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Success Stories of Tech-Savvy Teachers in Crafting Lesson Plans with Artificial Intelligence

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Abstract. Teachers increasingly use generative artificial intelligence to prepare lessons, yet few accounts describe how teachers who are comfortable with digital tools do this successfully, what they still need, and how this looks in Philippine schools. This study documented the experiences of tech-savvy teachers in crafting lesson plans with artificial intelligence, the digital competencies they credited for their success, the challenges and strategies they reported, and the institutional support they recommended. A qualitative exploratory-descriptive design was used. Fifteen teachers of languages, mathematics, social science and social studies, organization and management, and agriculture, with 1 year 8 months to 16 years of teaching experience, were recruited through convenience and referral sampling and answered an online open-ended questionnaire. Tool use was summarized with frequencies and percentages, and the 58 written responses were analyzed through thematic analysis. ChatGPT (80%) and Google Gemini (66.7%) were the most used tools. Four themes emerged. First, fourteen teachers described planning with artificial intelligence as faster, easier, and more productive, and two noted effort at the outset, mainly in writing prompts. Second, success was linked to foundational digital literacy, prompt writing, and the ability to evaluate output, used together with teaching judgment. Third, the main challenges were output that did not fit learners, inaccurate information, and over-reliance, which teachers managed by reviewing, verifying, and localizing output. Fourth, teachers asked for continuous training, peer collaboration, and clear guidelines on appropriate use and its declaration. Interpreted through the Technological Pedagogical Content Knowledge framework and technology acceptance theory, the findings suggest that these teachers' success rested on their own judgment, prompting skill, and the support available to them. Because of the small sample, the brevity of many responses, and signs that some responses were machine-assisted, the findings are exploratory and not generalizable.

Keywords: Artificial Intelligence; Lesson Planning; Professional Development; Teacher Competence; Technology Integration

Introduction

Generative artificial intelligence (AI) tools such as ChatGPT, Google Gemini, and Microsoft Copilot have entered classrooms quickly. For teachers, one of the most visible uses is lesson planning, where objectives, activities, presentations, and assessments can be drafted in minutes. The guidance of the United Nations Educational, Scientific and Cultural Organization (UNESCO) recognizes both the promise of these tools and the need for human-centred, ethical, and pedagogically sound use (Miao & Holmes, 2023). Because the tools respond to requests written in plain language, many teachers who have a device and an internet connection can try them without specialized training.

In the Philippines, classroom use has moved fast enough that policy had to catch up. In February 2026, the Department of Education (DepEd) issued DepEd Order No. 003, s. 2026, the Foundational Guidelines on Artificial Intelligence in Basic Education, which acknowledges that classroom use of AI had outpaced clear and enforceable policy and promotes a human-centered approach in which AI supports, and does not replace, teachers' judgment (DepEd, 2026). Local evidence on lesson planning with AI is still thin: one recent Philippine experiment on ChatGPT in lesson planning involved pre-service teachers (Edraga, 2026), and less is known about how practicing teachers go about it.

Lesson planning is one of the most demanding and consequential tasks of teaching. It requires curriculum goals to be translated into objectives, activities, materials, and assessments that fit the learners in

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a particular classroom. The kind of knowledge required for this translation was described by Shulman (1986) as pedagogical content knowledge, that is, the blending of subject matter and pedagogy into an understanding of how particular topics are organized and presented to learners. Because planning is time-consuming, tools that promise to shorten the drafting stage are attractive to teachers who also carry heavy instructional, administrative, and reporting loads.

Concerns accompany the opportunities. Large language models can produce fluent but inaccurate or biased content, and they may encourage over-reliance if outputs are accepted without scrutiny; for this reason, the development of critical thinking and digital competencies has been emphasized for those who use them in education (Kasneci et al., 2023). Teachers, therefore, are not passive recipients of AI output. They act as the final reviewers of what enters the classroom, and the quality of that review determines whether AI strengthens or weakens instruction.

Two working definitions guide this study. A tech-savvy teacher is simply a teacher who is comfortable using digital tools in everyday teaching and who already uses AI tools to prepare lesson plans. A success story is a teacher's own account of using AI to produce a usable lesson plan more easily or more efficiently, or to improve classroom activities, while still reviewing and adapting the output before it reaches learners. Success here is therefore as reported by the teachers; it was not independently verified. Accounts from such teachers can show what working practice looks like, which skills sustain it, which difficulties persist, and which forms of support are still missing.

Research Questions

The study aimed to document the experiences of tech-savvy teachers in crafting lesson plans with the help of AI. Specifically, it sought to answer the following questions:

1. How do tech-savvy teachers describe their experiences in crafting lesson plans with AI, and which digital competencies do they credit for their success?
2. What challenges do they encounter, and what strategies do they use to maintain pedagogical integrity?
3. What institutional support do they recommend for sustaining AI-assisted lesson planning?

Scope and Delimitation of the Study

The study covered fifteen teachers who had used AI tools in preparing lesson plans and who taught languages (English, Filipino, and a language course), mathematics, social science and social studies, organization and management, and agriculture. It focused on teachers' self-reported experiences, competencies, challenges, strategies, and recommended supports. It did not evaluate the quality of the lesson plans produced, did not observe classroom implementation, and did not measure student learning outcomes. Because participants were recruited through convenience and referral sampling, the findings describe the participants studied and are not intended to represent all teachers.

Literature Review

Artificial Intelligence in Education

Artificial intelligence has long been part of education research, in intelligent tutoring, adaptive learning, and automated assessment. Recent scholarship examines generative AI in education from pedagogical, theoretical, and methodological perspectives (Noroozi et al., 2024). International guidance takes a human-centred position: the UNESCO guidance on generative AI in education and research promotes ethical use, data protection, and the building of teachers' capacity (Miao & Holmes, 2023). Concerns about integrity have been raised mainly in relation to student work (Cotton et al., 2024), but they reinforce a broader principle that applies to teachers' own use of AI: outputs need to be examined, attributed appropriately where required, and aligned with the purposes of education.

Generative AI and Teachers

The release of general-purpose large language models changed the character of AI in education, because teachers could now interact with the technology in plain language. Kasneci et al. (2023) discussed opportunities of large language models for education, including support for teachers in preparing materials, and at the same time cautioned about inaccuracy, bias, and the risk of over-reliance. They emphasized that benefits depend on the competencies of users, particularly critical thinking and the ability to verify information.

Studies of lesson planning specifically are still few and often involve pre-service teachers. In one study, pre-service science teachers integrated ChatGPT into lesson plans across several teaching strategies, but they also expressed concerns about accuracy and over-dependence, and some uses of the tool were judged inappropriate (Lee & Zhai, 2024). In the Philippines, an experiment with pre-service teachers of Filipino found

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that lesson plans drafted with ChatGPT scored higher on organization and content coverage, while plans drafted without it scored higher on creativity (Edraga, 2026). Together these studies suggest that AI can help with the structure of a plan while the teacher's judgment still shapes its quality.

A distinctive feature of generative AI is that the quality of the output depends on the quality of the input. Teachers who can specify the grade level, learning objectives, context, and format they need are more likely to obtain usable drafts. This is a new technical competency, and it sits alongside the older professional task of evaluating materials for accuracy and fit; the cautions raised about accuracy, bias, and over-reliance (Kasneci et al., 2023) make this evaluative step central to responsible use. Pedagogical integrity, as used in this study, refers to the alignment of lesson content and activities with learning goals and learners' needs after AI assistance, and maintaining it requires teachers to remain the decision-makers.

In the Philippine basic education setting, the Department of Education (DepEd) issued DepEd Order No. 003, s. 2026, the Foundational Guidelines on Artificial Intelligence (AI) in Basic Education, on February 20, 2026. The order recognizes that classroom use of AI had moved faster than clear and enforceable policy, and it promotes a human-centered approach in which AI supports, and does not replace, teachers' judgment (Department of Education [DepEd], 2026). It also contains provisions on declaring the use of AI (DepEd, 2026). For the present study, the order is the policy context against which teachers' requests for guidelines and transparency can be read.

TPACK and Technology Acceptance

The frameworks introduced in the Conceptual Framework have recently been applied to AI. In a study that built an AI-specific TPACK scale, technological knowledge alone did not predict integrated knowledge for using AI tools, whereas technological-pedagogical knowledge and the ability to assess AI-based decisions ethically did (Celik, 2023). Mishra et al. (2023) argue that generative AI invites a fresh look at how teachers combine technology, pedagogy, and content. On the acceptance side, a survey of 215 teachers in South Korea found that perceived usefulness, perceived ease of use, and perceived trust explained acceptance of educational AI tools, and that teachers with constructivist beliefs were more likely to integrate them (Choi et al., 2023).

Earlier work on barriers to technology integration distinguishes first-order barriers that are external to the teacher, such as access, time, training, and institutional support, from second-order barriers that are internal, such as beliefs about teaching and learning (Ertmer, 1999). The distinction remains useful for reading teachers' accounts of AI: providing access to tools is not enough, and attention must also be paid to teachers' beliefs, confidence, and working conditions.

Professional Development and Support

A recent mixed-method survey found that STEM teachers regarded professional development as the most crucial support for integrating generative AI, while also pointing to their own resistance and to school leaders' limited awareness as obstacles (Cheah & Kim, 2025). Research on effective professional development explains what such support should look like. Desimone (2009) proposed core features, namely a focus on content, active learning, coherence with teachers' other learning and institutional goals, sufficient duration, and collective participation. Opfer and Pedder (2011) argued that teacher learning is a complex system involving the teacher, the school, and the learning activity, so that the effect of a single workshop depends on its setting.

Guskey (2002) proposed that significant change in teachers' attitudes and beliefs tends to follow, rather than precede, evidence of improvement in their practice and in student learning. This view is relevant to the present study, because teachers who initially find AI difficult may come to value it once they see that it helps their work. It also suggests that training should be designed to give teachers early and visible successes. Taken together, these works imply that scaling AI-assisted lesson planning requires deliberate, sustained, and collaborative support, which is consistent with the system-wide frameworks called for by the participants of this study.

Methodology

Research Design

A qualitative exploratory (descriptive) design was employed. Qualitative description stays close to the data and to the participants' own words, and it is suited to questions about what people have experienced when the aim is a clear and accurate account rather than a high level of theoretical abstraction (Sandelowski, 2000). A qualitative approach was chosen because the aim was to understand experiences, meanings, and processes, which numerical scales do not adequately capture (Creswell & Poth, 2018), and because little is yet known about practicing teachers' AI-assisted lesson planning. The data were the written accounts of fifteen teachers who practise it. The intention was analytic: to identify patterns across the accounts and to relate them to the

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conceptual framework, not to estimate how common a practice is in a population. Each teacher answered one online questionnaire, and the responses to different questions could not be linked to individual respondents (see Limitations of the Study), so the unit of analysis was the response to each question and not the individual teacher. A multiple-case design was therefore not used, because one questionnaire per participant does not provide the depth that such a design requires.

Research Locale

The questionnaire was circulated among teachers of the Schools Division of Valencia City, during the academic year 2026-2027, so as to capture current practices and experiences in AI-assisted lesson planning. Participation took place online, so that teachers could respond at a time and place convenient to them. The form did not collect names, schools, or the level at which participants teach.

Research Participants

The participants consisted of fifteen teachers handling different subject areas: languages (English, Filipino, and a language course; n = 5), mathematics (n = 3), social science and social studies (n = 4), organization and management (n = 2), and agriculture (n = 1). Entries that differed only in capitalization or in closely related labels (social science and social studies; introduction to organization and management and organization and management [business]) were grouped together. Years of teaching experience ranged from 1 year and 8 months to 16 years (mean = 8.5 years, SD = 3.3, median = 9 years). Free-text entries were standardized for analysis; for example, “7 yeara” was read as 7 years. Two teachers had less than five years of experience, eleven had five to ten years, and two had more than ten years. This diversity of subjects and experience helped capture a range of perspectives within a small group. The questionnaire did not ask for the level at which participants teach or for their type of school.

Research Instrument

Data were collected using an online questionnaire (Google Forms) titled “Success Stories of Tech-Savvy Teachers in Crafting AI-Assisted Lesson Plans”. The questionnaire had two parts: the first gathered demographic and tool-use data, and the second contained four open-ended questions aligned with the research questions (Items 4 and 5 with Research Question 1, Item 6 with Research Question 2, and Item 7 with Research Question 3). The seven items are described below. The first three items gathered demographic and tool-use data. Item 1 asked for the subject area (short answer), Item 2 asked for years of teaching experience (short answer), and Item 3 asked which AI tools the teacher used, with ChatGPT, Claude, Google Gemini, Microsoft Copilot, Canva Magic Design, Curipod, MagicSchool AI, and Other as options (multiple selection). The four open-ended items were as follows. Item 4 asked, “How do you describe your experiences and processes in crafting AI-assisted lesson plans?” Item 5 asked, “What specific pedagogical and technological competencies enable you to integrate AI tools into your lesson planning practices effectively?” Item 6 asked, “What challenges do you encounter when using AI for lesson planning, and what strategies do you employ to address these challenges while maintaining pedagogical integrity?” Item 7 asked, “What institutional and professional development supports do you recommend for sustaining and scaling AI-assisted lesson planning practices?” Because the questionnaire consisted of a small number of open-ended questions aligned with the research questions, its content coverage was checked against the research questions rather than through statistical validation.

Data Gathering Procedure

The Google Forms link was shared with teachers who met the inclusion criteria. Participation was voluntary, and respondents were informed of the purpose of the study before answering. No names or institutions were collected. After the responses were received, they were exported from the form and read in full before any coding was done. Fifteen teachers responded. All fifteen answered the questions on subject area, years of experience, and tools used, and the open-ended questions received 15, 13, 15, and 15 responses, respectively, for a total of 58. Two responses were found to answer a different question from the one under which they were entered: a description of competencies entered under the third question, and a description of challenges entered under the fourth. These were coded according to their content, which gave 15, 14, 15, and 14 responses to Items 4 to 7, respectively. Research Question 1 draws on Items 4 and 5, Research Question 2 on Item 6, and Research Question 3 on Item 7. The responses were preserved in their original wording so that spelling and phrasing could be reported faithfully.

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Results and Discussion

Table 1. Profile of the Teacher Participants

Characteristic	Details
1. Number of participants	15
2. Subject areas	Languages: 5 (English 2, Filipino 2, language course 1); Mathematics: 3; Social science and social studies: 4; Organization and management: 2; Agriculture: 1
3. Years of teaching experience	1 year and 8 months; 4; 7 (four teachers); 9 (four); 10 (three); 12; 16 years
4. Central tendency and bands	Mean 8.5 years (SD = 3.3); median 9; range 1.7 to 16. Less than 5 years: 2; 5 to 10 years: 11; more than 10 years: 2

Table 1 presents the profile of the participants. The fifteen participants taught different subjects and differed widely in experience, from a teacher with less than two years of service to one with sixteen. Five taught languages, three mathematics, four social science or social studies, two organization and management, and one agriculture, which suggests that the use of AI for lesson planning is not confined to a single discipline. Thirteen of the fifteen had at least seven years of experience, so the accounts come mainly from established rather than novice teachers. All fifteen described themselves as users of AI in lesson planning, which is consistent with the inclusion criteria for the study.

Table 2. AI Tools Used by Teachers in Crafting Lesson Plans

AI Tool	Count	Percentage
1. ChatGPT	12	80%
2. Google Gemini	10	66.7%
3. Claude	6	40%
4. Canva Magic Design	5	33.3%
5. Microsoft Copilot	4	26.7%
6. MagicSchool AI	1	6.7%
7. Curipod	0	0%
8. Other	0	0%

Table 2 shows that ChatGPT was the most widely used tool (12 of 15 teachers, 80%), followed by Google Gemini (10 of 15, 66.7%). Claude was used by six teachers (40%), Canva Magic Design by five (33.3%), Microsoft Copilot by four (26.7%), and MagicSchool AI by one (6.7%). No teacher reported Curipod or other tools. In total, the fifteen teachers made 38 tool selections, an average of 2.5 tools per teacher.

The teachers therefore combined several platforms, which suggests that tech-savvy teachers use a toolkit of general-purpose assistants and design tools rather than depending on a single one. The use of Canva Magic Design by five teachers is consistent with the reported use of AI to produce presentations and engaging activities, and one response named MagicSchool AI together with ChatGPT and Gemini as tools that shortened brainstorming, formatting, and standards alignment. Education-specific platforms were nevertheless rare, which may reflect the greater familiarity and availability of general-purpose tools, but the data do not allow the reason to be established. Two responses also referred to limits associated with free or non-premium access, which suggests that access tier may shape how teachers work with these tools.

Summary of Themes

The 58 open-ended responses (15 to the first question, 13 to the second, 15 to the third, and 15 to the fourth) were coded as described under Data Analysis. Because two responses answered a different question from the one under which they were entered, the coded responses numbered 15, 14, 15, and 14 for Items 4 to 7. Table 3 summarizes the four themes, their sub-themes, a representative excerpt, and the number of responses containing each sub-theme. The full list of codes is given in Table 4. The counts are descriptive only and are not intended to indicate prevalence in a wider population.

Table 3. Summary of Themes, Sub-themes, Excerpts, and Counts

Theme	Sub-themes (responses containing the code)	Representative excerpt	Responses analyzed
1. From initial difficulty to ease, speed, and efficiency	Time savings and efficiency (6); breadth of planning tasks supported (6); ease and convenience (5); initial effort, including careful prompting (2)	Tools cut “hours of brainstorming, formatting, and standard-aligning” into “a matter of seconds.”	15
2. Digital skills used with teaching judgment	Blend of teaching expertise and digital competence (8); digital literacy and ICT integration (6); using AI to generate ideas, materials, and assessments (4); prompt writing (3)	Effective integration needs “a blend of core teaching expertise and foundational digital literacy.”	14

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3. Prompting skill, verification, and critical adaptation of AI output	Challenges: output not matching learners or context (6); inaccurate information (5); over-reliance (3). Strategies: reviewing and verifying (5); adapting and localizing (5)	Output "does not always match my learners' needs, the curriculum, or the actual classroom context."	15
4. Need for structured training and institutional support	Training, seminars, and workshops (9); clear guidelines and system-wide frameworks (7); peer collaboration (4); reliable internet, devices, and tools (4)	Training on commonly used AI platforms "to all teachers who wish to upgrade their knowledge."	14

Table 4. Codes Generated from the Open-Ended Responses

	Questionnaire Item	Code	Responses Containing the Code
1.	Item 4: Experiences	Time savings, speed, and efficiency	6 of 15
2.	Item 4: Experiences	General helpfulness and productivity	6 of 15
3.	Item 4: Experiences	Breadth of planning tasks supported (ideas, activities, assessments, presentations)	6 of 15
4.	Item 4: Experiences	Ease, convenience, and "hassle-free" process	5 of 15
5.	Item 4: Experiences	Aligning lessons with competencies and curriculum standards	3 of 15
6.	Item 4: Experiences	Initial difficulty or effort, including careful prompting	2 of 15
7.	Item 4: Experiences	Reviewing and adapting AI output as part of the process	2 of 15
8.	Item 4: Experiences	Enrichment: thinking, discovery, and engaging learning	2 of 15
9.	Item 4: Experiences	More time to rest and recharge	1 of 15
10.	Item 5: Competencies	Blend of teaching expertise and technological competence	8 of 14
11.	Item 5: Competencies	Aligning AI output with objectives, curriculum, and learner needs	7 of 14
12.	Item 5: Competencies	Digital literacy, ICT integration, and media skills	6 of 14
13.	Item 5: Competencies	Pedagogical knowledge base (curriculum planning, strategies, assessment design)	4 of 14
14.	Item 5: Competencies	Using AI to generate ideas, materials, and assessments	4 of 14
15.	Item 5: Competencies	Prompt writing	3 of 14
16.	Item 5: Competencies	Production of presentations and engaging activities	3 of 14
17.	Item 5: Competencies	Evaluating and revising AI content	2 of 14
18.	Item 5: Competencies	Anchoring use in frameworks (TPACK, OBE, 4A's)	2 of 14
19.	Item 5: Competencies	Self-training and cross-discipline collaboration	1 of 14
20.	Item 6: Challenges	Output not matching learners, curriculum, or context (too easy, generic, bookish)	6 of 15
21.	Item 6: Challenges	Inaccurate information	5 of 15
22.	Item 6: Challenges	Risk of over-reliance and uncritical use	3 of 15
23.	Item 6: Challenges	AI bypassing students' thinking and critical thinking	2 of 15
24.	Item 6: Challenges	Difficulty of crafting effective prompts	2 of 15
25.	Item 6: Challenges	Limited access (free-tier or resource limits)	2 of 15
26.	Item 6: Challenges	Output that makes easy things complicated	1 of 15
27.	Item 6: Strategies	Reviewing, verifying, and counter-checking output	5 of 15
28.	Item 6: Strategies	Adapting, reinventing, and localizing activities and examples	5 of 15
29.	Item 6: Strategies	Keeping professional judgment and learner-centeredness in control	3 of 15
30.	Item 6: Strategies	Refining prompts and giving model lesson plans	2 of 15
31.	Item 6: Strategies	Aligning with DepEd competencies; protecting student privacy	1 of 15
32.	Item 6: Strategies	Patience in working within access limits	1 of 15
33.	Item 7: Supports	Training, seminars, workshops, and webinars	9 of 14
34.	Item 7: Supports	Clear guidelines and structured, system-wide frameworks	7 of 14
35.	Item 7: Supports	Peer collaboration, mentoring, and sharing of practices	4 of 14
36.	Item 7: Supports	Reliable internet, devices, tools, and shared materials	4 of 14
37.	Item 7: Supports	Continuous, sustained support	3 of 14
38.	Item 7: Supports	Training on ethical, responsible, and reliable use	3 of 14
39.	Item 7: Supports	Quality assurance, data privacy, and content verification	3 of 14
40.	Item 7: Supports	Training on prompting techniques	2 of 14
41.	Item 7: Supports	Leadership resources, technical assistance, and evaluation	1 of 14
42.	Item 7: Supports	Declaration of AI use (DepEd Order No. 003, s. 2026)	1 of 14
43.	Item 7: Supports	Self-directed support	1 of 14

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Research Question 1: How do tech-savvy teachers describe their experiences in crafting lesson plans with AI, and which digital competencies do they credit for their success?

Theme 1: From Initial Difficulty to Ease, Speed, and Efficiency

Fourteen of the fifteen teachers described crafting AI-assisted lesson plans positively, although one of them said it was difficult at first before it became helpful; the fifteenth stressed that it takes time, "especially by carefully using the correct prompts." Six responses mentioned time savings, speed, and efficiency. One teacher said AI tools cut "hours of brainstorming, formatting, and standard-aligning" into "a matter of seconds," another said that a lesson plan that once required ample preparation time could now be made "in just a few minutes," and a third described the process as "Smooth, convenient & faster." Ease and convenience appeared in five responses; one teacher called the process "hassle-free" and "a big help in making a lesson plan easily." Six responses described the range of planning tasks that AI supported, from generating ideas and learning activities to developing assessments, organizing lesson content, aligning lessons with learning competencies and curriculum standards, and producing PowerPoint presentations. Two responses went beyond speed: one teacher said AI "allows me to think and discover more," and another called the experience "productive, efficient, and enriching." One teacher added that the time saved left more time to "rest and recharge." In all, two responses noted effort at the outset.

This pattern is consistent with the technology acceptance perspective. Perceived usefulness, expressed here as help in making lesson plans and as saved time, and perceived ease of use, expressed as the process being hassle-free, smooth, and convenient, are the two beliefs that Davis (1989) identified as central to acceptance. The near-unanimity of the positive accounts should be read with care, because the teachers were selected for being users of AI, and the data cannot show how teachers who stopped using it would describe their experience. The initial difficulty reported by two teachers corresponds to the effort expectancy described in the unified theory of acceptance (Venkatesh et al., 2003), which declines as users gain experience. The data do not show how long the learning period lasted, but one account suggests that persistence paid off.

The pattern also resonates with the proposal that changes in attitude tend to follow evidence of improvement in practice (Guskey, 2002). The teacher who found the tools difficult at first did not abandon them; the later experience of helpfulness appears to have confirmed the value of the effort. Because only two of fifteen teachers recalled initial effort, the learning curve may have been modest for most of these relatively experienced teachers, or it may simply have been forgotten once the practice became routine; the data cannot distinguish the two. Notably, the effort that was described centered on prompting, which anticipates the competencies discussed in Theme 2. Two responses also built review and adaptation into the description of the process itself, which anticipates Theme 3. For schools, one possible implication, resting on only two accounts, is that early support during the difficult stage could help teachers continue long enough to experience the benefits.

Theme 2: Digital Skills Used with Teaching Judgment

Regarding the second part of Research Question 1, fourteen responses described competencies (thirteen entered under the second question and one entered under the third). On the technological side, six responses named digital literacy, ICT integration, technology integration techniques, or media, technology, and communication skills; four described using AI to generate lesson ideas, instructional materials, and assessments; and three named prompt writing, including giving "clear, structured prompts." Two teachers reported evaluating and revising AI content for accuracy, relevance, and suitability, and one named self-training and collaboration across disciplines. These digital skills were seldom described alone. Eight responses explicitly joined them to pedagogical capability; one stated that effective integration requires "a blend of core teaching expertise and foundational digital literacy," and another described combining knowledge of subject matter, curriculum standards, learner-centered strategies, and assessment design with the ability to use digital tools. Seven responses stressed connecting AI output to learning goals, curriculum standards, and learner needs, and four named a pedagogical knowledge base such as curriculum planning, instructional strategies, and assessment design. One teacher described anchoring AI use in curriculum goals, learning outcomes, and frameworks such as TPACK or Outcome-Based Education "so technology serves the lesson rather than dictates it," and another named the "4A's of Lesson Plan." Three responses described outcomes instead of competencies, such as presenting different activities in class and making presentations and more engaging activities, and one very brief response ("The Videos & Background") could not be interpreted with confidence.

This finding aligns with the TPACK framework, which holds that effective technology integration arises from the interplay of technology, pedagogy, and content knowledge (Mishra & Koehler, 2006). The teacher's digital literacy makes it possible to operate the tools, while teaching expertise makes it possible to judge whether what the tools produce is worth using. Pedagogical content knowledge in particular (Shulman, 1986) is what enables a teacher to recognize whether a suggested activity fits a topic and a group of learners. This is

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also consistent with work on AI-specific TPACK, which found that technological knowledge alone was not enough for integrating AI tools and that technological-pedagogical knowledge and ethical assessment also mattered (Celik, 2023). That two teachers named a framework explicitly suggests that some of them use a pedagogical model as the anchor for AI use, so that the tool serves the lesson and not the reverse.

It is worth noting that the competencies named by the participants are modest in scope: foundational digital literacy, ICT integration, and prompt writing, not advanced technical expertise. This suggests that the barrier to effective use is not high technical sophistication but the combination of basic digital skills with sound teaching judgment. The result also supports the view that second-order factors such as beliefs and professional judgment matter alongside access to tools (Ertmer, 1999). Prompt writing deserves emphasis because it appears among the competencies, among the difficulties, and among the requested training topics. The mention of self-training and collaboration across disciplines indicates that competence was often built informally, which connects to the requests for structured support under Theme 4.

Research Question 2: What challenges do tech-savvy teachers encounter in crafting AI-assisted lesson plans, and what strategies do they use to maintain pedagogical integrity?

Theme 3: Prompting Skill, Verification, and Critical Adaptation of AI Output

In response to Research Question 2, fifteen responses (fourteen entered under the third question and one entered under the fourth) described challenges and strategies. The most frequent challenge, in six responses, was a mismatch between AI output and the learners, curriculum, or classroom context. One teacher said AI "often makes lessons too easy" and uses generic examples; another found suggested activities "bookish"; another noted that content "does not always match my learners' needs, the curriculum, or the actual classroom context," and two more mentioned simply "Generic learning activity" or generic suggestions that may not fit students' abilities. Inaccurate information was named in five responses. Three responses cautioned against over-reliance: one warned that automated suggestions can dull "a teacher's creative muscle intuition," and two said that relying on AI uncritically, or without critical oversight, endangers pedagogical integrity and educational quality. Two responses worried that AI bypasses students' thinking; one observed that AI sometimes "answers questions for students instead of letting them think," and another wanted to ensure that AI-generated activities promote critical thinking and creativity instead of simply providing ready-made materials. Two responses described difficulty in crafting effective prompts, and two referred to access limits, one of them describing many challenges when not on a premium subscription. One teacher found that AI at times "makes the easy things complicated."

The strategies that teachers reported were largely the counterpart of these challenges. Five teachers described reviewing, verifying, and counter-checking output, either before bringing it to class or against other sources, and five described adapting, reinventing, or localizing suggestions to the classroom context. Three emphasized keeping professional judgment and learner-centeredness in control; one explained that this means using AI "only as a supportive tool," aligning output with DepEd learning competencies, and protecting student privacy. Two teachers addressed the prompt itself, by giving the AI "strict instructions with clear learning goals" or by using correct prompts and "uploading model lesson plans." The teacher who struggled with access handled it by patiently using the time intervals between uses. One response observed that some content needs to be studied or researched, which implies that AI output cannot substitute for the teacher's own subject preparation.

Prompt construction is a technical competency specific to generative AI, because the output depends on how the request is framed. It appears on both sides of the account: two teachers named it as a difficulty, two described prompt refinement or model lesson plans as a strategy, three listed prompt writing among the competencies for effective use, and two asked for training on it. The difficulty reported is consistent with the observation that the benefits of large language models depend on the competencies of the user (Kasneci et al., 2023). Teachers who can state the grade level, objectives, and format they need, and who can supply a model lesson plan, are better positioned to obtain usable drafts, which supports the inclusion of prompt writing in training content.

The reinvention of bookish activities illustrates the strategy by which pedagogical integrity is maintained in practice. The teacher did not reject the AI suggestion, nor did the teacher accept it as given; the suggestion was treated as a draft and adapted to the learners. This is the kind of judgment that pedagogical content knowledge makes possible, and it corresponds to the view that the teacher remains the decision-maker. The cautions against uncritical reliance, and the concern that AI may do the students' thinking for them, express the same principle in general form and match concerns about over-reliance and the need to verify AI output (Kasneci et al., 2023; Cotton et al., 2024). The references to premium subscriptions and resource limits are a reminder that first-order barriers such as access also shape practice (Ertmer, 1999): teachers with free-tier access may work under limits that others do not.

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Research Question 3: What institutional support do tech-savvy teachers recommend for sustaining AI-assisted lesson planning?

Theme 4: Need for Structured Training and Institutional Support

For Research Question 3, fourteen responses were analyzed, and all recommended some form of support. Nine asked for training, seminars, workshops, or webinars. One teacher asked for training on the most commonly used AI platforms "to all teachers who wish to upgrade their knowledge," another for regular training on the effective and ethical use of AI, and another for continuous professional development that includes Learning Action Cell (LAC) sessions. Two asked specifically for training on prompting techniques, and three for training on ethical, responsible, or reliable use. Seven responses called for clear guidelines and structured, system-wide frameworks, and one of them warned that without deliberate frameworks adoption tends to remain fragmented, inconsistent, and vulnerable to quality and ethical risks. Four proposed peer collaborations, mentoring, and the sharing of best practices and sample AI-assisted lesson plans, including regular group meetings to practice writing prompts and check one another's lesson plans. Four asked for reliable internet, devices, free or appropriate tools, and shared local teaching materials, and three raised data privacy, accuracy, and verification of AI content. Three described the support as needing to be continuous, and one asked that school leaders and DepEd provide resources, technical assistance, and regular evaluation. One response referred to DepEd Order No. 003, s. 2026, stating that AI may be used in crafting lesson plans as long as its use is declared, and one response read only "Self-assisted support."

These recommendations correspond to the facilitating conditions identified in the unified theory of acceptance, namely the availability of training and organizational support (Venkatesh et al., 2003), and to the first-order barriers described by Ertmer (1999). They also match the recommendation of international guidance that teachers' capacity be built and that ethical safeguards be put in place (Miao & Holmes, 2023). A recent survey of STEM teachers likewise identified professional development as the most crucial support for integrating generative AI (Cheah & Kim, 2025). The call for system-wide frameworks is consistent with the view that teacher learning is shaped by the school and the system and not only by individual activities (Opfer & Pedder, 2011). The reference to DepEd Order No. 003, s. 2026 shows that national guidance now exists in the basic education context, and the teacher's reading, that use is acceptable when declared, is consistent with the order's emphasis on transparency and its AI Use Declaration form (DepEd, 2026). Three responses referred to DepEd, which suggests that at least some participants work in DepEd schools. Only one response mentioned the order, however, so the data cannot show how widely it is known or applied to individual lesson plans, and the questionnaire did not ask participants for the level at which they teach.

The features of effective professional development identified in the literature offer guidance on the form that such support might take. Training that is content-focused, involves active learning and collective participation, and is sustained over time (Desimone, 2009) would suit the needs expressed by the participants better than a single orientation session, and the repeated call for continuous support points in the same direction. The proposals for regular group meetings, peer mentoring, and LAC sessions are concrete examples of collective participation that could use existing school structures. For AI-assisted lesson planning, this might include hands-on workshops in which teachers draft, critique, and revise AI-generated plans together.

Synthesis of Themes

Read together, the themes describe a coherent account. Teachers pass through an initial period of effort, for some, and then experience ease, speed, and efficiency; this outcome rests on a combination of digital literacy, prompt writing, and teaching expertise; the main points of risk are output that does not fit the learners, inaccurate information, the writing of prompts, and the uncritical acceptance of output, which are managed through verification, adaptation, and judgment; and the practice can be sustained and spread only if institutions provide training, structured frameworks, and access. All 58 responses could be placed within these four themes without a new theme being created.

The Conceptual Framework Revisited

The findings can be mapped onto the conceptual framework in Figure 1. In the input, the participants' digital literacy, prompt writing, and teaching expertise, together with their use of several AI tools, formed the base from which lesson planning proceeded. In the process, prompt construction, verification, and the adaptation of AI output were the main activities through which pedagogical integrity was protected. In the output, ease, speed, efficiency, and more engaging activities were reported as the results. The support component was not described as present in the participants' experience; it was described as needed, with one teacher pointing to a national order and another to LAC sessions as reference points, which indicates that the success stories documented here were largely achieved through individual effort.

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This last observation deserves emphasis. The feedback loop in the framework, in which outcomes inform institutional support, was expressed by the participants as a request: they asked for training, workshops, guidelines, and access so that individual success could be made reliable and widespread. The study therefore suggests that the weakest link in the framework, at least among the participants studied, may not be the teachers' capability but the institutional environment in which they work.

Convergence with the Literature

Several of the findings converge with the literature reviewed earlier. The movement from initial difficulty to perceived ease agrees with the acceptance perspective, in which effort expectancy is expected to decline with experience (Venkatesh et al., 2003). The description of effective integration as a blend of teaching expertise and digital literacy agrees with the TPACK framework (Mishra & Koehler, 2006). The cautions about inaccurate content and uncritical reliance agree with the emphasis on verification and critical thinking in the literature on large language models (Kasneci et al., 2023). The call for sustained training and structured frameworks agrees with the features of effective professional development and with the view that teacher learning is shaped by its setting (Desimone, 2009; Opfer & Pedder, 2011), and the request for transparency about AI use agrees with the human-centered position of national and international guidance (DepEd, 2026; Miao & Holmes, 2023).

The study also adds a nuance. Much recent work on AI and lesson planning involves pre-service teachers or experimental tasks (Edraga, 2026; Lee & Zhai, 2024). The accounts reported here show how these concerns appear at the level of an individual teacher's planning routine: as a prompt that did not return the desired information, as an activity that was too bookish or too easy, as an AI answer that spares students the thinking, as a limit on a free account, or as a request for a workshop. In this way the findings translate general principles into concrete experiences that can inform the design of training.

Quality and Ethical Issues

The participants raised quality and ethical points only briefly. Five responses noted inaccurate information, three raised data privacy, accuracy, and verification of AI content among the supports they wanted, and one referred to declaring AI use under DepEd Order No. 003, s. 2026 (DepEd, 2026). Because these points came from few responses, they are noted here as issues for further study and not as findings about ethical practice.

Limitations of the Study

Several limitations should be kept in mind. The sample was small (fifteen participants) and recruited through convenience and referral sampling, so the findings are exploratory and cannot be generalized. Data came from a single open-ended questionnaire without follow-up interviews, and many responses were only a phrase or a sentence long, which limited the depth of the analysis. Responses were self-reported and were not triangulated with lesson-plan artifacts or classroom observation, so the study cannot confirm the quality of the lesson plans or their effect on learning. The teachers were also selected for being users of AI, which likely favored positive accounts, and the questionnaire did not ask about the level taught or the type of school, so the relevance of national basic education guidance to each participant is unknown.

In addition, the responses to different questions could not be linked to specific individuals, so the analysis was organized by question and not by participant, and relationships between teachers' characteristics and their experiences could not be examined. Two responses were entered under a question other than the one they answered and were coded by content. Finally, a number of responses were formal and polished, and six showed features typical of AI-generated text: three responses to the fourth question opened with near-identical wording, one of which also ended with a truncated lead-in addressed to a reader; two responses to the third question shared a near-identical sentence about efficiency and uncritical reliance; and one response to the second question referred to "AI assistants" in the third person. Several other long, formally structured responses may also have been drafted with AI assistance, although this cannot be determined from the text. These features are observations about the text and are not proof of authorship. When the six flagged responses were set aside, no theme disappeared, but the number of responses supporting clear guidelines and structured frameworks fell from seven of 14 to four of 11, and the number supporting the risk of over-reliance fell from three of 15 to one of 13. Findings on these two points should therefore be interpreted with caution. These limitations point to clear directions for future research, which are presented under Recommendations.

Implications of the Findings

For theory, the findings lend qualified support to the combined use of TPACK and the technology acceptance perspective in studying AI-assisted lesson planning. TPACK accounts for why teaching expertise and digital literacy were described as a blend, and the acceptance perspective accounts for the movement from

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initial difficulty to perceived ease and usefulness. At the same time, the participants' emphasis on prompt construction points to a competency that is specific to generative AI and that may deserve explicit treatment as a component of technological knowledge. Whether prompt writing is best understood as a part of technological knowledge, of pedagogical knowledge, or as a distinct literacy is a question that the present data cannot answer but that future work could address.

For practice, the findings suggest that the responsibility for quality cannot be left to the tool. The participants' own safeguards, namely the reinvention of bookish activities and the warning against uncritical reliance, show that quality is produced by teacher judgment applied to AI output. Schools that wish to benefit from AI-assisted planning, therefore, should invest in the judgment of teachers and not only in access to tools. This view is consistent with the human-centred orientation of international guidance (Miao & Holmes, 2023) and with the emphasis on critical thinking and verification in the literature on large language models in education (Kasneci et al., 2023).

For policy, the repeated request for structured, system-wide support (seven of fourteen responses) signals that teacher-led adoption has outpaced institutional preparation among the participants studied. National guidance has since appeared in the basic education sector (DepEd, 2026), but only one response referred to it, which suggests that issuing guidelines is not the same as making them known and usable at the level of the teacher. The recommendation to move from informal experimentation to deliberate frameworks is therefore a response to a need expressed by the participants.

Ethical Considerations

Informed consent was obtained through the online form: its first page explained the purpose of the study, stated that participation was voluntary and anonymous, and asked respondents to tick a consent item before they could answer the questions. No names or other personally identifying information were collected. Participants were informed that their responses would be used for research and could be reported in published form, and the responses are reported in a way that does not allow any individual or institution to be identified.

Conclusion

Among the fifteen teachers studied, AI was described as a practical aid for lesson planning, but the value of its output depended on the teacher's own judgment. The reported benefits, namely speed, ease, efficiency, and more engaging activities, were accompanied by a learning period for some teachers and depend on AI suggestions being reviewed and adapted to the needs of the students. Training and institutional guidance emerge as the conditions that these teachers said would help their individual successes to be sustained and shared. Four specific conclusions are drawn from the findings. First, fourteen of fifteen teachers described AI-assisted lesson planning in positive terms, as faster, easier, and helpful, and two recalled initial effort, although two accounts are too few to show whether early support matters. Second, the competence that matters most is the combination of foundational digital literacy, prompt writing, and sound teaching expertise, not technical sophistication alone. Third, verification, prompt construction, and critical adaptation are the practical skills through which pedagogical integrity is protected, in the face of output that is inaccurate, too easy, generic, or ill-fitting. Fourth, the participants regard continuous training and structured, system-wide support, including guidance on appropriate use and transparency, as necessary if AI-assisted planning is to avoid being fragmented, inconsistent, and exposed to quality and ethical risks. Because the study rests on fifteen accounts, many of them brief and some of which appear to be AI-assisted, these conclusions are offered as exploratory propositions to be examined further, and not as established facts about teachers in general.

Recommendations

On the basis of the findings, recommendations are presented for teachers, school leaders, professional development providers, policymakers, and researchers. They are elaborated below. The recommendations for teachers draw on Themes 1 and 3, those for school leaders on Theme 4, those for professional development providers on Themes 2, 3, and 4, those for policymakers on Theme 4, and those for researchers on the limitations of the study. For Teachers, AI output should be treated by teachers as a draft and should be reviewed against learning objectives and learners' needs before use. Facts should be counter-checked against other sources, and examples should be localized. Time should be invested in learning to write specific prompts that state the grade level, the objectives, the context, and the format required, and sample or model lesson plans can be supplied to the AI, since the quality of the output depends on the quality of the request. Adapting suggestions that are too bookish, too easy, or too generic, as the participants did, should be regarded as a normal part of the workflow and not as a sign that the tool has failed. Where required, the use of AI should be declared. For School Leaders, shared guidelines on appropriate, reliable, and ethical use, including how AI use is declared and how student data are protected, should be developed by institutions so that adoption does not

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remain fragmented. Teachers who have already succeeded with AI can be invited to share their practices with colleagues, for example through Learning Action Cell sessions or regular group meetings where lesson plans are checked together, because peer learning is likely to be more credible and more practical than abstract guidance. Time for experimentation and review should be built into schedules, reliable internet, devices, and free or appropriate tools should be made available, and early support could be offered to teachers who find the initial period difficult. For Professional Development Providers, hands-on training and workshops on commonly used AI platforms should be provided, and should include prompt writing, evaluation of the accuracy and appropriateness of AI output, and the ethical use of AI. Following the features of effective professional development (Desimone, 2009), training should be content-focused, active, coherent with school goals, collective, and sustained over time. Teachers should also be helped to judge which tools are appropriate and reliable for their purposes, as one participant requested. For Policymakers, system-wide frameworks should be adopted to replace informal, individual experimentation, consistent with international guidance that promotes human-centred use, ethical safeguards, and teacher capacity building (Miao & Holmes, 2023). Where national guidelines already exist, such as DepEd Order No. 003, s. 2026, deliberate effort should be made to make them known to teachers and to translate them into school-level procedures (DepEd, 2026). Such frameworks should address quality assurance, data protection, and equitable access to tools and training, including for teachers who cannot pay for premium subscriptions, so that the benefits of AI-assisted planning are not limited to teachers who are already confident or well resourced. For Future Research, future studies should use a larger and more varied sample, include interviews or analysis of actual lesson plans, and measure the effect of AI-assisted lesson plans on student learning outcomes. Data collection should be designed to reduce AI-composed answers, for example through interviews or supervised responses, so that the voices recorded are the teachers' own. Comparative studies of teachers at different experience levels, in different subject areas, and at different school levels would clarify whether the themes identified here hold across contexts, and comparisons of free and premium access could examine the equity concern raised by participants. Studies that follow teachers over time could examine how the learning curve described by the participants unfolds and which forms of support most effectively shorten it.

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