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ANALYSIS OF WAYS AND MEANS FOR ENHANCING LITERACY & EDUCATION FACILITATION IN INACCESSIBLE AREAS THROUGH E-LEARNING

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KEYWORDS

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ABSTRACT

This research study analyses the ways and means of enhancing the literacy and education facilitation in inaccessible areas over e-learning. The study explores current state of education and literacy in remote and inaccessible areas and the potential of e-learning to provide access to education. The basic objectives of study were to explore the ways and means to enhance literacy and education facilitation in inaccessible areas through e-learning and also to investigate the challenges faced by learners and educators in remote areas with limited access to educational resources and potential of e-learning to overcome these challenges. Due to the qualitative nature of the study, the available literature was analyzed by using coding followed by thematic analysis and discussion. The study highlighted key factors that contribute to the successful implementation of e-learning in remote areas, including infrastructure, internet connectivity, availability of digital devices, and digital literacy skills. The research findings suggest that e-learning can significantly improve literacy & education in inaccessible areas by providing access to high-quality educational resources & facilitating remote learning. Further, study recommends the implementation of e-learning programs as a means of enhancing literacy and education facilitation in the inaccessible areas.

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INTRODUCTION

The government is spending a lot of resources to increase the literacy rate in the country. Even though we haven't yet seen the expected rise in literacy, there is still optimism that government will step up its efforts to fulfil the promises made in different past educational policies but still, a gap is evident in implementation (Gowdy, Cubric, Pechenkina, Dyer, Pyper, Söbke & Spangen, 2023). Literacy is a human right, a way to give people more power over their own lives, and a

way to help people and society grow (Ashraf & Ismat, 2016). The access to education depends on literacy. Literacy must be the focus of primary education for everyone if we want to get rid of poverty, lower child mortality and slow population growth. We also need to make sure men and women have same rights and ensure sustainable development, peace, and democracy (Shakir, Lone & Zafar, 2012). Every country has a unique system for calculating the literacy rate. Most of them are based upon the national population counts, but surveys from campaigns and other information from national publications and reports used to collect more detailed information. The most accurate way to gauge someone's level of literacy is to assess their reading, writing, and math abilities in a social setting (Maphosa & Bhebhe, 2019). In Pakistan, only reliable way to figure out literacy rate and levels is to look at national population census (Ashraf & Ismat, 2016). Education is vital for human growth, as it helps people become well-informed members of society.

A large number of empirical studies show a strong link between education and development of a country, and it is essential that residents of developing nations have access to basic services like health care and education. It is well known that a large number of people who could read and write helped United States and other Western countries grow and improve in almost every way, similar to Japan, Korea, Singapore, Malaysia, and Thailand. (Ashraf, & Ismat, 2016). The e-learning is a type of education where instructional materials are delivered electronically and contact between instructors and students is facilitated by the use of electronic devices such as computers, the internet, and mobile phones (Rafiq, Hussain & Abbas, 2020). It emphasizes the acquisition of information and abilities and uses Internet to teach and learn. It includes student work plans, communication, teacher-to-student communication, content delivery, enrichment, research, and publishing. E-learning is act of choosing among wide variety of tools available on Internet to improve education (Safdar, Shabir & Khan, 2018). The internet is largest network in use today, connecting billions of individuals all over the world. Before 1990s, it had a small user base and was controlled by a few large corporations. The creation of World Wide Web by Tim Berners-Lee revolutionized networking by enabling users to upload and receive the data from anywhere in the globe (Safdar et al., 2018). Internet provides multitude services, ranging from email to video conferencing, print to electronic media, advertising to e-commerce, knowledge sharing, assignment writing, searching for educational resources & growing one's global friend network.

Problem Statement

Literacy and education are vital to individual and societal development. Literacy skills enable individuals to communicate effectively, access information and participate fully in society. The education helps to develop critical thinking, creativity, and problem-solving skills in addition to giving them knowledge and talents needed to excel in a range of industries and occupations. Access to quality education and literacy skills can have far-reaching impacts, improving health outcomes, reducing poverty, and promoting economic growth. Our government is spending a lot of resources to increase the literacy rate in the country. However, we have not yet seen the expected rise in literacy in the country in general and in inaccessible areas in particular. The government needs to step up its efforts to fulfil promises made in past educational policies. The problem addressed in this study is related to exploration of ways and means toward e-learning. It is, thus, needed to analyze ways and means for enhancing literacy and education facilitation in inaccessible areas over e-learning. The following questions were used to probe the matter at hand.

Research Questions

1. What is the current state of literacy and education in the inaccessible areas in Pakistan?
2. How e-learning approach is effective for enhancing literacy & education in inaccessible areas?
3. What are the best practices and lessons learned from existing e-learning programs in inaccessible areas?

Objectives Of Study

1. To find out the current state of literacy and education in inaccessible areas in pakistan.
2. To analyze effectiveness of e-learning as a means of facilitating literacy and education in inaccessible areas.
3. To investigate the factors that influences the successful implementation of e-learning in inaccessible areas, and to suggest policy recommendations on the basis of findings of the study.

LITERATURE REVIEW

The search for knowledge and education began centuries ago, and every century has its own patterns and effects on future. The end of one millennium signals and opens the door to fresh concepts for future generations. The previous millennium left road maps for this millennium's educational trip in shape of remote learning, e-learning, m-learning, and other technologies. Pakistan needs a paradigm change from established networked interactive educational model to achieve economic and sustainable growth (Iqbal, & Ahmad, 2010). E-learning is educational tool that teaches, puts things in context, builds things, and helps people talk to each other. It also helps students develop higher-order skills like working across time and space and solving challenging problems in the real world. It can help target disadvantaged populations by easily expanding education providing students with a digital identity and linking all the education stakeholders. It makes transdisciplinary research easier. The scope of study is delimited to the description of E-learning approaches used for enhancing literacy levels in inaccessible areas of Pakistan.

Policy Approach to Literacy & Education

Pakistan is the sixth most populated nation in world and has one of fastest-rising populations. According to Pakistan's constitution, both basic and secondary education must be free for all citizens. According to Article 25-A of the country's constitution, the state must offer childrens aged 5 to 16 in Pakistan free and necessary quality education (Ashraf & Ismat, 2016). The state is required under Article 37-B of Pakistani Constitution to end illiteracy in the nation and offer free, mandatory education. Thus, the state must eliminate illiteracy and offer free and required secondary education in the shortest amount of time (Ashraf & Ismat, 2016). The government of Pakistan recognized the importance of education as the most important sector and a critical element in the development of the young nation, even though its top priorities at the time of the country's founding in August 1947 were the expeditious rehabilitation of the millions of refugees and restructuring of the administrative system. Therefore, the first message of Quaid-e-Azam in the First All Pakistan Education Conference stressed the acquisition of the Six-Year free and compulsory education (Saif & Naz, 2016). Therefore, in 1958 the government passed a decision to appoint Commission for National Education. The main recommendations of the commission were;

a. The Commission believed that in order to produce skilled labour and educated citizens, primary school education should be made mandatory. Commission advised five years of mandatory schooling in ten years and eight years of mandatory schooling at fifteen years of age.
b. A child's functional literacy, all aspects of personality, basic knowledge and abilities, and habits of initiative, integrity, and curiosity should be main objectives of primary education.
c. The curriculum should be modified to take into account children's mental capacities. It must be planned to help people learn fundamental skills. Activities should be the focus of instruction.
d. School structures and furnishings must be plain, affordable, tidy and made of materials and designs that are appropriate for the area.
e. To ensure that teachers are prepared to fulfil demands of primary education, training facilities should be made available. For untrained instructors, refresher courses should also be organized (Saif & Naz, 2016).

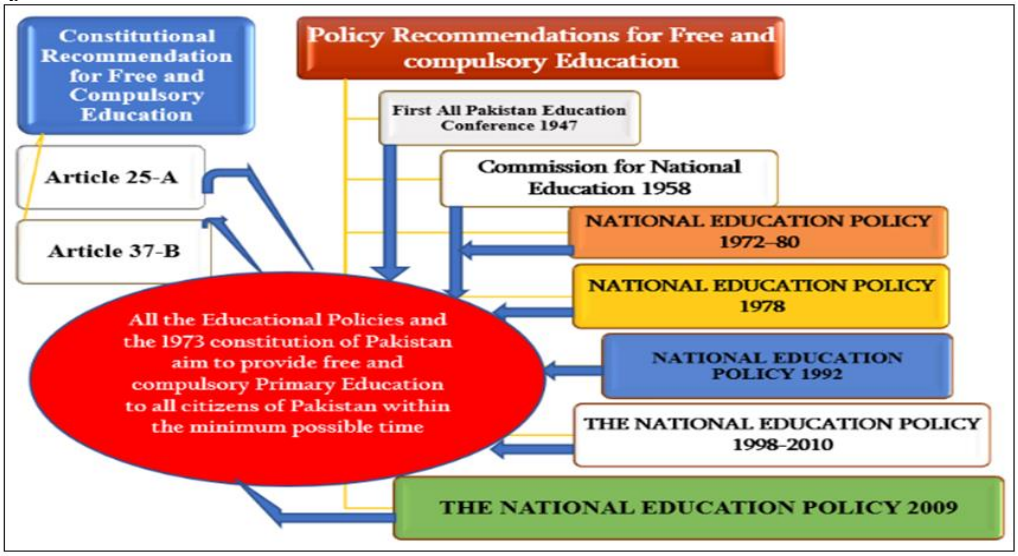
Then according to NATIONAL EDUCATION POLICY 1972–80 once again promise of achieving free and compulsory education was repeated. The policy projected that elementary education would be provided to all boys by the year 1979 and to all girls by the year 1984 (Waheed, 2020). Similarly, the same claim was repeated in NATIONAL EDUCATION POLICY 1978 for achieving universal primary education. The plan called for an increase in primary school enrollment such that by 1982–1983 all males of school age were enrolled. Thus, by 1986–1987, males would be enrolled universally. By 1992, the universalization would be accomplished for girls. To reach the goal, necessary provisions will be provided in form of physical facilities, educational resources, and pre-service and in-service teacher training. The creation of about 5,000 mosque schools was a start in that direction, but many other non-formal methods would also be employed to attain elementary education for all (Waheed, 2020). In same chain, NATIONAL EDUCATION POLICY 1992 advocated that every child in Pakistan has a basic right to the primary education, which will be made mandatory and free by the end of the decade in order to attain universal enrolment.

The provinces will decide on medium of teaching. The quality of schooling would be improved with special efforts. Primary education development in the private sector would be supported, but commercialization would be avoided through stringent management and oversight. To Proceed further THE NATIONAL EDUCATION POLICY 1998-2010, claims that, “The right of every person to an elementary education is unalienable”. Compared to other sectors, it is the cornerstone and basis of the entire educational pyramid. As a result, the government gave more importance to the issues of reducing illiteracy and promoting elementary education across all of Pakistan in its strategy (Waheed, 2020). In this linking, the last educational policy, National Education Policy 2009 which is also called open and live documents, means that there will be amendments in the policy documents but will not be replaced by other policy also repeated that universal primary education will be achieved in minimum possible time (Waheed, 2020). Now after the 18th amendment, education has been removed from the concurrent list and developed to the provinces and now provision of the educationand its development is only the provincial subject.

In line, The Government of Punjab already announced an education policy for the province of Punjab while the policy document in KP is ready to announce. Apart from Government both

international and domestic organizations, including the UNDP, helped Pakistani government to improve effectiveness of primary education system and eradicate illiteracy. Yet, not much has been accomplished far to demonstrate any appreciable progress in achievement of the target objectives and caliber of basic education provided by these establishments. Current study took into consideration the findings of studies that is published thus far on subject of illiteracy and educational development and attempted to analyse all those indicators with which Pakistan satisfactorily delivered all that was necessary to achieve primary education for all (PEFA) and a literate nation. The summary of policy provisions for literacy enhancement are represented in the figure.

Figure 1
Policy Provisions



Literacy Rate in Pakistan

In the light of educational policies, and measures passed through different period the impacts on the literacy level is manifested in the following tables, which seems unsatisfactory from the figures.

Table 1
Educational Policies in Different Period

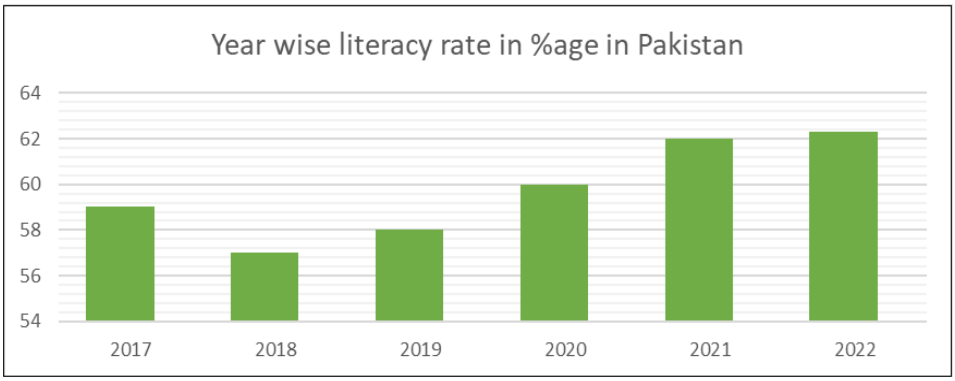
	2017	2018	2019	2020	2021	2022
Literacy Rate	59.03	57.00	58.00%	60.00	61.00	62.30
Increase	2.15%	-2.12%	0.99%	0.99%	0.99%	1.30%

Data Source: World Bank

Due to current census of Population senses 2023, the PSLM Survey was not conducted during 2021–2022. As a result, the analysis may take into account the data from most recent poll on GER and NER. However, Labour Force Survey 2020–21 reports that literacy rates are trending downward, with rate of 62.8% in 2020–21 (compared to 62.4 % in 2018–19) and higher among

males (73.0 to 73.4%) than females (from 51.5% to 51.9%). According to area-based study, both rural (53.7 to 54.0 %) and urban areas are seeing increase in literacy (76.1%to 77.3%) (Pakistan Economic Survey, 2022).

Figure 2
Year Wise Literacy Rate in %age in Pakistan

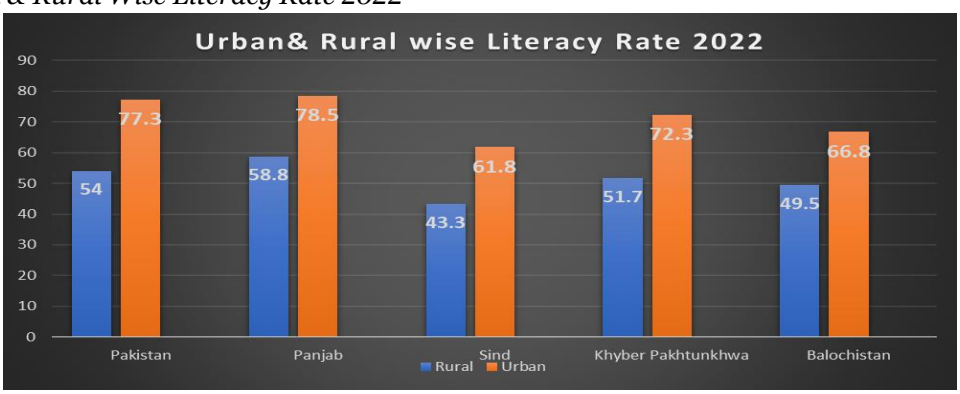


The gap between men and women appears to be closing over time. All of the provinces' literacy rates have increased, including Punjab (66.1 to 66.3%), Sindh (61.6 to 61.8%), KP (52.4 to 55.1 %), and Baluchistan (53.9%to 54.5%). The current literacy rate of both urban and rural areas of all the provinces of Pakistan is listed below table that provide clear picture of the literacy rate in percetanges.

Table 2
Current Literacy Rate

Provence/area	Pakistan	Panjab	Sind	KP	Baluchistan
Rural literacy Rate	54%	58.8%	43.3%	51.7%	49.5%
Urban Literacy Rate	77%	78.5%	77.9%	72. 3%	66.8%

Figure 3
Urban & Rural Wise Literacy Rate 2022



Sources: Pakistan Economic Survey 2022

Approaches of E-Learning

Since 1990, the infrastructure of classroom-based educational system has been reorganized into cutting-edge and efficient methods of teaching and learning. The most effective way to share & spread knowledge is through e-learning (Kim & Park, 2017). As per Renda, Santos and Okazaki (2016), E-learning offers access to learning materials to all students, promoting learning and teaching so, many research studies reported diverse approaches to e-learning (Clark & Mayer, 2023).

M-Learning

The M-learning is supported by any mobile device or device available at any time and from any location (Hulme & Shield, 2008). M-learning has many advantages over conventional learning strategies, like flexibility, portability, and accessibility. (Mehdipour & Zerehkafi, 2013). Using mobile learning can reduce illiteracy in underdeveloped countries to its lowest level. Mainly in nations with large populations, strong mobile phone penetration, a weak economy, and a very low literacy rate expanding education is very expensive due to significant investments made in infrastructure growth, learning facilities, and staff salaries (Siraj & Saleh, 2004). Fast growth in the usage of mobile and portable devices globally, notably in Pakistan, bodes well for future of m-learning.

Digital Literacy

The capacity to use information and communication technology for learning is referred to as digital literacy. Since Open Distance and e-learning is mostly technology-driven, digital literacy is essential for operation of ODL programs at institutions (Santos & Serpa, 2017). According to Lubbe (2016), in order to implement successful program, teachers and students must both have a certain set of information and communication technologies (ICTs) skills and abilities. Thus, technological aspects of ICT must be taken into account while creating and developing ODeL environments (Maphosa & Bhebhe, 2019). In this linking, the learners should use the available technologies to improve the learning, but there is the digital divide in developing nations Cloete (2015).

CD-ROM Based Learning

Asynchronous devices include CD-ROMs. It is an optical disc, physically identical to an audio CD, but it exclusively carries data that can be read via the computer's CD-ROM drive. It enables the compact storing of the wide range of materials, such as audio and/or video presentations, animations, simulations, slides, etc. It also enables participants to get all material in the uniform manner (Pawling, 1999). With a CD-ROM, it is also feasible to do many of the same things that are possible on the Web (multimedia, interactivity, performance tracking). Thus, Web is used to deliver text, tiny images, and external links; the rest of the course, including the audio and video components, is accessible on the CD-ROM and is accessed via the Web browser (Oesterle, & Shellhart, 1998). Instead of being used as teaching materials, CD-ROMs are more suited for self-learning. Participants may go at their own pace, concentrating upon some topics or passing over others based on their interests, providing the most flexibility to meet the different learning demands.

Web-Based Learning

Any educational initiatives that use Internet are referred to as web-based learning (McKimm, Jollie & Cantillon, 2003). While the online tutorials are comparable to in-person lectures. They typically contain data that is organized by the teacher in a way that will hopefully aid in learning.

Features like multimedia (music, photos, movies & animations), links to online resources (full-text journal articles or related websites), additional sections of the course, and self-assessment tools are used to improve tutorials. Good online tutorials frequently incorporate patient cases as well (Cook, 2007). Internet has become a significant source of information for academics and pupils, providing wealth of information about its contents, dependability, aspirations, and intentions (Shabir et al., 2014). Hence, it is vital that users are aware of variety of information available on the internet (Chapman, 2002). Internet has revolutionized our lives and education, allowing us to interact, exchange, and develop new knowledge (Rose & Fernlund, 1997; Shabir et al., 2015).

Distance Learning

More lately, remote learning programmes have been offering incredibly intimate and effective learning possibilities in a variety of distant education courses by utilising the amazing potential provided by modern technology. Efficient online learning is currently an option for students in kindergarten, elementary school, and university (Oz, 2005). There are, of course, some notable contrasts amid traditional learning and remote learning, with absence of a necessity for on-site attendance in a particular place being most salient. Students who take part in distance learning have lot more leeway in how they line their studies. This may be useful as it allow students to select classes according to their schedules, available teaching modalities & teaching styles (Fall, et al 2005).

Use of ICT as a Means for Enhancing Access to Education

The technology-enabled educational programs enable students to access information from any location and at any time, enhancing learning and preparing them for lifetime learning (Moore & Kearsley, 1996). Students are beginning to recognize how convenient it is to pursue education at any time, in any location (Amin, 2013). ICT enhances flexibility of how education is delivered so that students may access the information from any location and at any time. It may have an impact on how students are taught and how they learn because current learning procedures are learner-driven rather than teacher-driven. This would increase both the learners' readiness for lifelong learning and the standard of instruction. Besides providing more geographic flexibility, technologically supported educational programs also eliminate many of the time limitations that affect students with special needs (Moore & Kearsley, 1996). Students are beginning to see the value of being able to pursue education at any time, in any location. Further, the computer can also be used as a tutor to enhance academic performance (Zaman, Naeemullah, & Ullah, 2021).

Blended Learning

The blended learning mixes traditional classroom instruction with online learning (Tabassum, Najeeb, Ullah, 2018). Using this method, students may interact with online content and digital tools while simultaneously learning from their teacher in person (Tayebinik & Puteh, 2013). This approach is widely recongnized and may be used in combination with another formal or informal approach and strategy in order to enhancing the literacy rate in inaccessible areas of Pakistan.

Problems in E-Learning

The incorporation of e-learning technologies into the educational system is limited by technical issues, such as setup, accessibility to most recent technology, quick Internet access, consistent electrical supply, maintenance, administration, security, and lack of technical help. Moreover,

English competency is a barrier to e-learning in non-English speaking nations, as students with low competence are less inclined to use e-learning. To promote e-learning, a balanced strategy that includes both the online and in-person learning should be used (Khalif, 2010). Sweeney, Donoghue, and Whitehead's (2004) confirmed that students preferred face-to-face instruction, but e-learning is advantageous for acquiring information and exchanging a variety of abilities across various geographies. This is due to the level of awareness, computer literacy, resistance to change, and reliance on the teachers' presence. Additionally, switching toward the frequently utilized asynchronous strategy in e-learning will likely make the students more frustrated and dissatisfied.

Benefits of E-Learning

Information technology has significantly influenced academic activities in higher education since it has become more reliable and user-friendly (Johns, 2003). E-learning is proven method for involving students in information exchange and learning, with advantages like accessibility, low delivery cost, bridging the gap between theory and practice, deep learning, shared learning, freedom of speech and COVID-19. The global learner community has been forced to switch from traditional in-class method of learning to a mode of online learning due to coronavirus disease 2019, which first appeared in the first quarter of the year 2020 and quickly spread throughout the world (Rafiq, Hussain & Abbas, 2020). Pakistani institutions have been working hard to convert their pedagogical teaching and learning processes into virtual ones, creating effective online learning platforms. Thus, the virtual classrooms have been set up utilizing the variety of videoconferencing technologies (Roy & Raymond, 2005). In this connection, the information technology has significantly influenced academic activities in the higher education since it has grown more reliable and user-friendly over time. The usage of Internet and online forums has considerably aided learning techniques. E-learning is a proven method for involving students in information exchange and learning, according to literature (Lewis & Allan 2005; McConnell, 2006).

RESEARCH METHODOLOGY

The nature of study is qualitative and exploratory and through rigorous investigation the study answered questions related to problem at hand. So, data was collected from secondary sources, like research articles, books, and government departments. The collected data was analyzed by using preferred reporting items for systematic reviews & meta-analysis for protocol (PRISMA-P) a qualitative approach as mentioned by (Moher et al 2015). Data was coded after collection and then led to theme development and discussion that generated major findings through process of synthesis.

Data Collection & Analysis

The data was collected from articles and published literature from several academic databases and publications. Science Direct, IEEE Explore, ACM Digital Library, Google Scholar, Springer, Wiley Online Library, Taylor & Francis, EBSCO host, Web of Science, and Scopus are some of the academic databases and publications that were taken into consideration for this study. The study was designed to analyze ways and means for enhancing literacy and education facilitation in inaccessible areas over e-learning. Further, data was analyzed by using thematic analysis and SWOT analysis. In this context, government of Pakistan national education policies documents were used as a starting point, and the findings of the numerous studies and evaluation reports produced by local and international agencies were examined and repeated ideas were clustered

to generate themes that lead to findings that allowed to make references for the more practical approach to combating illiteracy and enhancing efficiency of public sector primary education system.

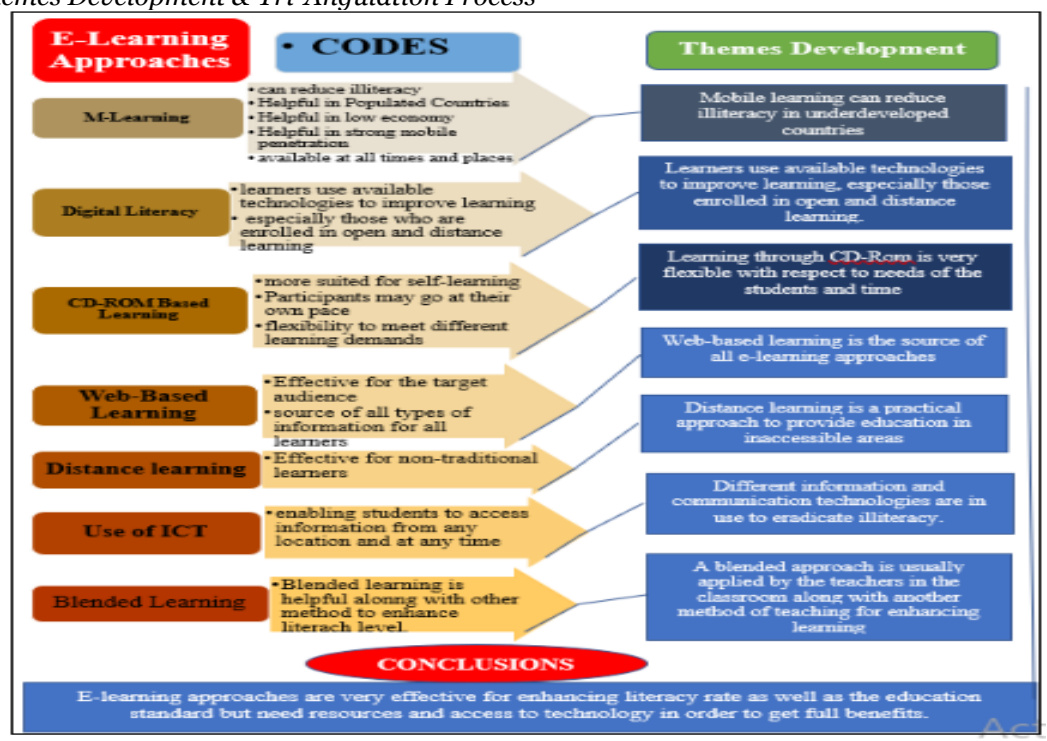
DATA ANALYSIS

The data was analyzed through coding and theme development of e-learning approaches under a thematic data analysis approach. To have a clear picture of the problem a SWOT analysis has also been done on the basis of available data including the strengths, weakenesses, threats and opportunities.

Coding of Data

Figure 3

Themes Development & Tri-Angulation Process



Theme Development & Discussion

1. Mobile learning can reduce illiteracy in underdeveloped countries. Developed theme has strong positive root in literature like it has been expressed that an appealing and simple way to access knowledge is through mobile technology. The approach has strong chance of reaching underprivileged communities and giving them access to more education and progress since they are inexpensive, simple to distribute & accessible. Distance learning is made possible by mobile technology in situations when physical location, post-conflict or post-disaster conditions make access to education difficult or interrupted (Mehdipour & Zerehkafi, 2013).

2. "Learners use available technologies to improve learning, especially those enrolled in the open and distance learning". Ability to get helpful information from a variety of sources through online media can enhance educational performance of the students and is key factor to properly handle in the education sector for getting fruitful results in eradicating illiteracy as manifested by (Reddy, Sharma, & Chaudhary, 2022).
3. "Learning through CD-ROM is very flexible with respect to needs of students and time". Significant improvement was recorded in development of comprehension level of students if he/she listened to contents from CD-ROM (Wishart, 2000).
4. "Web-based learning is source of all e-learning approaches for all learners". Education is now promoted as long-distance learning, web-based learner-centred settings, internet-based learning environments, and self-instructed learning as a result of the development of the Internet. Few studies have examined the acceptance of and efficiency of the many models utilized on web for learning. Several educational organizations started creating web-based courses in early days. Unfortunately, they have very tough time implementing successful tactics, such as how courses are delivered, effective, and accepted. Thus, this was primarily because creating the successful web-based courses included the number of interconnected elements, from technological problems to pedagogical concerns (Saadé, 2003).
5. "Distance learning is a practical approach to providing education in inaccessible areas". When all other teaching methods fail to meet the desired educational goals, the distance learning can deliver instruction towards communities in rural places (Khan, & Williams, 2006).
6. Different information and communication technologies are in use to eradicate illiteracy. Integrations of information and communication technologies showed effective results in eradicating illiteracy but some teachers reported some key obstacles in implementation stage (Hutchison & Reinking, 2011)
7. "A blended approach is usually applied by the teachers in classroom along with another method of teaching for enhancing learning". Blended learning approach has been found effective in developing weal areas of the education sectors including literacy development and quality enhancement (Majeed, & Rehan Dar, 2022).

Synthesis

The above-mentioned themes in light of empirical studies and triangulation lead to synthesize the following statements.

1. Mobile learning can reduce illiteracy in underdeveloped countries, as it is inexpensive, simple to distribute & open. Distance learning is made possible by mobile technology in circumstances when physical location, post-conflict or post-disaster conditions make access to education difficult or interrupted.
2. The learners use available technologies to improve learning, especially those enrolled in open and distance learning. Online media can offer helpful information from variety of sources, which is essential for eradicating illiteracy.
3. Web-based learning is source of all e-learning approaches for all learners and is now promoted as long-distance learning, web-based learner-centred settings, internet- based learning environments, and self-instructed learning. Still, few studies have examined the acceptance of and the efficiency of many models utilized on the web for learning. Educational organizations have a tough time implementing successful tactics, such as how the courses are delivered, effective, and accepted.

4. Capacity building of educators and students is necessary to ensure effective utilization of e-learning approaches, technologies, and tools.
5. Distance learning is a practical approach to providing education in inaccessible areas, and different information and communication technologies are being used to eradicate illiteracy. However, some teachers report key obstacles in implementation.
6. The blended learning approach has been found to be effective in developing the weal areas of education, such as literacy development and quality enhancement.
7. The social and cultural factors such as language barriers and lack of awareness of the e-learning can pose challenges to successful application of e-learning in inaccessible areas.
8. E-learning can facilitate self-paced learning, which is particularly useful for students who may have to juggle work, family, and other responsibilities.
9. E-learning can also provide opportunities for the collaborative learning, which enables students in inaccessible areas to interact with other students and educators from diverse parts of the world.

Overall, the study shows that e-learning has the potential to enhance the literacy and education facilitation in inaccessible areas. However, successful implementation requires a multifaceted approach that addresses infrastructure, content, capacity building, and social as well as cultural factors.

Swot Analysis

The technique of SWOT analysis is utilized in the table that is provided in order to highlight the internal strengths and weaknesses as well as external opportunities and challenges that pertain to E-learning approaches in developing literacy in inaccessible areas of the country toward the outcomes.

Table 3

Swot Analysis

STRNGTHS	**WEAKENESSES**
1. Mobile learning can reduce illiteracy in underdeveloped countries. 2. Learners use available technologies to improve learning, especially those enrolled in open and distance learning. 3. Web-based learning is the source of all e-learning approaches for all learners, and is now promoted as long-distance learning. 4. Distance learning is a practical approach to providing education in inaccessible areas, and different information and communication technologies are being used to eradicate illiteracy.	1. E-learning technologies are limited by technical issues, such as setup, accessibility, Internet access, and lack of qualified personnel. 2. Students prefer face-to-face instruction, but e-learning is beneficial for acquiring information and exchanging abilities. 3. Students who are accustomed to being spoon-fed information are more likely to reject e-learning, leading to frustration and dissatisfaction.
OPPORTUNITIES	**THREATS**
1. Learners use available technologies to improve learning. 2. The advantages of e-learning are made clear to students, and active engagement and commitment are linked to user happiness.	1. Equal access to computers is essential for students in poor nations, as uneven access to online education can lead to a disparity between socioeconomic categories. 2. E-learning in non-English speaking nations

3. People with greater computer technology expertise are more likely to use technology effectively and with confidence. 4. The blended learning approach has been found to be effective in developing new areas of education, such as literacy development and quality enhancement.	is hindered by English as the teaching language, making students with low competence less likely to use e-learning. 3. Identity management security is essential for web applications to protect against virus attacks, as students may lack confidence in using infected computers.

Challenges of Implementing E-Learning

While e-learning has the potential to revolutionize education in Pakistan, its application in the inhospitable places is fraught with the difficulties and challenges. Thus, the key obstacles are as follows:

1. A lack of necessary infrastructure, including computers, energy, and internet access, that are all necessary for the e-learning, exists in many parts of Pakistan. Because of this, it is challenging for students in these regions to access online learning materials.
2. A lot of online learning materials are only available in English, which is not native tongue of many Pakistani students. It may be challenging for pupils to comprehend the material and interact with resources due to language barrier.
3. The self-directed learning is frequently emphasized in e-learning, which can be difficult for students who require direction and assistance from teachers. It might be challenging to offer essential help in the inaccessible places since there may be few or no competent teachers there.
4. Even in the places with access to computers and the internet, many students do not have access to these tools. This may restrict their capacity to take part in the online learning programs.
5. As many students in inaccessible locations originate from the low-income households, it might be challenging for them to buy required gadgets and internet connectivity. It may also be necessary for many students to work in order to provide for their families, which makes it challenging for them to prioritise their education.
6. Some families might not perceive the benefit of the online schooling or could prefer more conventional methods of the instruction. As a result, convincing them to support their children's involvement in online learning programs may be challenging.

CONCLUSION

This research study has shown that e-learning can be an effective means of enhancing literacy and education facilitation in the inaccessible areas. The study has highlighted the potential of e-learning to provide access to the education for students who are unable to attend traditional schools due to physical, social, or cultural barriers. However, the successful implementation of e-learning in inaccessible areas requires a multifaceted approach that addresses the challenges and opportunities that arise from the use of technology. The study has identified the need for adequate infrastructure, culturally sensitive e-learning content, capacity building of educators and students, and addressing social and cultural factors that may pose challenges to effective utilization of e-learning. These findings have vital implications for policymakers, educators, and other stakeholders who are working to enhance education in the inaccessible areas. Overall, the study concludes that e-learning has the potential to revolutionize education in inaccessible areas and to provide students with knowledge and skills they need to thrive in 21st century. As such, further research and investment in e-learning infrastructure and capacity building are vital

to ensure that students in inaccessible areas have access to quality education and opportunities for success.

Recommendations

1. The development of an e-learning infrastructure should be funded by governments and organizations. This infrastructure should include dependable internet access, a power source, and right gadgets. This will guarantee that students in remote locations may access e-learning materials.
2. To help teachers and students in remote locations make the most of e-learning strategies, technology, and resources, it is important to train and assist them. As a result, e-learning will be utilized to improve literacy and education facilitation in various fields.
3. Cultural backgrounds of students in inaccessible locations should be taken into account when creating e-learning materials. This will guarantee that material is relatable to kids, that they comprehend it, and that it is suitable for particular cultural setting.
4. Governments and educators should consider social and cultural issues that can make it difficult for e-learning to be used effectively in inaccessible places. Language hurdles, lack of understanding of e-learning, and cultural barriers should all be addressed.
5. Governments, businesses & local communities may work together to improve e-learning in inhospitable locations. This can involve cooperation between various groups engaged in education sector and collaborations between online learning providers and neighbourhood schools or community centres.
6. Frequent monitoring and evaluation of e-learning programs in inaccessible locations will assist in identifying the areas of improvement and ensure that e-learning is being used successfully to promote literacy and education facilitation.

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