

Exploring the Influence of Digital Life on Women's Social Engagement: The Role of Digital Literacy

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The research investigates how digital life affects women's social interaction by exploring digital literacy as a mediating variable. The study used 240 women from North India as participants with diverse occupations through a quantitative methodology. The study applied Partial Least Squares Structural Equation Modelling (PLS-SEM) to analyse the data. Digital life creates positive effects on both social engagement processes and digital literacy comprehension, along with digital literacy acting as an important factor for enhancing social engagement. Digital literacy serves as a connector between digital life and social engagement because it strengthens the advantages of digital technology for women in their social participation. The study finds digital literacy serves as an essential tool which unites technology access to social inclusion goals. The research findings provide essential directions to developers, along with policymakers and instructors, on enhancing women's digital competence and social inclusivity. Further research needs to explore these connections from a perspective of time and diverse population demographics throughout different community settings.

Keywords: Digital inclusion, Digital technology, Mediation effect, PLS-SEM, Social inclusion

Introduction

New technologies developed through the digital revolution have transformed all aspects of social connection and communication that happen during social interactions.¹ Digital technologies, including the internet, social media and mobile devices, allow users to invent fresh ways of social interaction while forming communities, according to Trub *et al.* (2025).² The influence of digital transition on social behaviour needs more investigation regarding female behavioural patterns specifically.^{3,4} The digital literacy competence of women determines their participation rates as active digital citizens since it describes how effectively they operate with digital resources.⁵ Forming a basis for digital literacy involves two primary competencies: ICT skills combined with analytical thinking functions and the ability to generate and convey digital content.^{6,7}

People require specific abilities to fully benefit from digital possibilities in digital environments.⁸ Social engagement as a concept exists in various

dimensions between civic activity and community involvement alongside interpersonal relationships.⁹ Social interaction in the digital era evolved through the creation of digital communities and technological tools.¹⁰ Through social media networks, people can now participate in group activities while holding conversations and maintaining relationships that advance in a positive direction.¹¹ Women rely on their digital proficiency to access social communication channels.^{12,13} Research about digital technology's impacts on various social aspects has developed substantially over the past few years.¹⁴ Researchers have not yet discovered the detailed role that digital literacy plays as a relationship moderator between women's social roles in digital environments.¹⁵ Most existing research focuses on digital literacy in different use environments^{16,17} alongside general evaluations of social participation through digital technology.¹⁰ The complex relationship and specific impact of these variables on female community interaction require more research exploration.^{18,19} Women need full access to digital technology for meaningful social involvement with minimal obstacles to addressing this present gap.²⁰ Modern

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society requires research on digital inequality identification because digital literacy impacts female social connectivity during an era of growing digital technology adoption and significance.^{21,22} This understanding enables the creation of inclusive digital platforms that let women from all backgrounds establish social bonds through technology.²³ Research shows digital literacy needs to be better understood as both a standalone concept and as a technology utilisation outcome, but its potential to generate social engagement benefits from digital life remains unexplored.^{24,25}

Research on digital technologies and social engagement contains extensive works but fails to account for female-specific experiences, according to Pattnaik *et al.* (2024).²⁶ Research about digital life interaction with women's social engagement through their digital literacy practices remains scarce, causing vital knowledge deficits in digital experience processes for women. These key factors of age groups alongside socioeconomic standings, educational backgrounds and cultural environments lack proper study, though they strongly influence women's digital skills and inclusion levels. Jammu and Kashmir provide researchers with an exceptional environment to study the dynamics of these phenomena, according to Wani (2013).²⁷ The region's distinctive economic structure and cultural differences, alongside digital inequality between genders, demand a thorough investigation of women's digital lifestyle practices in social engagement.²⁸ The research contributes essential knowledge about digital life together with digital literacy and women's social participation through its examination of these knowledge deficits. The discovered effects will help develop programs and policies designed to increase digital inclusion among women and foster better digital learning and valuable digital social opportunities. The study aims to answer two key research questions: RQ1. How does digital life influence social engagement among women? RQ2. Does digital literacy mediate the relationship between digital life and social engagement? By investigating these questions, the research seeks to contribute a nuanced understanding of the mechanisms driving women's social participation in the digital era, offering theoretical and practical insights to enhance digital inclusion and equity.

Literature Review and Hypothesis Development

Digital Life and Social Engagement among Women

Digital life transforms contemporary society because widespread digital platforms and technology usage

redefine human relationships.¹⁹ Digital communication tools, including social media and instant messaging, started transforming social engagements after their development in 2011.⁽¹⁸⁾ Web-based tools help people maintain relationships as well as grow bonds with others while providing access to digital communities where individuals can engage in collective activities.^{10,11} Women utilise digital spaces as essential platforms to express themselves through their networks and build advocacy actions, according to Gouws (2018)²⁹ and Baer *et al.* (2016).³⁰ The platforms give women power through their option to share ideas while creating connections with others who agree and participate in political advocacy. The digital space now stands as an essential environment for promoting gender equality along with empowering women.³¹

H1: Digital life positively affects social engagement among women.

Digital Life and Digital Literacy among Women

Digital social engagement success among people depends heavily on their digital literacy capability.¹² Digital literacy consists of multiple competencies involving digital content-related skills for gaining knowledge and evaluation proficiency along with proficiency in various digital platforms.⁶ The growing integration of digital technologies into daily lives has made digital literacy increasingly important for meaningful online participation.²¹ Highly digitally literate individuals develop better skills to use digital platforms that enable social and educational engagement together with professional development.³² Digital proficiency helps them evaluate digital information critically in addition to creating digital materials and leveraging digital tools for communication and collaboration.³³ The lack of digital literacy skills creates difficulties for such individuals to engage with the digital world which subsequently leads to digital exclusion.²³ Digital inequality becomes more severe because access to information resources and opportunities demand advanced digital skills from people.³⁴ It is essential to develop digital literacy capabilities because they create opportunities for equal access to digital age advantages.

H2: Digital life positively affects digital literacy among women.

Digital Literacy and Social Engagement among Women

Studies by Litt (2013)¹⁷, Tsetsi & Rains (2017)²⁵, Showkat *et al.*, (2025)³⁵ and Van Deursen & Van Dijk (2011)¹⁶ have confirmed that digital literacy serves as a

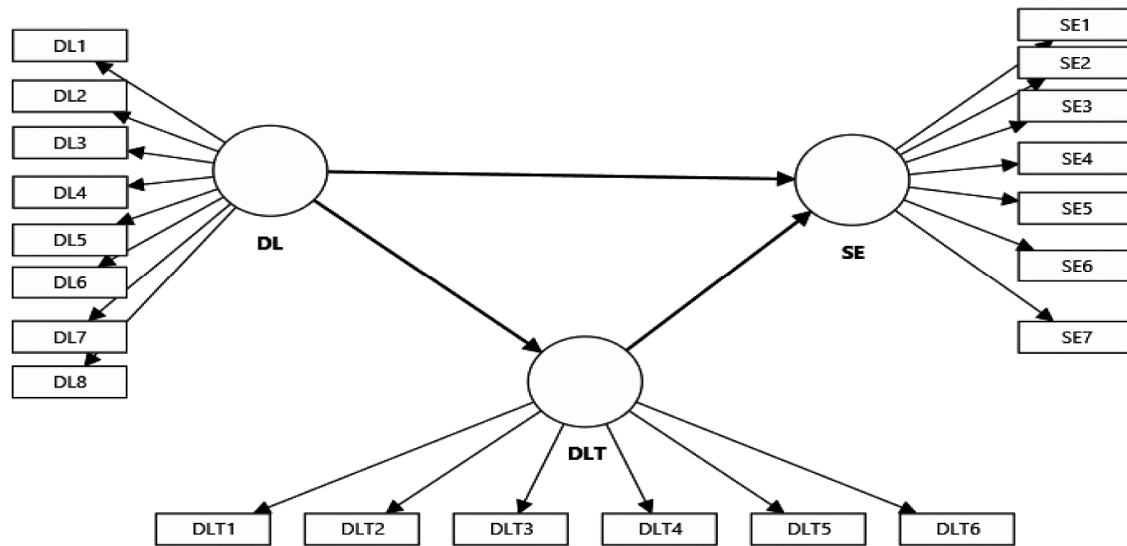


Fig. 1 — (a) In-born Nutrient variability and (b) corresponding variable rate fertilizer input in the same field to provide (c) uniform yield subjected to zonal classifications

vital tool which helps individuals to actively join online communities while they access information and perform digital civic activities. Women who achieve advanced digital literacy skills demonstrate better abilities when it comes to using digital platforms for social connection. The upgraded digital competence enables women to form complete online networks which support meaningful discourse and collective actions.^{21,22} Digital literacy allows women to access enhanced opportunities for empowerment which improve their digital representation. Female digital fluency enables people to defend their rights through digital networks by telling their personal experiences and creating activist support for various social campaigns.³⁶ People can achieve better recognition through a mixed approach of digital and physical engagement which strengthens their ability to influence their communities. Men and women who learn digital literacy skills gain better opportunities to create businesses, pursue education, and build digital market potential by acquiring innovative abilities that drive success.³⁷ Gender equality advancement in society requires dedicated attention to building digital literacy capabilities for women who will use these skills to grow as individuals and advance society.

H3: Digital literacy positively affects social engagement among women.

Digital Literacy, Digital life and Social Engagement among Women

Research indicates that digital literacy acts as a mediator between the relationship established

between digital life patterns and social engagement activities. Digital literacy shapes social engagement among women because it either helps or obstructs their successful digital space interaction.¹³ Women with advanced digital competence tend to maximise digital tools for social purposes.¹² Effective digital skills let them enter digital spaces with deeper engagement to perform online activities, which include networking and community building as well as advocacy and activism.³⁸ The digital landscape proves difficult for women who have limited digital literacy, so their ability to connect online remains limited, according to Suwana (2017).³⁹ The advancement of digital literacy would enable people to transition from digital tool access to effective technology utilisation for building meaningful social connections. Woman-targeted digital skills training, along with educational initiatives, acts as a major tool to boost female digital participation for better social inclusion and equality.^{40,41} Digital literacy stands as an essential foundation because it requires focus in the overall discussion of digital inclusion alongside women's empowerment work.

H4: Digital literacy mediates the relationship between digital life and social engagement among women.

Theoretical Framework: The Digital Inequality Paradigm

The research depends on the digital inequality paradigm (DiP)^{16,42} presented in the conceptual model Fig. 1 to analyse the intersection between Digital Life (DL), Digital Literacy (DLT), and Social

Engagement (SE) in women. Through its multidimensional approach, the DiIP evaluates how numerous factors determine individuals' abilities to obtain and use digital resources. A core principle of the DiIP declares that digital inequalities occur through multiple obstacles or stages that people need to surpass to complete their digital inclusion.¹⁶ The successive hurdles identified by the model include motivational access to digital technologies, as well as material access to physical resources, and skills access to digital literacy capabilities, and usage access for meaningful technology utilisation.

The DiIP emphasises digital literacy as an essential factor that determines the achievement of digital inclusion. An individual's capability to exploit digital technology potential depends completely on their level of digital literacy skills, according to both Scheerder *et al.* (2017) and Van Dijk (2013).^{42,43} The study supports the hypothesis (H4) since digital literacy functions as a mediator between digital life and social engagement behaviours in women. The DiIP acknowledges both individual characteristics, including age, socioeconomic status and gender, in how people experience digital inequalities and differences.^{13,22} The concept is well-suited for studying particular digital experiences of women because this area represents the research core of this study.

Materials and Methods

Research Design

A survey-based quantitative research design evaluated women's social engagement through digital life, while digital literacy functioned as the intermediary relationship in this analysis. Aligned with the research framework³⁵, which examines "financial inclusion and women's economic empowerment", the survey instructions explicitly communicated this scale orientation to respondents to ensure clarity in responses and consistency in data collection.

Sampling Technique and Data Collection

The research investigated female users of digital services who are residents of Jammu and Kashmir in the Indian Union Territory. The research site was chosen because its specific socio-economic dynamics and cultural aspects create an optimal environment to study digital life together with digital literacy and social interaction elements. Through the application of stratified proportional sampling, the study included equal representation of employed and self-employed

workers, students, and unemployed women. The chosen research method enabled researchers to gather various perspectives, which led to a complete understanding of female experiences and opinions in this field.

Sample Size

Field surveys were conducted by researchers from December 2023 to March 2024 as part of the household examination in Jammu and Kashmir. The questionnaire was administered through a scheduled "face-to-face" survey. This approach ensured direct interaction with participants, allowing for clarification of any questions and enhancing response accuracy. The researcher acted as an enumerator, directly recording participant answers. This approach helped minimize misunderstandings and ensured that responses were properly filled. To encourage participation, we emphasized the study's importance, assured respondents of confidentiality, and minimized the time burden by designing a concise and clear questionnaire.

According to Table 1, the research population included 240 active female users who were strategically balanced between four occupational groups before survey distribution commenced. Through this approach, the researcher distributed the participants equally across different roles to ensure data quality and unbiased findings. Sarstedt *et al.* (2015)⁴⁴ suggest using 240 participants for sufficient PLS-SEM statistical power; thus, our research used this sample size. The research sample exceeds the minimum standards of the "10 times rule" indicator rule for complex constructs, thus achieving better results by enhancing stability and reliability.

Data Analysis and Findings

The research needed "Partial Least Squares Structural Equation Modelling (PLS-SEM)" through Smart PLS version 4.0 to perform the data analysis. The study employed PLS-SEM for data analysis because this method demonstrates strength in processing non-normal distributions and works with small samples, as Hair *et al.* (2017)⁴⁵ explain. The initial step focused on evaluating the first-order measurement model as the starting point of analysis. Using a bootstrap analysis of 10,000 subsamples, the researchers performed a two-tailed test with bias-corrected percentile methods according to Gautam & Kumar (2023)⁴⁶ and Hair & Alamer (2022).⁴⁷

Table 1 — Demographic profile (Source: Authors calculation)

Age	Frequency& Percent	Designation	Frequency& Percent	Education Level	Frequency& Percent
18–24	40 & 17	Employed	60 & 25	No formal education	26 & 11
25–34	60 & 25	Self-Employed	60 & 25	Primary School	71 & 30
35–44	77 & 32	Student	60 & 25	Diploma/certificate	34 & 14
45–54	35 & 14	Unemployed	60 & 25	Bachelor's degree	83 & 34
55–Above	28 & 12			Master's degree or higher	26 & 11
Total	240 & 100	Total	240 & 100	Total	240 & 100

Table 2 — Descriptive statistics (the constructs and item codes are: Digital Life = DL, Digital Literacy = DLT, Social Engagement = SE) Source: Authors' Calculation

Item Code	Questionnaire Item	Mean ± SD
Digital Life		
DL1 ⁽⁴⁸⁾	I feel confident in using new digital tools and applications.	2.573 ± 1.028
DL2 ⁽⁴⁹⁾	I can troubleshoot common problems when using digital devices.	2.554 ± 1.006
DL3 ⁽⁵⁰⁾	I am able to learn new digital skills on my own.	2.594 ± 0.991
DL4 ⁽⁴²⁾	I own a personal computer/laptop/smartphone.	2.556 ± 1.004
DL5 ⁽⁵¹⁾	My internet connection is reliable and stable.	2.561 ± 1.02
DL6 ⁽⁵²⁾	I use the internet for social networking daily.	2.561 ± 1.02
DL7 ⁽⁵³⁾	I often use digital tools for professional development	2.540 ± 1.007
DL8 ⁽⁵²⁾	I use online platforms to stay informed about current events	2.566 ± 0.987
Digital Literacy		
DLT1 ⁽⁵⁴⁾	I can evaluate the credibility of online information sources	2.756 ± 0.998
DLT2 ⁽⁵⁵⁾	I can effectively use search engines to find information	2.362 ± 0.848
DLT3 ⁽⁵⁶⁾	I understand how to protect my privacy online	2.648 ± 0.975
DLT4 ⁽⁵⁷⁾	I can use digital tools to communicate effectively with others	2.512 ± 0.943
DLT5 ⁽⁵⁸⁾	I understand the ethical implications of my online behaviour	2.441 ± 0.895
DLT6 ⁽⁵⁹⁾	I am proficient in using software applications	2.505 ± 0.92
Social Engagement		
SE1 ⁽⁶⁰⁾	I regularly participate in online communities	2.516 ± 0.952
SE2 ⁽⁶¹⁾	I attend social events organized through digital platforms	2.484 ± 0.92
SE3 ⁽⁶²⁾	I use digital tools to collaborate with others on community projects	2.446 ± 0.905
SE4 ⁽⁶³⁾	I engage in discussions on social media about social issues	2.54 ± 0.964
SE5 ⁽¹⁰⁾	I join online groups that interest me	2.647 ± 0.985
SE6 ⁽⁶⁴⁾	I use social media to organize or promote events	2.52 ± 0.977
SE7 ⁽³¹⁾	I interact with others through digital platforms for support and advice	2.54 ± 0.954

Results

The demographic profile (Table 1) shows that most respondents are between 25 and 44 years old (57%), indicating a predominantly working-age population. Employment status is evenly distributed, with 25% each being employed, self-employed, students, and unemployed. Regarding education, most respondents hold at least a Bachelor's degree (34%), while 30% have completed primary school, and 11% have no formal education. This distribution suggests a relatively educated population with diverse employment conditions. The research questionnaire (Table 2), derived from past studies, maintained fitness to current requirements to comprehensively understand female

participant response patterns. The questionnaire contained a "5-point Likert scale" that used 1 for "strongly agree" and 5 for "strongly disagree."

Reliability and Validity Assessment

The reliability check indicates consistent internal quality across all constructs pictured in Table 3. The reliability assessment shows positive results through "Cronbach's alpha values" greater than 0.7 along with "composite reliability" scores exceeding 0.7 as per Henseler *et al.* (2015)⁶⁵ recommendation. The tools demonstrate success in measuring the defined latent variables according to these research results. The validity assessment produces satisfactory results. The

Table 3 — Validity and reliability (Source: Authors' Calculation)

Item	Outer loadings				Average variance extracted (AVE)
		Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	
Digital Life					
DL1	0.927	0.89	0.99	0.992	0.937
DL2	0.984				
DL3	0.954				
DL4	0.944				
DL5	0.97				
DL6	0.984				
DL7	0.98				
DL8	0.954				
Digital Literacy					
DLT1	0.822	0.946	0.947	0.957	0.787
DLT2	0.89				
DLT3	0.878				
DLT4	0.913				
DLT5	0.898				
DLT6	0.918				
Social Engagement					
SE1	0.885	0.961	0.962	0.968	0.812
SE2	0.919				
SE3	0.923				
SE4	0.922				
SE5	0.871				
SE6	0.902				
SE7	0.885				

Table 4 — Discriminant validity (Source: Authors calculation)

HTMT	DL	DLT	SE	Fornell-Larcker criterion	DL	DLT	SE
DL				DL	0.968		
DLT	0.804			DLT	0.778	0.887	
SE	0.835	0.828		SE	0.845	0.791	0.901

results demonstrate "convergent validity" according to Hair *et al.* (2019)⁶⁶ recommendations because outer loadings exceed 0.7 and "Average Variance Extracted (AVE)" values surpass 0.5. The measurement items demonstrate a useful representation of their intended constructs based on these results. The examination establishes that the measurement tools effectively measure their target concepts, which creates a strong foundation for analysis. The discriminant validity assessment for Digital Life (DL), Digital Literacy (DLT), and Social Engagement (SE) adopt two approaches: "Heterotrait-Monotrait (HTMT)" ratios and the "Fornell-Larcker criterion" in Table 4. The HTMT ratios remain under 0.85 following Henseler

et al.'s (2015)⁶⁵ recommended threshold, which demonstrates strong discriminatory validity. The Fornell-Larcker criterion demonstrates acceptable discriminant validity due to its values surpassing each inter-construct correlation as defined by Fornell & Larcker (1981).⁶⁷ These respective results indicate each scale in the model detects separate aspects, thereby proving both measurement model principles and construct independence. The structural model analysis and hypothesis testing, as depicted in Fig. 2 and Table 5, reveal significant relationships among Digital Life (DL), Digital Literacy (DLT), and Social Engagement of Women (SE). The results strongly support the proposed hypotheses, backed by robust

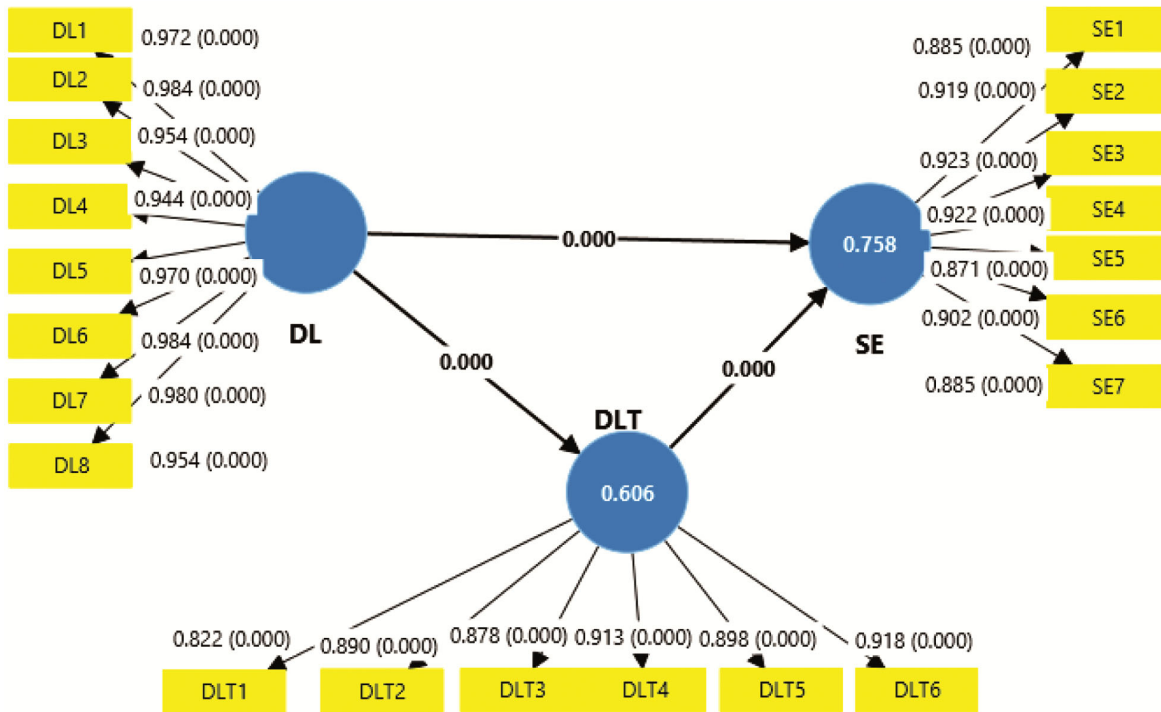


Fig. 2 — Structural model (Source: Authors' Calculation)

Table 5 — Structural model assessment (Source: Authors' Calculation)

Hypothesis	Path relation	(β)	T Statistics	CI (0.95)	VIF	f2	R2	P-value	Significance
H1	DL \rightarrow SE	0.582	10.53	(0.469; 0.686)	2.537	0.551	0.758	0.00	Yes
H2	DL \rightarrow DLT	0.778	29.322	(0.724; 0.827)	1	1.537	0.606	0.00	Yes
H3	DLT \rightarrow SE	0.338	6.011	(0.23; 0.453)	2.537	0.186		0.00	Yes

Table 6 — Mediation analysis (Source: Authors' Calculation)

Hypothesis	Mediation	(β)	Sample mean	Standard deviation	T-statistics	CI0.95	P-value	Significance
H4	DL \rightarrow DLT \rightarrow SE	0.263	0.264	0.046	5.684	(0.179; 0.362)	0	Yes

statistical evidence. Hypothesis H1, examining the link between DL and SE, shows a strong positive relationship ($\beta = 0.582$, $T = 10.53$, $p < 0.001$).^{45,66} This indicates that digital life has a substantial direct impact on women's social engagement. The relationship's strength is further emphasized by large effect size ($f^2 = 0.551$) and explains a significant portion of the variance in SE ($R^2 = 0.758$, or 75.8%). The connection between DL and DLT (Hypothesis H2) is also strongly supported ($\beta = 0.778$, $T = 29.322$, $p < 0.001$). The high effect size ($f^2 = 1.537$) and substantial explained variance ($R^2 = 0.606$) underscore the crucial role digital life plays in fostering digital literacy among women.⁶⁶ Hypothesis H3, focusing on DLT's impact on SE, shows a significant but more moderate effect ($\beta = 0.338$, $T = 6.011$, $p < 0.001$, $f^2 = 0.186$).⁴⁵ This suggests that while digital literacy directly influences social

engagement, its impact is less pronounced compared to digital life's direct effect. The model's overall fit is excellent, as indicated by the "Standardized Root Mean Square Residual (SRMR)" value of 0.034, well below the 0.08 threshold recommended by Sarstedt *et al.* (2014).⁴⁴ This suggests a strong alignment between the hypothesized model and the observed data. The results highlight the interconnected nature of digital life, digital literacy, and social engagement among women. The strong relationship between digital life and social engagement suggests that increased digital presence and activity can significantly boost women's social participation and involvement.

The direct association between Digital Life (DL) and Social Engagement (SE) depends on Digital Literacy (DLT) as shown in Table 6. The results show clear mediation influence because the pathway

coefficient reaches 0.263 while the T-statistic values are at 5.684. The verification of the mediation effect can be conducted through “PLS-SEM mediation analysis” methods as described by Hair *et al.* (2017).⁴⁵ Research analysis shows digital literacy functions as a crucial connection which enables digital life to influence social engagement so digital literacy initiatives become necessary for improving women's social involvement. The total indirect relationship between Digital Life and Social Engagement through Digital Literacy reaches 0.263 according to the path coefficient analysis. Digital literacy functions as the principal instrument that allows digital life to affect social engagement. Strong evidence exists for the observed relationship because the T-statistic of 5.684 shows that this mediation effect is statistically significant.⁶⁶ The examined findings confirm that digital literacy programs remain essential for boosting the social benefits that women gain from digital life. Upgraded digital competencies among women will intensify their digital life benefits for social connectivity.

Discussion of Findings

This study looked at the connections between women's digital lives, digital literacy, and social participation, with an emphasis on the mediating function of digital literacy. The findings shed important light on how these variables interact with women's social experiences in the digital age.

Digital Life and Social Engagement

According to our study, digital life elements foster positive social participation for women, thus confirming the concept. The research supports previous findings presented by Rainie and Wellman (2012)⁶⁸ alongside Hampton *et al.* (2011)³¹ about how digital tools fundamentally change the way people interact with each other and fashion their communities. The notable effect demonstrates that digital life plays an essential role in changing how women interact socially. This research extends the work of Ellison *et al.* (2007)¹⁰ as well as Rainie *et al.* (2011)¹⁸ by specifically examining female experiences. The research of Gouws (2018)²⁹ and Baer (2018)⁶⁹ demonstrates that digital platforms serve as fundamental platforms for women to network together and conduct activism as well as express themselves. Our research demonstrates strong evidence that digital technology can establish itself as a force to enhance women's social involvement.

Digital Life and Digital Literacy

Our study confirms that digital life and digital literacy exhibit positive relationships based on the derived results. Digital life helps women develop better skills in digital literacy at a higher rate. Through digital technology, users can develop and refine a set of digital competencies as per Buckingham (2008)⁶, which is also supported by Gui & Argentin (2011).⁷ The discovered strong correlation emphasises the necessity of people to access digital platforms for digital skill enhancement. The study supports the argument made by Antonio & Tuffley (2014)²³ and Livingstone & Helsper (2007)²¹, which states that deep online participation leads to improved digital skills development. Our research indicates women's engagement initiatives in digital life create positive effects on their digital literacy development.

Digital Literacy and Social Engagement

Research demonstrates a substantial correlation that validates the third hypothesis that digital literacy leads to social engagement. The findings correspond to research results in Litt (2013)¹⁷ and Van Deursen & Van Dijk (2011)¹⁶, which demonstrate the connection between digital literacy and active participation in online civic life. The sizeable relationship between digital literacy and social involvement does not prove that digital literacy alone determines social involvement. Studies by Robinson *et al.* (2015)²² as well as Livingstone and Helsper (2007)²¹ verify that digital literacy empowers women to better explore online platforms for social interactions. The research shows that digital literacy abilities serve as essential tools for helping women gain full participation in online communities while sustaining meaningful discussions within and providing leadership for group projects.

Mediating Role of Digital Literacy

According to our analytical findings, Digital literacy functions as a mediating variable that explains the connection between social engagement and digital life. This study provides concrete evidence to address the knowledge gap described earlier, which explains how digital lives influence women's social activities. Digital literacy exhibits its importance by mediating the effective utilisation of digital technologies and access to digital technology systems. The findings support the opinions of Van Dijk (2006)¹³ and Hargittai & Shafer (2006)¹², who established that digital competencies facilitate effective digital

environment involvement. The research shows that digital literacy enhancement potentially strengthens the positive aspects of digital interactions for women's social community involvement.

Implications

Policy Development

Policy leaders should establish complete digital inclusion strategies that teach women digital information skills and offer them digital technology access. Digital literacy skills must be incorporated across all educational stages to prepare women and girls for digital duties from early childhood. Women's social and professional lives affect organisations, so they must implement policies supporting continuous digital skills development for their female workforce members.

Technology Design and Development

Technology companies should develop friendly interfaces, which will enable them to reduce the digital skills gap. The development of accessible digital platforms should be promoted to enable women at various computer literacy levels to participate in the digital processes. Programs teaching digital literacy must use individualised approaches to teach female demographics while eliminating constraints they encounter. The design of user interfaces should match various cultural traditions by implementing visual indicators that particular demographic groups of women recognise. The participation of diverse women in product design testing along with design sessions should become standard practice for designers to verify that digital products perform correctly across different cultures.

Social Impact

The results should empower organisations to develop and market online networks supporting female social engagement by establishing safe communication frameworks alongside collective programs. Develop strategies to bring more women into digital civic engagement and leverage their social engagement to reach societal objectives. Women need policies that also entail educational programs on maintaining appropriate social connections between virtual and real life. Successful online interaction requires women to receive privacy and digital safety training through digital literacy programs. Developing specialised digital networks for women should address professional groups, including those working

in STEM, mothers, and entrepreneurs, according to their current life situation.

Conclusions

This study examines women's social participation through digital life, highlighting digital literacy as a key mediating factor. Findings show that digital technologies can transform relational development, increase community involvement, and support new forms of social interaction. However, access alone is not enough; digital literacy significantly influences women's ability to fully engage in digital spaces. Only when women demonstrate proficiency with digital tools does digital life lead to meaningful social empowerment. The study emphasizes the importance of addressing both access and skills development to ensure inclusive digital participation. Without adequate digital literacy, the potential for social engagement remains limited. While the research offers valuable insights, the sample limits generalizability. Future research should adopt longitudinal approaches to track the evolving impact of digital literacy on women's social engagement. Additionally, studies should explore how age, education, socioeconomic status, and location intersect with digital literacy to shape women's experiences and opportunities in the digital sphere.

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