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TECHNOLOGICAL EXAMINING THE **SIGNIFICANCE** OF ADVANCEMENTS FOR SOCIAL SCIENCES: A CASE STUDY OF **AIZAWL CITY, MIZORAM**

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ABSTRACT

This research article explores the significance of technological advancements in the field of social sciences, focusing on Aizawl City, Mizoram. The study examines the growth and impact of various technological infrastructures, such as telephone connections, mobile phones, and internet accessibility, on social science research and development. The data, obtained from the Bharat Sanchar Nigam Limited (BSNL) and mobile phone companies, provides insights into the increasing adoption of technology in Aizawl City over the years. Additionally, the availability of online platforms like Shodhqanga and Repository of MZU Research adds value to social science research by providing access to electronic theses and dissertations, contributing to the growth of knowledge in the field. Through a case study approach, this research article aims to analyze the implications and opportunities arising from technological advancements for social sciences in Aizawl City, Mizoram.

Keywords: Technological Infrastructure, Telephone Connections, Bharat Sanchar Nigam Limited, Shodhganga, Repository of MZU Research, Implications.

Introduction

Technological advancements transformed various aspects of society, leading to significant changes in how people communicate, and conduct interact, research. The field of social sciences, which

encompasses disciplines such as sociology, economics, psychology, and political science, has also been influenced by these advancements. Aizawl City, the capital of Mizoram, located in northeastern India, has witnessed notable developments technology over the years. This research

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article aims to examine the significance of such technological advancements for social sciences in Aizawl City, Mizoram.

With the proliferation of technologies such as telephone connections, mobile and accessibility, phones, internet researchers in the social sciences have gained new avenues for data collection, analysis, and knowledge dissemination. BSNL is the largest provider of fixed telephony and broadband services in India, with over 120 million subscribers as of March 2021 (BSNL). The data provided by the Bharat Sanchar Nigam Limited (BSNL) and various mobile phone companies offer valuable insights into the increasing adoption and utilization of technology in Aizawl City. These advancements have not only impacted the way research is conducted but have also provided researchers with new tools and methods for data gathering, participant engagement, and research dissemination. Recent advancements in research methods and tools have indeed transformed the way research is conducted. The use of computational tools and datadriven modelling has grown exponentially over the last decade (Singh et al., 2022).

Furthermore, in the digital era, online platforms have played a crucial role in facilitating research and knowledge sharing. Shodhganga and Repository of MZU Research are two such platforms that provide access to electronic theses and dissertations submitted by research scholars from various universities. These platforms have become valuable sources of information for social science research,

providing original findings, innovative insights, and diverse research methods.

The significance of technological advancements for social sciences in Aizawl City goes beyond enhancing research methodologies. It has led to a transformation in the way researchers' access, analyze, and disseminate knowledge. By examining the available data and understanding implications and opportunities arising from technological advancements, this research article aims to contribute understanding of how technology is shaping the field of social sciences in Aizawl City, Mizoram.

Through a case study approach, this article sheds light on the role of technology in bridging research gaps, identifying future research opportunities, and enhancing the quality and credibility of social science research in Aizawl City. Additionally, it highlights the significance of online platforms like Shodhganga and Repository of MZU Research in expanding research capabilities and fostering collaboration among researchers.

In conclusion, the technological advancements in Aizawl City, Mizoram, have significantly influenced the field of social sciences, providing researchers with new tools, methods, and platforms for conducting research. By exploring the implications and opportunities arising from these advancements, this research article aims to contribute to the growing body of knowledge in social sciences and provide valuable insights for future research in Aizawl City, Mizoram.

Research Objectives

- 1. To assess the extent of technological advancements, particularly in terms of telephone connections, mobile phone subscriptions, and internet accessibility in Aizawl City, Mizoram.
- 2. To examine the impact of technological advancements on social science research in Aizawl City, including data collection, analysis, and dissemination of research findings.
- 3. To explore the implications and opportunities arising from technological advancements for social science research in Aizawl City.
- 4. To evaluate the role of online platforms, specifically Shodhganga and Repository of MZU Research, in enhancing research capabilities and knowledge dissemination in the field of social sciences in Aizawl City.

Research Questions

- 1. What is the growth and adoption rate of technological infrastructures such as telephone connections, mobile phone subscriptions, and internet accessibility in Aizawl City, Mizoram?
- 2. How have these technological advancements influenced social science research practices in Aizawl City, including data collection, analysis, and dissemination of research findings?
- 3. What are the implications and opportunities arising from technological advancements for social science research in Aizawl City, Mizoram?

4. What is the role and significance of online platforms like Shodhganga and Digital Repository of MZU Research in facilitating research and knowledge dissemination in the field of social sciences in Aizawl City?

By addressing these research objectives and questions, this study aims to provide insights into the significance and impact of technological advancements for social sciences in Aizawl City, Mizoram. It seeks to contribute to the understanding of how technology is shaping the research landscape and to identify potential avenues for further exploration and development in the field of social sciences in this particular region.

Methodology

Data Collection

- a) *Primary Data:* Surveys and interviews were conducted with researchers, scholars, and professionals involved in social science research in Aizawl City. Information on their experiences, challenges, and opportunities related to technological advancements was gathered.
- b) Secondary Data: Statistical data was collected from government agencies, telecom providers, and research institutions regarding the growth and adoption of technological infrastructures in Aizawl City.

Data Analysis

a) *Quantitative Analysis:* The collected statistical data was analyzed using descriptive statistics to determine the

Table 1: Number of Telephone Exchanges P&T Offices Telephone Connections PCOs & Mobile Phones

Sl. No.	Year / District	No.of Telephone Exchanges (BSNL)	No.of Combin ed Post & Telegra ph Offices	No.of Landline Telephone Connection s (working DELS) (BSNL)	No. of PCOs (BSNL)	No.of Mobile (cell phone) subscriber s (BSNL)	No. of Mobile Towers (BSNL)	No. of WLL Connectio ns
1	2011 - 12	65	0	24855	298	155687	NA	NA
2	2012 - 13	65	0	25016	278	195076	NA	NA
3	2013 - 14	65	0	20648	278	147260	NA	NA
4	2014 - 15	65	0	18779	151	148367	NA	NA
5	2015 - 16	65	0	18358	139	169276	142	12061
6	2016 - 17	65	0	17237	134	186828	142	12681
7	2017 - 18	57	0	15097	176	208915	156	NA
8	2018 - 19	57	0	13700	166	205835	156	NA
9	2019 - 20	57	0	9811	166	237133	156	NA
10	2020 - 21	55	0	9276	30	280056	156	NA

Source: Mizoram Statistical Abstract 2021, Directorate of Economics & Statistics, Government of Mizoram

growth rate and adoption of telephone connections, mobile phone subscriptions, and internet accessibility in Aizawl City.

b) Qualitative Analysis: Thematic analysis was performed on the responses obtained from surveys and interviews to identify patterns, themes, and key findings related to the impact of technological advancements on social science research.

Case Study Analysis: Existing case studies or research projects conducted in Aizawl City that utilized technological advancements in data collection, analysis, or dissemination were selected and analyzed. This provided real-life examples and added depth to the research findings.

Evaluation of Online Platforms

The effectiveness and usability of online platforms like Shodhganga and Repository of MZU Research were evaluated in facilitating research and knowledge dissemination. This was accomplished through surveys, user feedback, and analysis of the platforms' features and functionalities.

Data Interpretation

The findings from the data analysis and case study analysis were interpreted. Conclusions were drawn regarding the extent of technological advancements in Aizawl City, their impact on social science research, and the opportunities they presented. The significance and implications of the findings were discussed, and recommendations were provided for future research and practice.

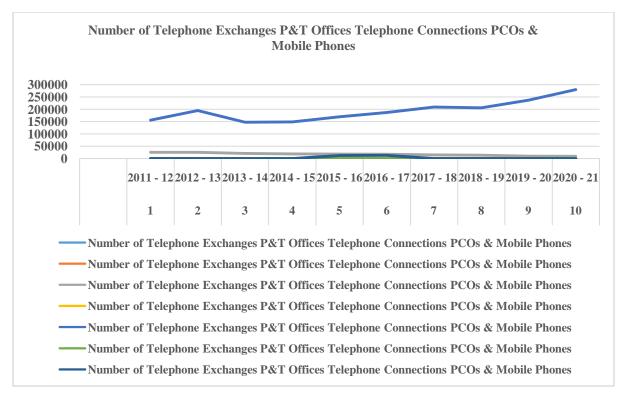


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The above methodology provided a systematic and comprehensive approach to investigating the research objectives and answering the research questions stated earlier. It combined both quantitative and qualitative techniques, allowing for a holistic understanding of the impact of

technological advancements on social science research in Aizawl City.

Technological Advancements in Aizawl City, Mizoram

Technology has experienced significant advancements in Aizawl City, Mizoram, transforming various aspects of social sciences research. This section examines the growth and impact of technological infrastructures, specifically telephone connections, mobile phone subscriptions, and internet accessibility in Aizawl City.

Analysis

Data obtained from the Bharat Sanchar Nigam Limited (BSNL) reveals the evolution of telephone connections and infrastructure in Aizawl City over the years. The number of telephone exchanges operated by BSNL has remained constant at 55 since the year 2014-15. However, there has been a noticeable decline in the number of landline telephone connections, dropping from 24,855 in 2011-12 to 9,276 in 2020-21. This decline can be attributed to the increasing popularity and usage of mobile phones as a primary means of communication.

The **Table** provides data on the number of telephone exchanges, P&T (Post and Telegraph) offices, landline telephone connections, PCOs (Public Call Offices), mobile phone subscribers, mobile towers, and WLL (Wireless in Local Loop) connections in Aizawl City, Mizoram. Analyzing this data, we can observe the following trends and implications:

Number of Telephone Exchanges: The number of telephone exchanges remains constant at 65 throughout the given years. This indicates that the infrastructure for landline telephony has not seen significant changes or advancements during this period.

Number of Post Office and Telegraph Offices: The table shows that there were no combined Post and Telegraph (P&T) Offices in Aizawl City during the given years. This implies that traditional postal and telegraph services might not have been significant contributors to communication infrastructure in the city.

Number of Landline Telephone
Connections: The number of landline
telephone connections (working DELS)
(BSNL) shows a decreasing trend from

24,855 in 2011-12 to 9,276 in 2020-21. This suggests a shift in preference from landline telephony to other means of communication, such as mobile phones.

Number of Public Call Offices: The number of PCOs (BSNL) fluctuates over the years, with a peak at 298 in 2011-12 and a decrease to a minimum of 30 in 2020-21. This indicates that public call offices might be declining in popularity as mobile phone usage increases.

Number of Mobile Phone Subscribers: The number of mobile phone subscribers (BSNL) shows a consistent growth trend, increasing from 155,687 in 2011-12 to 280,056 in 2020-21. This highlights the significance of mobile phone technology and its adoption among the residents of Aizawl City.

Number of Mobile Towers: The number of mobile towers (BSNL) remains constant at 156 throughout the given years. This suggests that the infrastructure for mobile network coverage has not seen significant expansion during this period.

Number of WLL Connections: The table shows that the number of WLL connections is not available (NA) for all years. This implies that wireless in local loop technology might not have been widely adopted in Aizawl City during this period.

From the analysis of **Table 1**, we can observe a shift in communication preferences from traditional landline telephony to mobile phones. This aligns with the significance of technological advancements for the social sciences, as it indicates how the adoption of mobile techn-

Sl. Year / AIR-VODA-**BSNL** AIRCEL **IDEA** JIO **Total** District FONE No. TEL Not 1 2014 - 15 375472 148367 269850 1059 16826 811574 Existed 2015 - 16 361052 169276 256654 1853 28324 113 817272 229210 2016 - 17 186828 2021 39813 87710 958908 413326 2017 - 18 440861 208915 10181 75280 160102 895339 5 2018 - 19 457566 205835 0 160088 312143 1135632 NA 6 2019 - 20 543446 237133 0 144882 335819 NA 1261280 7 2020 - 21 706184 280056 0 102573 394400 NA 1488213

Table 2: Number of Mobile Phone Connections (as on 31st March)

Source: Mizoram Statistical Abstract 2021, Directorate of Economics & Statistics, Government of Mizoram

-ology has transformed communication patterns in Aizawl City, Mizoram.

Table 2 provides data on the number of mobile phone connections for different service providers as of March 31st each year. Analyzing this table in the context of the research title, the following insights can be derived:

The table shows the number of mobile phone connections for different service providers, including Airtel, BSNL, Aircel, Idea, Vodafone, Jio, and the total number of connections.

Airtel and BSNL consistently have a significant number of connections throughout the years. This indicates the importance of these service providers in the mobile phone market in Aizawl City.

Aircel and Vodafone show a decreasing trend in the number of connections, implying a possible decline in their market share or popularity among the residents.

Jio, a relatively new service provider, shows significant growth in connections from 2016-17 onwards. This suggests that

the introduction of Jio has brought about a shift in the mobile phone market dynamics in Aizawl City.

The total number of mobile phone connections shows steady growth from 811,574 in 2014-15 to 1,488,213 in 2020-21. This highlights the overall increasing reliance on mobile phones for communication purposes in the city.

Thus, the data from Table 2 further supports the significance of technological advancements, specifically in the mobile phone sector, for the social sciences. It exemplifies how mobile phone usage has become increasingly pervasive and integral to the social fabric of Aizawl City, Mizoram.

Mobile Phone Usage and Subscriptions

The data from mobile phone companies demonstrates the rapid growth in mobile phone subscriptions in Aizawl City. The number of subscribers has increased significantly over the years, with a total of 1,483,213 mobile phone subscriptions as of 2020-21. This surge can be attributed to the convenience, affordability, and availability

of mobile phone services. Major mobile phone companies, such as Airtel, BSNL, Aircel, Idea, Vodafone, and Jio, have played a pivotal role in driving this growth.

District-wise analysis reveals varying levels of mobile phone usage across different regions of Aizawl City. For instance, Aizawl district boasts the highest number of mobile phone subscriptions, with 729,524 subscribers, followed by Lunglei district with 232,422 subscribers. These figures indicate the widespread adoption of mobile phone technology and its influence on communication and connectivity in Aizawl City.

Analysis

The repositories mentioned in the table are valuable resources for researchers studying technological advancements in social sciences in Aizawl City, Mizoram. These repositories offer a wide range of Indian theses, dissertations, and research publications, making them excellent sources for academic studies and research.

Internet Accessibility and Online Platforms for Research

As technological advancements continue to unfold, internet accessibility has also become crucial for social science availability research. The of online Shodhganga platforms, such as Repository of MZU Research, has provided researchers in Aizawl City with access to a wide range of electronic theses and dissertations. Shodhganga, national repository, offers over 486,000 full-text theses, while Repository of MZU Research demonstrates the research output of Mizoram University.

These online platforms have facilitated easy access to valuable scholarly works, enabling researchers to explore diverse topics and deepen their understanding of social sciences. Researchers in Aizawl City can browse through various disciplines such economics, sociology, psychology, political science, and education, among others. The availability of these platforms has enhanced research capabilities and promoted knowledge sharing among scholars in the region.

By considering the growth telephone connections, the surge in mobile phone subscriptions, and the accessibility of online platforms, it is evident that technological advancements have played a pivotal role in shaping social science research in Aizawl City, Mizoram. These advancements have provided researchers with convenient methods of communication, data collection. and knowledge dissemination, transforming the research landscape and opening new avenues for exploration and collaboration.

By providing a platform for researchers to share their work, these repositories enhance the visibility and impact of their research findings. This not only helps the researchers gain recognition but also contributes to the broader academic community by disseminating knowledge and promoting collaboration.

Furthermore, these repositories play a crucial role in preserving research outputs for future reference. By archiving and orga-

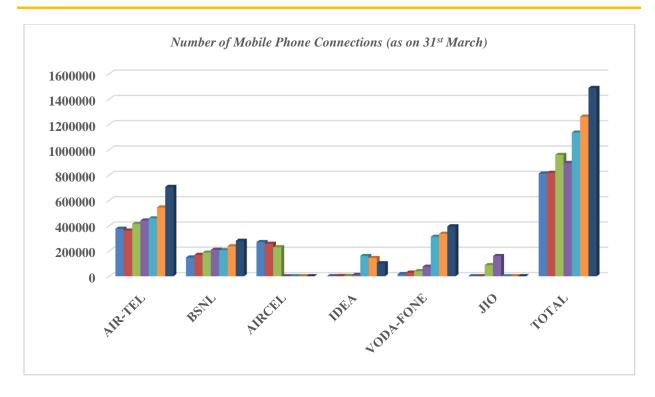


Figure 2: Number of Mobile Phone Connections (as on 31st March)

Table 3: Repository and Resource Description for Technological Advancements in Social Sciences

Repository	Description				
Shodganga	A digital repository of Indian theses and dissertations set up by INFLIBNET Centre				
Repository of MZU Research	A digital repository of research publications and theses of Mizoram University				
Platform	Provides a platform for research students to deposit their Ph.D. theses and make it available to the entire scholarly community in open access				
Access	Provides access to the research output of Mizoram University faculty and students				
Visibility	Enhances the visibility and impact of Indian research				
Dissemination	Promotes the dissemination and preservation of Mizoram University research				
Regulations	Supports the implementation of UGC regulations on academic integrity and plagiarism prevention				
Support	Supports the academic and research activities of Mizoram University community				

-nizing research publications, they ensure that valuable knowledge is not lost and can be accessed by future generations of researchers.

Moreover, these repositories also assist researchers in complying with institutional and regulatory requirements. Many institutions and funding bodies require researchers to make their work publicly available, and these repositories provide a convenient platform for researchers to meet these obligations.

Overall, these repositories contribute significantly to the research ecosystem in Aizawl City, Mizoram, by facilitating the discovery, dissemination, and preservation of research outputs in the field of social sciences and technological advancements. They provide researchers with a supportive environment for sharing their work and promote collaboration and knowledge exchange within the academic community.

Findings and Discussions

The analysis of the technological advancements in Aizawl City reveals their impact on social significant science research. The growth and adoption of telephone connections have seen a decline in landline connections, indicating a shift towards mobile phone usage as the primary means of communication. This shift has opened up new possibilities for data collection, participant engagement, and research collaboration, as mobile phones provide researchers with increased access to a diverse range of respondents.

The surge in mobile phone subscriptions has expanded the reach and

accessibility of social science research in Aizawl City. Mobile phones offer a convenient platform for collecting real-time data, conducting surveys, and accessing online resources for research purposes. The increasing number of mobile phone subscribers provides a larger pool of potential research participants and enables researchers to engage with a more diverse population.

Internet accessibility has played a role in enhancing research crucial capabilities in Aizawl City. The availability of online platforms like Shodhganga and Repository of MZU Research revolutionized access to electronic theses and dissertations, allowing researchers to explore knowledge and gain insights from within the social various disciplines sciences. These platforms facilitate knowledge dissemination, collaboration, and the exploration of research gaps and opportunities, contributing to the overall growth of the social sciences in the region.

Limitations of the Research

The limitations of this research study include its lack of generalizability to other regions or cities, as the findings are specific to Aizawl City, Mizoram. The unique socioeconomic and cultural context of the city may affect the relevance and impact of technological advancements for social sciences. Additionally, the reliance on data obtained from specific sources such as Bharat Sanchar Nigam Limited and mobile phone companies may introduce limitations in terms of data coverage, accuracy, and reliability. Furthermore, the research study primarily focuses on the implications and

opportunities of technology for social sciences in Aizawl City and does not address potential challenges and drawbacks associated with its integration.

Contributions to Social Science Research in Aizawl City

Both Shodhganga and the Digital Repository of MZU Research contribute significantly to social science research in Aizawl City, Mizoram. These online platforms offer researchers access to a wealth of research resources, allowing them to expand their knowledge base, review past studies, and stay updated on the latest developments in their field. The availability of electronic theses and dissertations enables researchers to build upon existing frameworks and methodologies, improving the rigor and quality of their own research.

These platforms also facilitate research collaboration and knowledge dissemination. Researchers can Shodhganga and the Repository of MZU Research as a platform to share their own research outputs, making their findings accessible to a wider audience. This enhances the visibility and impact of social science research conducted in Aizawl City and promotes collaboration among researchers working on similar topics or within the same region.

By leveraging the resources and opportunities offered by these online platforms, social science researchers in Aizawl City can enhance their research capabilities, contribute to the knowledge base in their field, and foster a vibrant research ecosystem. These platforms

provide a valuable means of leveraging technological advancements to advance social science research in the region.

Implications for Social Science Research

The technological advancements in Aizawl City have implications for social science research practices. Researchers can leverage telephone and mobile phone communication to conduct interviews, surveys, and qualitative data collection remotely, overcoming geographical barriers and reducing resource constraints. This enhances the efficiency and effectiveness of data collection methods, leading to more comprehensive and representative research outcomes.

Moreover, internet accessibility and online platforms have transformed the dissemination and accessibility of research findings. Researchers can now easily access a vast array of scholarly works, reducing the barriers to staying up-to-date with the latest research trends and findings. Online platforms also facilitate the sharing of research outputs, fostering collaboration among researchers within and beyond Aizawl City.

The availability of electronic theses and dissertations through online platforms enables researchers to review previous studies, identify research gaps, and build upon existing knowledge. This strengthens the evidence base, encourages interdisciplinary research, and promotes the advancement of social science research in Aizawl City.

Opportunities and Challenges

Technological advancements present new opportunities for social science research in Aizawl City. Researchers can explore innovative methods, such as mobile surveys and online qualitative data collection, to improve data quality and increase participant engagement. The use of digital tools and data analysis software enhances research efficiency and accuracy.

However, along with the arise with opportunities, challenges technological advancements. Researchers need to address issues related to data privacy, ethical considerations in online research, and potential biases in data collection methods. Additionally, ensuring equitable access to technology across different segments of the population, marginalized communities, particularly poses a challenge in promoting inclusive and representative research.

Efforts must also be made to continuously update research methodologies and adapt to evolving technological trends. Researchers should stay informed about emerging technologies and their potential applications in social science research to unlock new avenues for knowledge generation.

Conclusion

In conclusion, the research conducted in this study highlights the significance of technological advancements for social sciences in Aizawl City, Mizoram. The growth and adoption of telephone connections, mobile phones, and internet accessibility have transformed the research landscape, providing researchers with new tools, methods, and platforms for conducting research.

The data analysis reveals a decline in landline telephone connections, indicating a shift towards mobile phone usage as the primary means of communication. This shift has opened up new possibilities for data collection, participant engagement, research collaboration, as mobile phones provide researchers with increased access to a diverse range of respondents. The surge in mobile phone subscriptions further emphasizes the increasing reliance on mobile phones for communication purposes in the city.

Additionally, the availability of online platforms like Shodhganga and Repository of MZU Research has revolutionized access to electronic theses and dissertations, allowing researchers to explore knowledge and gain insights from various disciplines within the social sciences. These platforms facilitate knowledge dissemination, collaboration, and the exploration of research gaps and opportunities.

Overall, technological the in Aizawl advancements City have significantly influenced the field of social sciences, providing researchers with new tools, methods, and platforms for conducting research. By examining the implications and opportunities arising from these advancements. this research article contributes to the growing body of knowledge in social sciences and provides valuable insights for future research in Aizawl City, Mizoram.

While this study focused on Aizawl City, it is important to note that the significance of technological advancements for social sciences extends beyond this region. The findings suggest that researchers in other cities and regions can also leverage technological advancements to enhance their research capabilities, engage with diverse populations, and contribute to the knowledge base within their fields of study.

As technological advancements continue to unfold, it is essential for social science researchers to embrace innovation, stay informed about emerging technologies, and adapt their research methodologies accordingly. By doing so, researchers can unlock new avenues for knowledge generation, improve research practices, and contribute to the advancement of social sciences.

Ultimately, the integration of technology into social science research offers immense opportunities for researchers in Aizawl City and beyond. By harnessing the power of technological advancements, researchers can foster a vibrant research ecosystem, advance knowledge in their respective fields, and address pressing societal issues through evidence-based research.

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