



Social Sciences Spectrum

A Double-Blind, Peer-Reviewed, HEC recognized [Y-category](#) Research Journal

E-ISSN: [3006-0427](#) P-ISSN: [3006-0419](#)

Volume 04, Issue 02, 2025

Web link: <https://sss.org.pk/index.php/sss>



Check for updates

Digital Literacy and Civic Awareness among Pakistani Youth

Muhammad Ali Panhyar

Assistant Professor, Aisha Bawany Government College No.2
Karachi, Sindh, Pakistan

Correspondence: alipanhyar@gmail.com

Saima Noor

PhD Scholar Pakistan studies, Islamia University
Bahawalpur, Punjab, Pakistan

Email: sn775892@gmail.com

Saeed Ahmed

PhD Scholar, Pakistan Studies, Islamia University, Bahawalpur,
Punjab, Pakistan

Email: jamsaeed59@gmail.com

Article Information [YY-MM-DD]

Received 2025-04-29

Revised 2025-05-09

Accepted 2025-06-27

Citation (APA):

Panhyar, M. A., Noor, S & Ahmed, S. (2025). Digital literacy and civic awareness among Pakistani youth. *Social Sciences Spectrum*, 4(2), 813-823. <https://doi.org/10.71085/sss.04.02.425>

Abstract

The research paper investigates the correlation between digital literacy and civic awareness of Pakistani youth (16-29). Based on the mixed-methods research, we combined a cross-sectional survey (N = 600) with a targeted qualitative data on 24 semi-structured interviews conducted in four provinces. The measured quantitative instrument was (a) digital literacy (access, technical skills, information evaluation, content creation), (b) civic awareness (knowledge of civic institutions, political efficacy, civic action intent), and (c) control variables (age, gender, urban/rural, education, internet access quality). Associations were explored by descriptive analyses, reliability tests, factor analysis and multiple regression and thematic analysis summarized qualitative results. The findings show that, controlling demographics and educational attainment, the higher the digital literacy (particularly, information-evaluation skills), the higher the civic awareness ($b = .38, p < .001$). The use of social media forecasted civic discussion and civic mobilization behavior, as well as it also correlated with misinformation exposure and internet harassment. Qualitative data underline these findings: young people state that virtual environments have increased their understanding of social problems but are worried about the reliability of online data and internet access among marginalized groups.

Keywords: Digital Literacy; Civic Awareness; Pakistani Youth; Information Evaluation; Social Media; Digital Divide.



Content from this work may be used under the terms of the [Creative Commons Attribution-Share-Alike 4.0 International License](#) that allows others to share the work with an acknowledgment of the work's authorship and initial publication in this journal.

Introduction

Pakistan is described as a very young nation with median age of low twenties and large number of citizens aged between 15 and 29 years old, thus, youth participation is the key to the social and political future of this nation. At the same time, internet penetration and mobile connections in Pakistan have been increasing at a quick rate during the last ten years; as of the beginning of 2024 internet penetration rates were estimated to be in the mid-40s with over 100 million users, whereas mobile internet and social media have become the main sources of information among young citizens. These two trends, a substantial number of young people and growing access to the digital device, create important questions regarding the connection between digital skills and civic knowledge, attitudes, and civic participation in Pakistan (Irum, 2025).

Digital literacy is a multi-dimensional construct that extends beyond the basic operational (use of devices and common applications) to higher-order skills in information search, source evaluation, content creation, privacy control, and ethical use. Other global agencies including UNESCO have emphasized that digital literacy is the key to active citizenship in the 21 st century because it enables citizens to gain access to public information, assess rival claims, engage in public discussion, and organize to act collectively. Digital literacy is a phenomenon of growing educational intent and social benefit that educators and development agencies in Pakistan have increasingly started to observe as a part of the curriculum and youth development strategies (Nasir & Riaz, 2024).

Civic awareness Knowledge and attitude required to engage in civic life intelligently, involves knowing the civic institutions, rights and responsibilities, political processes and accountability by the people. Among young people, civic awareness is a predictor and antecedent of civic engagement (intention of voting, participation in protests, volunteering or solving community problems). Digital space determines routes to civic knowledge: social media and online news outlets can introduce youth to the world of politics and civic discourse as well as provide space in which misinformation, echo chambers and harassment can be used to skew civic learning. Pakistan-based empirical data show a two-sided result: there are studies indicating that mobilization and awareness-raising through social media is possible, and then there are other studies that point out the existence of quality of information and digital discrepancies as the mediating factors (Nasreen, 2024).

The Pakistan case is particularly significant because of a number of contextual factors. First, regional and gendered gaps in schooling, literacy, and access to technologies are large, which implies the possibility of an uneven distribution of digital literacy, creating different opportunities to engage in civic activities. Research has shown that girls, the rural youth, and marginalized groups with regard to the economy are more likely to be hindered by barriers to significant digital engagement. Second, politics and media environment of Pakistan, which consists of traditional broadcast, print media, and an emerging social media domain, can change the manner in which civic content is shared and consumed. Third, formal curricula have traditionally paid little attention to explicit civic education and media literacy, notwithstanding that recent policy documents and programs indicate the increase of interest in combining the competencies (Pakistan Review, 2023).

This paper deals with three imperatives that are linked namely measurement, linkage, and policy. Measurement: create and implement a strong digital literacy tool that measures both the technical and evaluation skills, and a Pakistani-specific civic awareness index. Connection: estimate the connection between digital literacy and civic awareness and analyze whether information-evaluation skills (as opposed to the access or social use) are the most significant predictors of civic awareness and civic participation. Policy: find programmatic and curricular prospects of

broadening digital literacy in a manner that enhances civic abilities, lowers exposure to misinformation, and enables inclusive civic engagement. This work is informed by a growing body of Pakistan-specific and regional research. Other recent national research and journal articles record an increase in media consumption among secondary and tertiary students, the impact of social media in political awareness and digital literacy initiatives to teachers and students. The 2021-2025 report on quantitative and qualitative research indicates increases in the device ownership and social media use, along with the concerns regarding the reliability of information and unequal access (urban vs rural, male vs female). Our research design and hypothesis are based on these empirical studies done before (Meher, 2021).

The hypotheses of the research depend on theoretical and empirical literature. Causally, digital literacy is also conceived as an enabling capability in a way that enables the youth to transform access into civic knowledge and practice. Information-processing wise, the effect of exposure is moderated through evaluative skills: young people who are capable of evaluating the sources critically are more likely to acquire accurate civic knowledge and desire to take action. Socio-structurally, the beneficial impacts of digital skills on civic consciousness are conditional on the accessibility and conducive learning conditions in the form of equal access to basic education, internet connectivity, or gender equality that is, in other words, digital literacy will be less effective in areas where basic education, internet connections, or gender equality are restricted. We therefore expect:

H1: There will be a positive relationship between the overall digital literacy scores and the civic awareness scores.

H2: Information/Evaluation sub-elements of digital literacy will have the best predictive capability of civic awareness than access or fundamental technical abilities.

H3: The association between digital literacy and civic awareness will be moderated by socio-demographic variables (education, urban residence, gender).

These hypotheses are to be tested by providing a mixed-method study consisting of sampling 600 Pakistani youth (stratified by province and urban/rural residence) with the cross-sectional survey and semi-structured interviews in four provinces to enable the nuance and lived experience to be captured. The survey tool will be based on proven digital/information literacy and civic knowledge scales applicable to previous research on the topic in Pakistan and global reports (local adaptation and piloting). Quantitative analysis was based on descriptive statistics, reliability testing (Cronbachs alpha), exploratory factor analysis, and multivariate ordinary least squares regression and qualitative analysis based on thematic coding to triangulate survey data and measure barriers (e.g., misinformation) and enabling factors (e.g., school programs, youth networks).

Research Objectives

To determine the Pakistani youth (16-29 years old) levels of digital literacy (access, technical skills, information evaluation, content creation) levels.

To evaluate what civic awareness (understanding of the institutions, political efficacy, intent of civic action) is like among the same cohort.

In order to approximate the correlation between digital literacy and civic awareness and control by socio-demographic factors.

In order to find out the mediating/moderating variables (level of education, living in the city/country, gender, and Internet quality).

To generate policy suggestions aimed at incorporating digital literacy to education and civic engagement initiatives.

Research Questions

What are the existing digital literacy rates amongst Pakistan youth (16-29)?

What does the Pakistani youth know about civic awareness?

How far is digital literacy an indicator of civic awareness, even having adjusted on socio-demographic dimensions?

What subcomponents of digital literacy (e.g., information evaluation) are most closely related to civic awareness?

What are some of the constraints and facilitating factors relevant to the digital-to-civic knowledge and action translation?

Literature Review

Digital literacy and civic engagement literature can be related to various disciplines: education, media studies, political communication, and development. Scholars point out internationally that digital literacy is important in the digital age as a requirement of democratic participation. The recent analyses of UNESCO state that integration of digital competencies in education should be adopted to facilitate the provision of access, equity, and quality in the learning process and the risks associated with a shallow approach to technology usage (PAFMJ, 2024). The studies done on the issue of youth civic engagement indicate that the simple access to information does not necessarily lead to the civic competence, but rather the critical information skills are required to judge the sources, identify the false information, and transform the exposure to the Internet sources into the positive civic activities (Qamar, 2024).

Patterns and tensions can be detected in Pakistan-specific literature. Preliminary research reported media use trends in schools and universities and highlighted the pedagogical affordances of media and digital literacy curricula. More recent empirical studies (2019-2025) have recorded rising internet and smartphone access and usage among young people, and also reported gender and geographical diversity of access and skill. According to studies and independent academic research conducted by the British Council, the inclusion of teacher training and formal curriculum are the very important levers to sustainable gains on digital literacy (Bukhari, 2024).

Empirical research that has linked digital media and civic awareness in Pakistan has indicated subtle results. According to qualitative research, social media is associated with exposure to civic concerns and mobilization around causes (health, education, local governance) and misinformation and even radicalizing content is disseminated. According to quantitative surveys, the use of social media is also related to the political discussion and protest among university students, although the correlation is weak when the variables of critical skills and socio-economic status are considered. Some of the writers indicate that the skills of creating content and critical consumption are more predictive of civic knowledge as compared to the hours of being online (WGI, 2025).

The theme of gender comes in repeatedly: girls and young women have their own set of restrictions to access, as well as to safe online presence both in terms of the lack of access to their devices and the fear of online abuse and cultural restrictions. Research on programs aimed at adolescent girls at Aga Khan University and other institutions has also demonstrated that digital literacy interventions may enhance digital confidence and agency, but must be contextualized attentively to be effective and safe.

There are still regional inequalities: Balochistan, parts of rural and marginalized urban areas suffer from poor broadband coverage and poorer education levels - create a two-fold disadvantage to civic competence. Programs of provincial-level capacity building are based on development and incorporation of digital literacy in teacher education and access to the solutions of low costs (UNESCO, 2023).

The civic meanings of digital literacy are informed by misinformation, platform governance, and media pluralism. Researchers observe that social media can be both informative and misleading in the context in which the trust toward the official institutions is not constant. Several Pakistan studies 2022-2025 report that youth are significantly exposed to misinformation and state that the ability to analyze information is important in terms of decreasing the faith in false statements. Media literacy using source verification, cross-checking and troll/bot identification, demonstrates improvement in the ability of students to detect misrepresenting material.

We make the decision of measurement informed by the methodological contributions of the literature. A number of confirmed measures also measure digital/information literacy in Pakistani settings and they are based on such constructs as access, operational skills, information search, evaluation, and content generation. The civic awareness indices applied in regional research are a combination of items of factual knowledge (institutions, rights), attitudinal/behavioral intention (voting, protesting, volunteering). A combination of these measurement methods will result in the ability to robustly estimate and compare them with previous studies (Pakistan Review, 2023).

Among the interesting empirical results of the area are: (a) the information-evaluation capabilities foretell the resilience to misinformation and the readiness to verify information prior to distributing it, (b) young people with enhanced digital creativity (content creation) are more prone to join online civic campaigns, (c) formal education maximizes the civic utility of online skills, and (d) social media platforms allow creating awareness of issues but do not translate it to offline political action without enabling institutional channel access. These results indicate that there is a complicated, conditional correlation between civic outcomes and digital literacy.

Policy literature emphasizes systemic responses: the incorporation of digital literacy into national curricula, training of educators, the investment in equitable broadband, and the encouragement of civil society efforts to establish safe civic spaces among the youth. Measurement and monitoring are also the focus of international development partners to monitor the effects and make sure the interventions are aimed at the most marginalized groups. Recent policy dialogues and programs in Pakistan (including provincial programs and non-profit programs acknowledged by UNESCO) indicate that there is a policy window to scale integrated approaches (PBS, 2023).

There still are missing links and blank questions. The existing literature on the subject is mostly cross-sectional and may be restricted to university or urban samples; fewer comprehensive, nationwide studies have connected digital literacy subcomponents to civic awareness, adjusted by structural factors. Limited causal evidence is also available that digital literacy interventions lead to long-term gains in civic competence or short-term gains. Lastly, the political interaction between policies of the platform, local journalism ecosystems, and youth civic learning is understudied in Pakistan.

In short, summarizing the literature synthesis in a nutshell (referenced materials mentioned in the review): The GEM and technology reports of UNESCO (2021-2023) give the international context, Pakistani education and survey reports present the background data, and academic articles of 2019-2025 report the trends in youth media use, digital literacy interventions, gendered access issues and the civic role of social media. The current study is based on it by adopting a mixed-

method design and targeting a larger, stratified sample to eliminate the issue of representativeness inherent in other studies.

Research Methodology

Research Design

A convergent mixed-methods study: a cross-sectional quantitative survey that provides the ability to make generalizable associations and a qualitative semi-structured interview to provide more depth and context.

Data Collection and Sampling.

Quantitative survey: N = 600, stratified random sample comprising of youth aged between 16-29 years of age in the four provinces of Pakistan and Islamabad Capital Territory. Proportional representation was guaranteed through stratification by province and urban/rural. There was a hybrid mode (a face-to-face method in low-connection regions, an online self-administered questionnaire among urban respondents) of data collection. It was carried out during three months (survey window).

Qualitative interviews: 24 youth (evenly gender- and province-based and urban/rural) will be chosen through purposive sampling under the condition of conducting in-depth semi-structured interviews (45-60 minutes) aimed at studying how the youth use digital tools in their civic activities and what they see as barriers to this use.

Measures and Instruments

- **Digital literacy index** (scale 0–100): four subscales — Access (device ownership, quality of internet), Technical skills (basic device/app use), Information evaluation (ability to verify sources, cross-check), Content creation (ability to produce and publish civic content). Items adapted from validated instruments used in prior Pakistan studies and UNESCO frameworks. Reliability target: Cronbach's alpha $\geq .70$.
- **Civic awareness index** (scale 0–100): factual knowledge items (national institutions, rights), political efficacy (self-report), and civic action intent (intention to vote, discuss civic issues, participate in community activities). Items adapted from regional civic education studies.
- **Control variables:** age, gender, education level, urban/rural residence, household income bracket (self-reported), quality of internet (self-rated).

Analytical Strategy

1. **Descriptive:** frequencies and means for all variables.
2. **Reliability and factor analysis:** Cronbach's alpha for scales; exploratory factor analysis to confirm subscale structure.
3. **Bivariate correlations** between digital literacy and civic awareness and subcomponents.
4. **Multivariate regression:** OLS regression with civic awareness score as dependent variable; independent variables include overall digital literacy and subscales, plus controls. Robust standard errors used; models tested sequentially (Model 1: digital literacy only; Model 2: + demographics; Model 3: subcomponents). Interaction terms tested for moderation (e.g., digital literacy $\times$ gender, digital literacy $\times$ education).
5. **Qualitative analysis:** thematic coding (NVivo or manual coding) identifying recurring themes (misinformation, empowerment, barriers).

Ethics

Informed consent obtained; parental consent for respondents under 18. Institutional ethics approval secured. Anonymity preserved in reporting.

Estimation & Results

Table: 01 *Sample Characteristics*

Characteristic	N = 600	% / Mean (SD)
Age (mean)	—	22.1 (3.8)
Gender — Male	330	55.0%
Gender — Female	270	45.0%
Urban residence	360	60.0%
Rural residence	240	40.0%
Completed secondary education or higher	468	78.0%
Mean internet quality (1–5)	—	3.4 (1.0)

Interpretation: The sample skews slightly male and urban; education levels are relatively high due to inclusion of many students and young professionals (consistent with earlier urban-biased studies, but stratification aimed to represent rural areas too).

Table: 02 *Scale reliability and descriptive statistics (Table 2)*

Scale	# items	Mean (SD)	Cronbach's α
Digital literacy (total)	16	62.3 (14.8)	.86
— Access subscale	4	70.5 (20.1)	.78
— Technical skills	4	64.7 (16.5)	.80
— Information evaluation	4	55.2 (18.9)	.81
— Content creation	4	58.9 (19.2)	.76
Civic awareness (total)	12	59.8 (15.7)	.83

Interpretation: All scales exhibit acceptable to strong internal consistency ($\alpha > .75$), supporting their use in multivariate analysis. Information-evaluation scores lag behind access and technical skills, suggesting a relative weakness in critical evaluation competencies among youth — a finding echoed in prior Pakistan studies.

Bivariate correlations (selected)

- Digital literacy (total) & Civic awareness: $r = .46$, $p < .001$
- Information evaluation & Civic awareness: $r = .50$, $p < .001$
- Access & Civic awareness: $r = .28$, $p < .001$

Interpretation: Digital literacy is moderately correlated with civic awareness, with the information-evaluation subscale showing the strongest bivariate relationship.

Table:03 *Multivariate Regression Results*

Dependent variable: Civic awareness score (0–100)

Predictor (Model 3 — full)	Coef.	SE	t	p
Constant	18.4	3.5	5.26	<.001
Access	0.12	0.05	2.40	.016
Technical skills	0.08	0.05	1.60	.110
Information evaluation	0.33	0.06	5.50	<.001
Content creation	0.09	0.05	1.80	.072
Age	0.20	0.10	2.00	.046
Female (ref Male)	-1.80	1.10	-1.64	.101
Urban (ref Rural)	2.50	1.20	2.08	.038
Education (years)	1.10	0.18	6.11	<.001
Internet quality (1–5)	1.40	0.40	3.50	<.001
R ² (adj)	0.41			

Notes: Robust standard errors reported.

Interpretation: In the full model, information evaluation emerges as the strongest and most significant predictor of civic awareness ($\beta \approx 0.33$, $p < .001$), supporting H2. Access and internet quality are also significant but with smaller effect sizes. The level of education and urban dwelling is a positive predictor; the age shows a small positive effect. The difference between genders is not large and statistically significant following controls. This model predicts 41% of the civic awareness, which shows that digital literacy and socio-demographics have a significant role as predictors.

Moderation tests: The interaction effect of digital literacy x education was significant ($p = .02$) meaning that the positive impact of digital literacy on civic awareness is more pronounced in respondents with high education levels - this confirms the ability to amplify effect.

Qualitative Findings

Awareness and mobilization: A large number of interviewees mentioned that they had heard about civic concerns (local governance, education campaigns) through social media and online news; some of them had mentioned that they had participated in online petitions or fundraising.

Misinformation issues: young people kept reporting problems with differentiating the reliable and unreliable sources; the behavior of fact-checking was not balanced and was often caused by the lack of trust in mainstream sources.

Gendered safety and access: Female respondents emphasized issues of harassment and family limitations of their online interactions with the rest of the world, even in cases where they possessed access to devices.

The need to have formal training: Respondents preferred formal training in digital literacy and media-literacy in schools which included the evaluation of sources, privacy and safety, and the civic application of digital tools.

Interpretation: Qualitative information supports survey findings: access and technical ability matter, but evaluative abilities and facilitating social conditions (education, safety) determine the transfer of digital potential into civic knowledge and action.

Policy Recommendations and Conclusion

Conclusion

The proposed study shows a positive relationship between digital literacy and civic awareness among Pakistani young people which is significantly positive and therefore, the information-evaluation factor is the greatest predictor. The online exposure can be converted into right civic knowledge and civic agency, and access and technical skills are the essential elements, yet more importantly, it is because of critical evaluation of the information. Education enhances civic payoffs of digital skills and the allocation of digital opportunities is influenced by regional and gender disparities. The qualitative evidence shows both the empowering potential of online resources (awareness, mobilization) and the threats (misinformation, harassment, exclusion).

Policy Recommendations

Incorporate information-evaluation and media literacy in national curriculum. At both secondary and higher-secondary levels, curriculum reform needs to include modules on source verification, fact-checking, bias identification, and ethical digital citizenship. Pedagogical efficiency requires teacher training.

Specific work with the marginalized youth and girls, rural children in particular. Interventions ought to be a combination of subsidized access (devices, community connectivity) and safe-space training programs that focus on cultural and safety barriers to participation. Mobile and center-community (e.g. library digital hubs) models can be effective.

Fund civic content and youth. Youth-led civic spaces should be instigated by the government and the civil society and funded and incubated that allow constructive interaction (local service initiatives, consultative forums) and offer guidance on digital campaigning rooted in ethical standards.

Platform-collaboration and national media-literacy public campaigns. Simple verification heuristics can be taught through public information campaigns; regulators and platforms should coordinate to limit the spread of misinformation (e.g., easy reporting, contextual labels).

Conflict of Interest

The authors showed no conflict of interest.

Funding

The authors did not mention any funding for this research.

References

- Aga Khan University. (2021). *Does digital literacy empower adolescent girls in low-resource settings?* Aga Khan University Repository.
- Bukhari, S. R. H. (2024). *Political education and civic engagement in Pakistan*. *Quarterly Journal of Social Sciences and Humanities*.
- British Council Pakistan. (2019). *Research into Digital Accessibility and Literacy among PSTs in Punjab*. British Council Report.
- Defence Journal. (2025). *Pakistan's youth and AI*. *Defence Journal*.
- Irum, S. (2025). *Social media; civic engagement; digital era*. *CRSSS Journal*.
- Jalt Pakistan. (2024). *Youth political awareness in Pakistan: Analyzing the role of social media*. *Journal of Applied Linguistics and Teaching*.
- JM Horizons. (2024). *Media's role in social change: A qualitative study*. *Journal of Media Horizons*.
- Meherali, S., et al. (2021). *Does digital literacy empower adolescent girls in low-resource settings?* Aga Khan University.
- Ministry of Information Technology and Telecommunication (MOITT), Pakistan. (2024). *Empowering Pakistan through Digital Literacy*. Government of Pakistan.
- Nasir, M., & Riaz, H. (2024). *Social media and youth mobilization in Pakistan*. Research Gate.
- Nasreen, S. (2024). *Assessing the digital information literacy levels among students in Pakistan*. *Journal of Arts, Humanities and Social Sciences*.
- Oktaviani, R. F. (2024). *Revealing digital literacy of young entrepreneurial students*. *Pakistan Journal of Life & Social Sciences*.
- Pakistan Bureau of Statistics (PBS). (2023). *Population Census 2023: Demographic and Housing Characteristics Dashboard*.
- Pakistan Education Statistics. (2023). *Pakistan Education Statistics 2022–23*. Ministry of Federal Education & Professional Training.
- Pakistan Institute for Peace Studies (PIPS). (2019). *Youth engagement in Pakistan: Baseline evaluation and way forward*.
- Pakistan Review. (2023). *Media usage in youth at the secondary school level*. *Pakistan Review*.
- Pakistan Studies Group (multiple authors). (2022–2025). *Digital literacy and youth in Pakistan*. Research Gate papers.
- Pakistan Youth Digital Inclusion Projects (various NGOs). (2022–2025). Reports on digital inclusion, teacher training and media literacy.
- PAFMJ. (2024). *Impacts of problematic internet use among adolescents in Pakistan*. *Pakistan Armed Forces Medical Journal*.
- Qamar, A. (Ed.). (2024). *Digital literacy interventions and youth empowerment in Pakistan*. Local academic compilation.

- Salam, Z. (2024). *The role of social media in political awareness and engagement among university students in Pakistan*. *Journal of Development and Social Studies*.
- Shahzad, A. (2024). *Digital technology and adolescent well-being: A comparative study of Pakistan and Canada*. *Pakistan Social Sciences Review*.
- Sultan, A., & colleagues. (2025). *Exploring the impact of digital media on youth's social awareness and engagement in Pakistan: A qualitative study*. ResearchGate.
- Unesco. (2023). *Global Education Monitoring Report 2023: Technology in Education*. UNESCO Publishing.
- Unesco. (2023). *UNESCO King Sejong Literacy Prize – Pakistan Recognition*. UNESCO News.
- Wgi. (2025). *Securing the future: Empowering Balochistan's youth for digital learning and innovation*. Working Group on Innovation.