Integrating Social Media into Professional Development: Evidence from Special Education Teachers in Palestine

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***Abstract*—This study investigates the impact of social media in enhancing the professional proficiency of special education educators in Palestine. Employing a mixed-methods approach, the research collected quantitative data through structured questionnaires administered to 66 educators and qualitative data via semi-structured interviews with 8 educators who had over 10 years of experience. The findings revealed that social media platforms contribute to professional development by enhancing communication, enabling resource sharing, and offering access to educational tools and professional networks. Teachers reported high levels of agreement across technological, professional, and cultural dimensions related to social media use. The study revealed no significant differences in perceptions across gender, academic qualifications, or experience, indicating a shared view of social media's benefits. Interviews emphasized key advantages as well as challenges such as privacy concerns, content credibility, and limited training. The study recommends offering digital-literacy training, creating online professional communities, and improving institutional digital infrastructure to support ethical and effective use of social media in special education.**

***Keywords*—social media, professional proficiency, special education educators, professional development, Palestine**

I. Introduction

Recent studies highlight the expanding role of digital platforms in strengthening professional learning for special education teachers, particularly as teaching environments become increasingly digitized. Marcelo-Martínez [1] demonstrated that teachers are turning to social networks to enhance professional collaboration and access to pedagogical resources, reflecting a broader shift toward informal, technology-mediated learning [2], further emphasized that digital transformation is deeply intertwined with inclusive education, as educators' technological readiness and attitudes directly influence inclusion outcomes. Xu [3] found that social media networks not only support reflective professional learning but also strengthen teachers' engagement in digital communities of practice. Complementing this, Meyer [4] identified interactivity, contextual relevance, and sustained communication as key components of effective online professional development. Additionally, Liu [5] showed that professional learning communities can meaningfully bridge the gap between digital training and classroom application, reinforcing findings from Pi *et al*. [6] regarding the role of self-efficacy and professional identity formation in shaping teachers' digital engagement.

Moreover, the results indicate that the use of social media for professional development provides teachers with continuous opportunities for collaboration and self-directed learning, allowing them to expand their professional growth beyond the constraints of the formal school setting [7]. This perspective reinforces the growing evidence that digital platforms can expand teachers' access to professional communities and innovative instructional strategies.

The potential of social media becomes especially salient in the Palestinian context, where special education educators face persistent challenges such as limited resources, imbalanced teacher–student ratios, and restricted access to formal professional development programs. Platforms such as Facebook and WhatsApp play a central role in facilitating instant communication, sharing educational materials, and building supportive learning networks [8, 9]. Al-Sabi *et al.* [10] highlighted the positive influence of balanced social media use on educators' psychological well-being, helping them adapt to increasing professional challenges, although excessive or unstructured use may negatively affect psychological compatibility. For special education specifically, social media provides essential channels for collaboration among educators, students, and families, and the perceived social support derived from such interactions has been shown to strengthen professional development [6, 11]. Nevertheless, concerns related to privacy, misinformation, and inconsistent digital literacy remain significant barriers that require intentional policies and frameworks to ensure ethical and effective use.

Despite growing evidence of the benefits of social media for educational practice, previous studies tend to focus on isolated dimensions such as psychological well-being, pedagogical utility, or contextual challenges, rather than analyzing these aspects holistically. Systematic reviews [1, 5] confirm that social media enhances reflective practice and cross-institutional knowledge exchange among special education teachers, while research on digital transformation stresses the need for institutional readiness and technological support [2, 4].

Special education educators face substantial challenges related to high professional demands and limited resources. They are expected to provide individualized instruction, conduct accurate assessments, and implement effective interventions, while also competing for professional titles based on criteria similar to those used in general education, which increases professional pressure [12]. In addition, the persistent shortage of special education staff intensifies workloads and contributes to burnout and reduced job satisfaction; for instance, Hadijah and Shalawati [13] highlighted a significant gap between the number of educators and students with disabilities in China, negatively affecting both teacher well-being and educational quality.

Moreover, limited access to specialized professional development and certification programs restricts educators' capacity to meet students' unique needs. As a result, inexperienced teachers often depend on informal support rather than structured training essential for professional growth [14]. The emotional demands of working with students with disabilities further compound stress, as educators struggle to balance emotional strain with the rewards of student progress, ultimately influencing their well-being and instructional quality [15].

Challenges documented in Palestine further include weak digital infrastructure, insufficient technical support, and inadequate stakeholder preparedness [16, 17]. Although these studies offer valuable insights into both the promise and the limitations of technology, there remains a clear research gap regarding how social media specifically contributes to enhancing the professional proficiency of special education educators within the unique constraints of the Palestinian educational system.

This study seeks to address this gap by investigating how social media networks influence the professional proficiency of special education educators in Palestine and by exploring whether their perceptions vary according to gender, educational qualifications, and years of experience. To guide this investigation, the study examines the following core questions: What role do social media networks play in enhancing the professional proficiency of special education educators in Palestine? Are there statistically significant differences at the Level of Significance Alpha (α) ≤ 0.05 level in educators' perceptions based on gender? Are there differences according to educational qualifications? And do years of experience shape how educators evaluate the role of social media in their professional growth? Together, these questions aim to capture both the general value of social media and the demographic patterns that may influence its perceived effectiveness.

The significance of this study lies in its contribution to developing a nuanced, evidence-based understanding of how social media can be integrated into professional development frameworks for special education educators in Palestine. By linking teachers' digital practices with their demographic characteristics and contextual challenges, the study provides insights that can guide the design of ethical, innovative, and sustainable strategies for using social media to enhance collaboration, resource sharing, and reflective learning. Ultimately, the findings aim to support the advancement of teaching quality for students with disabilities, promote equitable access to professional support networks, and contribute to the broader goal of building a resilient and future-ready educational system.

II. Methodology and Procedures

A. Research Method

This study adopts a quantitative–qualitative mixed-methods approach to examine the perceptions of special education teachers in Palestine regarding the use of social media in enhancing professional competence. The quantitative component employed a structured questionnaire to measure teachers' perceptions across technological, pedagogical, and professional dimensions. The qualitative component utilized semi-structured interviews to gain deeper insights into teachers' experiences, challenges, and suggestions related to social media use.

B. Research Framework

The study is guided by the Technological Pedagogical and Content Knowledge (TPACK) framework [11, 18], which provides a comprehensive model for understanding how teachers integrate technology into instructional practices. TPACK emphasizes the interaction among Technological Knowledge (TK), Pedagogical Knowledge (PK), and Content Knowledge (CK). In this study, TPACK was used to interpret teachers' perceptions of social media in terms of technological usability, pedagogical relevance, and content applicability within special education settings.

The Technological Pedagogical and Content Knowledge (TPACK) framework guided the design of the questionnaire by aligning three intersecting dimensions: social media, special education teaching, and content adaptation. In this study, social media represents the technological component, special education teaching reflects the pedagogical component, and content adaptation corresponds to the content knowledge component. Accordingly, the questionnaire dimensions were developed to examine how social media supports professional practices, instructional strategies, and the adaptation of learning materials to meet the needs of students with disabilities. This alignment ensured that the instrument systematically captured the integrated role of technology, pedagogy, and content in enhancing the professional proficiency of special education educators.

C. Research Design

This study followed an explanatory sequential mixed-methods design implemented in two consecutive phases. In Phase 1 (Quantitative), data were collected from 66 special education teachers using a structured questionnaire to examine the overall impact of social media on professional competence and to identify potential differences related to gender, educational qualification, and years of experience. In Phase 2 (Qualitative), the quantitative findings informed the selection of participants and the focus of inquiry; accordingly, semi-structured interviews were conducted with 8 teachers who had more than ten years of teaching experience to provide in-depth explanations of the identified strengths, challenges, and practical suggestions related to social media use. This two-step process enabled the integration of quantitative trends with qualitative insights, thereby enhancing the depth and interpretability of the results.

The research adopts an explanatory sequential mixed-methods design. Quantitative data were collected first to measure overall perceptions and identify potential demographic differences. Qualitative interviews were conducted afterward to clarify and deepen the interpretation of quantitative findings. This design allows triangulation of results and enhances the credibility and comprehensiveness of the study.

D. Research Objects and Samples

A purposive sampling method was employed to ensure that the study sample reflected the diversity of special education contexts in Palestine. Teachers were selected from different

geographical regions and from various types of special education settings, including public schools, private institutions, and specialized centers, to enhance the representativeness of the sample. For the qualitative phase, interviewees were selected based on two criteria: having more than 10 years of teaching experience in special education and being frequent users of social media for professional development. Frequent use was operationally defined as engaging with social media platforms for professional purposes at least 3 times per week and actively participating in at least one professionally related social media group or online community.

The population of the study consists of special education teachers working in Palestinian schools during the academic year 2023–2024. The quantitative sample includes 66 teachers selected using a purposive sampling method to ensure representation of various educational settings. For the qualitative phase, 8 teachers with more than ten years of experience were interviewed to provide in-depth perspectives. Inclusion criteria focused on teachers who actively use social media for professional or instructional purposes.

The demographic characteristics of the quantitative sample are presented in Table 1, showcasing the distribution by gender, years of experience, and educational qualifications. This combination of quantitative and qualitative data collection methods allowed for a robust exploration of the study's objectives.

Table 1. Distribution of the study sample by professional characteristics

Variable	Category	Frequency	Percentage (%)
Gender	Male	37	56.2
	Female	29	43.8
	Total	66	100.0
Years of Experience	Less than 5 years	17	26.0
	5–10 years	30	43.8
	More than 10 years	19	30.1
	Total	66	100.0
Educational Qualification	Bachelor's (BSc) or lower	45	67.8
	Graduate studies	21	33.2
	Total	66	100.0

E. Research Instruments

Two primary instruments were used:

1) **Questionnaire:** Developed based on previous studies on social media in teacher development and aligned with the TPACK framework. It consisted of demographic variables and three main dimensions: technological, pedagogical, and professional. Responses were measured using a five-point Likert scale.
2) **Semi-structured Interview Guide:** Designed to explore teachers' experiences in depth, covering three areas: advantages of social media, challenges faced, and suggestions for improving social-media-supported professional development.

F. Reliability and Validity Testing

Validity of the questionnaire was verified through expert review by specialists in special education, educational technology, and research methodology. Construct validity was further supported through factor alignment with the TPACK framework. Reliability was assessed using Cronbach's Alpha, which demonstrated high internal consistency across all dimensions ($\alpha > 0.85$). Interview credibility was strengthened through member checking and thematic cross-coding by two independent coders.

G. Data Processing Methods

Quantitative data were analyzed using descriptive statistics: means, Standard Deviations (SD) and inferential statistics, including t-tests and one-way Analysis of Variance (ANOVA) to examine differences across gender, academic qualifications, and years of experience. Qualitative data were analyzed using thematic analysis following Braun and Clarke's [19] six-step procedure, involving initial coding, theme generation, and refinement to identify recurring patterns in participants' responses.

H. Ethical Considerations

Informed Consent: All participants were clearly informed about the purpose of the study, the nature of their participation, and how the collected data would be used for research purposes only. Written informed consent was obtained prior to participation. To ensure anonymity, the questionnaire did not collect any personal identification information, and interview recordings were transcribed anonymously using coded identifiers.

Data Storage and Retention: All quantitative and qualitative data were securely stored using encrypted cloud-based storage systems accessible only to the researchers. The data will be retained for a period of three years following the completion of the study, after which all digital files will be permanently deleted to ensure data protection and confidentiality.

Withdrawal Mechanism: Participants were informed that their participation was entirely voluntary and that they had the right to withdraw from the study at any time without providing any reason. Withdrawal from the study did not result in any negative consequences and did not affect participants' professional rights or standing in any way.

Ethical approval for the study was obtained from the relevant institutional review authorities. Participation was voluntary, and informed consent was secured from all participants. Teachers were assured of confidentiality, anonymity, and the right to withdraw at any stage. Data were stored securely and used solely for academic purposes.

III. Results

A. Quantitative Results

Question 1: What is the impact of social media networks in enhancing the professional proficiency of special

education educators in Palestine?

To answer this question, means and SDs were calculated for each dimension of the study instrument, which included 45 items distributed across three axes:

- Technological Dimension (15 items)
- Professional Dimension (15 items)
- Cultural Dimension (15 items)

The results are summarized in Table 2, which presents the calculated means and SDs.

The results indicate that the impact of social media networks in enhancing professional proficiency was perceived as high across all dimensions, with overall mean values ranging from 3.90 to 3.95. The Technological Dimension ranked first, followed by the Professional Dimension, and then the Cultural Dimension. The overall mean score was 3.96, reflecting a high level of agreement among respondents about the positive impact of social media on professional proficiency.

Table 2. Means and SDs for the role of social media networks in enhancing professional competence of special education teachers

Dimension	Mean	SD	Interpretation
Technological Dimension	3.95	0.504	High
Professional Dimension	3.92	0.508	High
Cultura Dimension	3.90	0.527	High
Overall	3.96	0.318	High

Question 2: Are there statistically significant differences at the ($\alpha \leq 0.05$) level in the use of social media to enhance professional proficiency based on gender?

To address this question, an independent samples t-test was conducted to examine differences between male and female educators' responses. The results are presented in Table 3.

Table 3. Independent samples t-test for differences in perceptions of social media's role in enhancing professional competence based on gender

Dimension	Gender	Sample Size (N)	Mean	SD	*t*-value	Sig. (*p*-value)
Technological Dimension	M	37	3.97	0.419	1.787	0.080
	F	29	3.92	0.379		
Professional Dimension	M	37	3.94	0.415	0.198	0.882
	F	29	3.90	0.412		
Cultural Dimension	M	37	3.92	0.532	0.108	0.920
	F	29	3.88	0.470		
Overall	M	37	3.97	0.366	0.897	0.590
	F	29	3.94	0.359		

Note: Sig. = Significance; *p*-value = probability value.

The results indicate no statistically significant differences in educators' perceptions based on gender for any dimension or for the overall score, as all *p*-values were greater than 0.05. This indicates that male and female educators share similar views on the impact of social media in enhancing professional proficiency.

Question 3: Are there statistically significant differences at the ($\alpha \leq 0.05$) level in the use of social media to enhance professional proficiency based on educational qualification?

To explore this question, an independent samples t-test was conducted to examine differences between educators with a bachelor's degree or lower and those with postgraduate degrees. The results are summarized in Table 4.

Table 4. Independent samples t-test for differences in perceptions based on educational qualification

Dimension	Qualification	N.	Mean	SD	*t*-value	Sig. (*p*-value)
Technological Dimension	BSc's or Lower	45	4.00	0.418	−0.018	0.488
	Postgraduate	21	3.96	0.422		
Professional Dimension	BSc's or Lower	45	3.95	0.488	0.684	0.524
	Postgraduate	21	3.91	0.390		
Cultura Dimension	BSc's or Lower	45	3.91	0.602	−0.520	0.714
	Postgraduate	21	3.87	0.521		
Overall	BSc's or Lower	45	3.98	0.377	0.035	0.962
	Postgraduate	21	3.94	0.350		

No statistically significant differences were found based on educational qualification ($p > 0.05$), indicating that both groups perceive the impact of social media similarly in terms of enhancing professional proficiency.

Question 4: Are there statistically significant differences at the ($\alpha \leq 0.05$) level in the use of social media to enhance professional proficiency based on years of experience?

Table 5. One-way ANOVA for differences in perceptions based on years of experience

Dimension	Source	Sum of Squares	Degrees of Freedom	Mean Square	F-value	Sig. (*p*-value)
Technological Dimension	Between Groups	0.244	2	0.116	0.611	0.588
	Within Groups	15.373	63	0.166		
Professional Dimension	Between Groups	0.746	2	0.222	1.616	0.231
	Within Groups	12.135	63	0.160		
Cultural Dimension	Between Groups	1.784	2	0.455	2.147	0.441
	Within Groups	14.332	63	0.118		
Overall	Between Groups	0.584	2	0.188	1.402	0.265
	Within Groups	7.547	63	0.137		

To address this question, a one-way ANOVA test was conducted. The results are presented in Table 5.

The analysis revealed no statistically significant differences ($p > 0.05$) in educators' perceptions based on years of experience. This indicates that novice and experienced educators alike recognize the impact of social

media in enhancing professional proficiency similarly.

B. Qualitative Results (Interview Findings)

To gain deeper insights into the impact of social media in enhancing the professional proficiency of special education educators, semi-structured interviews were conducted with a purposive sample of eight educators with more than ten years of experience.

1) Perceived advantages of social media

The interview results indicated that all participants unanimously agreed on the significant impact of social media in enhancing their professional proficiency. Teachers highlighted that platforms such as Facebook and LinkedIn provide access to a wide range of resources, including teaching materials, webinars, and professional discussions.

2) Key challenges

Participants highlighted several challenges, including privacy concerns, information overload, the time-consuming nature of managing multiple platforms, and difficulties in verifying the credibility of resources shared on social media.

3) Suggestions for improvement

Participants suggested creating specialized groups for special education teachers, organizing professional webinars, and providing access to certified training programs through social media platforms.

IV. Discussion

A. Discussion of Quantitative Results

The results of the current study align with global evidence indicating that participation in online professional communities strengthens pedagogical adaptation and innovation [1, 19].

The role of social media in shaping professional identity is reinforced by cross-cultural findings demonstrating that digital engagement increases educators' self-efficacy and instructional confidence [5].

The absence of statistically significant differences based on gender is consistent with the findings of Al-Sabi *et al*. [10], who reported similar results regarding educators' perceptions of social media use. This consistency may reflect equal access to digital tools among male and female educators, as also highlighted by Naser *et al*. [8].

Similarly, the lack of significant differences based on educational qualification aligns with Zyoud [16], who found that educators across varying academic levels adapted effectively to online platforms. Naser *et al.* [8] also emphasized the universal applicability of social media tools due to their accessibility and ease of use.

Regarding years of experience, the findings are consistent with Zyoud [16] and Nassar [17], both of whom reported that educators across experience levels benefited similarly from digital tools, particularly during periods of increased reliance on online platforms.

B. Discussion of Qualitative Results

These findings are consistent with broader research indicating that teachers benefit from online professional communities by accessing diverse resources, receiving peer support, and engaging in reflective dialogue that enhances instructional practices [20]. Such evidence aligns with the interview results in this study, where participants described social media as a vital space for exchanging experiences and solving instructional challenges collaboratively.

C. Theoretical and Practical Implications

This study advances scholarly understanding by providing a context-specific examination of how social media enhances the professional proficiency of special education educators in Palestine through the TPACK framework.

D. Limitations of the Study

A key limitation of this study is the potential social desirability bias inherent in self-reported surveys on technology use, where participants may overstate the benefits of social media. This limitation should be considered when interpreting the findings.

V. Conclusion and Recommendations

Although the study provides meaningful insights, it should be noted that the quantitative sample included only 66 educators, which limits the generalizability of the findings. Future research with larger and more diverse samples is recommended to strengthen external validity. The study explores the impact of social media networks on the professional proficiency of special education educators in Palestine, examining differences by gender, qualification, and years of experience. Conducted across several regions in 2024, it targets teachers who use social media partially or regularly for professional purposes. A descriptive-analytical approach was employed using surveys to assess educators' perceptions.

The findings reveal highly positive views regarding the role of social media in enhancing professional competence. Teachers reported strong agreement about the usefulness of social media in accessing resources, improving instructional practices, and supporting professional communication. No statistically significant differences were identified across demographic variables, indicating shared perceptions of social media's value. Qualitative insights reinforced these results, highlighting benefits such as resource availability and peer collaboration, alongside concerns related to privacy and limited digital literacy.

Based on the results, several recommendations are suggested. Teachers are encouraged to participate in online professional communities, engage in reflective digital practices, and demonstrate responsible online behavior. Strengthening digital literacy is essential for evaluating content and integrating it effectively into teaching. Schools should provide structured digital literacy training, develop moderated discipline-specific online spaces, and establish guidelines that promote safe and productive use of social media. Enhancing digital infrastructure is also necessary to ensure equitable opportunities for professional development.

At the policy level, education authorities should develop frameworks for ethical social media use, integrate digital professional development into national programs, and allocate resources for sustainable capacity-building. Partnerships with specialized organizations and digital platforms can further support national efforts to enhance professional learning among special education teachers.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

Sahar Abu Shokhedim drafted the initial version of the manuscript. Jamil Itmazi revised and improved the manuscript by refining the language, reorganizing some sections, and adding relevant references. In addition, Jamil Itmazi led and managed the submission and publication process. Both authors reviewed and approved the final version of the manuscript.

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