetooth connectivity, and ample storage capacity with cloud and drive integration, “has led to their wider integration and smoother use in the field of learning and in the field of language learning as well” (12). The escalating volume of research and studies revolving around mobile-assisted language learning underscores the escalating demand for mobile learning solutions, which have ushered in unprecedented flexibility across various domains, including education. While numerous studies have explored mobile-assisted language learning, there remains a dearth of research focused on evaluating the efficacy of MALL specifically for English language learning, particularly from the perspective of educators teaching in colleges, institutes, and universities in the Gujarat state.

Innovations in teaching methodologies, driven by the integration of Information and Communication Technology (ICT) tools, have revolutionized the global pedagogical landscape and it provide “dynamic and proactive teaching learning environment” (Ghavifekr 24). ICT tools, encompassing projectors, interactive whiteboards, computers, and notably, mobile phones,

have redefined traditional teaching paradigms. The digital transformation of classrooms has precipitated a paradigm shift in instructional approaches, with mobile phones emerging as versatile tools with immense potential to augment language learning endeavours.

The compactness and multifunctionality of mobile phones offer a distinctive avenue for personalized learning experiences. The ubiquitous use of mobile phones among both educators and learners renders them conducive for seamless integration into educational frameworks. Leveraging the myriad capabilities of mobile phones, educators can deliver lectures through diverse formats such as short video clips, audio messages, PDF files, web links, and cloud-based platforms like Google Drive. The wireless and portable attributes of mobile devices engender innovative learning designs, facilitating engagement in language learning even while on the move.

This study delves into the efficacy of digital teaching and learning of the English language, scrutinizing the perceptions and instructional practices of educators operating within colleges, universities, and institutes across Gujarat state. Employing a mixed-method research approach encompassing both quantitative and qualitative analyses, the study endeavours to offer a nuanced understanding of the subject matter. Data collection from educators was accomplished through a combination of questionnaires and personal interviews.

Quantitative data underwent rigorous analysis utilizing statistical tools, meticulously crafted within MS Excel, to discern patterns and trends. Simultaneously, qualitative data analysis delved into educators' viewpoints regarding the integration of mobile technology into English language instruction. The synergistic amalgamation of quantitative and qualitative methodologies was strategic in facilitating a holistic evaluation of mobile technology's efficacy in enhancing English language learning experiences.

The inclusion of personal interviews as part of the research design facilitated a deep dive into educators' perspectives, enriching the qualitative dimension of the study. This comprehensive approach was instrumental in unravelling the multifaceted dynamics underpinning mobile-assisted language learning in the English language education context.

## **5.2 Findings of the Study**

A plethora of respondents and students possess mobile phones with internet connectivity and are proficient in utilizing advanced features and systems of mobile devices. This facilitates learners to enrol in language learning classes and acquire language skills conveniently at their own pace. The study aimed to scrutinize the impact of mobile learning by eliciting the opinions and recommendations of educators regarding the implementation of digital education and their perspectives on mobile-based teaching. The research delved into assessing the potential of mobile learning in English language teaching while considering its advantages and disadvantages. The investigation took the approach of gauging teachers' opinions about their experiences with online learning during the Covid-19 lockdown, aiming to understand the comfort level of teaching and learning language with mobile phones and its popularity among students. It sought to explore educators' views on whether mobile learning contributes to students' proficiency and competence in English language acquisition. The research was conducted through a checklist-cum-questionnaire, and interviews were carried out for an in-depth exploration of the subject.

The study's findings are derived from the analysis of responses to the questionnaire and interviews, employing quantitative and qualitative methods, respectively.

### **Quantitative Research Findings:**

The quantitative research findings presented in this study delve into the intricate realm of mobile-assisted language learning (MALL) within the context of English language education. Through rigorous data collection and analysis, this research aims to unveil key insights regarding the utilization, impact, challenges, and perceptions surrounding the integration of mobile phones as educational tools in language instruction.

The quantitative aspect of this study encompasses a comprehensive examination of educators' and students' experiences, practices, and viewpoints related to mobile-assisted language learning. By employing statistical analysis and structured data collection methods, this research endeavours to provide a

nanced understanding of how mobile devices contribute to the teaching and learning of the English language.

The findings outlined in this section encapsulate diverse facets of mobile-assisted language learning, including the prevalence of mobile phone usage among teachers, the perceived impact of mobile devices on language learning outcomes, the challenges encountered in mobile-based instruction, the development of technical skills among educators, and the awareness and utilization of digital resources such as online libraries and MOOC platforms.

Through a quantitative lens, this research sheds light on the quantitative aspects of mobile-assisted language learning, offering valuable insights that can inform pedagogical practices, curriculum design, and educational policies aimed at enhancing language education through digital means.

- Teachers predominantly utilise mobile phones with smart functions as digital aids for teaching the English language, favouring a blended learning approach to optimise educational outcomes.
- Digital tools like laptops and projectors enhance classroom interactivity, while mobile phones are primarily used for resource searches, audio-visual content, and sharing learning materials via social media.
- The Covid-19 pandemic has shifted educators' perceptions towards online teaching, with many now finding it more convenient post-lockdown.
- Integrating mobile technology with traditional teaching methods is perceived as beneficial, offering a comprehensive learning experience and improved outcomes.
- Game-based learning using mobile phones is lauded for its engaging and efficient approach, particularly in improving reading and listening skills through interactive content.
- Learning English with mobile phones offers portability, flexibility, wireless connectivity, advanced features, and anytime-anywhere access, although challenges such as screen size limitations and reduced peer interaction are acknowledged.

- Students exhibit a preference for mobile devices over traditional classroom interactions, relying on mobile phones for accessing learning resources, definitions, and English language concepts.
- MOOC videos are widely shared with students to promote Massive Open Online Courses as supplemental learning resources.
- Recommendations include integrating mobile learning into institutional curricula, providing teachers with adequate training and digital resources, and leveraging educational applications and games designed for mobile-based English language instruction.
- Ensuring a student-centred approach while addressing potential distractions from social media platforms during learning sessions is essential.
- Despite challenges, educators and students endorse mobile phones as preferred tools for enhancing English language teaching and learning experiences.
- Online platforms like YouTube and WhatsApp are instrumental in facilitating interactive learning experiences across diverse age groups and geographic locations.
- The availability of diverse study materials online, combined with the convenience of repeated access to audio-visual content, supports effective mobile-assisted language learning.
- Digital libraries such as the National Digital Library of India and Internet Archive serve as valuable repositories for educators and learners, enhancing access to educational resources.
- The Covid-19 pandemic has accelerated the adoption of mobile phones for English language learning, highlighting the importance of digital literacy and adaptive teaching strategies.
- Educators note improvements in students' pronunciation, speaking skills, fluency, grammar, and confidence in English language acquisition through mobile-assisted learning approaches.
- The convenience of accessing videos, recordings, and online lectures contributes significantly to students' learning experiences and engagement with English language content.

- Despite initial scepticism, educators have embraced online teaching post-pandemic, recognising its potential for flexible and interactive learning environments.
- Blended learning, incorporating mobile phones as integral components, is perceived as an effective strategy for enhancing students' language skills and academic achievements.
- Strategies to mitigate challenges associated with mobile learning include interactive learning materials, collaborative platforms, and ongoing professional development for educators in digital teaching methodologies.

### **Teachers' Utilization of Mobile Phones for English Language Teaching:**

In the realm of English language teaching, the integration of mobile phones as Information and Communication Technology (ICT) tools has garnered substantial attention among educators. The qualitative data reveals that a significant majority, specifically 90% of teachers, actively employ mobile phones to facilitate English language instruction as “Mobile-assisted language learning has expanded beyond relatively humble beginnings of replicating computer-based activities assigned in formal language learning contexts” (Glenn 03). This adoption of mobile technology signifies a paradigm shift in pedagogical approaches, indicating a departure from traditional methods towards more innovative and digitally enabled teaching methodologies.

The qualitative findings suggest that mobile phones, equipped with smart features, are widely utilised by teachers to augment the educational experience. These devices are not merely viewed as communication tools but are harnessed as powerful aids for delivering engaging and interactive English language lessons. The versatility of mobile phones allows teachers to leverage various functionalities such as audio-visual capabilities, internet connectivity, and access to educational apps and platforms. This comprehensive use of mobile technology underscores its significance in modern language education contexts.

Moreover, while mobile phones serve as primary ICT tools, some educators may complement their teaching strategies by integrating additional devices alongside mobile phones. This approach reflects a holistic use of technology in

the classroom, where educators leverage multiple digital tools to create immersive and effective learning environments for students.

### **Perceived Impact of Mobile Phones on English Language Learning:**

The qualitative analysis delves into educators' perspectives regarding the efficacy of mobile phones in facilitating English language learning. Approximately 39% of respondents express a belief in the significant impact of mobile phones on language acquisition outcomes. This finding underscores the growing recognition of mobile technology as a potent catalyst for enhancing learning experiences and academic achievements.

Furthermore, a substantial majority, accounting for 83% of respondents, note that students exhibit a strong inclination towards using mobile phones to explore and grasp new concepts related to English language learning. This student-driven preference highlights the inherent appeal and accessibility of mobile devices, aligning with the broader trend of digital natives embracing technology for educational purposes.

Educators' observations regarding students' proactive engagement with mobile phones for language learning underscore the device's potential to foster self-directed and independent learning practices. This finding resonates with contemporary educational theories that advocate for learner autonomy and personalized learning experiences, both of which are facilitated by mobile-assisted language learning initiatives.

### **Usage of Digital Mediums by Teachers:**

The qualitative data sheds light on the prevalent use of digital mediums among educators, with platforms like YouTube and WhatsApp emerging as prominent channels for instructional content delivery. "Educational reform in the digital era required teachers to have the ability to integrate information and communication technology into the learning process" (Moonti and Gani 1355). Across different age groups and geographical settings, teachers demonstrate a penchant for leveraging these digital tools to augment their teaching methodologies and engage students effectively.

YouTube, renowned for its vast repository of educational videos and tutorials, serves as a dynamic resource for supplementing classroom lessons. Teachers

leverage the platform to curate and share relevant videos, animations, and multimedia content that resonate with students' learning preferences. This multimedia-rich approach not only enhances content comprehension but also caters to diverse learning styles, promoting an inclusive and immersive learning environment.

Similarly, WhatsApp, a ubiquitous messaging app, is harnessed by educators for seamless communication, resource sharing, and collaboration within academic communities. Its real-time messaging features, file-sharing capabilities, and group chat functionality facilitate quick dissemination of information, feedback exchange, and collaborative learning initiatives among teachers and students.

### **Reasons for Employing Mobile-Assisted Language Learning (MALL):**

The qualitative findings underscore several key reasons cited by educators for incorporating mobile-assisted language learning (MALL) into their instructional practices. Flexibility emerges as a primary advantage, allowing teachers to adapt learning materials, activities, and assessments to suit individual student needs and learning preferences. This adaptive approach fosters a tailored learning experience, catering to diverse learning styles and paces.

Additionally, the availability of diverse study materials accessible through mobile phones enhances educators' instructional capabilities. Teachers can leverage a plethora of resources such as e-books, articles, audiovisual content, online quizzes, and interactive learning apps to create engaging and comprehensive learning experiences. The convenience of accessing videos and recordings repeatedly further reinforces content retention and comprehension among students.

Moreover, the qualitative data highlights the role of mobile phones in facilitating continuous learning beyond traditional classroom settings. Students can engage with learning materials anytime and anywhere, promoting a culture of lifelong learning and self-directed study habits. This anytime-anywhere access aligns with modern pedagogical trends that emphasise the importance of ubiquitous learning environments supported by digital technologies.

### **Challenges in Teaching through Mobile Phones:**

While mobile phones offer myriad benefits for language learning, educators also encounter several challenges when utilising these devices in teaching contexts. The qualitative analysis identifies common challenges such as small screen sizes, network connectivity issues, and the absence of face-to-face interaction as significant barriers to effective teaching through mobile phones.

The limited screen real estate of mobile devices poses challenges in displaying content comprehensively, especially for complex visual materials or detailed text-based content. This limitation may hinder content clarity and readability, impacting students' comprehension and engagement levels during mobile-assisted learning activities.

Additionally, network connectivity issues, including slow internet speeds or unreliable network coverage, can disrupt the seamless delivery of instructional content and collaborative activities. Such technical challenges may impede the smooth flow of lessons and interactions, leading to potential learning interruptions and frustration among both educators and students.

Furthermore, the absence of face-to-face interaction, inherent in traditional classroom settings, poses a pedagogical challenge in mobile-assisted language learning contexts. Non-verbal cues, real-time feedback, and interpersonal communication nuances may be compromised, affecting the depth of student-teacher interactions and the overall learning experience.

Despite these challenges, educators are proactively addressing these issues through innovative instructional strategies, technical troubleshooting measures, and ongoing professional development initiatives focused on leveraging mobile technology effectively in language education contexts.

### **Impact of Mobile Phones, Online Applications, and Online Lectures on English Language Learning:**

The qualitative data reveals the multifaceted impact of mobile phones, online applications, and online lectures on enhancing students' English language skills. Educators highlight that these digital tools contribute significantly to improving students' pronunciation, speaking abilities, fluency, grammatical proficiency, and overall confidence in English language learning.

Mobile phones, equipped with advanced features such as audio-video functions, internet connectivity, and access to educational apps, offer students a dynamic platform to engage with language learning content. Through interactive online applications and multimedia-rich online lectures, students can immerse themselves in authentic language contexts, practice language skills in real-time, and receive immediate feedback on their progress.

Moreover, the qualitative findings suggest that the flexibility and portability of mobile devices facilitate on-the-go learning experiences, allowing students to access learning materials, practice exercises, and participate in online lectures from anywhere at any time. This anytime-anywhere access fosters a culture of continuous learning and self-directed study habits among students, complementing traditional classroom instruction.

#### **Utilization of Digital Libraries and MOOC Platforms:**

The qualitative analysis underscores the widespread utilization of digital libraries and Massive Open Online Course (MOOC) platforms among educators. Approximately 63% of teachers report using digital libraries, with platforms like SWAYAM being recognized as prominent MOOC platforms.

Digital libraries serve as invaluable repositories of academic resources, scholarly articles, e-books, research papers, and multimedia content related to English language education. Educators leverage these digital repositories to access a diverse range of study materials, enriching their instructional content and supporting student learning outcomes.

Similarly, MOOC platforms offer educators and students access to a wealth of online courses, lectures, tutorials, and interactive learning modules. Educators often share MOOC videos and resources with students to supplement classroom instruction, provide additional learning opportunities, and foster self-paced learning experiences.

However, despite educators' awareness of MOOC platforms and digital libraries, the qualitative data suggests that student registration and active participation on these platforms remain relatively low. This disparity highlights the need for targeted strategies to promote student engagement with online

learning resources and encourage active participation in MOOC-based learning experiences.

### **Recognition of Well-Known Digital Libraries:**

The qualitative findings enumerate several well-known digital libraries that are widely recognized and utilized by educators. These include the National Digital Library of India, Internet Archive, N-List, and Universal Digital Library, among others.

These digital libraries serve as comprehensive repositories of educational content, offering educators access to a vast array of scholarly resources, research materials, reference books, multimedia resources, and educational tools. Educators leverage these digital repositories to enrich their teaching materials, augment classroom instruction, and support student research projects and assignments.

The qualitative data underscores the importance of digital libraries in facilitating knowledge dissemination, promoting lifelong learning, and fostering a culture of academic inquiry and research among educators and students alike. These well-known digital libraries play a pivotal role in advancing digital literacy, promoting open access to educational resources, and enhancing the quality of education in English language teaching contexts.

### **Impact of Covid-19 on Mobile Learning and Blended Learning Preferences:**

The qualitative analysis delves into the impact of the Covid-19 pandemic on mobile learning practices and educators' preferences for blended learning modalities. Educators acknowledge a notable increase in the use of mobile phones for teaching the English language following the Covid-19 pandemic, reflecting a broader trend towards digital adoption and remote learning initiatives.

The sudden shift to online and remote learning during the pandemic necessitated the integration of mobile technology into educational practices, leading to enhanced digital literacy among educators and students. This digital transformation has spurred educators to explore innovative teaching

methodologies, leverage digital tools and platforms, and embrace mobile-assisted language learning as a viable pedagogical approach.

Despite the surge in mobile learning activities, the qualitative data indicates that most educators still prefer blended learning modalities that combine traditional classroom instruction with digital tools and online resources. Blended learning offers a balanced approach that harnesses the strengths of face-to-face interactions, collaborative learning experiences, and digital enhancements through mobile technology, ensuring a comprehensive and engaging learning environment for students.

### **Advancement of Teachers' Technical Skills Post-Covid-19 Lockdown:**

The qualitative findings highlight a significant advancement in teachers' technical skills following the Covid-19 lockdown period. The rapid transition to online teaching and remote learning necessitated educators to acquire and refine their technical competencies, leading to a noticeable improvement in their digital literacy and proficiency with digital tools and platforms.

Educators underwent a learning curve during the pandemic, familiarizing themselves with online teaching platforms, video conferencing tools, learning management systems (LMS), and other digital resources essential for delivering effective online instruction. This upskilling initiative empowered educators to adopt innovative teaching strategies, create interactive learning experiences, and engage students in meaningful digital learning activities.

The qualitative data also reflects educators' positive attitudes towards ongoing professional development opportunities, workshops, and training sessions focused on enhancing their technical skills and pedagogical practices in the digital age. This continuous learning ethos underscores educators' resilience and adaptability in navigating digital challenges and leveraging technology to enhance English language teaching and learning outcomes.

### **Role of Mobile Phones in Student-Centric Learning:**

Qualitative analysis highlights the pivotal role of mobile phones in promoting student-centric learning approaches in English language education. Mobile devices empower students to take ownership of their learning journey by

providing access to a wide range of resources, interactive tools, and self-paced learning opportunities.

Students actively engage with mobile apps, multimedia content, language games, and online platforms tailored to their learning preferences and needs. Mobile phones facilitate personalized learning experiences, allowing students to explore language concepts, practice skills, collaborate with peers, and receive instant feedback, thus fostering autonomy and motivation in language learning.

Educators recognize the transformative impact of mobile-assisted language learning on student-centred pedagogies, emphasizing the need to leverage mobile phones as catalysts for promoting active learning, critical thinking, and collaborative knowledge construction among students.

### **Barriers and Challenges in Mobile-Assisted Language Learning:**

The qualitative findings shed light on the barriers and challenges associated with mobile-assisted language learning. Educators and students encounter obstacles such as small screen sizes, limited interactivity in certain apps, network connectivity issues, digital distractions, and the need for technical troubleshooting.

Educators express concerns about maintaining student engagement, managing digital distractions during mobile learning sessions, and addressing disparities in students' access to mobile devices and internet connectivity. Students, on the other hand, face challenges related to navigating complex apps, managing digital literacy skills, and balancing mobile learning with other academic commitments.

Despite these challenges, educators and students adopt adaptive strategies, such as selecting user-friendly apps, optimizing mobile learning environments, providing technical support, and promoting responsible use of mobile devices to mitigate barriers and enhance the effectiveness of mobile-assisted language learning.

### **Perceived Impact of Mobile Learning on Language Proficiency:**

Qualitative analysis reveals a positive perception of the impact of mobile learning on enhancing language proficiency among students. Educators and students alike attribute improvements in language skills, including speaking fluency, listening comprehension, vocabulary acquisition, grammar proficiency, and cultural awareness, to their engagement with mobile-assisted language learning resources and activities.

Mobile phones enable students to practice language skills in real-world contexts, access authentic language resources, interact with native speakers through online platforms, and participate in immersive language learning experiences. This immersive and contextualized learning approach contributes significantly to students' language development and communicative competence in English.

Educators note observable improvements in students' language proficiency levels and academic performance as a result of incorporating mobile-assisted language learning into their teaching practices. The qualitative data underscores the positive impact of mobile learning on language learning outcomes and students' overall language proficiency levels.

### **Collaborative Learning Opportunities Through Mobile Devices:**

The qualitative findings highlight the collaborative learning opportunities facilitated by mobile devices in English language education. Mobile phones serve as catalysts for promoting collaborative projects, group discussions, peer feedback exchanges, and collaborative problem-solving activities among students.

Educators leverage mobile apps and online platforms that support collaborative learning, allowing students to work together on language tasks, share resources, co-create multimedia projects, and engage in virtual language exchanges with peers from diverse cultural backgrounds.

Students value the collaborative nature of mobile-assisted language learning, which fosters teamwork, communication skills, intercultural competence, and a sense of community among learners. Educators recognize the importance of

collaborative learning experiences in enhancing students' language proficiency and interpersonal skills.

### **Future Directions and Recommendations for Mobile Learning Integration:**

The qualitative analysis culminates in future directions and recommendations for effectively integrating mobile learning into English language education. Educators emphasize the need for ongoing professional development and training programs that equip teachers with the pedagogical skills, digital literacy competencies, and best practices for integrating mobile phones into language teaching effectively.

Recommendations also include the development of user-friendly mobile apps and platforms tailored to language learning needs, promoting digital citizenship and responsible mobile use among students, fostering collaboration between educational stakeholders and technology providers, and advocating for equitable access to mobile devices and internet connectivity for all learners.

Furthermore, the qualitative data underscores the importance of research and evaluation initiatives to assess the impact of mobile-assisted language learning on teaching effectiveness, student engagement, and language learning outcomes. Collaboration between researchers, educators, policymakers, and technology developers is essential to drive innovation, address challenges, and harness the full potential of mobile learning in English language education.

In conclusion, the quantitative research findings shed light on the transformative impact of mobile-assisted language learning (MALL) on English language education. By meticulously analysing data and statistical trends, key insights emerge, providing a comprehensive view of the efficacy, challenges, and potential benefits of integrating mobile devices into language instruction.

Firstly, the research underscores a widespread adoption of mobile phones among educators as essential ICT tools for teaching English. A staggering 90% of teachers utilize mobile phones in their instructional practices, indicating a collective recognition of mobile devices as invaluable assets for delivering language content effectively.

Moreover, the findings reveal positive perceptions among both educators and learners regarding the utility of mobile phones in language learning. While 39% of respondents believe mobile phones yield significant results in language acquisition, a substantial majority (83%) acknowledge students' inclination to use mobile phones for grasping new English language concepts. This points to a favourable outlook towards mobile-assisted language learning among stakeholders in the education sector.

Additionally, the study identifies YouTube and WhatsApp as prominent digital platforms widely used by teachers across diverse demographics and geographical locations. These platforms play a pivotal role in disseminating educational content and fostering communication among educators and students, enhancing the learning experience.

Furthermore, the research highlights the advantages and challenges associated with mobile-assisted language learning. Educators emphasize the flexibility, accessibility of diverse study materials, and convenience of revisiting videos and recordings as key benefits of integrating mobile phones in language instruction. However, challenges such as small screen sizes, network issues, and the absence of face-to-face interaction are acknowledged as areas requiring attention to optimize the mobile learning experience.

The study also delves into the impact of the Covid-19 pandemic on mobile learning practices. It notes a significant surge in the use of mobile phones for teaching English post-pandemic, showcasing educators' adaptability and resilience in leveraging digital tools during unprecedented circumstances.

Moreover, the research reveals a positive trend in the enhancement of teachers' technical skills post-Covid-19 lockdown, indicating a growing proficiency in utilizing digital tools and platforms for online teaching. This signifies a transformative shift towards digital pedagogy, with educators embracing technology to facilitate effective language instruction.

Despite challenges, mobile phones remain the preferred digital device for teaching and learning English, as indicated by feedback from both teachers and students. This preference underscores the potential of mobile-assisted language

learning to enhance language proficiency, communication skills, and overall learning outcomes.

In conclusion, the quantitative research findings provide valuable insights into the evolving landscape of mobile-assisted language learning in English language education. These findings serve as a foundation for further research, pedagogical innovation, and policy development aimed at harnessing the full potential of mobile devices in language instruction.

**H1.** Educators in the state of Gujarat exhibit a comprehensive utilization of diverse digital tools to augment the pedagogy of the English language. This comprehensive approach encompasses a spectrum of digital devices, including mobile phones, laptops, desktop computers, e-book readers, tablets, and iPads, integrated strategically within their instructional methodologies. The seamless integration of various digital platforms such as YouTube, WhatsApp, Google Meet, and Microsoft Teams, among others, plays a pivotal role in facilitating the process of English language learning.

The research reveals a remarkable adoption rate of mobile phones among educators, with a striking 90% actively integrating these devices into their teaching practices. This overwhelming endorsement underscores a consensus among the majority of educators regarding the unparalleled convenience and efficacy offered by mobile devices. The prevalent belief among educators is that mobile phones not only introduce a sense of flexibility but also ensure constant accessibility to instructional resources. As such, these findings robustly corroborate and bolster the initial hypothesis posited in the study.

Furthermore, the incorporation of digital tools within the educational landscape of Gujarat extends beyond mobile phones, encompassing a wide spectrum of devices aimed at enhancing the English language learning experience. The strategic utilization of laptops, desktop computers, e-book readers, tablets, and iPads serve to diversify instructional methods, catering to varied learning styles and preferences among students.

The seamless integration of digital platforms like YouTube, WhatsApp, Google Meet, and Microsoft Teams into educators' instructional strategies plays a crucial role in creating dynamic and interactive learning environments. These

platforms serve as integral mediums for delivering educational content, fostering collaborative learning experiences, and facilitating real-time communication between educators and students.

The overwhelming consensus among educators regarding the efficacy and convenience of mobile devices in language instruction highlights a paradigm shift towards digital pedagogy. This shift is underpinned by the recognition of mobile phones as versatile tools that not only enhance instructional delivery but also empower students to engage with course materials in a flexible and accessible manner.

Overall, the findings of the study underscore the transformative impact of digital tools, particularly mobile phones, in revolutionizing the landscape of English language education in Gujarat. The seamless integration of diverse digital devices and platforms not only enhances the teaching-learning process but also aligns with the evolving needs and preferences of modern-day learners.

**H2.** Educators across various educational institutions hold a strong conviction regarding the significant advantages of integrating mobile phones into the teaching and learning paradigm. The widespread availability of mobile phones among students has transformed the educational landscape, providing learners with access to a vast array of educational resources. These resources encompass diverse formats such as videos, audio materials, and online libraries, offering a dynamic and multifaceted learning experience.

The seamless incorporation of mobile phones into the educational process enables students to explore and engage with educational content in a personalized and interactive manner. This personalized approach caters to individual learning styles and preferences, fostering a deeper understanding and retention of course materials. Moreover, the accessibility of educational resources on mobile phones promotes self-directed learning, empowering students to take ownership of their education.

The dynamic nature of mobile learning transcends traditional classroom boundaries, enabling students to learn anytime and anywhere. This flexibility not only enhances student engagement but also accommodates diverse learning schedules and preferences. Additionally, the interactive features of mobile

phones, such as multimedia content and interactive applications, contribute to a more engaging and immersive learning experience.

The findings of the study strongly align with and validate the initially proposed hypothesis, affirming the substantial benefits of integrating mobile phones into the teaching and learning process. The overwhelming consensus among educators regarding the positive impact of mobile learning underscores its potential to revolutionize education and cater to the evolving needs of modern learners.

**H3.** Wireless digital devices like mobile phones offer a flexible and convenient mode for both teachers and students to engage in English language teaching and learning via the internet. The findings of the study strongly support this hypothesis, as evidenced by the high percentage of respondents who utilize mobile phones due to their flexibility (73%) and convenience (73%).

Students particularly favour mobile phones for accessing the web to grasp new concepts, preferring this method over asking questions in class. They often use their mobile phones spontaneously to enhance their vocabulary by learning new words, synonyms, and improving pronunciation. Additionally, students frequently browse YouTube videos or listen to audio/podcasts on their mobile devices as supplementary learning resources.

While teachers express comfort in using mobile phones as digital aids for teaching English, the majority prefer to leverage them as supplementary tools rather than primary instructional devices. This preference aligns with the overall trend of utilizing mobile phones for their flexibility and convenience in enhancing the teaching and learning experience in the English language domain.

**H4.** The acknowledgment of mobile phones' significant impact on students' academic performance by educators is indeed notable. However, a critical observation arising from the study contradicts the initial hypothesis. Despite recognizing the positive influence of mobile phones on learning outcomes, a substantial majority of educators express a clear preference for blended learning approaches rather than exclusively relying on mobile-based learning.

This finding suggests that while mobile phones are valued for their contributions to education, they are viewed as part of a broader ecosystem of instructional tools and methodologies. Educators see blended learning, which combines traditional classroom instruction with digital resources like mobile phones, as a more effective and comprehensive approach to enhancing student learning outcomes.

Therefore, the study challenges and rejects the hypothesis that educators overwhelmingly favour exclusive reliance on mobile learning in English language education. Instead, it highlights the importance of integrating mobile phones into a well-rounded educational framework that includes a mix of traditional and digital teaching methods.

**H5.** The study's findings shed light on educators' perceptions regarding the delivery of English language lectures through mobile phones. A significant proportion, accounting for 42% of respondents, acknowledge the ease and convenience associated with teaching and learning English via mobile devices. This recognition underscores the potential of mobile phones in simplifying the educational process and enhancing accessibility to language content.

However, despite this acknowledgment, the research introduces an intriguing dynamic. When presented with the option to choose between mobile learning, traditional learning, and blended learning, the majority of participants expressed a preference for blended learning approaches. This preference indicates that while mobile phones offer certain advantages in language instruction, educators believe that a combination of traditional classroom methods and digital resources yields optimal learning outcomes.

As a result, the study's findings deviate from the initially posited hypothesis, highlighting an inconsistency between educators' recognition of the benefits of mobile learning and their ultimate preference for a blended learning approach in English language education.

**H6.** The study's exploration into students' spontaneous use of mobile phones, particularly their audio-video features, reveals a proactive approach to accessing study resources and enhancing English language learning. The findings affirm that a significant number of respondents reported using mobile

phones to learn pronunciations, understand new meanings, concepts, and synonyms effectively. This positive response indicates that students rely on mobile devices as valuable tools for self-directed learning and skill development in English language acquisition.

Consequently, the study's findings align closely with the initially proposed hypothesis, which posited that students utilise mobile phones extensively for language learning purposes. The widespread and proactive use of mobile phones among students in accessing study resources and enhancing language skills supports the hypothesis and underscores the significant role of mobile-assisted language learning in modern educational practices.

**H7.** The post-Covid-19 lockdown era has witnessed a notable transformation in educators' technical skills, particularly in the realm of online teaching. The mandatory shift to online education during the pandemic necessitated educators to adapt swiftly to digital platforms and tools, thereby enhancing their proficiency in online teaching methods. This accelerated learning curve has not only improved teachers' technical competencies but has also fostered a greater acceptance and integration of mobile phones as viable tools for teaching and learning the English language.

Prior to the pandemic, both teachers and students harboured scepticism towards the efficacy of mobile phones in language education. However, the mandatory transition to online teaching due to Covid-19 compelled educators and learners to become accustomed to using mobile phones as part of their educational toolkit. This increased familiarity and comfort level with mobile devices have led to a significant uptick in their usage for English language teaching and learning purposes.

The study's findings corroborate the hypothesis, with 86% of respondents acknowledging a marked improvement in their technical skills post-Covid-19 lockdown. This enhancement in technical proficiency has translated into a more seamless and effective adoption of mobile phones for language education. Additionally, the study reveals a notable increase in the utilization of mobile phones for teaching English, with 76% of respondents using mobile devices before the lockdown and a substantial 87% using them after the lockdown.

Therefore, the Covid-19 pandemic has not only accelerated the adoption of digital technologies in education but has also catalysed a positive shift in attitudes towards mobile learning. The increased comfort level and technical competence among educators and students signify a promising trajectory for the continued integration of mobile-assisted language learning in the post-pandemic educational landscape.

**H8.** Digital libraries have revolutionized the way educators and learners access educational materials, offering a wealth of resources in a convenient online format. The accessibility and versatility of digital libraries make them indispensable tools for both teachers and students, eliminating the need for physical books and providing seamless access to a vast array of content.

Prominent digital libraries like the National Digital Library of India, JSTOR, Internet Archive Books, The British Library, and N-List have become go-to platforms for educational materials. These platforms are highly conducive to mobile learning, allowing users to access resources using their smartphones, laptops, or computers, thus enhancing flexibility and ease of use.

Despite the charm of physical books, digital libraries, and online courses such as MOOCs have gained significant traction due to their accessibility and time-saving benefits. However, while these resources offer immense value, our study reveals a notable gap in awareness and uptake among students regarding online courses. This discrepancy challenges the initial hypothesis positing widespread utilization of online courses and digital libraries among students.

In conclusion, digital libraries play a pivotal role in modern education, offering unparalleled convenience and accessibility to a vast repository of educational materials. While their benefits are undeniable, there remains a need for increased awareness and promotion of online courses to fully harness the potential of digital resources in education.

**H9.** Teaching and learning the English language through mobile phones present a myriad of challenges and limitations that impact its efficacy. One of the primary challenges identified in the study is the constraint posed by small screen sizes, which can hinder the delivery and reception of educational

content. Additionally, network issues often disrupt the seamless flow of online classes, leading to interruptions and decreased engagement among learners.

Furthermore, the absence of physical presence in online classes through mobile phones creates a barrier to effective communication and interaction between teachers and students. This limitation can impede the development of a conducive learning environment and hinder active participation from students.

The study underscores these challenges and limitations as significant factors influencing the overall effectiveness of Mobile-Assisted Language Learning (MALL) for teaching the English language. The findings align with the hypothesis, highlighting the need to address these issues to optimize the potential of mobile learning in language education.

**H10.** The study reveals a nuanced perspective regarding the ease of teaching through mobile phones among educators. While 42% of teachers acknowledge the convenience of teaching using mobile devices, a significant majority of 90% actively incorporate mobile phones into their teaching practices for English language learning. This demonstrates a general willingness and acceptance of mobile learning among teachers.

However, despite the recognition of mobile phones as effective teaching tools, a notable finding is that most teachers still prefer a blended mode for teaching English. This preference for blended learning indicates that while educators appreciate the benefits of mobile learning, they also recognize the value of integrating traditional teaching methods.

As a result, the study does not fully support the initial hypothesis, as it reveals a preference for a blended approach over exclusive reliance on mobile learning among educators in teaching the English language.

**H11.** The study sheds light on the efforts made by many teachers and colleges to promote mobile and online learning, including Massive Open Online Courses (MOOCs). However, the findings reveal that not all colleges actively support or encourage these forms of learning, particularly when it comes to using mobile phones for English Language Learning (ELL).

Despite the promotion of MOOCs and digital libraries, the uptake among students remains relatively low. Only 66% of respondents indicate that a few

or none of their students have signed up for MOOCs, indicating a lack of enthusiasm or awareness among students regarding these platforms. Additionally, a mere 27% of teachers express confidence that their students regularly use digital libraries, which is considerably low considering the potential benefits of accessing educational resources online.

As a result, the findings of the study contradict the initial hypothesis, suggesting that there are significant challenges and barriers to widespread adoption and utilization of mobile and online learning tools among students and educators in the context of English Language Learning.

**H12.** The study highlights the integral role of mobile phones in the daily teaching practices of educators, particularly in the context of teaching the English language. A significant majority, comprising 72% of respondents, actively use mobile phones as teaching aids in their day-to-day instructional activities related to English language teaching. These educators utilize mobile phones to share a wide range of study materials with their students, including study notes, audio and video resources, files, and website links. The internet and various social media platforms serve as conduits for disseminating these resources, underscoring the seamless integration of mobile technology into the teaching process.

Moreover, the study reveals that 64% of teachers opt to use mobile phones primarily due to their high accessibility. Mobile devices offer a plethora of study materials accessible through the web, catering to the diverse learning needs of students, including those in rural areas. This accessibility ensures that students, regardless of their geographical location, have access to a rich repository of learning resources essential for language education.

As a result, the findings of the study strongly support the hypothesis that mobile phones play a crucial role in enhancing students' access to a diverse array of study materials, thereby contributing significantly to language education.

**H13.** The study findings strongly support the hypothesis, as evidenced by the overwhelming majority of teachers, 83% to be precise, affirming that students promptly utilize mobile phones for learning English. This prompt usage is attributed to the wide range of study resources accessible through mobile

devices, including digital libraries, dictionaries, and the internet. These resources offer various features that aid in enhancing students' language skills, communication abilities, and overall confidence in using the English language.

The accessibility of digital resources through mobile phones plays a pivotal role in students' language learning journey. They can access a wealth of information and educational materials with ease, thereby facilitating a more engaging and interactive learning experience. The convenience and versatility of mobile devices empower students to explore different aspects of language learning, such as vocabulary expansion, grammar comprehension, pronunciation practice, and language fluency development.

Furthermore, the study underscores the positive impact of mobile learning on students' language proficiency and communication skills. By leveraging mobile phones as educational tools, students can engage in self-directed learning, explore diverse learning resources, and practice language skills independently. This autonomy fosters a sense of ownership and motivation among students, leading to improved language acquisition outcomes.

In summary, the study's findings provide compelling evidence that supports the hypothesis, highlighting the instrumental role of mobile phones in facilitating students' access to study resources and enhancing their language learning experiences.

**H14.** The study's findings reveal an interesting trend regarding the promotion and uptake of Massive Open Online Courses (MOOCs) among students. While a significant majority of teachers, 79% to be precise, encourage their students to explore MOOCs for language learning, only 66% of teachers observe that very few or none of their students actually sign up for these courses. This discrepancy between encouragement and actual student participation suggests a potential lack of awareness or engagement among students regarding the benefits and opportunities offered by MOOCs.

However, the study also sheds light on an important aspect: the impact of active promotion and advocacy by teachers for government initiatives related to digital language learning. When teachers actively promote these initiatives, such as MOOCs, it significantly increases students' involvement and

engagement with these platforms. This proactive approach by teachers plays a crucial role in bridging the gap between encouragement and actual student participation in digital language learning resources.

Therefore, while the initial hypothesis may not be directly supported by the findings regarding MOOCs' uptake, the study emphasizes the influential role of teachers in fostering student engagement with digital learning platforms. It underscores the importance of continued promotion and advocacy by educators to maximize the benefits of government initiatives aimed at enhancing digital language learning opportunities for students.

**H15.** The study's findings indicate a strong preference among teachers for the blended learning approach, with 77% of educators endorsing this method as optimal for improving English language skills. This endorsement underscores the significance of integrating technology, including mobile learning, into traditional classroom teaching methods, aligning with contemporary educational trends.

Blended learning combines face-to-face instruction with online and digital resources, offering a comprehensive and versatile approach to language education. It leverages the benefits of both traditional teaching methods and modern technology, providing students with diverse learning experiences that cater to their individual needs and preferences.

The study's support for the blended learning approach reflects an acknowledgment of the evolving role of technology in English education. It highlights the importance of adapting teaching practices to incorporate digital tools effectively, enhancing the overall learning experience and fostering students' language proficiency, communication skills, and confidence.

The conclusions drawn from the research hypotheses shed light on the complex dynamics of mobile-assisted language learning (MALL) and its impact on English language education. Through a comprehensive analysis of quantitative and qualitative data, several key findings have emerged, shaping our understanding of the efficacy, challenges, and potential of integrating mobile devices into language instruction. Firstly, the research confirms that educators in Gujarat extensively use digital tools, including mobile phones, laptops, and

digital platforms like YouTube and WhatsApp, to enhance the teaching of English. There is a notable consensus among teachers regarding the convenience and accessibility offered by mobile phones, with a majority incorporating them into their daily teaching practices. However, despite the recognition of mobile phones' benefits, there is a preference among educators for a blended learning approach that combines traditional methods with digital tools. The study also highlights the positive impact of the Covid-19 pandemic on advancing teachers' technical skills related to online teaching and promoting mobile learning. Teachers and students have become more accustomed to using mobile phones for language learning, leading to increased comfort and proficiency in leveraging digital resources. Furthermore, the findings reveal that while mobile phones offer high accessibility to diverse study materials and facilitate spontaneous learning among students, challenges such as small screen sizes and network issues persist. These limitations underscore the need for continuous improvements in mobile-assisted language learning to optimize its effectiveness. Despite the challenges, mobile-assisted language learning shows promise in enhancing students' language skills, communication, and confidence. The study supports the notion that technology, particularly mobile learning, plays a significant role in modern language education. However, it also emphasizes the importance of a balanced approach that combines mobile learning with traditional teaching methods to create a comprehensive and effective learning environment.

Hence, the research findings underscore the evolving landscape of language education in the digital age and emphasize the need for ongoing research, pedagogical innovation, and professional development to harness the full potential of mobile-assisted language learning in English language education.

### **5.3 Contribution of the Research**

This doctoral research delves into English language education, specifically focusing on digital teaching and learning through mobile-assisted language learning (MALL) in Gujarat's urban and rural areas. The primary objective is to assess the efficacy of using mobile phones for English language learning while emphasizing digital literacy, quality education, equality, current demand, alternative education modes, challenges in mobile learning, innovative teaching

practices, alignment with National Education Policy (NEP) 2020, and promotion of digital resources, “The recent rise in epidemics and pandemics necessitates that we are ready with alternative modes of quality education whenever and wherever traditional and in-person modes of education are not possible” (NEP 2020 58). The study significantly advances digital literacy among educators and students by using mobile phones as tools for English language learning. This emphasis on digital skills is essential in today’s technology-driven world, equipping stakeholders with competencies to navigate modern education effectively. The research explores innovative methods of teaching English through mobile devices, evaluating digital resources’ effectiveness in enhancing language skills. This contributes to improving educational outcomes and overall learning experiences. By leveraging widely available mobile phones, the study promotes equal opportunities for English language education across socio-economic backgrounds, ensuring inclusivity in access to effective learning tools. The study responds to the global demand for English language proficiency by focusing on its relevance in contemporary society, aligning educational strategies with learners’ evolving needs. Recognizing the significance of alternative education during crises like the Covid-19 pandemic, the research explores mobile learning as a flexible option for teaching English, ensuring continuity in education. Identifying challenges such as network issues and limited interaction, the study proposes strategies to enhance mobile learning effectiveness, including infrastructure improvements and user-friendly platforms. Teachers’ roles as influencers in mobile learning design are highlighted, with the study aiming to support innovative pedagogies and learner-centred approaches. The research aligns with NEP 2020’s objectives, promoting quality education through technology and digital infrastructure enhancement. By advocating for digital libraries, MOOCs, and government initiatives, the study enhances access to quality learning materials and continuous professional development. In conclusion, this research significantly contributes to improving English language education through MALL, addressing key aspects such as digital literacy, quality education, equality, alternative modes, challenges, innovative practices, policy alignment, and

digital resource promotion. Its findings have practical implications for educational stakeholders, benefiting educators, students, and institutions alike.

Digital literacy is a crucial skill set in today's technologically driven world, "Digital literacy is the ability to use information and communication technologies to find, evaluate, create, and communicate using both cognitive and technical skills" (Niti Aayog, Atal Innovation Mission). The research contributes significantly to advancing digital literacy among educators and students by focusing on the use of mobile phones as tools for English language learning. The emphasis on digital skills is essential, considering the increasing reliance on technology in various aspects of life, including education. By exploring how mobile devices can enhance language learning, the research aims to equip educators and students with the necessary digital competencies to navigate the modern educational landscape effectively.

Quality education is a cornerstone of societal development and individual growth. The study endeavours to foster quality education by exploring innovative methods of teaching and learning English through mobile devices. This includes evaluating the effectiveness of digital resources and strategies in enhancing language skills. By identifying effective digital teaching methods and resources, the research aims to contribute to the improvement of educational outcomes and overall learning experiences for students.

Access to quality education should be equitable across different socio-economic backgrounds. One of the essential aspects of this research is its focus on promoting equality in accessing English language skills. By leveraging mobile phones, which are widely available across various socio-economic strata, the study aims to provide equal opportunities for language education. This inclusivity is crucial in ensuring that all learners, regardless of their background, have access to effective language learning tools and resources.

English language learning is in high demand globally due to its importance in various spheres such as education, business, and communication. The decision to concentrate on English language learning in this research is driven by its current demand and relevance in contemporary society. The study responds to

the evolving needs of learners and educators in the digital age, where proficiency in English is increasingly valued and sought after.

The Covid-19 pandemic highlighted the importance of alternative modes of education, especially during times when traditional in-person teaching is not feasible. The research acknowledges this need and explores mobile learning as an alternative mode of education, particularly in the context of teaching English. By examining the effectiveness of mobile-assisted language learning, the study contributes to ensuring continuity in education and providing flexible learning options for students and educators.

While mobile learning offers several advantages, it also presents challenges that need to be addressed for optimal effectiveness. One of the significant contributions of this research is its exploration of the challenges and limitations of mobile learning. By identifying these challenges, such as network issues, small screen sizes, and limited interaction, the study aims to propose strategies to overcome them. This includes recommendations for improving infrastructure, designing user-friendly mobile learning platforms, and providing adequate support to educators and students.

Teachers play a pivotal role in designing and delivering effective mobile learning experiences. The research recognizes teachers as key influencers and course designers who possess a nuanced understanding of students' needs. By gathering insights into teaching practices and educators' opinions regarding mobile learning, the study aims to support innovative teaching methods. This includes incorporating technology-enhanced pedagogies, utilizing interactive learning resources, and fostering a learner-centred approach to education.

The study aligns with the objectives outlined in the National Education Policy (NEP) 2020, which emphasizes the promotion of alternative modes of quality education. NEP 2020 acknowledges the importance of leveraging technology for improved learning outcomes and enhancing digital infrastructure in education. By aligning with these objectives, the research contributes to the broader goals of digital transformation in education and supports the implementation of NEP 2020 initiatives at the grassroots level.

Digital libraries, Massive Open Online Courses (MOOCs), and government initiatives play a crucial role in promoting digital education and providing access to quality learning resources. The research contributes to promoting these digital resources in education, particularly in the context of English language learning. By highlighting the potential of mobile learning and encouraging stakeholders to leverage digital platforms, the study aims to enhance access to educational materials, promote lifelong learning, and support continuous professional development for educators.

In conclusion, this research has made significant strides in enhancing English language education through mobile-assisted language learning (MALL) across urban and rural areas of Gujarat. The study's multifaceted approach, spanning from advancing digital literacy to supporting innovative teaching practices, reflects its comprehensive nature in improving language learning outcomes. By focusing on key areas such as fostering quality education, promoting equality, addressing current demand, exploring alternative modes, and overcoming challenges in mobile learning, this research has provided valuable insights and recommendations.

The findings of this study hold practical implications for various stakeholders. For policymakers, the research offers insights into policy development related to digital education and language learning strategies. Educators can benefit from the study's recommendations for integrating mobile learning into their teaching practices and fostering a learner-centred approach. Students stand to gain from improved access to quality learning resources and enhanced language skills development.

Furthermore, the research aligns with the National Education Policy (NEP) 2020 objectives, contributing to the broader goals of digital transformation in education. Its promotion of digital resources, support for alternative education modes, and emphasis on digital literacy are in line with contemporary educational trends and needs. Overall, the findings and recommendations of this research pave the way for future advancements in the field of digital teaching and learning, ultimately benefiting educators, students, and educational institutions by enhancing the effectiveness and inclusivity of English language education.

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