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Integrating AI Tools in Teachers' Professional Development: Opportunities and Challenges

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Abstract

The use of Artificial Intelligence (AI) has been increasingly using in different areas, including teaching, learning and professional development. In this regard, this study explores the opportunities and challenges faced by secondary-level English teachers while integrating AI tools, like ChatGPT and MagicSchool AI for their professional growth. A qualitative research design was adopted. Four secondary-level English teachers, two from community and two from private schools of Kathmandu district having at least one-year experiences of using AI tools were purposively selected as the sample. Data were collected using semi-structured interviews. Teachers' narratives were transcribed and analysed thematically. The findings from the narratives show that teachers get many opportunities, including becoming the best learning partner, material creation and designing, workload reduction, and interesting and engaged classroom techniques while integrating AI tools in developing their teaching profession, including. However, they faced some challenges, such as inadequate equipment and infrastructure, incomplete technological knowledge on the part of teachers, and over-dependency. Importantly, AI tools have high potential for teachers' professional development and transformative pedagogy. So, technological training for teachers, management of the required infrastructure and equipment, and proper policy formation are mandatory to promote AI tools in sustainable integration for teachers' capacity building.

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Introduction

Use of Artificial Intelligence (AI) is becoming popular in each field of human concern, including teaching and learning. As it enhances personalised learning, efficiency, and student autonomy, and also challenges traditional teacher-student dynamics (Alasgarova & Rzayev, 2025), teachers and students have preferred AI tools for their teaching and learning purposes. These provide opportunities for personalised learning, automated administrative support, and data-driven feedback that can strengthen instructional practice (Viberg et al., 2025). Although developed countries have begun embedding AI literacy into teacher-preparation programs and in-service teacher education, persistent concerns about ethics, equity of access, and teachers' trust complicate wide-scale adoption (Viberg et al., 2025). Despite these shortcomings, teachers are independently learning new knowledge, skills and ideas of better teaching using diverse AI tools, such as Gemini, Canva, ChatGPT etc. Actually, these tools are supporting teachers as virtual assistants (Aguilar-Cruz & Salas-Pilco, 2025) by providing updated and innovative strategies required for their teaching profession.

Professional development is solely related to the teachers' self-practices and reflection, which generate context-sensitive practices in a particular teaching context. Teacher professional development programs and sessions frequently lack hands-on training, contextual relevance, and ongoing support, leaving teacher educators unprepared for their profession (Tomaskinova & Tomaskin, 2024). Due to the use of lecture-based programs of teacher development (al-Zyoud, 2020), many questions have been raised regarding their effectiveness at the practical level, i.e, the classroom. But these questions have started to be addressed by teachers' self-initiation to practice AI tools to learn professional skills. Most of the teachers, including the experienced ones, are consulting different AI-based tools for lesson planning, material designing, question construction, language editing and so on (Lamrabet, 2025). For a professional teacher preparing a reading test, interactive tasks and assignments are very important and require additional skills. But AI tools like ChatGPT, Q-Craft, or MagicSchool (Karakaya et al., 2025) have been facilitating them easily without consuming their valuable time.

In the Nepalese context, teachers are practising different AI tools, including ChatGPT, to get teaching resources and strategies. In another way, they are in the process of getting teacher education for their professional growth. According to Dhakal et al. (2025), the use of AI tools in the field of teacher education in Nepal has assisted in social transformation and contributed to inclusive and equitable access to education. Though there are some constraints, including inadequate technological infrastructure, improper teacher training,

ethical dilemmas, and digital inequity in terms of under-resourced communities (Karki & Karki, 2025), teachers are passionate about enhancing their digital skills with the help of AI tools. Teachers teaching in a digitally equipped school have updated their skills as well as improved engagement and academic outcomes among students (Baral, 2025a). So, despite some shortcomings such as policy gaps and limited infrastructures (Dhakal et al., 2025), teachers are eagerly engaging in practising different AI tools to enhance their capabilities and learners' learning together. However, how teachers can implement AI tools for their professional enhancement is very important ar present. In this regard, this study explores the opportunities and challenges faced by teachers in Nepal while integrating different AI tools for their professional development.

AI Tools for Teachers

Chat GPT

Among the AI tools available, ChatGPT by OpenAI stands out as a potential game-changer for educators around the world (Tran et al., 2024). It further helps teachers stay updated on new pedagogies, curriculum trends, educational technology, and assessment methods. It opens a wide field of possibilities for teaching assistance and learning processes (Mena Octavio et al., 2024). Generally, teachers can ask their queries related to multiple subjects and get a variety of alternatives immediately. Furthermore, they can upload their teaching content or materials and ask to analyse their effectiveness in the learning process. Teachers do not need to meet experts or colleagues for their problems, but can learn independently. Asare & Boateng (2025) state that ChatGPT helps to enhance teachers' self-efficacy and self-regulatory learning.

Magic School AI

MagicSchool AI is an AI-powered platform designed specifically for K-12 educators and school systems. It offers a wide range of tools to support lesson planning, differentiation, assessment creation, communication, and student-facing supports through AI (Li et al., 2025). It is specially designed for teachers and includes a wide range of additional tools related to teaching and learning. It covers features that can be used to produce diagnostic assessments, produce project-based lesson plans, improve the visual quality of learning, and produce learning support texts (Anggi Prasetia, 2023), which are integrated into a single platform. As found by Robinson & Leander (2025), teachers can use this AI to record their audio, create a visual presentation, generate music from the content, create different polls, etc., which are really significant for teachers' professional development.

Canva

Canva AI uses artificial intelligence to assist teachers in designing visual and text-based content, such as presentations, posters, infographics, and graphics, that are very inspiring for learners. More interestingly, teachers can design and construct attractive digital teaching materials (Amalia et al., 2025) in Canva, which creates motivation on the part of teachers. It helps to implement the institutional digitalisation of schools in the age of science and technology. Similarly, teachers can enhance their design skills by simply writing their concept in Canva (Catya et al., 2025). Teachers can also inspire their learners to use such a design platform. It significant positive impact on student abilities, marking the effectiveness of this innovative approach in meeting the learning needs of Generation Z (Arifa, 2024). So, Canva can be another platform for enhancing professional skills related to students' motivation, interesting teaching skills and learners' inspiration.

AI for Teachers: Nepalese Practices

Along with the growing use of technology in teaching and learning, teachers have been practising different AI tools in Nepal. Mostly, most of the teachers use AI for their personalised learning (Baral, 2025a). Using different platforms like ChatGPT, Gemini, Grok, etc., teachers are learning to develop their professional skills. Using specific design tools like Canva, teachers have started to create interesting teaching materials like PPT text, posters, and short picture-related stories (Amalia et al., 2025). Khadka et al. (2025) state that teachers are promoting learners' autonomy using AI tools. Here, teachers are using AI tools to develop their teaching skills on one hand and to inspire the learners for independent learning on the other hand.

Though teachers in Nepal have been getting the benefits of AI to develop their teaching abilities, they are not free from challenges. Particularly, a lack of adequate assistance, poor technological skills, inadequate infrastructures like internet and devices are the major issues (Neupane et al., 2025). In the same way, some ethical issues like over-dependence on AI tools might undermine critical thinking, suppress creativity, and elevate the risk of plagiarism have been seen on the part of both teachers and students (Dahal & Paudel, 2025).

Methodology

This study adopts a qualitative method to explore secondary-level English language teachers' perspectives, opportunities and challenges while working with AI tools for their

professional development. Their opinion, obstacles and practices of AI were explored using a narrative enquiry. Four secondary-level English teachers from two schools in Kathmandu district, one public school and another private, were selected as research participants. A purposive sampling procedure was adopted to select participants having experience in using AI for their professional development. The selected teachers have used AI tools to enhance their teaching skills for at least a year.

Semi-structured interviews with selected teachers were used to collect the data. Participants were inspired to share their practices and experiences freely and openly without personal bias. As per participants' preferences, interviews were done in person or using video chat. Each interview was about 50 to 60 minutes, with teachers' permission. Mainly, the topics of the interview were practices, opportunities and challenges that the teachers faced while using AI tools for their professional development. Special attention was given during data collection on obtaining informed consent and protecting participants' privacy. After proper transcription of the interview, the research generated themes based on opportunities, challenges and practices regarding AI in teacher development.

Results and Discussion

This section covers the analysis and interpretation of data collected from the interviews of selected participants. Basically, two categories are used for thematic analysis: Opportunities of AI tools for teacher professional development, and challenges faced by teachers while using AI tools in the teaching and learning field.

Opportunities

All of the teachers have highlighted that they have been getting golden professional opportunities. They further termed AI tools as their mentor to learn independently, as interpreted in the following sub-themes.

AI Tools as Learning Partner

Teachers used to learn teaching skills and content by asking their colleagues. But the majority of the respondents stated that they are getting good company with different AI tools to learn personally, and do not realise the need for their colleagues. In this regard, Yagya Sharma (pseudonym), one of the respondents, states:

> *"I ask ChatGPT to support me in lesson planning. I just put the topic, students' level and a few criteria it gives me an attractive PowerPoint with pictures. When*

> *students ask difficult questions, I consult it and make them satisfied. It is my 'sikne sathi' (learning friend)."*

Here, Mr Sharma is more confident because of ChatGPT. It has created an additional opportunity to create materials and make his teaching smart. As per his idea, ChatGPT is not a replacement, but it is a true helper for enhancing professional skills. In the same way, another respondent, Ranjana Thapa (pseudonym), shares:

> *"I frequently use Gemini to correct my written language. While preparing the question set for the English subject, I can get many unseen passages from Gemini easily. In past, I spent more than 2 hours preparing an unseen passage and comprehension questions. Now, AI tools like Gemini have become my teachers".*

As Sharma, the second respondent, is also getting support from Gemini, particularly in question paper construction. She has become able to reduce professional burden, like spending hours to write lengthy passages and comprehension questions from there. Fourth respondent, Dhiraj Yadav (pseudonym), adds:

> *"I used to request my friend to record my voice using his cell phone for audio text while teaching listening skills. But nowadays, ChatGPT is providing different downloadable audio files as per my students' level. I download these files and play using my mobile phone in class."*

According to these narratives, AI tools are serving as an assistant in teachers' professional journeys. Due to these tools, teachers can learn independently and make their profession relevant and effective. A professional journey is collaborative; teachers are collaborating with AI tools for learning. So, these tools are being true learning partners of teachers.

AI Tools for Interesting Teaching

Respondents were asked about what additional benefits they have realised after using AI tools. Commonly, most of the respondents agreed that after consulting with different AI platforms, they have made their teaching strategies more interesting and fun. Tanka Subedi (pseudonym) narrates:

> *"I consult many stories and jokes generated by AI tools. Based on the teaching contents, I share these stories and jokes in the class to motivate the learners towards learning. They feel enjoyment and participate in learning interestingly."*

As per these ideas, by consulting AI tools, teachers are making their teaching style enjoyable and fun. AI tools can offer many interesting ideas and concepts for teachers.

Using these ideas, they can inspire and motivate the learners for further learning. Similar ideas are expressed by Ranjana Thapa:

> *"I love to implement language games in my class. Before few years ago, I was aware of limited language games. But when I started to consult AI tools, particularly MagicSchool AI, I got a range of language games suitable for my learners. They feel enjoyment while participating in language games and learning the content."*

According to these narratives, teachers are using AI tools to bring change in their teaching style. They can bring innovation in teaching by replacing monotonous lecture methods with other interesting techniques like language games. By consulting AI tools, they can adapt new and interesting teaching strategies best for their learners as well as the classroom situation. Another respondent, Yagya Sharma, tells :

> *"I do not put in my hard effort to translate and explain the English text for my students. I just upload the text in Gemini or ChatGPT and give simple commands to prepare worksheets. Then I assign these worksheets to the students. They actively engage to complete the worksheet based on the text given in the textbook."*

Here, teachers are dealing with the content given in the textbook very effectively using AI. On the one hand, they have brought variety with interesting teaching methods and reduced their workload to avoid over-explanation and translation techniques. By such practices, learners feel really engaged and have fun while learning.

Challenges Faced by the Teachers

Despite having many opportunities and benefits of using AI tools for teachers' professional capacity building, teachers have shared some challenges they faced. These challenges are interpreted in the following sub-themes.

Inadequate Resources and Infrastructures

Teachers shared that they are using different AI tools on their personal side. Institutional support is not available effectively. Schools, as well as local governments, have not managed to allocate resources and infrastructures for practising digital skills for teachers' professional development. Accepting these facts, Dhiraj Yadav shares:

> *"I have been using my personal mobile data to consult AI tools during school hours. There is an internet service, but that covers only limited areas. I requested*

> *the school administration to manage additional internet service in the staff room, but they have not addressed it yet."*

As highlighted by Acharya & Bansyat (2024) major issue in practising AI in schools is the internet issue. The respondent was from Kathmandu, the capital city of Nepal and shared such a pathetic experience; then we can not expect adequate internet access in the remote parts of Nepal. Tanka Subedi adds:

> *"I am teaching in a private school now. Sometimes my cell phone does not support uploading large files to upload in AI to generate questions as well as a quiz. I try to use a desktop computer from the computers and find it in worse condition."*

As shared by Mr Subedi, the computers in the computer labs of schools in Nepal are kept randomly. Internet connection, updated systems and equipment are rarely found. Because of this, most of the teachers are not able to surf the internet using functional devices, as highlighted by (Baral (2025b).

Lack of Technological Knowledge and Skills

While sharing their narratives, teachers shared that they have limited knowledge and skills in using AI tools for their profession. Although they have been practising popular AI tools like ChatGPT and Gemini, they are not aware of specific AI tools for teachers. Yagya Sharma responds to the question of how many AI tools are familiar to him:

> *" ..... and there are only two AI tools, ChatGPT and Gemini. I can handle both generally. I do not think that there are others."*

From this argument, it is clear that teachers have limited knowledge of the varieties of AI tools to improve teachers' teaching modalities. There are specific AI tools designed and developed for teachers, like MagicSchool AI, but teachers are unknown. Ranjana Thapa expresses:

> *"I just know how to ask queries to ChatGPT and Gemini. I don't know the skills of questioning with proper prompts. Sometimes I get irrelevant responses from AI tools as per my students' level and teaching content."*

As Ranjita shared, most of the teachers just paste the question in AI tools without limiting and relating to context, students' age and learning level and the expected outcome of the curriculum. Here, it is necessary to assist the teachers with the skills of preparing correct

prompts and criteria for relevant responses (Chapagai & Adhikari, 2024). Tanka Subedi has similar responses:

> *"I am facing a problem in editing the PPT text generated by the AI tool. I can ask to prepare slides on the given topic and download them, but I do not know any ideas to modify the slides in my context. So, AI training is necessary for teachers like me."*

According to these experiences, teachers are not able to adjust and convert the output given by AI in their teaching context. They just share whatever they get in AI. They need to facilitate reviewing and editing the output information from the contextual lens. They will get additional benefits to develop their teaching profession if a proper training and guidance program is offered.

Discussions

Teachers are getting many opportunities by adopting AI tools for their professional growth. AI tools can be the best learning partner to enhance professional skills, like creating lesson plans and preparing attractive and interesting PowerPoint presentations. By this, teachers can perform their teaching behaviours confidently. The teaching profession incorporates many tasks such as constructing questions, preparing workseets, developing audio text for listening, etc., which can be completed using different AI tools within in short period of time. Here, AI tools can be the best collaborator of teachers. Getting ideas from AI, teacher make their classroom teaching more engaging and enjoyable using effective strategies such as storytelling, language games, worksheets, and audio text and language quizzes. These tools help the teachers to be updated with innovative ideas on one hand and inspire and motivate the learners on the other hand. Similarly, it helps to reduce teachers' workload.

Despite many benefits and opportunities, teachers have been facing some challenges while using AI in their professional work. Available resources and infrastructures in schools are not adequate for the effective integration of technological tools. Due to the limited bandwidth in the schools of Nepal, teachers are compelled to use their personal mobile data for teaching purposes. In the remote areas of Nepal, the same mobile data can not be used because of network issues. Computers available in schools are not updated and functional. Similarly, teachers have poor technological skills, such as pasting proper prompts, modifying the generated information as per local context, proper uploading and downloading of files and information filtering skills. Lacking these ideas, they have faced

many problems and used raw AI output. In this way, proper support and guidance through training sessions to teachers can minimise these challenges.

Conclusion and Implications

Integrating different AI tools, teachers from low-resourced countries like Nepal can develop and update their professional knowledge and skills. The participants of this study got the opportunities to update their professional knowledge and skills. However, the findings of this study indicate some perplexing problems, including inadequate ideas about technology and lack of equipments like internet and devices to practice innovative ideas in teaching and reduce unnecessary workload, teaching specific tools like MagicSchool AI is really beneficial for teachers. Inspiring learners with interesting materials like PPT text, worksheets, pictures and audio text teacher can implement the real spirit of engaged pedagogy. The findings of the study provide evidence for effectiveness of AI tools for teachers' professional growth which should be ensured from the policy level. Similarly, proper collaborative practices among teachers for effective use of AI tools is very important which can be addressed in the institutional level.

For further effectiveness of AI tools, efforts should be focused on enhancing digital and technological skills and proper management of infrastructures, like devices and adequate internet access. Only then, AI tools transform the education systems and teachers' professional capabilities.

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