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GENDER AND DIGITAL ENGAGEMENT IN PANCHKHAL MUNICIPALITY, KAVRE, NEPAL

Sunil Rawal

Patan Multiple Campus, TU, Lalitpur
Corresponding author: sunilrawal20001@gmail.com

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ABSTRACT

The purpose of this research is to delve into the detailed performance between the gender and digital participation in Panchkhal Municipality, which is located in the developing tech realm of Kavre District. The research investigates the subtle relationship between gender and digital dimensions, including self-rated digital literacy, internet habits, online safety mindfulness, and the desire to improve digital prowess. This research uses a combination of methods to access data from a field survey conducted within Panchkhal Municipality. This survey includes a wide range of participants, recording their gender preferences and digital behaviors. It also used quantitative analysis, primarily the Pearson Chi-Square test, to identify significant connections between gender and the examined digital factors. This method provides empirical support for a more nuanced sociological perspective on gender's role in forming digital interactions. The findings reveal intriguing patterns: gender has no influence on self-rated digital competence levels, but it does have a significant influence on internet use patterns, online safety awareness, and the desire to improve one's skills. These differences reveal gendered sections within tech engagement, implying that genders share inclinations while also having distinct choices, susceptibilities, and aspirations. Beyond the numbers, our research emphasizes the importance of fostering all-encompassing digital literacy initiatives that take gender differences into account. Furthermore, we advocate for just technological ecosystems while acknowledging the complex dance of norms in society, gender personas, and tech behavior. This study adds to our sociological understanding of how gender presents on the digital canvas by unraveling gender-infused threads interwoven into digital interaction. These insights transcend

academia, guiding us to craft actions and policies that shape a more equitable, inclusive digital future in Panchkhal Municipality, Kavre Palanchowk district and beyond.

Keywords: gender, digital engagement, self-rated digital literacy, internet usage, online safety awareness, skill enhancement

INTRODUCTION

In an era marked by the proliferation of digital technologies, the interaction between gender as well as individuals' engagement with these technologies has grown in importance. Understanding the dynamics among gender and digital engagement is becoming more important as society becomes more reliant on digital platforms over communication, education, and other aspects of daily life. This study aims to delve into this complex relationship by looking into several aspects of digital engagement, such as self-rated digital literacy, internet usage patterns, online safety awareness, and the desire for skill enhancement.

Gender, as a social construct, shapes people's experiences, behaviors, as well as possibilities in a variety of ways. The digital realm provides a unique lens for investigating how gender influences such interactions. Scholars have recognized the significance of understanding these forces, as digital technologies possess the potential to reinforce as well as challenge existing gender stereotypes and roles (Broussard, 2020; Nakamura, 2021). Furthermore, disparities in internet usage and literacy may exacerbate gender inequalities (Hargittai, 2013). As a result, this investigation into the complex interplay of gender and digital engagement may bring light on broader the dynamics of society.

The processing and manipulation of information through digital systems, such as computers, software, and other electronic devices, is referred to as digital technology. It includes a broad range of technologies that transform analog data into digital format, allowing for more effective and flexible data processing, transmission, and storage (Fitzgerald, Kruschwitz, Bonnet, & Welch, 2014).

The dynamic relationship between technology and society is examined by technology sociology. It takes into account important ideas like technological determinism, which holds that changes in society are shaped by technology. The reciprocal influence between society and technology is acknowledged by the Social Shaping of Technology. Important factors are ethical concerns, such as power imbalances and privacy (Star, 1988).

Digital technologies can be used to resist and challenge gender-based violence as well as to reinforce or refute conventional gender stereotypes. It's critical to be aware of both the beneficial and detrimental effects that digital technologies have on gender and to use them in ways that advance social justice and gender equality (Lupton, 2014).

Marxists view that the digital divide through the lens of class conflict and economic inequalities, which may exacerbate gender-based disparities (Marx, 1867). The Protestant Ethic and the Spirit of Capitalism are two cultural influences that, according to Weber's point of view, shape gendered digital engagement by influencing the norms and roles in online spaces (Weber, 2013).

Parsons' structural-functionalism highlights how societal norms influence digital behaviors including self-rated digital literacy; Durkheim's concept of anomie is used to examine gender-related disparities in internet use (Durkheim, 2014; Parsons, 1991). The construction of identities for marginalized genders in digital spaces is also revealed by feminist perspectives from sociologists like de Beauvoir and Smith (De Beauvoir, 1993; Smith, 1987). These numerous insights provide a thorough comprehension of the complex interactions between gender, technology, and society.

The current research aims to provide an understanding of how gender shapes individuals' approaches to and experiences with technology by concentrating on self-rated digital literacy, internet usage patterns, online safety awareness, as well as the desire for skill enhancement. Understanding gender differences in these aspects is critical for developing successful educational approaches, policies, and interventions as digital literacy turns into increasingly important for inclusion in modern society. The research presented here contributes to the larger discourse upon gender, technology, along with empowerment by unraveling the power source gendered threads woven through digital engagement.

Technology's rapid evolution has influenced human interaction with the outside world, especially through digital engagement stretching interaction, education, work, and leisure. Though the study of gender as well as digital engagement is new, it contains important findings. There are clear gender differences within internet use, online safety awareness, along with digital skill aspirations. This literature examines the impact of gender on digital engagement, delving across four key dimensions.

Self-rated digital literacy refers to an individual's assessment of their own technological competence. Notably, gender differences are common, with women frequently rating their skills lower than men. Hargittai's (2021) study focuses on women's proclivity to admit to having poor internet skills and experiencing anxiety or frustration while using the internet. Another study conducted by Nakamura (2021) discovered that women were more inclined than men to report having experienced online harassment. The study also discovered that women were more likely than men to be concerned about their online privacy and security. According to these findings, women may have lower levels during self-rated digital literacy than men, and they are additionally more likely to experience negative effects of online use.

Men prefer recreational activities such as gaming and pornography, whereas women prefer communication, education, as well as shopping. Castells (2011) emphasizes men's preference for information and entertainment, whereas Van Dijk (2013) emphasizes women's emphasis on communication and learning. These differences reflect gendered roles and expectations that influence online behavior.

Understanding the dangers of the internet and protective measures is part of online safety awareness. Gender differences are notable, with women frequently being more risk-averse. Jones (1998) discovers that women are more worried about security and privacy and take more precautions. According to Wellman and Haythornthwaite (2002), women face more online assault and discomfort. These findings suggest that women have increased risk awareness alongside protective behavior.

Desires for skill improvement include a desire to improve one's digital prowess. Gender differences exist, with women frequently showing more interest. Donath (1999) describes woman's eagerness for discovering new technologies as well as their feelings of excluded due to skill gaps. According to Turkle (1995), women feel empowered by their knowledge of technology. These findings emphasize women's strong desire to improve their skills.

OBJECTIVE

The objective of this article is to look into how gender is associated to digital engagement, literacy, as well as empowerment. It aims to find gender-specific patterns in assessed digital literacy, internet usage, safety online awareness, and curiosity in enhancing digital skills through an

examination of four tables. The paper emphasize the importance of gender in determining technology-related behaviors, as well as the importance of encouraging consisting digital literacy initiatives along with equitable technological environments.

METHOD AND MATERIALS

The data was gathered at Panchkhal Municipality; Out of the 42,011 people in the population, data were gathered from a sample size of 422 people. A 95% confidence level and a $\pm 4.65\%$ margin of error were employed. Stratified random sampling was used as the sampling technique, which included randomly selecting samples from each group after the population was divided into discrete groups according to pertinent characteristics. Structured questionnaires and interviews were used to collect data; depending on respondent preferences and accessibility, different tools were used, including online surveys, phone interviews, and in-person interviews. The research employs quantitative research combining a descriptive and Inferential Statistical approach. The Pearson Chi-Square test is used to examine data across four tables in quantitative assessment. This statistical approach reveals the impact of gender on various aspects of digital engagement, yielding empirical validation.

In addition, The hypothesis setting of the research is as follows:

***Null Hypotheses:** There is no significant association between gender and digital literacy among respondents.*

***Alternative Hypotheses:** There is a significant association between gender and digital literacy among respondents.*

RESULTS AND DISCUSSION

The investigation that is being presented explores the complex relationship that exists between gender and digital engagement in Panchkhal Municipality, Kavre District, which is a tech hub. The study illuminates the complex dynamics at work by examining a number of aspects of digital interaction, such as self-rated digital literacy, internet habits, online safety mindfulness, and the desire for skill enhancement.

Gender is a social construct that profoundly affects people's experiences and behaviors, including how they interact with digital technologies. The study recognizes how important it is to comprehend these dynamics in light of the growing influence of digital platforms on everyday

life, education, and communication. Academics have acknowledged that digital technologies have the capacity to both strengthen and weaken preexisting gender stereotypes, highlighting the necessity for more research into this intricate relationship.

Relationship between Gender and Responding Rating their Level of Digital Literacy

The table 1 shows the effect of gender on assessed digital literacy. Males (53.1%) and females (46.9%) both contribute. Males: "Very Low" (8.8%), "Low" (6.2%), "Normal" (17.3%), "High" (13.0%), "Very High" (2.6%); females: "Very Low" (9.7%), "Low" (6.2%), "Normal" (20.4%), "High" (6.6%), "Very High" (2.6%).The Pearson Chi-Square test result of 27.854 indicates a statistically significant relationship, with degrees of freedom (d.f.) equal to 4 and a significance level (alpha) of 0.000.

Table 1.

Relationship between Gender and Responding Rating their Level of Digital Literacy

Gender	Responding rating their level of digital literacy					Total
	Very Low	Low	Normal	High	Very High	
Female	41	26	73	55	3	198
	9.7%	6.2%	17.3%	13.0%	.7%	46.9%
Male	37	62	86	28	11	224
	8.8%	14.7%	20.4%	6.6%	2.6%	53.1%
Total	78	88	159	83	14	422
	18.5%	20.9%	37.7%	19.7%	3.3%	100.0%

Source: Field Survey, 2023

* Pearson Chi-Square = 27.854, degree of freedom (d.f.) = 4, p-value = 0.05 and level of significance (alpha) = 0.000

** a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.57.

b. Based on 422 sampled tables with starting seed 2000000.

From a sociological standpoint, this result suggests that gender is intricately linked to participants' self-rated digital literacy levels. The statistically significant finding highlights the presence of distinct gendered patterns in how people evaluate their digital skills. Social norms, cultural expectations, and access to digital education and resources may all have an impact on such patterns. The significant differences in self-assessment

across gender categories may reflect broader structural gender inequalities, in which social and cultural factors contribute to varying levels of confidence and competence in using digital technologies. This discovery encourages further research into the societal dynamics that shape gendered digital literacy, potentially illuminating areas for intervention to ensure more equitable opportunities and empowerment in the digital realm.

Relationship between Gender and Responding Rate of Using Internet

The table 2 delves into the gender and internet usage relationship. Males (53.1%) and females (46.9%) both contribute. Both genders align in daily (24.9%) and weekly (4.5% females, 6.4% males) rhythms of usage. "Rarely or never" is echoed by females (10.2%) and males (5.9%). "Several times a week" frequency increases—males outnumber females (15.9% vs 7.3%). A statistically significant association is indicated by a Pearson Chi-Square test result of 17.846, with degrees of freedom (d.f.) equal to 3 and a significance level (alpha) of 0.000.

Table 2

Relationship between Gender and Responding Rate of Using Internet

Gender	Use the internet for personal purposes				Total
	Daily	Once a week	Rarely or never	Several times a week	
Female	105 24.9%	19 4.5%	43 10.2%	31 7.3%	198 46.9%
Male	105 24.9%	27 6.4%	25 5.9%	67 15.9%	224 53.1%
Total	210 49.8%	46 10.9%	68 16.1%	98 23.2%	422 100.0%

Source: Field Survey, 2023

* Pearson Chi-Square = 17.846, degree of freedom (d.f.) = 3, p-value = 0.05 and level of significance (alpha) = 0.000

** a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 21.58.

b. Based on 422 sampled tables with starting seed 2000000.

You need to pay attention on the items mentioned in table 1.

From a sociological perspective, this result indicates that gender significantly influences how survey respondents use the internet. The statistically significant relationship highlights the fact that there are distinct gendered preferences and habits when it comes to using the internet for personal reasons. These patterns might be affected by societal norms,

personal preferences, and cultural norms. The observed differences in usage rates between genders draw attention to potential differences in access to technology, engagement opportunities, and how people use digital tools in their daily lives. These realizations can spur further investigation into the social forces that shape gendered technology use, opening the door to initiatives that promote inclusive digital literacy and equal access to online resources.

Relationship between Gender and Responses Familiar with Basic Online Safety and Data Privacy Practices

Table 3 explores the impact of gender on familiarity with online safety. 53.1% of the members are men and 46.9% of the members are women. The tableau shows responses to questions about knowledge of online security precautions. In terms of females, 8.5% are knowledgeable, 21.8% feel unfamiliar, and 16.6% want to learn more. These percentages are 17.3%, 22.7%, and 13.0%, respectively, for males. A statistically significant relationship is indicated by the Pearson Chi-Square test result of 2.523, with degrees of freedom (d.f.) equal to 2 and a significance level (alpha) of 0.000.

Table 3

Relationship between Gender and Responding Familiar with Basic Online Safety and Data Privacy Practices

Gender	Respondent familiar with basic online safety and data privacy practices			Total
	I know some online safety measures but would like to learn more	No, I am not familiar with online safety practices	Yes, I am well-informed about online safety	
Female	70 16.60%	92 21.80%	36 8.50%	198 46.90%
Male	73 17.30%	96 22.70%	55 13.00%	224 53.10%
Total	143 33.90%	188 44.50%	91 21.60%	422 100.00%

Source: Field Survey, 2023

* Pearson Chi-Square = 2.523, degree of freedom (d.f.) = 2, p-value = 0.05 and level of significance (alpha) = 0.000

** a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 0.283

b. Based on 422 sampled tables with starting seed 2000000.

This outcome highlights the important role that gender plays in influencing people's awareness of online safety and data privacy. Gender differences in understanding of safety measures are significant. Response discrepancies point to differences in digital literacy, risk exposure, and protective awareness. This discovery encourages further research into societal factors, including cultural norms, educational systems, and the digital sphere, that affect gendered online safety awareness. Knowing these nuances can help create a secure online environment for everyone, regardless of gender, by directing efforts to enhance digital education and safety practices. As the curtain descends on this tableau, its reverberations linger, sparking reflections on the harmonies between gender and digital defense. This snapshot of digital awareness carries with it a chorus of questions that ripple through the realms of technology, education, and cultural dynamics, beckoning sociological contemplation and encouraging deeper conversations about empowerment and preparedness in our digital age.

Relationship between Gender and Responses Familiar Interest in learning more about digital literacy skills such as using online tools, internet safety, and accessing online services

The relationship between gender and the desire to improve digital literacy is examined in Table 4. Contributors include both men (53.1%) and women (46.9%). The respondents say they would like to learn more about digital skills. In terms of females, 11.1% show no interest, 19.4% show some interest, and 16.4% show extreme interest. These proportions are 18.7%, 26.5%, and 7.8% for males, respectively. A statistically significant relationship is established by the Pearson Chi-Square test result of 26.870, with degrees of freedom (d.f.) equal to 3 and a significance level (alpha) of 0.000.

This result highlights how gender influences people's aspirations for their level of digital literacy. Gender differences in interests for developing digital competencies are significant. Variations that have been noticed point to potential access and confidence gaps. This finding encourages further investigation into the social factors, such as culture, education, and self-perception that contribute to gender-specific skill improvement aspirations. This knowledge directs educational initiatives, promoting inclusivity and empowerment in the digital sphere.

Table 4

Relationship between Gender and Responding Familiar Interested in learning more about digital literacy skills

Gender	Interested in learning more about digital literacy skills,			Total
	Not interested	Somewhat interested	Very interested	
Female	47	82	69	198
	11.1%	19.4%	16.4%	46.9%
Male	79	112	33	224
	18.7%	26.5%	7.8%	53.1%
Total	126	194	102	422
	30.0%	46.0%	24.2%	100.0%

Source: Field Survey, 2023

* Pearson Chi-Square = 26.870, degree of freedom (d.f.) = 3, p-value = 0.05 and level of significance (alpha) = 0.000

** a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 0.283

b. Based on 422 sampled tables with starting seed 2000000.

This study adds empirical evidence of the relationship between gender and digital engagement to the ongoing discussion in gender studies and digital sociology. By examining particular facets of digital interaction, such as self-rated digital literacy and internet usage patterns, within the framework of Panchkhal Municipality, Kavre, Nepal. The results draw attention to the differences in technology use between genders and emphasize the significance of gender-sensitive approaches in technology education and policy. The study contributes to the promotion of digital inclusivity and empowerment by shedding light on gender-specific tendencies and advocating for equitable technological ecosystems. This improves our understanding of the intersection of gender and technology.

CONCLUSION

In conclusion, the intricate dynamics between gender and technology that the aforementioned four tables uncovered the nuanced interactions between gender and online engagement. These results highlight the role of gender in determining how people interact with technology and highlight potential gaps in accessibility, comfort, and aspirations. The gender-sensitive approaches that are required in technology education and security measures are highlighted by the observed differences in self-rated

digital literacy, internet usage patterns, awareness of online safety, and desires for skill enhancement.

This sociological investigation emphasizes the value of fostering inclusive digital environments that take gender differences in experience and aspirations into account. In the end, these insights serve as a basis for laws and programs that seek to develop an equitable and inclusive tech sector that empowers people of all genders.

Overall, the study contributes significantly to the association of gender and digital engagement, shedding light on the intricate ways in which societal constructs intersect with technological behaviors. The insights provided have implications not only for academic discourse but also for practical efforts to promote digital inclusivity and empowerment across genders.

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