

Enhancing Career Readiness through Digital Literacy: Challenges, Strategies, and Best Practices

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Abstract:

Digital literacy has become a fundamental competency for career readiness in the contemporary digital economy. However, women, particularly those from rural and marginalized communities, continue to face significant barriers in acquiring digital skills and accessing employment opportunities. This study examines the impact of digital literacy on women's career readiness, evaluates the inclusiveness of existing educational and training programmes, and identifies challenges and best practices for fostering women's career development. A qualitative research approach was adopted using secondary data from peer-reviewed literature, government reports, policy documents, and industry publications. Additionally, a case study of Sudha Murty's Village Adoption Mission was analysed to provide insights into digital skill development and workforce preparedness among rural women. The findings reveal that digital literacy is a critical determinant of employability and career readiness; however, a substantial gap exists between the digital competencies imparted through education and those demanded by the labour market. Women face additional challenges, including inadequate digital infrastructure, limited internet connectivity, shortage of skilled trainers, and socio-cultural constraints that restrict access to digital learning. The study highlights the need for gender-responsive digital training programmes, improved digital infrastructure, and inclusive policy interventions to bridge the digital skills gap and promote equitable career opportunities for women.

Keywords: Digital Literacy; Career Readiness; Women's Empowerment; Gender Inclusion; Rural Women; Employability Skills

Introduction

Digital Literacy encompasses a wide range of skills essential to access, utilize and interpret digital platforms efficiently in both educational and professional settings. As workplaces are becoming more digitalized, mastering technology has become essential for individuals to advance in their careers. Career readiness refers to having both technical abilities and soft skills that are needed to transition into the workforce, facilitating career advancements. Even with technological advancements, gender disparities persist. Women face additional barriers in accessing digital education, which leads to disparities in career opportunities, limiting their chances for equitable growth. Digital literacy helps women in overcoming traditional employment barriers and creating new career paths by enhancing financial independence, increasing participation in e-commerce, and exploring entrepreneurship. Women's digital literacy and career readiness are affected by unequal access to technology, societal constraints, and the lack of inclusive training programs, making it even harder for them to develop essential skills for career growth. While many studies acknowledge the significance of digital literacy, only a few evaluate whether these training programs are designed to be inclusive and effective for women, overlooking the socio-cultural barriers that hinder women's access to equitable growth. This study seeks to identify the impact of digital literacy on women's career readiness by identifying the key challenges women face in utilizing digital literacy programs for professional growth, evaluating existing educational programs, and exploring best practices for making digital education more inclusive for women. This study employs a literature review methodology analyzing government reports, academic papers, journals, and articles on digital literacy, gender disparities and career readiness. Additionally, a case study on eVidyaloka's women-centric digital literacy program is included to provide practical insights into successful digital training programs. eVidyaloka's digital education program that empowers rural women by providing online learning opportunities and equipping them with essential digital skills, improving their workforce readiness. This case study explores the achievements and obstacles of digital literacy initiatives for women, offering key takeaways for inclusive learning. While previous studies have evaluated digital

literacy's role in career readiness, they often fail to consider the gaps in understanding how these skills impact women's employment opportunities. This study seeks to identify the impact of digital literacy on women's career readiness by identifying the key challenges women face in utilizing digital literacy programs for professional growth, evaluating existing educational programs, and exploring best practices for making digital education more inclusive for women. This study's findings contribute to digital education policies by identifying barriers and effective strategies. It provides guidance on developing inclusive programs, improving digital infrastructure, and bridging the accessibility gap in underserved communities. This research also fosters the partnerships between governments, private organizations, and NGOs to expand digital literacy programs.

Review Of Literature

This literature review aims to analyze previous studies on digital literacy and its role in women's career readiness while examining the barriers they face in accessing digital education.

1. Sujarwo&et.al (2022), The study is entitled "Digital Literacy Model to Empower Women Using Community-Based Education Approach" highlighted that training women in social media and digital marketing would help them develop long-term digital skills by significantly increasing their ability to engage in e-commerce and community-based entrepreneurship. The researcher also stresses the need for community-driven digital training programs, as peer learning motivates women to further enhance their digital skills.
2. Aggarwal &et al. (2019) The study is based on "Opportunities and Challenges in Digital Literacy: Assessing the Impact of Digital Literacy Training for Empowering Urban Poor Women" observed that while access to digital devices and training improved women's ICT skills for employment. Factors such as affordability constraints, societal norms, and difficulties in sustained digital engagement created gender disparities, hindering equal access to these opportunities.
3. Hilbert (2011), the researcher discusses about the "Digital Gender Divide" revealing that digital gender divide remains a global challenge by analyzing global patterns of gender disparities in digital access. Further, women are systematically marginalized in digital inclusion across multiple countries, essentially due to economic constraints, lower education levels, and cultural restrictions. The research study reinforced that narrowing the gender gap necessitates policy interventions, infrastructure improvements, and targeted digital education programs.
4. The Bridgespan&et.al (2018) in their case study "Bold Philanthropy in India: Internet Saathi Profile" calls for the impact of the Internet Saathi initiative, a Google and Tata Trusts collaboration. It was found that this initiative empowered rural women in gaining digital literacy and in turn training other women, creating a multiplier effect. Despite this long-term digital engagement, the need for ongoing support with the lack of financial and technological resources remained a challenge.
5. Smitha (2017) , the research paper "Empowerment of Women Through Digital Literacy Strategies – New Challenges" argued that digital literacy strategies in India need to appoint more inclusive approaches as the policies in practice failed to address gender biases while highlighting that even though initiatives like digital India have improved technological access, gender- specific barrier still exists.
6. Srinivasan and Pyati (2019) in "Underserved, Underrepresented, Unaware: Women and Digital Literacy in India" examined the hurdles women face engaging with digital literacy initiatives. The research study found that a small group of women in rural India remain untouched by digital education and training initiatives due to language barriers, social constraints, and lack of awareness. The study is inclined towards making training programs more inclusive by localizing it in turn increasing its adaptability and approachability towards the local rural population.
7. DeGres (2021) the research paper "Digital Literacy and Women's Employment Prospects" analyzed how digital literacy is impacting women's career opportunities. The study revealed that women with digital skills had slightly higher chances of securing good jobs, particularly in remote and freelance work. However,

unequal access to digital technology and financial literacy prevented women from utilizing these opportunities effectively.

Methodology

This research is structured as a literature review relying on existing data sources, synthesizing findings from previous studies, government records, journal, article and reports to identify trends, challenges and best practices in digital literacy initiatives for women. The study relies on secondary data instead of primary data collection by reviewing existing public sources to extract insights. The secondary data sources include government reports and policy documents-reports from establishments such as DEF(Digital Empowerment Foundation), GSMA, TRAI and UNESCO and also research paper and academic journals studies published in Taylor and Francis, ERIC, Emerald and ACM digital library, Industrial reports and articles from corporate initiatives like Internet Saathi and eVidyaloka and news articles and magazines- insights from economic, education and technology based publications that highlights digital inclusion trends.

A structured analysis was conducted by categorizing data under key themes such as;

- Existing disparities in digital literacy based on Gender
- Factors that hinder women's participation in digital education.
- Impact of digital literacy on career advancement

Quantitative insights from government records and research reports provided data for tables and graphical representations for comparative analysis. The study relies on quantitative data due to the wealth of extensive research and statistical reports available on digital literacy initiatives worldwide, providing a broader and more comprehensive perspective on women's digital empowerment as compared to small-scale primary surveys. Furthermore, government reports and academic studies contribute large-scale evidence-based insights that enhance the credibility and validity of the findings. Due to the extensive reliance of the study on existing data, it does not incorporate real-time updates in digital literacy initiatives. The data-driven findings are sourced from credible government and academic records, making them a reliable foundation for policy discussions.

Findings And Discussion

This section outlines the key findings from our examination of secondary data on digital literacy and women's career readiness. The discussion emphasizes significant trends, connections and insights, complemented by relevant tables and graphs.

1. Gender disparities in digital literacy skills

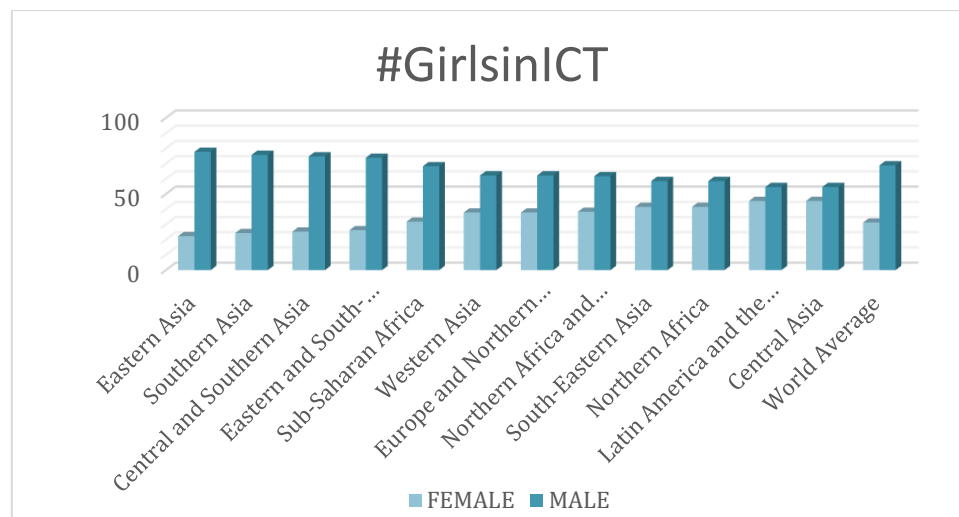
Research indicates that women worldwide are less likely to possess essential digital skills compared to men. UNESCO estimates men being approximately 4 times more likely than women to have advanced ICT skills, supporting career development, whereas women remain continuously under-represented in these areas.

Table1. Gender Distribution In Ict Skills

COUNTRY	East ern Asi a	Sout hern Asia	Cent ral and Sout hern Asia	East ern and Sou th- East ern Asi a	Sub- Sah aran Afri ca	Wes tern Asia	Euro pe and Nort h Ame rica	Nort hern Afric a and West ern Asia	Sou th- East ern Asi a	Nort hern Afric a	Latin Amer ica and the Carib bean	Cent ral Asi a	Wor ld Aver age
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FEMALE	22.3	24.3	25.3	26.2	31.8	37.8	37.8	38.3	41.5	41.5	45.4	45.4	31.2
MALE	77.7	75.7	74.7	73.8	68.2	62.2	62.2	61.7	58.5	58.5	54.6	54.6	68.8

Source: UNESCO #GirlsInICT 2023



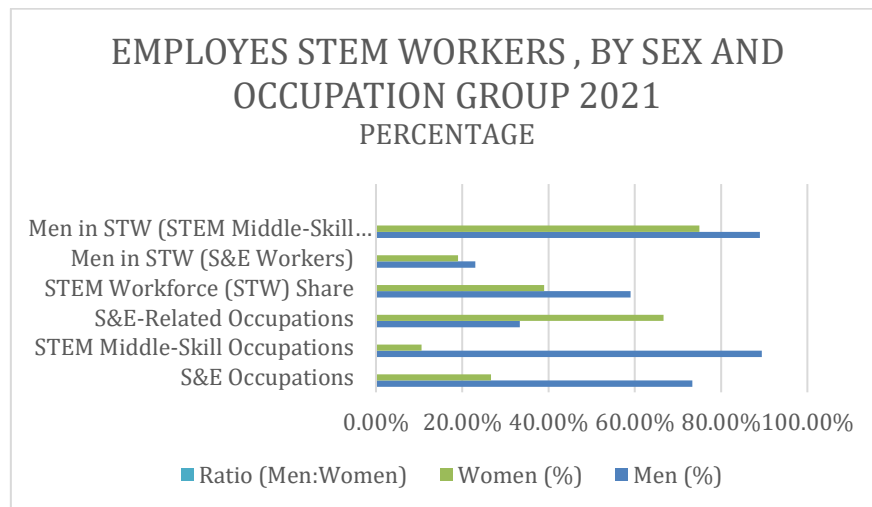
2. Under-participation of women in STEM fields

Only a minority of women have computing roles, occupying just over a quarter of such positions.

Table 2. Gender Participation In Stem Occupations(2021)

Category	Men (%)	Women (%)	Ratio (Men:Women)
S&E Occupations	73.33%	26.67%	2.75:1
STEM Middle-Skill Occupations	89.47%	10.53%	8.5:1
S&E-Related Occupations	33.33%	66.67%	1:2 (Women > Men)
STEM Workforce (STW) Share	59%	39%	1.51:1
Men in STW (S&E Workers)	23%	19%	1.21:1
Men in STW (STEM Middle-Skill Workers)	89%	75%	1.19:1

Source- National center for Science and engineering Statistics



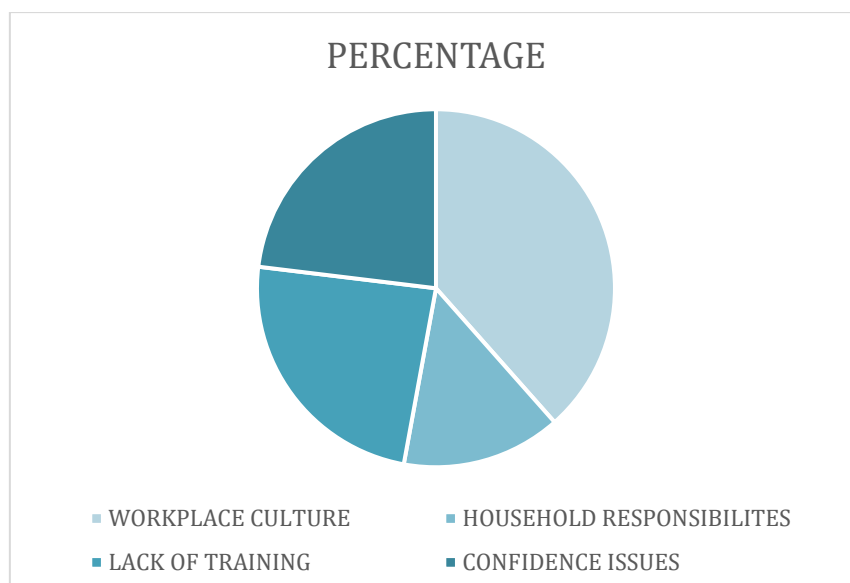
3) Barriers hindering women's career advancement in digital sectors

Over a third of women identify gender biases as a barrier to their career progression, citing factors such as inadequate support structure and limited training opportunities.

Table3. Perceived Barriers In Career Advancement For Women

BARRIER	PERCENTAGE
WORKPLACE CULTURE	40
HOUSEHOLD RESPONSIBILITIES	15
LACK OF TRAINING	25
CONFIDENCE ISSUES	24

Source- The Sun



4) Role of Digital Literacy in Women's economic empowerment

Enhanced digital literacy has empowered women economically by expanding their market reach and facilitating business growth.

Table 4. Impact Of Digital Literacy On Women's Economic Development

ASPECT	FINDINGS
Employment Opportunities	Women with digital skills are 25% more likely to gain formal employment.
Entrepreneurship Growth	Digital literacy enables 60% of women entrepreneurs to expand their businesses online.
Financial Inclusion	70% of digitally literate women use mobile banking and digital payments.
Education and Skill Development	Digital learning platforms have increased women's access to education by 40%.

Source- World Bank (2021)

Discussions

The findings reveal persistent gender disparities in digital literacy and fair opportunities by addressing ongoing challenges in achieving gender parity in digital skills and careers, highlighting factors such as work culture, lack of inclusive programs, and existing prejudice against women in society, which hinder equitable growth for women. Focused efforts should be necessitated to overcome these obstacles by providing women-centric training, leveraging their full potential, and enhancing their participation and advancement in digital sectors. Moreover, improving digital literacy among women not only empowers them but, on a broader perspective it adds to societal and economic development.

Conclusion

Digital literacy has become a necessity rather than a privilege in today's world, shaping career readiness and economic participation. However, this study highlights that gender disparities in digital skills continue to restrict women's career opportunities, particularly in STEM fields and digital entrepreneurship. Despite existing initiatives to bridge the digital gap, women remain underrepresented in technology-driven careers due to limited access to digital education, socio-cultural barriers, and economic constraints. To bridge these disparities, a comprehensive approach is needed involving early ICT education, the development of inclusive work environments, and specialized mentorship initiatives. These efforts can strengthen women's digital skills and enhance their participation and progression in technology-driven careers.

This study reveals that acquiring digital skills significantly enhances women's job prospects, entrepreneurial potential, and financial autonomy. Programs such as eVidyaloka and Internet Saathi demonstrate that when women gain exposure to digital education, they contribute to broader community empowerment. However, maintaining this progress necessitates sustained policy efforts, long-term financial support, and customized digital training programs that move beyond mere participation and achieve long-term success in the digital economy. When women are empowered with digital skills, it unlocks hidden potential, fueling innovation and strengthening economies. Ensuring gender equality in digital literacy goes beyond fairness- it plays a vital role in fostering overall social and economic development. Conclusively, digital literacy has the potential to be a transformative force for women's empowerment, but its benefits remain underutilized due to persistent challenges. It is narrowing the digital gender divide for achieving inclusive and long-term progress. A collective collaboration among stakeholders is necessary to strengthen women's access to digital education and career pathways, ensuring equal

opportunities in the evolving digital landscape. Governments, businesses, and academic institutions must join forces to ensure that women have equal access to digital opportunities, resources, and career advancement in an increasingly technology-driven world.

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