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Digital Learning and Women Empowerment

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Abstract

It is a powerful tool to promote women's empowerment by making education accessible, flexible and scalable. Advances in technology now mean women, even in the underserved and rural areas, can pick up new skills, increase economic opportunities, and conquer limiting societal barriers that prevent their personal and professional growth. Even today, women are hindered by the digital divide, socio-cultural norms, economic challenges, and safety concerns from having complete participation in digital education. Digital learning is investigated as an interface at the intersection of women's empowerment and digital learning, studying the barriers to women's adoption of it including technological access disparities due to gender, cultural perceptions of the disabled, and lack of family and institutional support. Here, it also draws attention to successful digital literacy programs as well as platforms in response to these challenges and empowering women. Inclusive digital learning initiatives can positively advance women's potential to actively participate in societal, economic and socio-political change promoting a culture of gender equality in the digital world.

Keywords:- Digital Learning, Women Empowerment, Gender Equality, Digital Divide, Inclusive Education

Introduction

The transformative force that digital learning has brought in the education system has provided learners a world in which innovative and accessible learning opportunities can be accessed. In an ever-changing world with technology changing the way we go about most tasks, its importance cannot be overstated especially in advancing women's empowerment by offering women tools and knowledge that will enable them to thrive in this fast-changing world. Women's empowerment,

when broadly defined as the process of increasing women's control over their lives, is not possible without access to education and digital learning platforms can certainly help in finding a way to bridge that educational gap. Women, particularly in the underserved regions, are able to acquire new skills, increase the knowledge and self-assurance they need to enhance their social, economic and political status through online courses, mobile apps and other digital tools. But this doesn't mean that digital learning doesn't have any impacts on the lives of women at all –the digital divide and gender based social norms still do exist. With flexible, affordable, and usually self paced options digital education allows women to overcome traditional barriers like geographic location, societal expectations, and financial constraints. Digital learning is particularly useful in facilitating sense of community and belonging among women and connecting them, allowing for a collaborative and mentoring experience, thereby amplifying their voice in the society. More women with a digital literacy and technical skills are not only creating better opportunities for employment but they are also becoming part of innovation and entrepreneurship which strengthens economic growth and gender equality. As such, the confluence of digital learning and women's empowerment is a formidable means of overcoming the gendered barriers, as well as of development and enabling the women to take their due place as a part of the digital economy. That brings us to the fact that supporting digital learning for women is not just about learning but equal opportunity and social transition and so forth.

Purpose of the Study

This study aims at analyzing the role of digital learning in empowering women through facilitation in overcoming the hindrances to women accessing education and economic activities. The objective of this work is to discover and to analyze the key obstacles in women's use of digital technologies by considering socio-cultural, economic, and institutional factors, as well as safety issues of the virtual world. Through a study of successful digital learning initiatives and platforms, the purpose of the study is to understand how digital tool can help women learn new skills, improve their employ ability and contribute to social and economic development. The study also aims at establishing how digital learning affects women's social mobility, their role in leadership and their involvement in decision making. Finally, the study is designed to yield insights and

recommendations for policymakers, educators, and organizations on how to create more efficient and powerful digital teaching application to assist women's enhancement and close the gender gap in the digital age.

Types of Digital Learning

Digital learning is comprised of a wide range of methods and platforms intended to meet the needs and learning styles of different people. eLearning, MOOCs, mobile learning and other forms of digital learning use technology to facilitate more interactive and accessible learning in an easier and more flexible manner.

- **eLearning**

eLearning refers to the use of digital platforms, such as Learning Management Systems (LMS), to deliver content and facilitate learning. It includes a wide range of instructional materials like videos, quizzes, and discussion boards. eLearning can be synchronous or asynchronous, allowing students to learn at their own pace or participate in real-time sessions. Many companies and educational institutions use eLearning to provide professional development or academic courses.

- **MOOCs (Massive Open Online Courses)**

MOOCs are online courses designed to be accessible to a large number of students worldwide, usually free or at a minimal cost. Platforms like Coursera, edX, and FutureLearn offer MOOCs, covering subjects ranging from humanities to advanced technical fields. These courses are typically self-paced, allowing learners from diverse backgrounds to gain valuable skills and knowledge without the constraints of traditional classroom settings.

- **Mobile Learning**

Mobile learning (mLearning) is where learning content is accessed on a mobile device (e.g. smartphone, tablet). mLearning refers to this learning process in which it enables learners anywhere and at any time to engage in their studies, thus making the education more flexible and accessible. Application of mLearning includes educational apps, podcasts, and videos among other applications that makes possible a bite sized learning and on the spot access to information. In

particular it is very useful in areas with very limited access to traditional learning infrastructure. Digital learning takes a variety of forms which provide learners with many pathways to access education, leading to breaking down of the geographic, temporal and socio-economic barriers. As the world becomes more connected via the digital world, these methods are now crucial to support lifelong learning, increase skills, and empowerment of a global community of people.

Technology Used in Digital Learning

With the help of numerous technological tools, digital learning has been improved in terms of delivery of educational content as well as engaging learners through interactive and an immersive manner. There are key technologies which support digital learning such as the internet, mobile apps, learning platforms and cutting edge technologies such as the Virtual Reality (VR) and Augmented Reality (AR). It's the same with these technologies that helped transform how education is delivered and its experience.

- **The Internet**

The internet is the backbone of digital learning, providing a platform for the seamless delivery of educational content. It enables access to online courses, educational videos, articles, forums, and other learning resources. The internet connects learners with instructors and peers, allowing for real-time communication through video conferences, chats, and discussion boards. This connectivity fosters a global learning community and breaks down geographical barriers, enabling access to education for individuals in remote areas.

- **Mobile Apps and Learning Platforms**

The way to interact with the content of a class is revolutionized thanks to mobile apps and learning platforms. Learning apps include interactive quizzes and language learning apps, that all present good resources to have on the go. Institutions have the option to use Learning Management Systems (LMS), such as Moodle, Canvas, or Blackboard to manage and deliver educational content, track learner progress, facilitate communication, etc. They also provided features of grading, assessments and peer collaboration to work together to make it a complete learning experience.

- **Virtual Reality (VR) and Augmented Reality (AR)**

Virtual Reality (VR) and Augmented Reality (AR) are subject to emerging technologies that provide immersive learning. Learners can be immersed in a completely virtual environment in a VR, by exploring complex topics or historical events in an interactive and 3D space. On the contrary, AR overlays the digital information on real world; this enriches the learner's interaction with the physical environment. However, these technologies are especially useful when you require hands on experience to understand complex ideas such as it is necessary to learn in fields like medicine, engineering, and science. Combined, these technologies constitute a strong framework for digital learning, enabling the education that attracts more people, engages students and is more accessible to the entire world. These tools are constantly evolving thus digital learning meets the varied needs of the learners globally.

Overview of Women Empowerment

Women Empowerment means to enable women to have control over the decisions making process and opportunities in all spheres of life similar to men. In essence, it is about enabling women to take part fully in all aspects of life, whether economic, social, political or health related. The very basic meaning of women empowerment is to make women strong by giving the power to handle their personal as well as professional life. It comprises of guaranteeing that they likewise have equivalent access to instruction, work, human services, and social assets. Empowerment gives women the confidence, autonomy and agency to challenge these systematically reinforced inequalities with which they have historically been marginalized.

Literature Review

Tabasum Niroo, W., et al (2022). Learning using technology has become an empowering force for women achieving gender equality in education, employment, and social participation. Digital tools and platforms provide access to educational resources, vocational training, and skill development programs to women in rural and under served areas from their homes. Online learning has allowed us to break free from the traditional barriers like distance, societal norms and being safe while still allowing flexibility and inclusivity of learning. Women are already learning through

technology in areas such as basic literacy and entrepreneurship up to advanced digital skills that improve their confidence, their financial independence and their ability to make informed decisions. Such initiatives as mobile based learning apps, virtual classrooms and the government initiatives backed the growth of digital literacy programs are critical in transforming digital learning.

Carm, E., et al (2013). Mobile learning or m learning has a great potential for women empowerment purpose, because it provides flexible and accessible opportunities to women for learning with their own preferred pace by minimizing gender inequality. Women located in remote or marginalized communities can easily overcome the time constraints, mobility issues, and cultural limitations through the use of mobile phones. M-learning makes possible access to a large variety of content including basic literacy and health awareness, digital skills and entrepreneurship training, boosting women's knowledge, self-confidence and economic opportunities. As a portable and affordable solution, it is a practical solution for lifelong learning of women at their own pace and at their own convenience. Other interactive features and social learning platforms facilitate student engagement and community support and in turn facilitate participation.

Niroo, W. T., et al (2022). Using technology for women's empowerment is a robust pusher for social and economic transformation. However, women are now able to access education, healthcare, financial services and employment opportunities through technology to bridge the gender gaps that have existed for long. Digital platforms and mobile applications enable women to learn new skills, create businesses, and reach new markets to become independent and entrepreneurial. Breaking barriers of mobility, safety and social norms, technology becomes the gateway to information and resources that were out of reach for rural and underserved areas. Additionally, women also have a voice on online communities and social media in order to disseminate their experiences, support the fight for women rights and set up support networks.

Amina, T. (2021). Access to Online education is crucial in promoting women's empowerment in providing flexible, accessible and inclusive learning opportunities. This creates an opportunity for women, especially those burdened with caregiving duties, social mores, or physical impediments, to engage themselves in learning and skill development as per their time and convenience. Women

can get basic literacy training to professional and technical training in the courses through online platforms that will improve their employability and economic independence. In terms of this digital mode of learning, students gain confidence, take part in self-expression, and make informed decisions. In many cases it has enabled women to start a business, work remotely, or finish college work that might otherwise not be available.

Mehra, B., et al (2004). As a powerful tool, internet does empower minority and marginalized users to access information, education, services as well as platforms for self-expression and advocacy. It removes traditional constraints of geography, socio economic status and systemic exclusion in permitting people from underserved communities to engage deeply in the society. Users can learn new skills, improve their literacy through online learning and improve their economic opportunities. Social media and digital forums provide spaces for the platforming of marginalized voices, for sharing of their stories, and through them mobilizing support for various social justice causes.

Shehzadi, S., et al (2021). In the post COVID-19 era, digital learning in educational institutes of Pakistan is playing a major role in shaping up the students' satisfaction and university's brand image. As a result, universities were forced to very quickly change to online education, using online platforms to teach and learn. The importance of technology driven education when it came to maintaining academic continuity and accessibility was shown through this transformation. Quality of digital infrastructure quality, teaching effectiveness, content delivery and user-friendly platforms have closely been associated with student satisfaction. Those which were well poised for digital learning were not only able to keep student engagement levels high, but also enhanced their profiles of innovation and resiliency.

Nedungadi, P. P., et al (2018). To develop such a framework to Digital India that is inclusive with regard to digital literacy, we need a comprehensive strategy so that the needs of the population are met while ensuring equitable access to digital resources. Digital literacy or digital fluency exceeds computer skills, and is the capability not just to use a computer, but to operate the various tools available digitally for education, communication and, in most cases, also for economic activities and, important, governance. To prioritize marginalized communities, rural populations, women

and persons with disabilities it should be overall an inclusive framework offering localized contents, vernacular language support and culturally contextualized training methods. The digital divide can be bridged by access through public-private partnerships, community based digital centers as well as mobile based learning initiatives.

Huyer, S., & Sikoska, T. (2003). The goal of overcoming the gender digital divide is crucial in tapping into the entire ICTs potential for empowering women. It indicates an inequality in accessing digital tools, connectivity to internet as well as digital literacy and confidence in using them; factors which are often impacted by socioeconomic status, socio cultural norms and educational inequalities. Women gain opportunities to access education, and healthcare, financial services, employment, and platforms of expression and advocacy through ICTs. Women's participation in the digital economy, remote work opportunities as well as in civic and political life increase, when empowered digitally. To bridge the gender gap, strategies need to encompass everything from digital literacy programmers' geared towards women, access to devices and connectivity at affordable rates, content in local languages and gender responsive technology policies. Creating spaces online and role models in tech will embolden more women to work with digital tools. To empower women through ICTs is not only raising individuals but also promoting inclusive and sustainable development.

Key Dimensions of Women Empowerment

Women's empowerment spans multiple dimensions. Economic empowerment involves women gaining control over financial resources, access to employment, and entrepreneurial opportunities. Social empowerment encompasses women's participation in social and cultural activities, enhancing their roles in family and community structures. Political empowerment involves women actively participating in governance and decision-making processes, breaking barriers in political leadership. Health empowerment ensures women have access to reproductive health services, information, and healthcare resources, which contribute to their overall well-being and autonomy.

Global Statistics on Women Empowerment

Globally, women continue to face significant disparities in empowerment. According to the United Nations, although progress has been made in areas like education and workforce participation, women still face obstacles in achieving equality, especially in leadership roles and decision-making. For instance, women occupy only about 25% of parliamentary seats globally, and the gender pay gap persists in most countries.

Women Empowerment in Developing Countries

In developing countries, women's empowerment faces unique challenges. Cultural norms, limited access to education, and economic dependency often restrict women's roles in society. However, initiatives like microfinance programs, vocational training, and digital literacy campaigns are helping women in these regions gain more control over their lives, improve their economic status, and participate more fully in public and political life.

The Role of Gender Equality in Empowerment

Gender equality is the foundation of women's empowerment. It ensures that men and women have equal rights, opportunities, and access to resources. Achieving gender equality helps create a more just and equitable society, where women's contributions are valued, and their potential is maximized. Through gender equality, the barriers to women's empowerment can be dismantled, allowing for the creation of a more balanced and inclusive world.

Digital Learning Tools and Platforms for Women

In the age of digital learning, a variety of tools and platforms specifically cater to women's education and empowerment, helping bridge the gender gap in technology and other fields.

- **Women-Centric Digital Learning Platforms**

Women-centric digital learning platforms, such as Women Who Code and SheCodes, are designed to provide women with the resources and support needed to thrive in male-dominated fields like

coding, software development, and data science. These platforms offer workshops, training programs, and networking opportunities, fostering a sense of community among women in tech.

- **Mobile Applications for Female Education**

Mobile applications also play a crucial role in women's education, with apps like Duolingo for language learning, Evernote for organization, and Udemy for skill-based courses, offering flexible, on-the-go learning.

- **E-Learning Modules and Resources**

E-learning modules and resources, including platforms like Coursera, edX, and Khan Academy, provide women with access to free and paid courses on a wide range of subjects, from entrepreneurship to digital marketing.

- **Gamification and its Effect on Female Learners**

Gamification in learning has proven to be particularly engaging for female learners, offering interactive, game-based experiences that make education more enjoyable and motivating. Platforms that incorporate gamified elements—such as Codecademy and Kahoot!—encourage participation and enhance learning retention.

- **Community and Mentorship Platforms for Women**

Community and mentorship platforms like Lean In and Girlboss provide women with access to valuable networks and mentors, helping them build confidence and develop skills in their chosen fields. These platforms foster a supportive environment where women can share experiences, seek guidance, and advance professionally.

- **Free vs. Paid Resources for Women's Education**

Finally, free vs. paid resources offer varying levels of access to education, with free platforms like Coursera and MIT Open Courseware providing quality education at no cost, while paid resources like LinkedIn Learning and Pluralsight offer premium content for those who can afford it.

Digital Literacy Initiatives for Women: Addressing Safety and Security Concerns

As more and more digital literacy initiatives for women take off, there is still the very crucial aspect that needs to be worked on, and it is safety and security of women. While women all over the world are part of the Internet community, we find, they are most exposed to online threats, like, cyberbullying, harassment, identity theft and cyberstalking, particularly in developing countries. They can make these challenges discourage them to participate fully in the digital world or make them lose confidence. As such, with the growth of digital literacy programs, it is important for programs to integrate strong safety protocols and also awareness of online risks to allow women to use the internet safely.

Addressing Safety Concerns in Digital Literacy Programs

Women's digital literacy initiatives should not stop at teaching of technical skills but also teaching of how to identify digital threats and protect their personal information. Alongside these programs, privacy protection should take part and women should be aware of how to secure their data and use secure passwords as well as be able to recognize phishing attempts or malware.

Ensuring a Safe Digital Space

Creating a safe digital space involves not just the technical aspect of security, but also fostering an environment of respect and inclusion. Programs should promote the importance of respectful online communication, encourage women to report harmful behavior, and provide resources for seeking help when facing cyber abuse. Moreover, digital platforms themselves must be held accountable for implementing policies that protect women from harassment and exploitation.

By addressing these safety and security concerns alongside digital skills training, initiatives can better equip women to confidently explore the vast potential of the digital world. As women gain more control over their digital lives, they will be empowered to use technology not only for personal growth and career development but also to advocate for their rights and engage in meaningful social change. Ensuring a safer digital experience is paramount to making digital literacy a tool of empowerment rather than a source of risk.

Barriers to Digital Learning for Women

Digital learning has the potential to significantly empower women, but several barriers hinder their full participation in this educational revolution.

- **Digital Divide: Gender Disparities in Access to Technology**

One of the most prominent challenges is the digital divide, where gender disparities in access to technology continue to persist, especially in rural or underserved areas. Women often face greater obstacles than men in obtaining smartphones, computers, and reliable internet connections, making it difficult for them to engage with digital learning platforms.

- **Socio-Cultural Barriers (Gender Norms, Traditional Roles, etc.)**

Socio-cultural barriers also play a significant role, as traditional gender roles and cultural norms restrict women's mobility and independence, often limiting their ability to engage in educational opportunities that require technology use.

- **Economic Barriers (Affordability, Lack of Devices, etc.)**

Economic barriers such as the high cost of internet access, smartphones, and computers further exacerbate the situation. Many women, particularly from low-income households, are unable to afford these technologies, preventing them from accessing online learning platforms.

- **Political and Institutional Challenges (Lack of Policies, Internet Censorship, etc.)**

On a broader scale, political and institutional challenges also persist, with a lack of supportive policies, limited access to internet infrastructure, and even government-imposed internet censorship in some regions, further curtailing women’s digital education opportunities.

- **Limited Representation in STEM Fields**

Moreover, there is limited representation in STEM fields, where women are underrepresented in both educational and professional settings, leading to a lack of role models and mentorship opportunities in tech-related fields.

- **Safety and Privacy Concerns Online**

Finally, safety and privacy concerns online often deter women from fully participating in digital spaces. Fears of online harassment, cyberbullying, identity theft, and privacy breaches make many women hesitant to engage with online learning, particularly in environments where digital literacy and safety training are lacking. These barriers highlight the need for targeted interventions that address the unique challenges women face in digital learning, ensuring equitable access and fostering an environment where women can thrive in the digital world.

Methodology

The mixed methods approach in the study is a combination of quantitative and qualitative methods of research. Quantitative data is collected initially using surveys and statistical analysis to examine the degree of accessibility and utilization of digital learning tools and their outcome on women in various places. Data of these surveys track amongst other factors, the percentage of women accessing digital platforms; women's participation in online courses; the types of technologies used; and the subsequent changes in economic, social and educational conditions. This is bolstered by other qualitative research, e.g., interviews, focus groups, case studies that provide additional understanding about women's personal experiences that lead to and hinder adoption of digital learning. It also discusses the qualitative part that covers socio cultural and economic barriers to digital adoption. To this end the research assesses selected digital literacy programs, initiatives, and platforms targeting women in order to evaluate their effectiveness towards reinforcing women's digital skills and enhancing their independence. Thus, we conduct comparative analysis in regions with contrasting digital infrastructure development and women empowerment in order to comprehend the crossroads between virtual learning and women's independent growth. The data is analyzed for deriving trends, patterns, and correlations related to outcomes of digital education and empowerment for women.

Table 1: Internal Normative Barriers to Women's Digital Adoption in India

Internal Barriers	Influence / Cause / Dependency
Perceived Lack of Need/Relevance	Lack of knowledge of digital use cases that are both personally appealing and relevant, but also externally justifiable to gatekeepers (e.g., family or community).
Negative Perceptions of Digital Costs	A perception that the internet is expensive, with limited return on investment; fear of uncontrolled online expenditure, due to a lack of understanding of how much it costs to perform various activities online.
Fear of the 'Negative Side' of Digital	Negative attitudes towards the internet, seeing it as a waste of time, disreputable for women, and risky. This is compounded by a lack of knowledge of how to stay safe online (e.g., avoiding addiction, harassment, scams, and cyberbullying).
Shortage of Self-Confidence and Technical Skills	Low self-confidence in their ability to learn how to use a smartphone or other devices, and in their ability to convince family members, particularly husbands, to help them access or learn digital technology.
Lack of Time to Learn or Use Digital Technology	Low motivation to prioritize digital learning due to competing responsibilities, coupled with a lack of support from family members, especially in traditional gendered roles.

There are several internal normative barriers to the digital adoption of women in India. A major barrier is that women do not perceive a need or relevance of the digital tools or there is a lack of awareness about how digital tools are personally beneficial and externally justifiable within their community and family. People have negative perceptions on digital cost such as perception on internet as uncontrolled expensive unnecessary cost and fears of mismanaged digital expenditure due to lack of digital cost understanding. The fear on the negative side of digital keeps women away as the internet may be seen as unsafe, connected with addiction, harasment, or fraud,

provided that she does not know how to stay safe online. This problem is amplified by a lack of self-confidence and skill with which women feel not confident and learn or don't ask for help in using digital tools. Finally, lack of time to devote to digital learning is one, since women's time and free time is often limited due to caregiving duties and the lack of support from their household members in terms of role sharing.

Table 2: External Normative Barriers to Women's Digital Adoption in India

External Barriers	Influence / Cause / Dependency
Perceived Lack of Need/Relevance	Gatekeepers (e.g., husbands, fathers, and other male family members) do not see any useful, justifiable reasons for women to use smartphones or the internet. They may believe it is unnecessary or unimportant for women to engage digitally.
Negative Perceptions of Digital Costs	Gatekeepers perceive it as a waste of money for women to use smartphones and the internet. The perception that digital technology is only a financial burden without tangible benefits discourages families from supporting women's digital adoption.
Fear of the 'Negative Side' of Digital	Gatekeepers, particularly husbands, fear that women's use of phones and the internet will lead to illicit relationships, infidelity, online scams, or exploitation, which could harm the family's reputation or cause social dishonor.
Poor Use of Time	Gatekeepers believe that smartphones and the internet are a waste of women's time, seeing them as distractions rather than tools for

	learning, personal development, or economic empowerment.

External normative barriers have a significantly negative effect on women adopting digital technologies in India. Among such barriers, there is a perceived lack of need or relevance of the smartphone or internet, since gatekeepers (mostly male family members such as husbands, fathers) do not see any valid reason for women to use their smartphones or get online, as it _is of no use in their family or social life_. Also, there are negative perceptions of digital costs in which the gatekeepers perceive internet and smart phones to be a financial burden and that women's engagement with technology does not have tangible benefits to offer. Limiting women's access to digital space further due to the fear of the negative aspect of digital as gatekeepers fear the possibility of illicit relationships, infidelity, scams or their family 'losing face'. Lastly, the poor use of time perspective is also a contributing factor in the above described barriers, as gatekeepers see smartphone and internet use as a waste of time and not as a tool to improve education, skill and economic power.

Table 3: Four Models for Improving Digital Literacy

Model	**Description**	**Digital Literacy Initiatives Reviewed**
Internet Kiosks, Telecentres, and Community Resource Centres	Initiatives that use a physical centre – often a local business such as an internet kiosk or phone sales centre – as a platform for digital outreach and training.	- National Digital Literacy Mission (India) - Telecentre Foundation - The DHAN Foundation - GSMA and Banglalink (Bangladesh)
Community Liaison	Initiatives where a community worker goes house to house	- Internet Saathi (India) - Soochnapreneur (India)

	imparting knowledge about how to use digital technology and providing digital services.	- Facebook We Think Digital - iSocial Kallyani (Bangladesh)
Leveraging Women's Empowerment Collectives	Initiatives that leverage women's empowerment collectives to promote digital adoption among members.	- Grameen Foundation: DIVE - Vodafone Smart Snehidi (India) - Nirantar (India)
Digital Solutions	Mobile phone-based products or services that train learners specifically on digital literacy and build skills, usually through self-learning.	- Viamo Calling All Women (Tanzania and Pakistan) - KaiOS Life Application (several countries across Africa and Asia, including India)

There are several models developed to enhance digital literacy (especially for women) with each mode of approaching and educating learners in a unique way. The physical spaces, such as local businesses or kiosks, are used for digital outreach and training, as an Internet Kiosks, Telecentres, and Community Resource Centers model. Instructors of these usages have played a key part in providing digital education in these settings, primarily through National Digital Literacy Mission and Telecentre Foundation. Internet Saathi and Soochnapreneur are Community Liaison where community workers go door to door teaching digital skills and services. The Leveraging Women's Empowerment Collectives model focuses on driving digital adoption in existing women's groups or cooperatives such as the Grameen Foundation: DIVE and Vodafone Smart Snehidi that use technology to empower women. Digital Solutions also employ mobile applications that teach digital skills, usually in the form of self-paced learning, including Viamo Calling All Women and KaiOS Life App, making digital literacy more accessible in regions where resources are scarce.

Conclusion

An agenda of access: Digital learning has become a powerful tool to empower women and provide opportunities for education, economic independence, and social mobility. In an age where the world is adopting technology as it should be, digital platforms are becoming much more accessible for women in unprivileged areas, who can now learn skills that they could not learn before. The digital learning breaks down geographies, distance and the socio-economic status allowing women to connect to educational content, ratchet up their digital literacy and rise up in their careers. Women need to be able to overcome barriers such as lack of access to technology, low digital literacy, socio cultural norms, and safety concerns in the digital space for digital learning to empower them. Specific initiatives have been introduced like women centric digital platforms, mobile apps and mentorship programs have proven to be successful in tackling these challenges. Including safety measures in digital learning programs allows women to use online spaces in a safe way. Individual empowerment of digital learning is however not the only long-term benefit of it, but also development of the wider society. Economically, education and the empowerment of women play an important role in promoting economic growth, innovation and social change. With more and more governments, NGOs, and private sector entities committing to digital education for women, the future is very much up in the air for a more equitable, inclusive society. To address the enormous benefits of digital learning in skill building, women must be provided with digital tools and resources to produce the changes that close the digital gender gap in Microsoft IDC initiative.

References

1. Tabasum Niroo, W., & Crompton, H. (2022). Women's Empowerment through Learning Using Technology. *Asian Journal of Distance Education*, *17*(2), 135-152.
2. Carm, E., & Øgrim, L. (2013). M-learning—a Potential for Women's Empowerment?. *World Studies in Education*, *14*(1), 57-77.

3. Niroo, W. T., & Crompton, H. (2022). Women's empowerment through the use of technology. *Asian Journal of Distance Education*, *17*(2).
4. Amina, T. (2021). Online education and women's empowerment. In *Oxford Research Encyclopedia of Education*.
5. Mehra, B., Merkel, C., & Bishop, A. P. (2004). The internet for empowerment of minority and marginalized users. *New media & society*, *6*(6), 781-802.
6. Shehzadi, S., Nisar, Q. A., Hussain, M. S., Basheer, M. F., Hameed, W. U., & Chaudhry, N. I. (2021). The role of digital learning toward students' satisfaction and university brand image at educational institutes of Pakistan: a post-effect of COVID-19. *Asian Education and Development Studies*, *10*(2), 276-294.
7. Nedungadi, P. P., Menon, R., Gutjahr, G., Erickson, L., & Raman, R. (2018). Towards an inclusive digital literacy framework for digital India. *Education+ Training*, *60*(6), 516-528.
8. Huyer, S., & Sikoska, T. (2003). *Overcoming the gender digital divide: understanding ICTs and their potential for the empowerment of women*. Santo Domingo: INSTRAW.
9. Grown, C., Gupta, G. R., & Pande, R. (2005). Taking action to improve women's health through gender equality and women's empowerment. *The lancet*, *365*(9458), 541-543.
10. Mariscal, J., Mayne, G., Aneja, U., & Sorgner, A. (2019). Bridging the gender digital gap. *Economics*, *13*(1), 20190009.
11. Summers, K. H., Baird, T. D., Woodhouse, E., Christie, M. E., McCabe, J. T., Terta, F., & Peter, N. (2020). Mobile phones and women's empowerment in Maasai communities: How men shape women's social relations and access to phones. *Journal of Rural Studies*, *77*, 126-137.
12. Cornwall, A., & Rivas, A. M. (2015). From 'gender equality and 'women's empowerment'to global justice: reclaiming a transformative agenda for gender and development. *Third world quarterly*, *36*(2), 396-415.
13. Cummings, C., & O'Neil, T. (2015). Do digital information and communications technologies increase the voice and influence of women and girls. *A rapid review of the evidence. Overseas Development Institute*.
14. Ewerling, F., Lynch, J. W., Victora, C. G., van Eerdewijk, A., Tyszler, M., & Barros, A. J. (2017). The SWPER index for women's empowerment in Africa: development and validation of an index based on survey data. *The Lancet Global Health*, *5*(9), e916-e923.
15. Antonio, A., & Tuffley, D. (2014). The gender digital divide in developing countries. *Future Internet*, *6*(4), 673-687.

16. West, M., Kraut, R., & Ei Chew, H. (2019). I'd blush if I could: closing gender divides in digital skills through education.
17. Winther, T., Ulsrud, K., & Saini, A. (2018). Solar powered electricity access: Implications for women's empowerment in rural Kenya. *Energy research & social science*, *44*, 61-74.
18. Gee, J. P. (2013). *The anti-education era: Creating smarter students through digital learning*. Macmillan.
19. Nath, V. (2001). Empowerment and governance through information and communication technologies: Women's perspective. *The International Information & Library Review*, *33*(4), 317-339.
20. Kamberidou, I. (2020). "Distinguished" women entrepreneurs in the digital economy and the multitasking whirlpool. Journal of Innovation and Entrepreneurship, 9(1), 3.