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Exploring the Experience of Digital Literacy of Muslim Undergraduate Females: An Analysis towards Digital Inclusion for Sustainability

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Abstract

The study intends to identify the challenges of undergraduate Muslim female students towards digital literacy. Adopting a qualitative approach, the narrative analysis of the collected interviews gave rise to four themes. The themes are a) Limited digital awareness and a huge change, b) Need for Parental and social support, c) Distortion due to social media engagement leading to insecurity and distortion, and d) Financial Instability hampers data connectivity. The study emphasizes social media insecurity and parental financial instability. Due to the lack of digital literacy, the gap remains in the digital inclusion of all towards making an inclusive digital society.

Keywords: Digital inclusion; Muslim women; Digital literacy

INTRODUCTION

According to the Telecom Regulatory Authority of India (TRAI) report (TRAI, 2022), in India, internet subscribers have increased from 836.86 million (June 2022) to 850.95 million at the end of Sep-22. Internet connection is one of the core components of digital inclusion (Reisdorf and Rhinesmith, 2020). Digital inclusion ensures reliable internet connection, availability of digital infrastructure, training in digital skills, and the creation of digital awareness programs and campaigns (Alamelu, 2013; NDiA, 2017). Digital literacy is one of the major factors that contribute to digital inclusion (Alhassan and Adam, 2021).

The main objective of digital literacy is to enable the youth to engage in digital media in safe, ethical, and wise ways (Media Smart, 2025; Pangrazio *et al.*, 2020). Valuing cultural diversity, attaining the goal of digital inclusion, and effectuating the concept of the digital world is a challenging endeavour. Digital competence, Digital usage, and Digital transformation are the three levels of digital literacy (Martin and Grudziecki, 2015). Acquiring the concepts, skills, attitude, and approaches (digital competence) is followed by the appropriate use of digital competence (Digital usage) within real-life or specific professional or domain contexts (Martin and Grudziecki, 2015). When a significant change is brought about through innovative or creative work, it is said to be a real digital transformation. In the education sector, to

reduce the digital divide, digital literacy is a key factor that makes students digitally competent for transformative change.

Despite a sudden jump in the number of internet users in India (TRAI, 2022), only 46% of individuals use the internet (ITU, 2021). The International Telecommunication Union (ITU, 2021) data reveals that in India, a wide gap exists between the male and female internet users (25% male and 15% female). Digital devices and digital access to the internet do not assure full inclusion without digital literacy. The government of India's programme, the National Digital Literacy Mission (NDLM), aims to upskill at least one family member to make them digitally literate (Banerjee, 2016). Muslims are the largest minority and the least literate religious group in India (Census, 2011). Muslim women's educational status is more vulnerable than that of their male counterparts (Census, 2011; Chandola, 2022). Understanding Muslim females' digital presence is crucial for promoting their digital literacy in today's evolving digital world.

Rationale of The Study

Digital inclusion enables every individual, community, and disadvantaged group to use digital skills to obtain the benefits from today's growing socio-technological process (SpringerNature, 2021). In this socio-technological process, the inclusion of all, irrespective of gender, religion, and cast, contributes to making positive changes in the digital society.

According to the report of UNICEF's – *The State of the World's Children 2017: Children in a Digital World* (UNICEF, 2017), one out of three internet users is younger than 18 years, and 71% of users' age is between 15–24-years and this age group is the most internet-connected age group in the world. In the Indian context, it is imperative to do an in-depth analysis of the experiences of Muslim female youth on the awareness of digital literacy at the onset of the digital revolution.

Objectives of The Study

- To explore the experiences of young Muslim women of undergraduate level towards the government's initiatives of the digital literacy program for digital inclusion.
- To analyze the present status of young Muslim female students of UG level in a rapidly evolving digital landscape.
- To identify the challenges of Muslim females of undergraduate level in the path of digital literacy programs.

METHODOLOGY

The researcher employed narrative analysis techniques to analyze the stories of 8 participants between the age group of 19-21 years. The researcher selected the participants using a purposive sampling method. The lived experiences of Muslim females and their stories related to digital awareness, digital literacy, and digital inclusion were recorded. For the sake of confidentiality, participants' names are not mentioned, and participants were assured that their interview and transcript would not be read in their entirety by anyone except the researcher. The stories of the participants within a research context were acknowledged, and the questionnaires of the semi-structured interview were framed to meet the objectives of the study. The questionnaires covered the following topics: purpose of using smartphones and the internet, perception about the future of digitalization, where they see themselves in this digital evolution process, digital safety and security awareness, and factors that hinder the digital inclusion process. Participants were allowed to review the interview transcript. After revising, the transcript was reread by the researcher to identify themes.

FINDINGS

The narratives of 8 participants were thoroughly analyzed to assign codes. The codes were grouped and then categorized as sub-themes based on commonality and similarity. From the sub-themes, major themes of the study emerged, which are discussed in the following section of the study.

Limited Digital Awareness and A Huge Change

Before the pandemic, digital devices and the internet were not much utilized for education by the participants. The narrative shows that eventually, they learnt the usage and its utility without proper training. However, their inclusion is limited to the WhatsApp group and YouTube channel. One girl's narrative describes how she feels herself to be digitally included, even though having little digital literacy and digital skills –

"I download my notes and material from the internet. If I have any doubt on my topic, I simply search from YouTube and clear my doubt. We circulate notes among the friends in a WhatsApp group where everyone gets updated regarding the class. If someone is absent in class, there is little chance of missing anything. Google, WhatsApp, and YouTube are the best sources of notes and materials for the students, and accessibility of these three will assist to connect to the class and the world of education."

More than exchanging notes among friends, joining in the idea exchange process nationally or internationally is predominant for digital inclusion. Government initiatives on digital awareness and other digital educational programs towards creating a digital world are not well-known to them. One girl smartly shared her views on the government's digital literacy program –

"Is there such program? What is the purpose? What is done through those programs? We didn't receive any notification or messages in our group. From where will we get the information?"

The presence of interrogative statements gives rise to a question about the purpose of the initiatives. Peer learning contributes to digital literacy enhancement. One Muslim girl explained through her narrative how one of her friends helped her to join a community in Telegram for an MCQ-based test, short-term course details, and eligibility criteria for different competitive examinations –

"This is my last year of the Graduation program. I have a lot of restrictions at home. I wanted to prepare for different competitive examinations. One of my friends suggested as well as guided me to join in Telegram to engage with a community and give online MCQ based test. Still I am receiving a lot of help from that group."

The above-mentioned narrative exemplifies how digitalization opens a huge scope for Muslim girls beyond their limits. Despite having limited digital awareness, the impact of digitalization brought a huge change in the lives of Muslim girls (UG level).

Need of Parental and Social Support

Muslim girls need more of their parents' support for digital inclusion. Parents' lack of knowledge restricts Muslim women from digital inclusion. This is clear through the statement of one girl –

"My mother always tells me not to get involved in anything digitally. Sharing any personal information like name, class, phone number or clicking on a link for an online meeting coming from any source even though genuine, she completely dislikes. One day, I did so while attending an online conference, and she got very angry with me. Since then, I never did."

Demonstrating insight into parents' lack of digital knowledge and awareness is important to comprehend the challenges of Muslim girls. The other side of the digital world (positive side) is not known to the parents; as a result, it forms a barrier that doesn't allow for shaping society through the lens of digitalization with the involvement of Muslim girls. The

statement of one of the participants indicates how societal unawareness and non-recognition of digital programs discourage their parents from involving their daughters in digital platforms –

“I do not inform my parents much about my involvement in online programs or events. No rationalization will help to convince them. Instead, they seek help from other community members to gain more information regarding that, and due to lack of exposure to digital programs he does not receive satisfactory information. As a result, he demotivates me in doing.”

The role of parents and society as a support system plays a huge role in the process of inclusion.

“We have to encounter a lot of obstacles in terms of stigma and taboo. We have a lot to learn about digital inclusion. If we would get little support from our parents or society, it would have been easy for us.”

Socio-cultural factors restrict women’s mobility as well as participation in the digital world. The participants expressed their views regarding the limited exposure of digital programs, especially those meant for educational purposes.

Distortion Due to Social Media Engagement

More than YouTube, WhatsApp, Instagram, and Facebook, they do not explore anything; they are mostly used for entertainment. One of the girls explicitly explains how she gets distracted from her studies if she keeps her smartphone around her during study time –

“Every minute, my thumb and index touch the screen to check the notifications of my social media account. I barely concentrate on my studies. When I read through the screen, I feel like checking my message box or other distraction comes into the path in the form of newsfeed or story updates”.

Some paid or sponsored sources in social media hit the target audience for their purpose, like for selling courses or for getting more views in their pages or videos. Most of the time, young Muslim girls fail to verify the authenticity of the available data on social media. They get distorted and lose confidence in accessing digital media platforms for educational purposes or career orientation.

“Advance technology retrieves all data from our mobile. Based on our Google search, whenever we open a social media account, similar videos or information pops up on our timeline. I was unaware of this fact once I clicked on the appeared link on my social media account. Since then, I kept on getting call from a particular agency to take admission at their institution for competitive examination, and it was too irritating.”

How WhatsApp notes lead to poor marks in examinations and add inferiority in one’s eligibility and potential is expressed through the narrative of one of the Muslim girls –

“I joined a WhatsApp group for available notes. As a last-minute exam preparation, I downloaded the notes from the group, which was available at free of cost, and I was so happy. But the score disappointed me, and it made me realize,

if I worked hard and would have prepared own notes, I could have scored better.”

Digital platform creates the opportunity to access everything in a single click, but the challenge is to distinguish between right and wrong. Eagerness to be included in a digital literacy program is shown through the narrative of one of the Muslim girls –

“If I can explore everything in Instagram and Facebook, I can do in other websites too. Publicity of those programs or websites will make the inclusion process smooth and easy. I heard about many governments’ online programs and courses, but not aware of the process and criteria. Therefore, question arises on its reliability.”

Financial Instability Hampers Data Connectivity

Many of the young Muslim girls are not fortunate enough to have a stable internet connection –

“I recharge the lowest amount for data connection. The daily quota of the internet is not sufficient for enough surfing and downloading.”

Food and lodging become the main concerns of the earning member when there is only one breadwinner and more than four family members. Young Muslim girls consider themselves as blessed for getting an education at undergraduate level. After the accomplishment of their studies, they wish to offer a better living for their parents. Once financial stability is restored, digital literacy and digital inclusion will take place eventually, according to the narrative of one Muslim girl at the undergraduate level –

“I know about my father’s capability; I cannot expect beyond his limitation. I do not contribute anything; it will be a burden on him. If I get a chance to make something on my own, I will look into my shortfalls and will upgrade myself even digitally.”

Many free courses and study materials seem to be for the quality enhancement of the education system, but the high cost of internet connection maintenance proves to be a futile effort in making the digital world. One Muslim girl’s narrative for not accessing the internet justly explains –

“What is the point in being digitally literate when we cannot afford the connection? If it was free of cost, at least we could think of. Right now, I am only focused on completing my studies. I have to adjust with whatever I have.”

DISCUSSION

The extensive digitalization encourages students around the world to connect with people and exchange their knowledge and information across the globe (Livari *et al.*, 2020). Besides knowledge enhancement, digital inclusion promotes students’ cultural learning by understanding global diversity, and it develops a sense of one’s global perspective. Data processing and speed are vastly taken into account to facilitate the process of communication and to obtain information accurately and efficiently (Hufad *et al.*, 2019). Digital literacy plays a key role in reducing the global digital divide; it is one of the key performance indicators for sustainable development (Radovanović *et al.*, 2020).

Added to digital literacy, cultural, social, and security factors determine adoption in digital inclusion (Thompson and Paul, 2020). This study points to the parental, social, and financial factors that influence the digital literacy of Muslim women at the undergraduate level. Exposure to digital devices does not equal digital literacy and inclusion (Murray and Perez, 2015), and the findings of the study underpin the concept of non-coherence between digital devices and digital inclusion, as other factors strongly impact digital inclusion, especially for Muslim women (Ervianti *et al.*, 2023). Muslim women's digital literacy is a yardstick to measure their digital inclusion in the context of digital inclusion. Higher digital literacy positively impacts learning outcomes (Cherayi and Jose, 2016; Yustika and Iswati, 2020), but higher formal education does not necessarily positively affect higher digital literacy.

CONCLUSION

At the time of rapid digital transformation, the digital inclusion of Muslim women is the need of the hour for sustainability (Hufad *et al.*, 2019). The study showed that digital inclusion of Muslim girls has opened a huge scope to obtain quality education and limitless knowledge acquisition. Cultural dogma restricts Muslim girls' physical mobility, but digital literacy offers educational opportunities and expands their potential (Iivari, 2020). The virtual realm bypasses traditional social limitations, empowering them without requiring physical visibility.

Nevertheless, parental, social, and financial constraints remain a challenge for young Muslim girls, which impede the full involvement of the girls in digital literacy programs. Moreover, the financial instability of the parents of young Muslim girls acts as a roadblock to getting access to an internet connection and sufficient mobile data (Carson *et al.*, 2016). The lack of publicity for the digital literacy program fails to get the full participation of many girls.

To reduce the digital divide, digital literacy is significant for every citizen. In that regard, the lack of digital literacy among young Muslim girls is an obstacle, and the gap remains in the digital inclusion of all. By addressing the challenges and opportunities, digital literacy can unlock the potential of young Muslim women, driving cultural diversity and sustainability in the digital sphere.

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Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this manuscript. In addition, the ethical issues, including plagiarism, informed consent, misconduct, data fabrication and/ or falsification, double publication and/or submission, and redundancy has been completely observed by the authors.

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