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RESEARCH ARTICLE

Digital Technology Use, Self-Reported Digital Literacy, and Emerging AI Practices among Teachers in Nepal: A Descriptive Survey

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Abstract: The growing presence of digital technology in education has increased expectations for teachers to use digital tools in their professional and instructional activities. However, access to technology does not necessarily indicate the ability to use it effectively for educational purposes. This study examines patterns of technology use, self-reported digital literacy, and teachers' perceptions of the importance of information and communication technology (ICT) in Nepal. A descriptive survey design was employed using data from 200 teacher survey records. The data were analysed through frequencies, percentages, means, and standard deviations. The findings indicate that 71% of the respondents reported using the internet for more than one hour daily, while 48% spent more than one hour on screens for academic or professional purposes. Although 89% reported having learned about technology at school, their self-rated digital literacy showed variation, with a mean score of 4.30 (SD = 1.51). Similarly, 98% considered ICT necessary. Email, Google Drive, YouTube, and mobile applications were reported as useful across different areas of life, whereas several other digital platforms were less commonly used. The findings provide a descriptive account of teachers' engagement with digital technology and their reported experiences of digital learning and emerging AI applications.

Keywords: digital technology, digital literacy, educator digital competence, artificial intelligence, teacher professional development, Nepal

1 Introduction

Digital technology has increasingly influenced how people communicate, access information, and participate in educational activities. In educational settings, digital tools are used for lesson preparation, instructional material development, online communication, assessment, collaboration, and professional learning. Consequently, teachers are expected not only to operate digital devices but also to select appropriate resources, evaluate online information, and use technology to support teaching and learning. The COVID-19 pandemic further accelerated the adoption of digital technologies in education. Following the closure of schools and educational institutions, teachers relied on online platforms and digital resources to continue instructional activities and maintain communication with students. Although this transition expanded opportunities for digital learning, it also exposed differences in access to devices, internet connectivity, technical support, and teachers' digital skills. More importantly, the experience demonstrated that access to technology alone does not guarantee its meaningful integration into educational practice.

Digital literacy has therefore become an important dimension of teachers' professional development. It extends beyond the technical ability to operate computers or mobile devices and includes locating, evaluating, creating, and communicating information through digital technologies. It also involves responsible participation, information management, and awareness of digital safety. The European Framework for the Digital Competence of Educators (DigCompEdu) provides a comprehensive framework for understanding educators' digital professional competence [1]. It identifies six areas: professional engagement, digital resources, teaching and learning, assessment, empowering learners, and facilitating learners' digital competence. These areas demonstrate that teachers' digital competence involves both technical knowledge and the ability to apply digital resources appropriately in educational contexts. Similarly, research on technology integration has highlighted the importance of teachers' knowledge, attitudes, beliefs, and professional support in shaping their use of technology [2, 3]. Taken

together, these perspectives suggest that meaningful technology integration depends not simply on the availability of digital resources but also on teachers' capacity and opportunities to use them purposefully.

The development of artificial intelligence (AI) has further expanded the scope of digital technology in education. AI-based applications can assist teachers in preparing instructional materials, developing questions, searching for information, explaining concepts, and supporting classroom activities. However, their educational value depends on how they are used and whether teachers can evaluate the accuracy and relevance of their outputs. Holmes and Tuomi (2022) [4] discuss the development of AI in education and the broader questions surrounding its educational applications. Research in specific educational fields also illustrates the opportunities and limitations of these technologies. For example, Opesemowo and Ndlovu (2024) [5] examine the potential and limitations of AI in mathematics education, while Sayed Al Mnhrawi and Alreshidi (2023) [6] discuss approaches to implementing AI in higher education during the COVID-19 pandemic. Although these studies address different educational contexts, they collectively demonstrate that the introduction of AI requires consideration of its educational purposes, practical applications, and limitations.

Alongside its potential benefits, AI use raises concerns about the accuracy of generated information, data privacy, algorithmic bias, and the role of human judgement in educational decision-making. Naudé (2020) [7] discusses limitations and risks associated with AI applications during the COVID-19 pandemic, highlighting the importance of responsible technological development and use. More recent research has also drawn attention to the relationship between AI and teachers' digital competencies. Gómez-Rey et al. (2026) [8], for example, examine future mathematics teachers' perceptions of AI and digital competencies. Such discussions are relevant to practising teachers because the increasing availability of AI applications requires them to develop the ability to assess generated information, recognise potential limitations, and make informed decisions about their educational use. Thus, AI literacy can be understood as an emerging dimension of teachers' broader engagement with digital technologies rather than an entirely separate professional concern.

In Nepal, the integration of digital technology into education takes place within educational settings that differ in infrastructure, internet connectivity, access to digital resources, institutional support, and professional development opportunities. These differences may influence not only whether teachers use digital technologies but also how frequently and purposefully they use them in their professional activities. Research on ICT integration in Nepalese teacher education has emphasised the importance of infrastructure, institutional planning, and professional development in supporting technology use [9]. However, the availability of digital facilities and participation in technology-related training do not necessarily indicate that teachers can apply digital resources effectively in their everyday professional practices. Understanding teachers' actual experiences, self-assessments, and sources of support is therefore important for identifying the conditions that shape their engagement with educational technology. This issue has become increasingly relevant with the emergence of accessible AI applications, which introduce additional opportunities as well as new responsibilities for teachers. Although previous research has examined digital competence, ICT integration, and AI in education, these areas are frequently discussed as related but separate concerns. Examining them together can provide a broader descriptive understanding of teachers' engagement with digital technology, including their everyday practices, perceived digital skills, and responses to emerging AI applications. Such an approach is particularly relevant in the Nepalese context, where teachers' experiences and opportunities for technology use may differ according to their professional backgrounds and working conditions. There is therefore a need for contextual evidence that considers digital technology use, self-reported digital literacy, and AI-related awareness and perceptions within a common research framework.

The present study examines digital technology use, self-reported digital literacy, and emerging AI-related practices among 200 English and Social Studies teachers in Nepal. The participants included current and retired teachers, with different professional experience categories represented in the survey data. Using a descriptive survey approach, the study explores their patterns and purposes of internet use, digital devices and online platforms, experiences of technology-related learning, sources of support, and perceptions of ICT and AI in education. Rather than measuring objectively demonstrated digital competence or establishing the effectiveness of particular technologies, the study focuses on respondents' reported experiences and perceptions. It provides descriptive evidence that may contribute to understanding teachers' engagement with digital technologies and identifying areas for professional development in the changing educational environment.

1.1 Research Objectives

The study was guided by the following objectives:

(1) To examine teachers' patterns and purposes of digital technology use, including their use of digital devices and online platforms.

(2) To explore teachers' self-reported digital literacy, technology-related learning experiences, and sources of support for developing digital skills.

(3) To investigate teachers' reported experiences, perceptions, and emerging practices concerning the use of artificial intelligence in education.

1.2 Research Questions

The study addressed the following research questions:

RQ1. How do teachers use digital technologies, devices, and online platforms for personal, educational, and professional purposes?

RQ2. How do teachers perceive their digital literacy, and what experiences and sources of support contribute to their reported digital learning?

RQ3. What are teachers' reported experiences, perceptions, and emerging practices regarding the use of artificial intelligence in education?

2 Literature Review

2.1 Digital Literacy and Teachers' Digital Competence

Digital literacy has become an essential aspect of contemporary education as teachers increasingly depend on digital technologies for accessing information, communicating, preparing instructional materials, and supporting learning. It involves the ability to access, understand, evaluate, create, and communicate information through digital technologies. However, digital literacy should not be understood solely in terms of technical familiarity with digital devices. It also requires critical evaluation of information, responsible participation in digital environments, and the ability to select appropriate technological resources for particular purposes.

The distinction between technical ability and meaningful educational application is particularly important in understanding teachers' digital competence. Redecker (2017) [1], through the DigCompEdu framework, identifies six interconnected areas of educators' digital competence: professional engagement, digital resources, teaching and learning, assessment, empowering learners, and facilitating learners' digital competence. This framework presents digital competence as a combination of professional, pedagogical, and technological abilities rather than a collection of isolated technical skills. It also indicates that the effective use of technology involves more than the frequency with which teachers access digital resources.

Falloon (2020) [10] similarly emphasises the integrated nature of teachers' digital competence, highlighting the relationship between technological understanding and its educational application. Research on teachers' technology integration also demonstrates that attitudes, knowledge, and contextual support influence the extent to which digital technologies are incorporated into teaching [2, 3]. These perspectives collectively suggest that digital competence is shaped by both individual capabilities and the conditions in which teachers work. However, an important distinction remains between teachers' perceived abilities and their demonstrated competence. Self-reported assessments can provide valuable information about teachers' confidence and experiences, but they do not necessarily establish whether teachers can perform particular digital tasks effectively. This distinction is important when interpreting questionnaire-based evidence on teachers' digital literacy.

2.2 ICT Integration and Professional Learning in Nepal

The integration of information and communication technology (ICT) in education depends on several interconnected conditions, including access to digital devices, internet connectivity, electricity, institutional facilities, and teachers' technical and pedagogical preparation. These factors influence not only the availability of technology but also the opportunities teachers have to use it in their professional activities. Consequently, the presence of digital facilities does not necessarily result in meaningful classroom integration.

In Nepal, ICT integration needs to be understood in relation to the educational conditions

within which teachers work. Rana and Rana (2020) [9] highlight the importance of institutional planning, ICT infrastructure, and professional development in supporting technology integration in teacher education. Their discussion draws attention to the fact that technology integration requires more than the introduction of digital equipment. Teachers also need appropriate preparation, opportunities for practice, and institutional support to incorporate technology into teaching and learning.

A related Nepalese study by Basnet and Sharma (2026) [11] examined teachers' practices in teaching English for Specific Purposes in technical education and identified challenges that included inadequate teacher training and limited teaching resources. Their findings reinforce the importance of context-sensitive professional development and institutional support. Although their study focused on ESP teaching in technical education, the present study extends the discussion to teachers' reported digital technology use, self-assessed digital literacy, and emerging AI-related practices across English and Social Studies teaching contexts.

Professional development is particularly important because teachers may acquire basic technical knowledge without developing the confidence or pedagogical understanding required for effective application. Training that concentrates only on the operation of particular devices or applications may not adequately prepare teachers to use technology for lesson planning, classroom interaction, assessment, and instructional resource development. Teachers also develop digital skills through independent learning, professional interaction, and everyday engagement with digital platforms. Therefore, examining both formal learning experiences and informal sources of support can provide a broader understanding of how teachers develop their digital skills.

Another important consideration is the relationship between frequency of technology use and the educational purposes for which it is used. Regular internet access or familiarity with digital platforms does not automatically demonstrate meaningful pedagogical integration. Teachers may use technology primarily for communication and information searching, while its application in assessment, resource development, or classroom instruction may differ. This distinction provides a useful basis for examining not only how frequently teachers use digital technologies but also the purposes and professional activities associated with their use.

2.3 Artificial Intelligence in Education

Artificial intelligence has introduced new possibilities for teaching, learning, and educational support. AI-based applications can assist teachers with lesson preparation, instructional material development, question generation, information searching, and the explanation of academic concepts. The growing availability of generative AI tools has made these applications increasingly accessible for educational and professional activities. However, their usefulness depends on the quality of their outputs and users' ability to evaluate the information they generate.

Kasneci et al. (2023) [12] discuss the opportunities and challenges of large language models in education, drawing attention to their potential for supporting learning and instructional activities while recognising concerns about accuracy, bias, and responsible use. Wang et al. (2024) [13] also contribute to the discussion of AI applications in educational contexts. These studies indicate that AI can provide useful forms of assistance, but its educational value should not be assumed simply because the technology is available. Teachers need to consider whether generated content is accurate, relevant, appropriate to learners' needs, and consistent with educational objectives.

UNESCO's guidance on generative AI in education and research further emphasises human responsibility, data protection, inclusion, and the development of appropriate educational policies [14]. These concerns are particularly important because AI-generated responses may contain inaccurate information, reflect biases, or present unsupported claims in convincing language. Teachers therefore need to exercise professional judgement rather than rely on AI-generated content without verification.

AI also raises questions about changing expectations of teachers' professional roles. Although AI applications can assist with certain instructional and administrative tasks, they cannot independently replace teachers' understanding of learners, classroom contexts, and educational purposes. The responsible use of AI consequently requires a combination of digital awareness, critical evaluation, and pedagogical judgement. In this sense, AI literacy extends the discussion of teachers' digital literacy by introducing additional considerations related to generated information, ethical responsibility, and the appropriate use of emerging technologies.

For the present study, the literature on AI is particularly relevant because it provides a basis

for understanding respondents' awareness, perceptions, and reported uses of AI in educational activities. However, awareness of AI, perceived usefulness, and actual classroom application should be treated as distinct dimensions. A teacher's positive perception of AI does not necessarily indicate regular use, just as familiarity with an AI application does not establish the ability to evaluate its outputs critically.

2.4 Research Gap

Previous research has established the importance of teachers' digital competence, ICT integration, and professional development in contemporary education. Other studies have examined the opportunities and challenges associated with artificial intelligence in teaching and learning. However, digital technology use, self-reported digital literacy, and AI-related awareness and practices represent interconnected but distinct dimensions of teachers' engagement with educational technology. Examining these dimensions together can provide a more comprehensive descriptive account of how teachers use digital resources, perceive their digital abilities, and respond to emerging technological developments.

In the Nepalese context, understanding these relationships requires attention to teachers' everyday professional experiences rather than focusing exclusively on the availability of technological infrastructure or formal ICT training. Information about internet use, digital devices, online platforms, technology-related learning experiences, and sources of professional support can help explain the different ways teachers engage with digital technologies. Similarly, examining their awareness and perceptions of AI can provide insight into how emerging applications are understood and considered for educational purposes.

The present study addresses this need by examining digital technology use, self-reported digital literacy, and AI-related awareness, reported uses, and perceptions among 200 English and Social Studies teachers in Nepal. By bringing these dimensions into a single descriptive survey, the study provides contextual evidence of teachers' reported technological engagement and identifies areas that may require greater attention in professional development. Its contribution lies in considering everyday digital technology use, perceived digital skills, and emerging AI-related perspectives within a common research framework, without claiming to measure objectively demonstrated digital competence or establish causal relationships.

3 Methodology

3.1 Research Design

The study employed a descriptive survey design to examine teachers' use of digital technologies, self-reported digital literacy, and emerging AI practices. A survey approach was appropriate because the study aimed to describe participants' experiences, reported practices, and perceptions rather than test causal relationships between variables.

3.2 Participants and Sampling Procedure

The study involved 200 English and Social Studies teachers from different parts of Nepal. The sample included 185 current teachers and 15 retired teachers, according to the professional categories recorded in the questionnaire. The respondents were classified into three categories: novice teachers (105, 52.5%), experienced teachers (80, 40%), and retired teachers (15, 7.5%).

The study used a non-probability convenience sampling technique. Participants were recruited through online teacher groups and face-to-face teacher workshops. The questionnaire was distributed electronically through online teacher networks and shared directly with teachers during the workshops. Participation was voluntary.The questionnaire recorded participants' professional categories and subject backgrounds but did not provide sufficient information to establish the exact number of respondents teaching at each grade level or to compare responses by subject area. Therefore, the findings are presented for the overall sample rather than as separate comparisons across grade levels or subjects.

3.3 Data Collection Procedure

Data were collected between August 2023 and December 2025 using the same questionnaire. The questionnaire was distributed through online teacher groups and face-to-face teacher workshops to reach teachers from different professional networks. It included structured and open-ended questions on participants' backgrounds, internet use, digital device use, technology-

related learning, self-reported digital literacy, perceptions of ICT, and sources of support, digital platforms, and views on AI in education. The same questionnaire was retained throughout the data collection period to maintain consistency in the information collected. Data collection took place over an extended period, during which teachers' access to and experiences with digital technologies and AI applications may have changed. This limitation was considered when interpreting the findings.

3.4 Data Analysis

The quantitative responses were analysed using descriptive statistics, including frequencies, percentages, means, and standard deviations. These statistics were used to summarise respondents' backgrounds, technology use, self-reported digital literacy, and reported use of digital platforms. Open-ended responses were reviewed to identify recurring examples and issues relating to digital technology and AI use in education. Responses referring to similar activities, such as preparing teaching materials, generating questions, searching for information, and supporting language learning, were grouped for descriptive presentation. These responses were used to provide additional context for the quantitative findings rather than treated as a separate qualitative dataset. No claim of theoretical saturation or comprehensive qualitative analysis is made.

3.5 Ethical Considerations

Participation in the study was voluntary. Participants were informed about the purpose of the research and the nature of their participation before completing the questionnaire. The responses were used for research purposes, and care was taken to maintain participants' privacy and confidentiality. Personal information was not included in the presentation of the findings.

4 Results

4.1 Respondents' Background Information

A total of 200 respondents participated in the study. The professional categories recorded in the questionnaire were novice teachers, experienced teachers, and retired teachers. Novice teachers formed the largest group, with 105 respondents (52.5%). Experienced teachers accounted for 80 respondents (40%), while 15 respondents (7.5%) were retired teachers. The inclusion of retired teachers means that the sample represents both current and former teaching professionals. Their responses should therefore be interpreted in relation to the professional experiences they reported rather than assumed to reflect only current classroom practice.Regarding gender, 99 respondents (49.5%) were female, 98 (49%) were male, and three (1.5%) selected another gender category. In terms of age, the largest group (39%) was aged 40–59 years, followed by those aged 26–39 years (28.5%). Respondents aged 18–25 accounted for 22%, while 10.5% were aged 60–64. (see Table 1)

Table 1 Respondents' Gender and Age Categories

Background Variable	Category	Frequency	%
Professional category	Novice teachers	105	52.5
	Experienced teachers	80	40.0
	Retired teachers	15	7.5
Gender	Female	99	49.5
	Male	98	49.0
	Other	3	1.5
Age (year)	Young adults (18–25)	44	22.0
	Adults (26–39)	57	28.5
	Middle-aged adults (40–59)	78	39.0
	Mature adults (60–64)	21	10.5
Institutional category	Community/government-aided	93	46.5
	Public	60	30.0
	Private/institutional	47	23.5
Total participants		200	100

The questionnaire also recorded participants' institutional backgrounds. The original categories included community, private, public, community/government-aided, public (private), and

institutional/private. For clearer presentation, these responses were grouped according to their main institutional label, as shown in Table 1.

The original responses were grouped as follows: community (73) and community/government-aided (20) were combined; public (42) and public (private) (18) were combined; and private (43) and institutional/private (4) were combined. This grouping follows the main label in each response. The original questionnaire categories were not fully distinct.

4.2 Internet Use and Screen Time

The findings indicate that most respondents used the internet for more than one hour daily. A total of 142 respondents (71%) reported using the internet for more than one hour, while 25 (12.5%) reported using it for one hour. Nineteen respondents (9.5%) used the internet for less than 15 minutes, and 14 (7%) reported 30–45 minutes of daily use. Academic and professional screen use also showed regular engagement with digital devices. Ninety-six respondents (48%) reported spending more than one hour on academic or professional activities using screens. Fifty-nine (29.5%) reported 30–45 minutes, while 33 (16.5%) reported one hour. The remaining respondents reported either 15–30 minutes or less than 15 minutes. (see Table 2)

Table 2 Daily Internet Use and Academic or Professional Screen Use

Activity	Time category	Frequency	%
Daily internet use	More than 1 hour	142	71.0
	1 hour	25	12.5
	Less than 15 minutes	19	9.5
	30–45 minutes	14	7.0
Academic/professional screen use	More than 1 hour	96	48.0
	30–45 minutes	59	29.5
	1 hour	33	16.5
	15–30 minutes	5	2.5
	Less than 15 minutes	7	3.5

The results suggest that internet use was a regular part of respondents' daily lives. A substantial proportion also used digital devices for academic and professional purposes. However, the reported time alone does not indicate the quality or effectiveness of technology use.

4.3 Technology-Related Learning and Self-Reported Digital Literacy

Most respondents reported having learned about technology at school. A total of 178 respondents (89%) answered yes, while 22 (11%) answered no. The questionnaire recorded this response as learning about technology "at school"; however, it did not distinguish whether respondents meant the school where they had studied or a school where they had worked. The finding is therefore reported in the broad terms used in the questionnaire and should not be interpreted specifically as evidence of workplace-based professional development. Respondents also rated their own digital literacy. The mean score was 4.295 (SD = 1.513), with a median of 4. Scores ranged from 2 to 7. The largest group, 46 respondents (23%), selected 6, followed by 42 (21%) who selected 5. Thirty-eight respondents (19%) selected 3, while 32 (16%) selected 2. Thirty-three (16.5%) selected 4, and nine (4.5%) selected 7. (see Table 3)

Table 3 Technology Learning and Self-Reported Digital Literacy

Variable	Response or statistic	Frequency	%
Learned technology at school	Yes	178	89.0
	No	22	11.0
Self-reported digital literacy	Score 2	32	16.0
	Score 3	38	19.0
	Score 4	33	16.5
	Score 5	42	21.0
	Score 6	46	23.0
	Score 7	9	4.5
Total	Mean (4.295)	SD (1.513)	Median (4)

The ratings show variation in how respondents assessed their own digital literacy. Since

the questionnaire's scale anchors were not available for interpretation, the mean should not be classified as indicating a high, moderate, or low level of digital literacy. The results are best understood as a description of participants' self-assessments.

4.4 Perceived Importance of ICT and Sources of Support

Almost all respondents considered ICT necessary in everyday life. A total of 196 respondents (98%) answered yes, while four (2%) answered No. Respondents identified different sources of support for developing their digital skills. Teachers were the most frequently reported source, selected by 77 respondents (38.5%). Friends were selected by 73 (36.5%). Twenty-five respondents (12.5%) selected other sources. Smaller numbers identified their sons, fathers, mothers, online websites, or social media. (see Table 4)

Table 4 Perceived Importance of ICT and Sources of Support

Variable	Category	Frequency	%
ICT necessary in life	Yes	196	98.0
	No	4	2.0
Main source of support	Teacher	77	38.5
	Friend	73	36.5
	Other	25	12.5
	Son	8	4.0
	Father	6	3.0
	Mother	6	3.0
	Online websites/social media	5	2.5

These findings show that respondents generally recognized the importance of ICT. They also indicate that interpersonal support played a major role in developing digital skills. Teachers and friends together accounted for 75% of the reported main sources of support.

4.5 Use of Digital Devices

Respondents reported using different devices for educational, professional, personal, and other purposes. Smartphones were widely used. Eighty-five respondents (42.5%) indicated that they used smartphones for all aspects, while 57 (28.5%) identified social and personal use and 44 (22%) identified study-related use. Laptops were also used for educational and professional purposes. Eighty-one respondents (40.5%) identified study as their main use, while 48 (24%) selected future employment. Thirty-seven (18.5%) reported using laptops for all aspects. Twenty respondents (10%) indicated that they did not have a laptop.The responses for tablets and desktop computers showed that some participants did not have access to these devices. Eighty-four respondents (42%) reported having no tablet, and 71 (35.5%) reported having no desktop computer. Digital cameras were not widely available, with 93 respondents (46.5%) reporting that they did not have one. (see Table 5)

Table 5 Reported Purposes and Availability of Selected Digital Devices

Device	Reported response	Frequency	%
Smartphone	All aspects	85	42.5
	Social/personal	57	28.5
	Study	44	22.0
	Future employment	14	7.0
Laptop	Study	81	40.5
	Future employment	48	24.0
	All aspects	37	18.5
	No laptop	20	10.0
Tablet	No tablet	84	42.0
	Study	55	27.5
Desktop computer	No desktop	71	35.5
	Study	65	32.5
Digital camera	No digital camera	93	46.5

The findings indicate that smartphones and laptops were important devices for respondents' educational and professional activities. The responses also suggest that access to other devices

was less common. Device ownership or reported use does not by itself establish the extent to which a device was used effectively for teaching and learning.

4.6 Use of Digital Platforms

Respondents reported using a range of digital platforms for study, communication, collaboration, and personal activities. Email was considered useful for all aspects by 112 respondents (56%). Google Drive was identified for all aspects by 86 respondents (43%). YouTube was used for all aspects by 96 respondents (48%) and for study by 70 (35%).Mobile applications were also used for different purposes. Seventy-seven respondents (38.5%) identified their use for all aspects, while 72 (36%) selected study. Zoom was mainly associated with study, with 141 respondents (70.5%) selecting this purpose. Microsoft Teams was used for study by 86 respondents (43%) and for all aspects by 72 (36%).Facebook was mainly used for social and personal purposes, as reported by 129 respondents (64.5%). Viber was also identified for social and personal use by 71 respondents (35.5%).

Several platforms were reported as not used by many participants. These included Dropbox, iTunes, Skype, Google Plus, Wikis, Google Groups, LinkedIn, and photo-sharing tools. For example, 130 respondents (65%) reported not using Dropbox, while 134 (67%) reported not using iTunes. (see Table 6)

Table 6 Selected Digital Platforms and Reported Uses

Platform	Reported use or response	Frequency	%
Email	All aspects	112	56.0
Google Drive	All aspects	86	43.0
YouTube	All aspects	96	48.0
YouTube	Study	70	35.0
Mobile applications	All aspects	77	38.5
Mobile applications	Study	72	36.0
Zoom	Study	141	70.5
Microsoft Teams	Study	86	43.0
Microsoft Teams	All aspects	72	36.0
Facebook	Social/personal	129	64.5
Viber	Social/personal	71	35.5
Dropbox	Not used	130	65.0
iTunes	Not used	134	67.0
Skype	Not used	121	60.5
Google Plus	Not used	117	58.5
Wikis	Not used	113	56.5
Google Groups	Not used	110	55.0
LinkedIn	Not used	116	58.0
Photo-sharing tools	Not used	101	50.5

The results show that respondents used different platforms according to their purposes. Communication and collaboration tools such as email, Google Drive, Zoom, and Microsoft Teams were commonly associated with educational or professional activities. Social networking platforms were more closely associated with personal communication. The reported non-use of several other platforms indicates that digital engagement was not the same across all tools.

4.7 Open-Ended Responses on Digital Technology and AI

The open-ended responses provided additional examples of how respondents understood and reported the use of digital technology and AI in education. Participants referred to preparing teaching materials, searching for information, developing presentations, preparing questions, finding examples, and supporting language learning. Some responses also indicated that digital resources could make classroom activities more engaging and help explain difficult concepts.

Participants mentioned AI applications such as ChatGPT, Gemini, Grammarly, and Copilot. These tools were associated with activities such as generating ideas, preparing teaching resources, improving language, and finding information. The responses indicate that some participants had begun exploring AI applications for educational and professional purposes.

However, the open-ended responses varied in detail. Some provided specific examples, while others were brief or did not explain how a particular tool was used. Therefore, the findings should be understood as examples of reported experiences and perceptions rather than a comprehensive assessment of teachers' AI competence or the extent of AI adoption among all participants.

5 Discussion

This study examined digital technology use, self-reported digital literacy, and emerging artificial intelligence (AI) practices among 200 English and Social Studies teachers in Nepal. The findings provide a descriptive account of how participating teachers engage with digital technologies in their everyday and professional activities. Three interconnected issues emerge from the results: regular access to and use of digital technologies, differences in teachers' experiences of developing digital skills, and the early exploration of AI applications for educational purposes. These findings suggest that digital engagement is becoming part of teachers' professional lives, although access to technology and familiarity with digital platforms should not be interpreted as evidence of effective pedagogical integration.

5.1 Digital Technology Use in Everyday and Professional Activities

The finding that 71% of respondents used the internet for more than one hour daily indicates regular engagement with online environments. In addition, nearly half reported spending more than one hour on academic or professional screen-based activities. The reported use of email, Google Drive, Zoom, YouTube, and Microsoft Teams further demonstrates the role of digital platforms in communication, information access, collaboration, and professional activities. These patterns broadly correspond with the DigCompEdu framework, which identifies professional engagement, digital resource use, teaching, learning, and assessment as important dimensions of educators' digital competence [1].

However, the frequency of technology use does not necessarily indicate the quality or educational value of that use. Spending time online, communicating through digital platforms, or accessing educational resources represents engagement with technology, but it does not independently demonstrate the ability to evaluate information, select appropriate digital resources, design technology-supported learning activities, or assess students' learning. This distinction is important because digital competence involves more than operational familiarity. It also requires the ability to make informed pedagogical decisions about the selection and use of digital tools [10].

The findings should therefore be interpreted as evidence of regular digital engagement rather than proof of advanced digital competence. A more complete assessment would require classroom observations, practical performance tasks, or evidence of how teachers use digital resources to support learning. Since the present study relied primarily on self-reported responses, it provides insight into teachers' reported practices but cannot establish the extent to which these practices improve classroom interaction or learning outcomes.

5.2 Digital Literacy and Teachers' Professional Learning

The questionnaire asked whether respondents had learned about technology "at school". Since the item did not distinguish between the school where respondents had studied and a current or previous workplace, the 89% response cannot be attributed specifically to workplace-based professional development or formal teacher education. The finding indicates only that respondents associated their technology learning with a school context. The survey also identified teachers, friends, and other sources as reported sources of support for developing digital skills. However, it did not establish the contribution of each source or the effectiveness of particular learning activities. Basnet and Sharma (2026) [11], in their study of English for Specific Purposes teachers in Nepalese technical education, draw attention to inadequate training and limited teaching resources. Although their research focused on a different educational context, it reinforces the importance of context-sensitive professional development and institutional support. The present findings similarly suggest that teachers' reported digital learning experiences and sources of support deserve attention when considering professional development needs.

Nevertheless, the findings do not establish which source of learning contributed most to teachers' digital literacy. Nor do they demonstrate whether training experiences resulted in measurable improvements in digital competence. The self-reported digital literacy mean (M = 4.30, SD = 1.51) should also be interpreted cautiously because the response-scale anchors were unavailable and the questionnaire did not include a practical assessment of digital skills. The score therefore describes respondents' self-assessments but cannot be used to classify their competence as high, moderate, or low. Taken together, these findings support the need to consider professional learning as an ongoing process rather than a one-time training activity. Opportunities for structured development, independent practice, and peer learning may provide complementary forms of support. However, their effectiveness needs to be investigated through

research that examines actual changes in teachers' digital practices.

5.3 Access to Devices and Use of Digital Platforms

The results show that smartphones and laptops were commonly reported among the devices used by respondents for different purposes. Smartphones appear to have an important role in everyday digital engagement, while laptops were associated with activities such as study and preparation for future employment. At the same time, some respondents reported limited access to tablets, desktop computers, and digital cameras. These differences highlight the importance of considering device availability when examining digital participation.

Although smartphones offer convenient access to communication platforms, online information, and educational applications, they may not provide the same functionality or ease of use as computers for tasks such as preparing extended documents, developing presentations, and managing multiple digital resources. Consequently, access to the internet alone may not provide teachers with equal opportunities to undertake different types of educational and professional work. The availability of appropriate devices, therefore, remains relevant to discussions of digital inclusion and technology integration.The reported use of different online platforms also suggests that digital tools serve multiple purposes in respondents' lives. Platforms such as Zoom and Microsoft Teams were associated with study and communication, whereas Facebook and Viber were more commonly connected with social and personal activities. These patterns indicate that teachers' use of digital platforms is shaped partly by their purposes and familiarity with particular applications. Research on technology acceptance similarly identifies users' perceptions, attitudes, and intentions as relevant factors in technology adoption [3, 15].

However, platform use alone does not reveal how effectively these tools are incorporated into teaching. For example, using a video-conferencing platform for communication does not necessarily mean that it is being used to facilitate collaborative learning or provide meaningful feedback. Further research involving classroom-based evidence would help clarify how teachers move from using digital platforms to integrating them into pedagogically purposeful activities.

5.4 Emerging Use of Artificial Intelligence in Education

The open-ended responses provide initial evidence that some respondents were beginning to explore AI applications for educational and professional purposes. ChatGPT, Gemini, Grammarly, and Copilot were among the applications mentioned. Respondents associated these tools with preparing teaching materials, developing questions, searching for information, improving language, and explaining concepts. These examples indicate that teachers are encountering generative AI as an additional resource within their existing digital practices.Such uses are consistent with the potential of generative AI to support aspects of teachers' professional work. AI applications can assist with generating initial ideas, drafting instructional materials, and providing language-related support. However, their educational value depends on how teachers evaluate, adapt, and apply the generated content. AI-generated responses may contain inaccurate information, bias, or contextually inappropriate material. Teachers therefore need to exercise professional judgement rather than rely on generated outputs without verification. Kasneci et al. (2023) [12] discuss both the opportunities and limitations of large language models in education, while UNESCO emphasises human-centred and responsible approaches to the use of generative AI [14].

A key distinction must be maintained between awareness of AI applications, reported experimentation, and effective pedagogical integration. The open-ended responses provide examples of reported use but cannot establish how frequently applications were used, how outputs were evaluated, or whether teaching and learning improved; nor do they show that all participants adopted AI or developed advanced AI literacy. The findings should therefore be understood as evidence of emerging engagement with AI, not widespread or established adoption.

This distinction matters for teacher development. Introducing AI applications is only a first step; teachers also need opportunities to assess content accuracy, recognize bias, protect personal and learner data, and judge whether an application suits a given educational purpose. AI literacy therefore entails critical evaluation and responsible decision-making, not merely the ability to operate AI tools.

5.5 Implications of the Study

The findings have implications for in-service teacher professional development and educational policy in Nepal. First, professional development programmes for practising teachers

should move beyond the introduction of individual applications and focus on the purposeful use of digital technologies in teaching, learning, and assessment. Training activities could include evaluating online information, creating digital learning materials, facilitating online collaboration, and using digital tools to provide feedback. Such activities should be connected to teachers' subject areas and classroom responsibilities.

Third, schools and educational authorities should recognise that effective technology use depends partly on the availability of appropriate infrastructure. Differences in access to devices and internet services may restrict teachers' opportunities to apply digital skills in their professional work. Institutional support should therefore combine relevant training with access to suitable devices, reliable connectivity, technical assistance, and opportunities for collaboration among teachers.

Finally, educational institutions and policymakers should consider developing clear guidelines for the responsible use of digital technologies and AI. Such guidelines should address data privacy, accuracy, academic integrity, inclusion, and human responsibility in educational decision-making. These recommendations are based on the reported experiences of the participating teachers. The study did not directly evaluate existing teacher education programmes, institutional policies, or the effectiveness of professional development interventions.

6 Limitations of the Study

This study has several limitations. First, convenience sampling through online teacher groups and face-to-face workshops limits the representativeness of the sample and the generalizability of the findings. The available data also did not allow comparisons by subject or grade level. Second, reliance on self-reported data means that reported technology use and digital literacy may not reflect teachers' actual abilities or classroom practices. No practical assessment or classroom observation was conducted. Third, the inclusion of retired teachers means that some responses may reflect previous rather than current teaching experiences. Finally, data collection extended from August 2023 to December 2025, during which digital technologies and AI applications continued to evolve. The findings therefore reflect teachers' responses across this period rather than practices at a single point in time.

Future research could use representative sampling, validated digital competence measures, classroom observations, and interviews. Longitudinal studies could further examine how in-service professional development shapes teachers' digital practices and responsible use of AI.

7 Conclusion

This study examined digital technology use, self-reported digital literacy, and emerging AI practices among 200 English and Social Studies teachers in Nepal. The findings indicate that digital technologies have become part of respondents' everyday and professional activities. However, regular technology use does not necessarily demonstrate effective digital competence or meaningful classroom integration. Respondents reported different experiences of technology-related learning and identified teachers, friends, and other sources as forms of support for developing digital skills. Some participants also reported using AI applications for preparing teaching materials, developing questions, searching for information, and explaining concepts. However, these responses do not establish the frequency or effectiveness of AI use in classroom practice.

The findings point to the need for continuous in-service professional development that addresses the practical digital learning needs of practising teachers. Such programmes should provide opportunities to develop digital resources, evaluate online information, use technology for teaching and assessment, and apply AI tools critically and responsibly. Schools and educational authorities also need to provide appropriate resources and opportunities for peer learning. Since this study relied on convenience sampling and self-reported data, its findings should be interpreted within the context of the participating teachers rather than generalised to all teachers in Nepal. Future research could examine how in-service professional development influences teachers' actual digital practices and classroom integration of AI.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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