Workshop Report

"Optimizing Teaching and Learning with AI ChatBots: A Practical Guide for Teachers"

October 25, 2024 at Phothisan Pittayakorn School

Figure. 1 Public Relations Poster

Principles and Rationale

In an era of rapid technological change, the lecture project "Optimizing Teaching and Learning with AI ChatBots: A Practical Guide for Teachers" was organized with a vision of improving the quality of education through the application of artificial intelligence technology.

The project is based on four key principles. The first is to promote educational equity, with a focus on reducing language and cultural gaps in the classroom using AI ChatBots as a learning support tool that meets the needs of diverse learners. The second is the integration of technology and innovation, which is a key component of education in the 21st century. The third is professional development and empowerment of teachers through practical training that allows teachers to use AI technology effectively, and finally, it promotes sustainability and lifelong learning. It aims to create a learning environment that can adapt and develop continuously.

The organization of this project consists of four aspects. They are starting from the need to adapt to technological developments due to the increase of digital tools in the education industry. As a result, teachers must improve their skills in using new technologies, especially AI ChatBots, which can reduce the workload of their daily tasks and increase teaching efficiency. The second is to increase student engagement through interactive and personalized learning experiences, which will help create an engaging and effective learning atmosphere. The third is to create consistency with curriculum standards by systematically integrating AI ChatBots to support curriculum-based teaching and learning, and finally, to support quality and sustainable education through the development of teachers' skills in the effective use of AI technology.

The project is not just a response to today's challenges but also a foundation for the future of education. It focuses on creating teachers who can use technology to improve the quality of education, ensuring it meets international standards and is future-ready.

Objective

1. Increase teachers' understanding of AI ChatBots so that teachers, especially foreign teachers, have the knowledge and skills to use AI ChatBots effectively in the teaching and learning process in accordance with the curriculum of local schools.

2. Improve teaching efficiency by using AI ChatBots to automate routine tasks. This will reduce teachers' administrative workload and allow them to focus on improving the quality of teaching and student participation.

3. Increase student engagement and learning outcomes to promote the use of AI ChatBots as a tool that can provide a unique learning experience. This will increase students' interest and ability to remember the content better.

4. Promote lifelong learning and educational innovation to stimulate teachers' continuous professional development by integrating AI in the classroom and creating a culture of lifelong learning and innovation in education.

5. The use of AI ChatBots in education is not just about individual classrooms. It's about supporting education management in line with SDG 4, which aims to provide quality education for all. By promoting equal access to modern educational tools and improving the quality of overall education management, we can contribute to the achievement of these global goals.

Target Audience

1. Foreign teacher working in local schools may face challenges related to language barriers. Cultural differences and adaptation to the local curriculum the project aims to empower these teachers to integrate AI ChatBots into their teaching effectively. Empower to attract and support diverse students

2. School administrators and educational leaders play a crucial role in the success of this project. By understanding the benefits and applications of AI ChatBots, they can effectively promote and support the integration of technology in schools, thereby enhancing the professional development of teachers and improving the overall quality of education.

3. Educational technology coordinators and trainers responsible for implementing technology projects in schools. This project will provide them with knowledge and resources to support the professional development of teachers so that they can fully take advantage of AI ChatBots in the classroom.

4. Policymakers and educational agencies, while not the main target group, are crucial to the success of this project. Understanding the potential benefits and impacts of AI in teaching will enable them to make effective decisions and strategies to improve the quality of education.

Expected Benefits

Expected Benefits of Teaching and Learning Optimization Projects with AI ChatBots

1. Teachers will be able to integrate the use of AI ChatBots in teaching, making the learning process more efficient. This technology is interesting and can be adjusted to better meet students' needs.

2. The use of AI ChatBots to answer common questions, check assignments, and track student progress will reduce the time teachers spend on routine tasks and allow teachers to focus more on teaching quality.

3. Students will benefit from personalized support and immediate answers through AI ChatBots. This individualized approach will not only enhance their interest and understanding but also boost their academic performance, a key advantage of AI in education.

4. Teachers, especially foreign teachers, will gain new skills in integrating modern technology into teaching methods, which will support their professional development and their ability to adapt to new educational tools.

5. The use of AI ChatBots in education encourages a culture of continuous learning and creativity. By providing tools that facilitate learning at all times, AI promotes a lifelong learning mindset among both teachers and students.

A process that brings about better change and audience adoption.

Step 1: Survey the knowledge and understanding of the use of AI ChatBots in teaching and learning from a questionnaire via Google form.
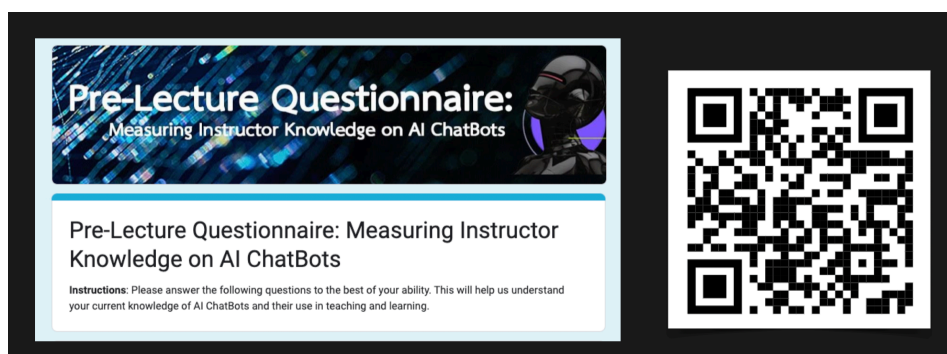

Figure. 2 Cognitive Survey on the Use of AI ChatBots in Teaching and Learning

Step 2: Knowledge Transfer, Teaching and Learning Optimization with AI ChatBots

Results of data analysis

According to the survey of participants before the lecture. Subject: Optimizing Teaching and Learning with AI ChatBots: A Practical Guide for Teachers The details are as follows:

1. Have you used AI ChatBot before?

There were a total of 32 respondents, and the results appeared as a pie graph. as follows
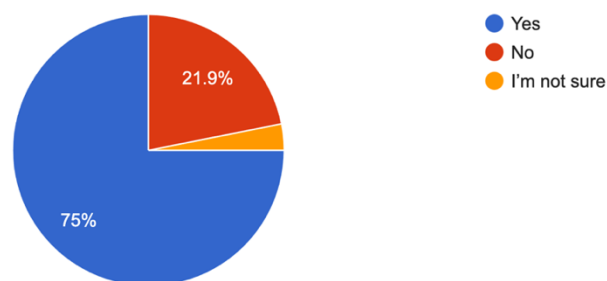

75% have used AI ChatBot, showing that the majority of participants have experience with the technology, while 21.9% have never used it, and 2.1% are unsure, indicating the need for an initial explanation for those who are unfamiliar.

Based on the results of this survey, it can be concluded that although most participants are familiar with AI ChatBot, the lecture should begin with basic information so that those who have never used it or are not confident enough to understand and have a sufficient knowledge base about AI ChatBot before moving on to complex content or higher levels of use.

2. If you have used AI ChatBot before, which AI ChatBot have you used?

There were a total of 26 respondents, and the results appeared as a bar graph. It shows the types of AI ChatBots that respondents have used. as follows
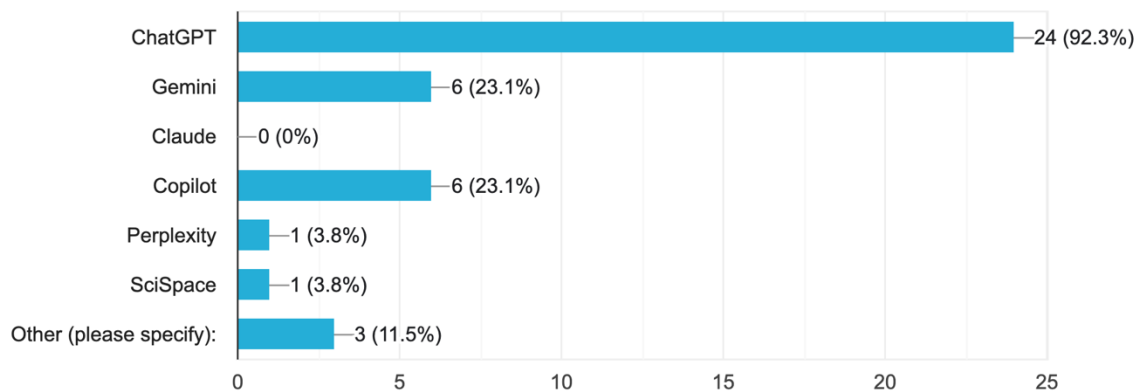
92.3% have used ChatGPT, the most popular tool. Other tools mentioned include Gemini (23.1%) and Copilot (23.1%), and some users mention Perplexity (3.8%) and SciSpace (3.8%).

In conclusion, ChatGPT is an AI ChatBot that is popular and widely known among respondents. While other AI ChatBots such as Gemini and Copilot are also in some use, but to a lesser extent. In addition, there are other AI ChatBots that respondents have used in addition to the selection, which represents the diversity of knowledge and experience of the participants. The lecture should focus on leveraging ChatGPT, a tool that participants are familiar with. Instead, other AI ChatBots that respondents may not have used or known about should be introduced. To increase knowledge and expand the scope of AI ChatBot application in a wider range of ways.

3. How familiar are you with the concept of AI in education?

There were a total of 32 respondents, and the results appeared as a pie graph showing the level of familiarity with the concept of AI in the study, as follows:
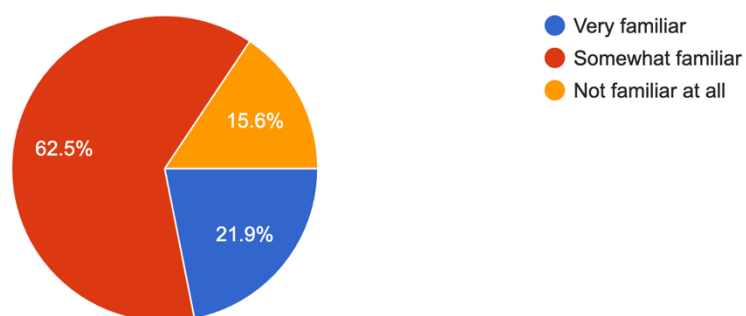
62.5% are somewhat familiar with AI in the study, 21.9% are very familiar with it, and 15.6% are not familiar with it at all. This represents different levels of knowledge. Indicates that basic information should be provided for some people, and insights for others.

In conclusion, the participants of the lecture varied in their level of familiarity with AI in the study. The lecture should begin by explaining the basic concepts and benefits of AI in education, and gradually expand to more complex content. Regardless of the level of knowledge. They can fully understand and benefit from this lecture.

4. What do you think AI ChatBots can do in the context of teaching (select all relevant items)

A total of 31 respondents were surveyed, with the results displayed as a bar graph showing respondents' opinions on what the AI ChatBot can do in the context of teaching. as follows
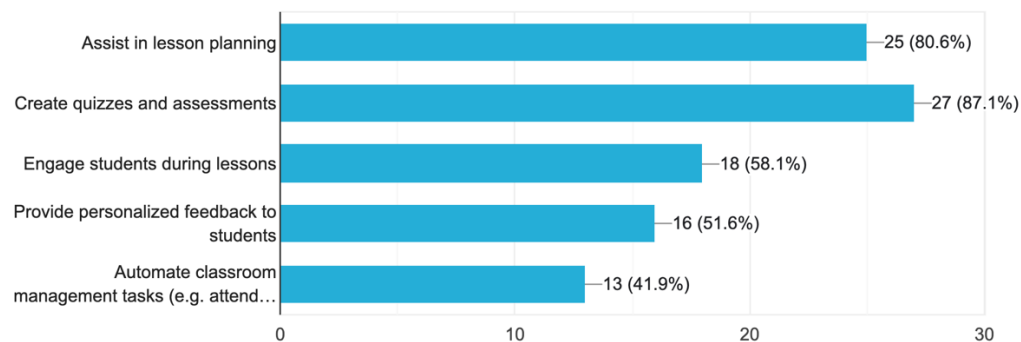

87.1% believe that AI ChatBot can generate quizzes and assessments, while 80.6% believe that it can help with lesson planning. Other comments included student engagement (58.1%), personalized instruction (51.6%), and classroom management automation (41.9%).

In conclusion, most respondents see AI ChatBot as a tool that can significantly improve efficiency in lesson planning and evaluation. Respondents also see AI ChatBot as able to interact with students and provide personalized feedback. However, few see AI ChatBot as being useful in the field of classroom management. The lecture should focus on providing additional knowledge about its application. AI ChatBot in teaching and managing various aspects so that participants can fully see the potential and benefits of AI ChatBot in supporting education.

5. Have you ever integrated AI tools into your teaching practice?

There were a total of 32 respondents, and the results appear as a pie graph showing the lead. AI is used in the teaching process of respondents. as follows
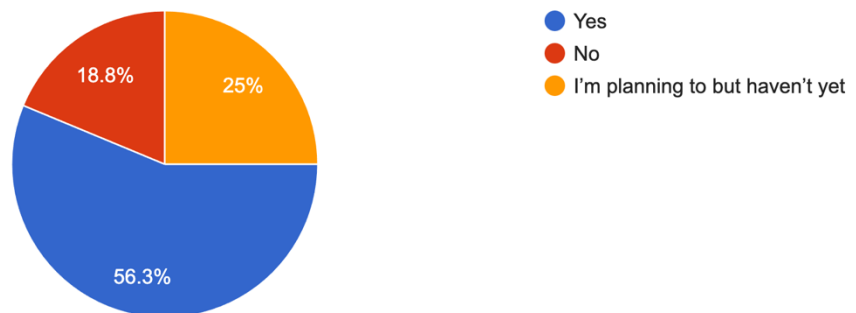

56.3% of the 32 respondents had used AI in teaching, 25% planned to use it but had not used it, and 18.8% had never used an AI tool, indicating different levels of adoption and the need to provide practical advice for those who are not yet starting.

In conclusion, most of the participants have already adopted AI in the teaching process, but there are some participants who are planning to use it or have not used it yet. Therefore, the lecture should tailor the content to cover all groups, from offering in-depth knowledge for those who are experienced, to providing advice and inspiration for those who are not yet active. AI to make it possible for everyone to see the benefits and applications of AI in diverse and effective education.

6. What do you believe are the biggest advantages of using AI ChatBots in education?

A total of 32 respondents were surveyed, and the results appear as a pie chart of respondents' opinions on the biggest advantages of using AI ChatBot in the study:
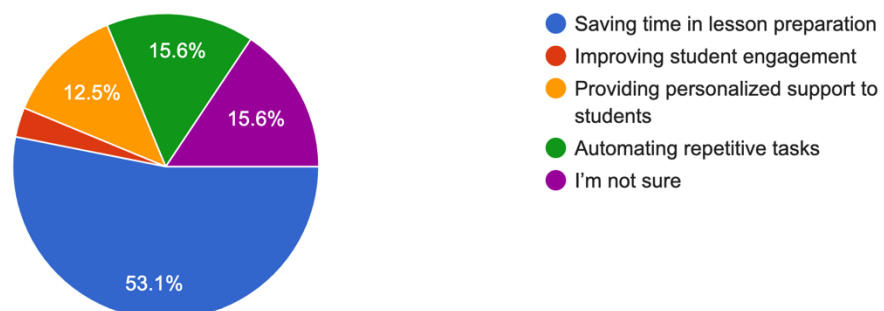
53.1% of respondents believe that saving time in lesson preparation is the biggest advantage. Other comments included automation of repetitive tasks (15.6%), personalized support (12.5%), and increased student engagement (3.1%).

In conclusion, the majority of respondents value AI ChatBot for increasing efficiency and saving time on teaching preparation. While others see the benefits of using it to manage repetitive tasks and provide personalized student support. However, there are still some respondents who are not sure or see the benefits in other areas. The lecture should focus on explaining the various benefits of AI ChatBot so that participants can fully understand and see the potential for its application in education.

7. What challenges or concerns do you have about using AI ChatBots in teaching?

A total of 31 respondents were surveyed, and the results are displayed as a bar graph reflecting the challenges or concerns of respondents regarding the adoption of AI ChatBot in teaching. as follows
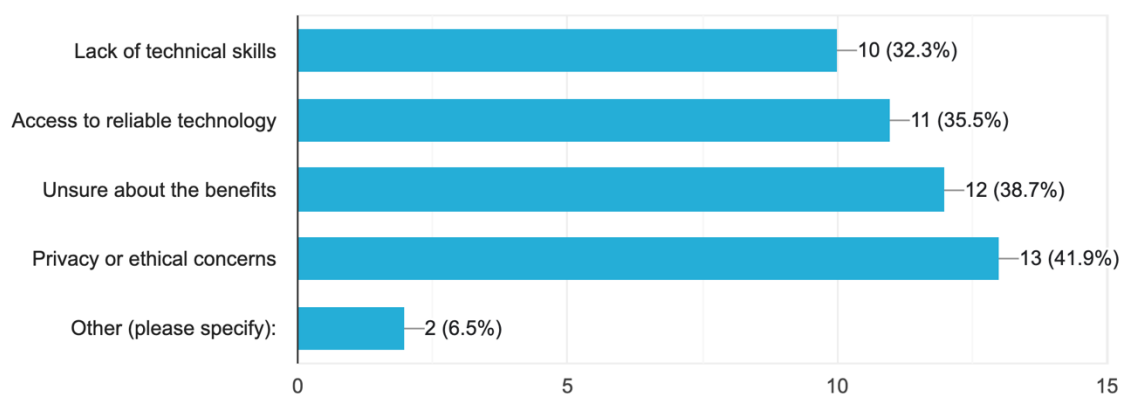

Other privacy and ethical concerns were the top concerns for 41.9% of respondents, including uncertainty about benefits (38.7%), access to trusted technology (35.5%), and lack of technical skills (32.3%).

In conclusion, privacy and ethical concerns were the main concerns of the participants. Another segment of participants was unsure of the benefits of AI ChatBots, and access to reliable technology was a major obstacle. Lectures should provide information that helps address these concerns through demonstrations of how to use AI ChatBot safely,

ethically, and highlight the obvious benefits to strengthen understanding and encourage participants to confidently adopt AI ChatBot in their teaching process.

8. Rate your confidence in using AI tools for teaching purposes (e.g., student assessment, lesson planning).

A total of 32 respondents were surveyed, and the results appear as a pie graph showing their level of confidence in using AI tools for teaching purposes, such as lesson planning and student assessment. as follows
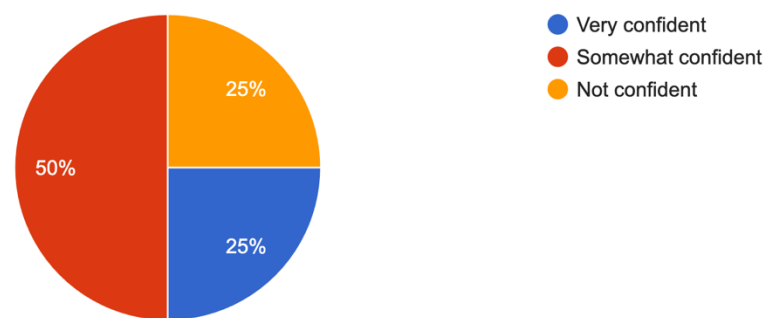
50% of the 32 respondents rated their confidence as moderate. 25% said they were highly confident and 25% said they were not confident. It represents the need to provide a variety of training to suit each person's confidence level.

In conclusion, half of the respondents have a moderate level of confidence in using AI tools, but there are also some respondents who are very confident. While the other group still lacks confidence. Therefore, the lecture should adapt the content to different confidence levels. It provides advanced advice and case studies to those with experience. At the same time, basic training and demonstrations of AI use should be organized for those who lack confidence so that all participants can benefit from the lecture and be able to increase their knowledge and ability to use AI for education to the fullest.

9. What do you hope to learn from this lecture on AI ChatBots?

Participants show a wide range of interests. Want to understand AI ChatBot in practical use? Discover new tools, validate data, and deploy AI in specific educational contexts. Lectures should be designed to cover both technical and classroom application

methods, with demonstrations and examples to strengthen participants' confidence and skills in use. Fully Educational AI

10. What kind of support or training will help you feel more comfortable using AI ChatBots in your teaching?

Respondents emphasized that they need practical training. Preview AI ChatBot usage and technical or financial support so they feel more confident in using these tools. The lecture should focus on organizing practical sessions. It provides previews of best practices and recommendations on optimizing AI applications to meet these diverse needs.

Training Content

1. Introduction

Objective: To contextualize and link projects to SDG 4: Quality education.

1. SDG 4 overview : Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

2. AI Context in Education: A brief introduction to the role of technology, especially AI ChatBots, in improving education management and learning processes.

3. Relevance of International Teachers: Explain the importance of this training in helping international teachers integrate AI tools to meet the needs of local school curricula and drive quality education.

2. The Role of AI ChatBots in Teaching and Learning

Objective: To describe the potential of AI ChatBots to optimize teaching methods and student engagement.

1. What is AI ChatBots? An overview of the functionality in an educational environment (e.g., answering student questions, offering tutoring support, etc.)

2. Benefits of AI ChatBots in Education Include Personalized Learning Experience Streamlined administrative work for teachers Real-time feedback for students, and increased student engagement outside of the classroom.

1. Case Studies and Examples: Provides examples of successful AI ChatBot integration in schools, focusing on the impact on quality education.

3. Practical application in local school curricula.

Objective: To guide international teachers on how to align AI ChatBots with local curricula and improve teaching and learning outcomes.

- Adapting AI ChatBots for Local Course Needs:
  - How to Tailor AI ChatBot Responses to Specific Subjects and Grade Levels
  - Creating interactive lessons using ChatBots that align with curriculum standards.
- Hands-on demos:
  - Using selected AI ChatBot platforms (such as ChatGPT) to create simple lesson plans.
  - Example: Teaching scientific concepts through interactive quizzes assisted by ChatBot
- Teacher support and AI as a collaborative tool:
  - Using ChatBots to reduce the workload (e.g., grading quizzes, answering FAQs) and focus on more personalized teaching strategies.
- Challenges and solutions: Addressing potential challenges (e.g., language barriers, cultural differences) and how to optimize AI tools.

4. Workshop Activity: Using AI ChatBots in Your Classroom

Objective: To provide hands-on experience in designing lessons and integrating AI ChatBots.

- Group Activities:
  - Divide participants into groups to design lesson plans or activities using AI ChatBots tailored to their disciplines and students.
  - Each group will be given a different school curriculum topic to integrate with the AI tool.
- Concept Presentation: The group presents lesson plans and AI ChatBot activities.
- Feedback and Discussion: Teachers discuss potential and challenges in the real classroom.

5. Impact of policies on improving education management

Objective: To link AI ChatBots to the broader policy goal of improving education management for quality education.

- AI ChatBots are the driving force for quality education:
    - How AI tools support the professional development of foreign teachers by strengthening their teaching abilities in line with local curricula?
    - Impact on student learning outcomes and equitable access to educational resources
- Sustainability and Lifelong Learning: Linking the Use of AI ChatBots to Long-Term Learning Outcomes and Continuous Professional Development for Teachers

6. Conclusion and Questions and Answers

Objective: Summarize the lecture and open up space for questions.

- Summary of key points:
    - AI ChatBots are a tool for teaching and learning optimization.
    - Aligned with SDG 4: Quality Education
    - Practical Strategies for International Teachers to Integrate AI into Teaching
- Next step: Encourage teachers to continue exploring the AI ChatBot platform and implement it in the classroom.

Training Duration and Schedule

It takes a lot of time to train. 2 hours

Figure. 3 Pre-training atmosphere

Training methods

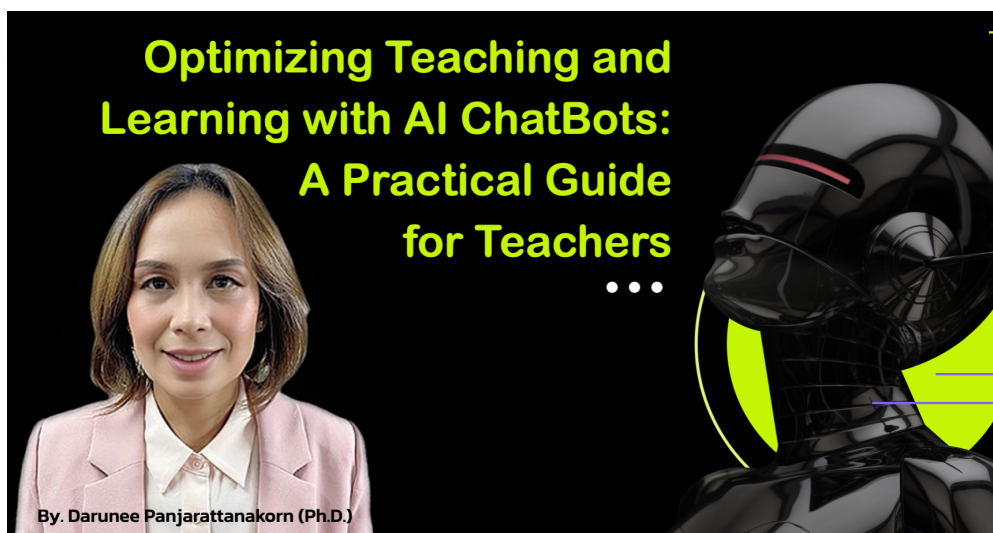Use Demo Practical training and education using electronic media.

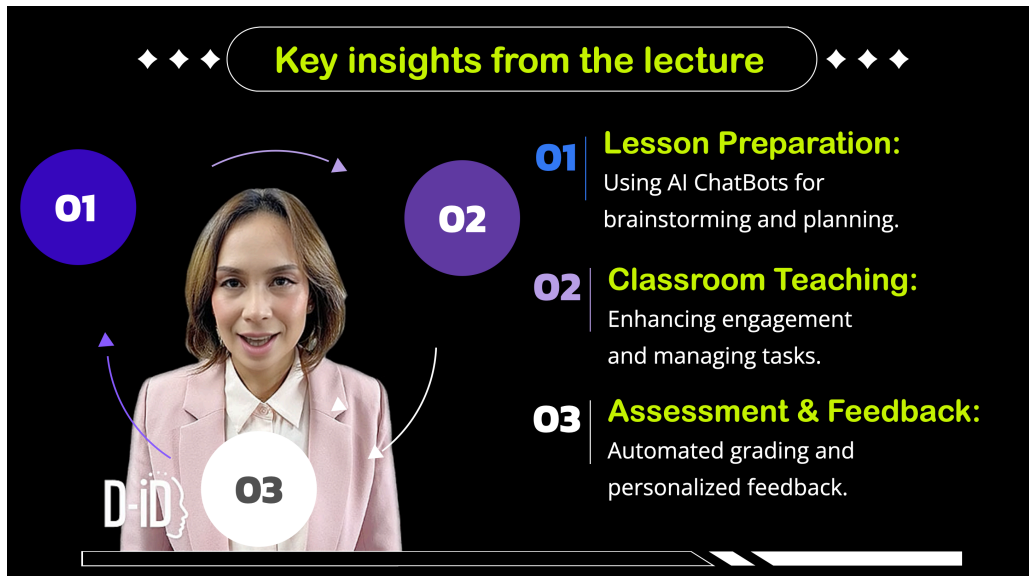**Figure. 4** Atmospheric slides with AI

Figure. 5 Atmospheric slides with AI

Figure. 6 Training Atmosphere

Figure. 7 Training Atmosphere

Figure. 8 Training Atmosphere

Figure. 9 Training Atmosphere

Figure 10 Training Atmosphere

Figure. 11 Atmosphere after the training

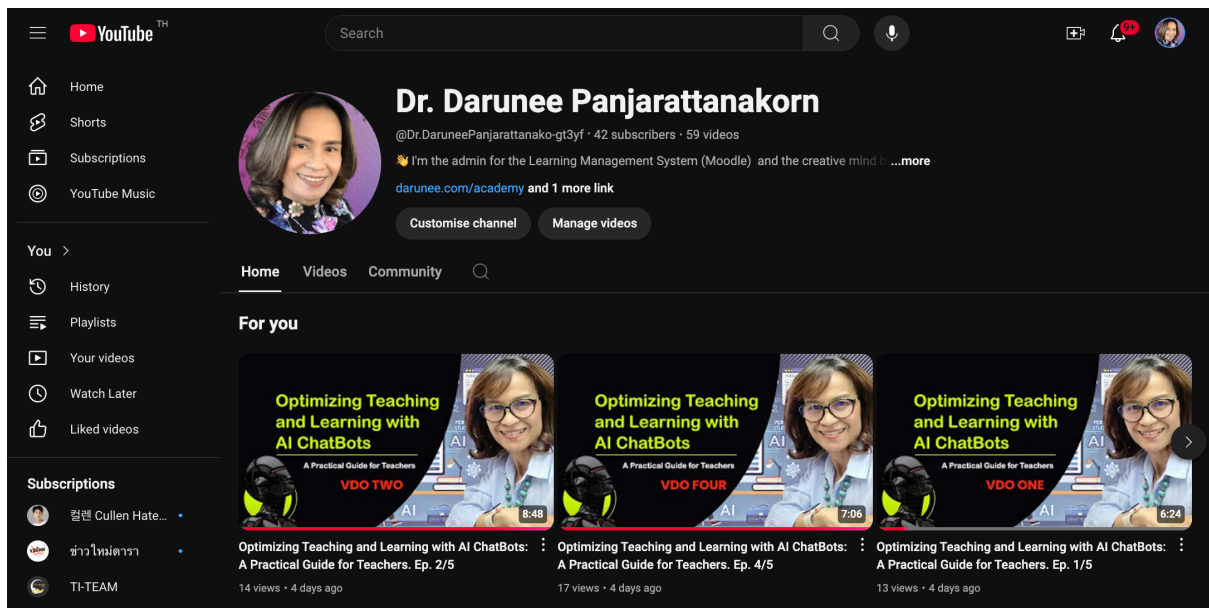

Figure. 12 Learning Platform Dr. Drunee Center

https://darunee.com/academy/course/view.php?id=169

Figure. 13 Channels to promote knowledge content through YouTube

https://youtu.be/y3mo3orOnaI?si=uqPly8Wrm1taZoaC

Assessment and Recommendations

1. Post-lecture evaluation: The teacher completes an opinion form about the training's benefits and potential areas for further development.

2. Follow-up support: A series of follow-up sessions will be held to support teachers in their ongoing integration efforts.

Summary of the post-training evaluation report

"Tech Tools for Teaching in the Classroom or Online" on October 25, 2024 at Phothisan Pittayak School.

The results of the data analysis from the opinions of the trainees on the training on teaching and learning enhancement were also carried out. AI ChatBots: A Practical Guide for Teachers The details are as follows:

1. Understanding the use of technology tools in teaching
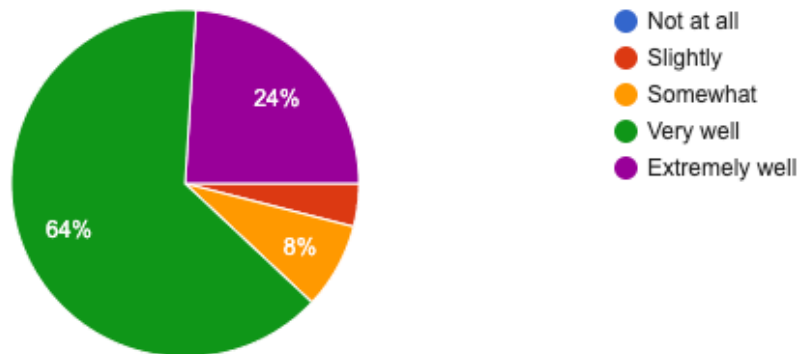
64% of the participants understood the purpose of using technology tools in teaching at a very good level, and 24% understood it at an excellent level, indicating high confidence and full potential to apply technology. Meanwhile, 8% have a moderate understanding, and only 4% have a little understanding. It has been shown that the training is effective in enhancing knowledge for most participants.

The survey results unequivocally demonstrate the effectiveness of the training, with 88% of respondents feeling confident in their understanding at a very good and excellent level. This reassures the audience of the training's positive impact on education, instilling confidence in its effectiveness.

2. Knowledge gained about technology tools for classroom and online teaching.
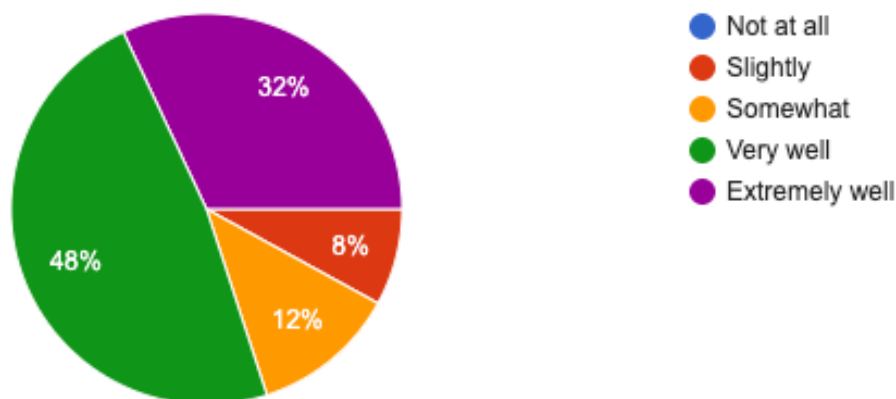
48% feel that their knowledge has increased significantly, and 32% indicate that it has increased to an excellent level. However, 12% felt a moderate increase in knowledge, and

8% felt a slight increase, suggesting that the majority of participants found the training helpful, but some still needed additional support.

These survey results suggest that the training has been highly effective in enhancing participants' knowledge of technological tools for teaching. 80 % of respondents, including those who reported a significant or excellent increase in knowledge, have seen a marked improvement. However, those who experienced a moderate or slight increase in knowledge have the potential to further strengthen their skills through additional support or supplemental training.

3. Confidence in choosing technology tools that are in line with the curriculum
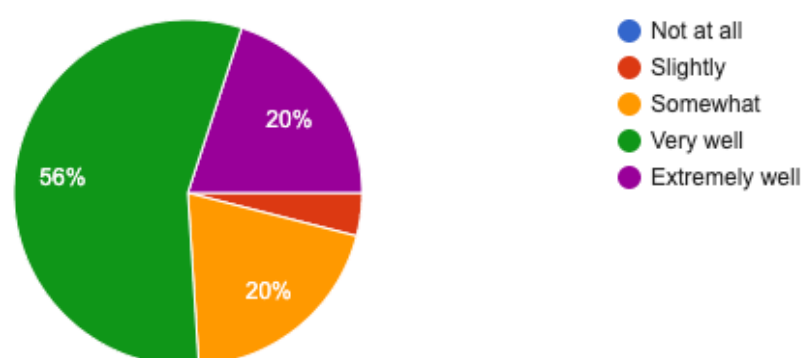
56% have a very good level of confidence, and 20% have a very good level of confidence. However, 20% with moderate confidence also need more training or guidance.

The survey results confirm the effectiveness of the training in boosting participants' confidence in selecting technology tools that align with the curriculum. A significant 76% of respondents, including those with very good and excellent confidence levels, feel confident in choosing the right technology tools for their courses. However, it's also evident that participants with moderate or mild confidence levels could benefit from additional support, such as extra practice or supplementary resources, to further enhance their technology selection and usage skills. This underscores the crucial need for ongoing support and training, ensuring that all participants can effectively use technology in their courses and highlighting the importance of continuous learning and development in this field.

4. Appropriateness of topics covered in the training
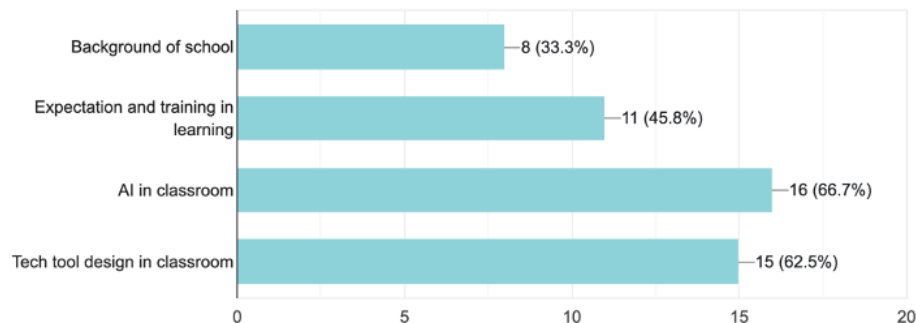
The topic that received the most attention was AI in the classroom (66.7%), followed by technology tool design (62.5%). The topic of the school's background received the least attention (33.3%), indicating the need for practical and applicable content.

Based on the results of this survey, it can be concluded that the participants mainly focused on topics related to the application of technology in the classroom. In particular, the topic of the use of AI and the design of technology tools that are linked to practical teaching These topics received the highest positive responses. The lower level of interest in topics that have little relevance to actual teaching, such as school background, may indicate an urgent need for instructors to focus on content that can be used immediately in teaching development.

5. Confidence in using technology tools to achieve learning outcomes.
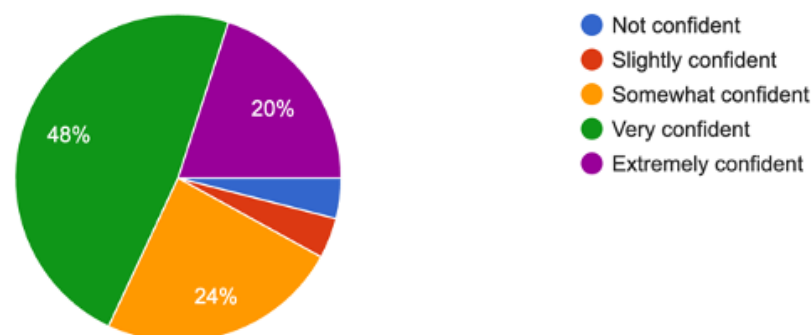

48% have a very good level of confidence, 20% have full confidence, and 24% have moderate confidence, which requires additional support.

According to the survey results, A significant 68% of the respondents, including those with very high and extremely high confidence, are adept at using technology tools to meet

learning objectives. However, it's crucial to recognize that participants with a moderate or minor confidence level may require additional support, such as more practice or supplementary resources, to fully harness the potential of technology in teaching.

6. Confidence in basic technical troubleshooting
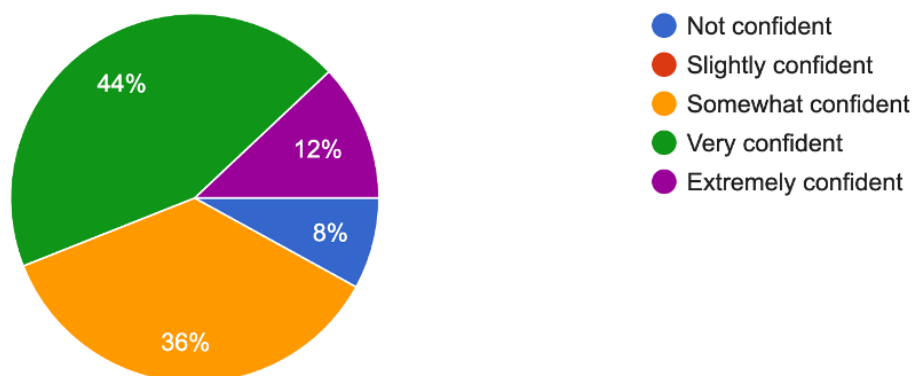
     44% feel very confident, 12% have a great level of confidence, and 36% have moderate confidence, indicating a need for additional training or resources.

     The results of this survey suggest that the training is effective in increasing the participants' confidence. 56% of respondents (including very good and excellent) have a high level of confidence in resolving basic technical issues. However, participants with moderate or minor confidence levels may benefit from additional support, such as additional practice or supplemental resources, to strengthen their confidence in handling technical issues.

7. Seeing the potential of technology to increase student engagement
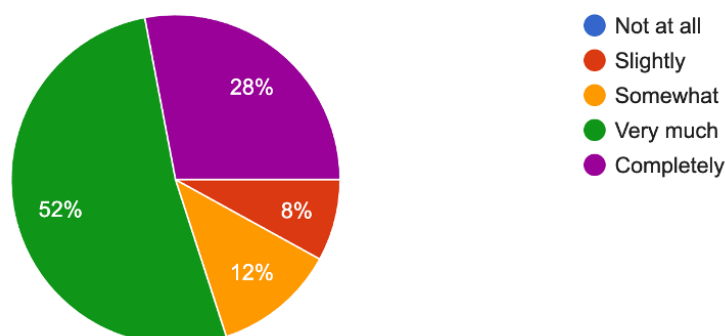
52% believe that technology has significantly increased student engagement, and 28% fully believe, While 20% have medium or low confidence. This indicates the need to provide additional examples.

The results of this survey can conclude that the training is highly effective in encouraging participants to see the potential of the tool to increase student engagement. 80% of respondents (inclusive, very high, and fully) are highly confident that these tools will significantly increase student engagement. At the same time Groups with moderate or modest confidence may benefit from additional support, such as how-to demonstrations or additional resources, to be able to use the tool effectively and achieve good results in teaching.

8. Intention to use technology tools in the lesson plan
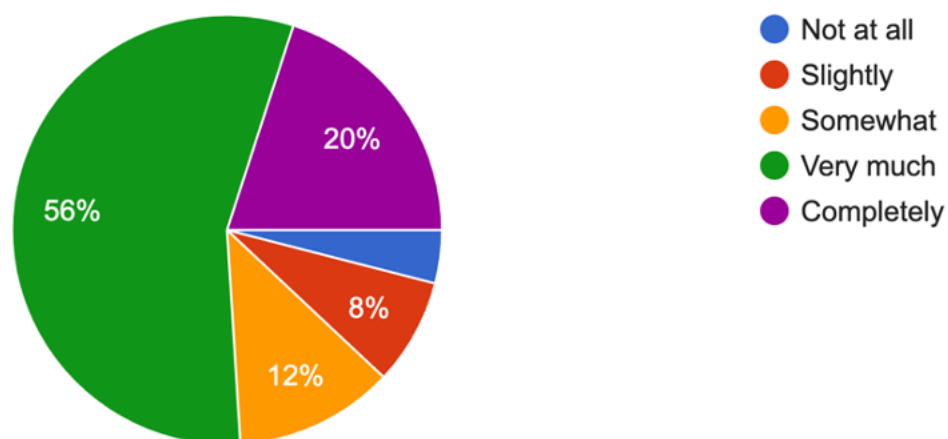
56% have a high level of intention to integrate technology, and 20% have full intention. At the same time, 20% have medium or low confidence, which requires additional support.

According to the results of this survey, the training is effective in stimulating interest and awareness of the value of technological tools. In particular, 76% of respondents (including very high and full) intend to implement technology tools in teaching and learning planning. Meanwhile, Participants with moderate or minor confidence levels may benefit from additional support, such as practical guidance or previews of using confidence-boosting tools.

9. Belief that technology improves student comprehension assessment
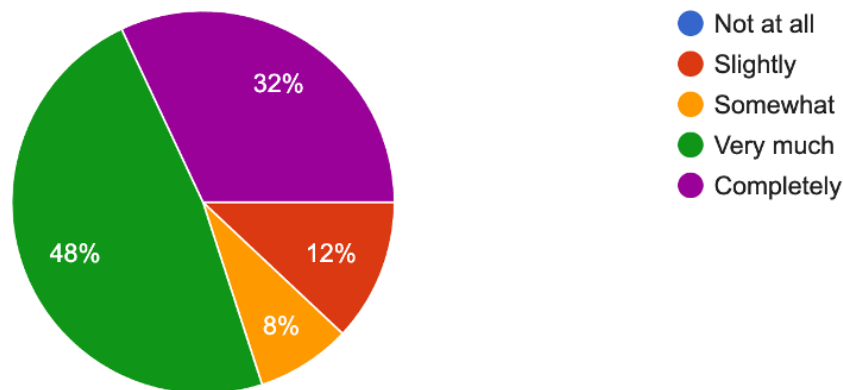
48% believe that technology helps to evaluate much better, and 32% fully believe. Some (20%) have medium or low confidence. This indicates the need for additional demonstrations.

The results of this survey can be concluded that the training is highly effective in encouraging participants to see the value of technology tools in improving students' comprehension assessment. 80% of respondents (very high and fully inclusive) have a high degree of confidence that these tools will help to make student assessments more efficient and accurate. Meanwhile, Participants with moderate or minor levels of confidence may benefit from additional support, such as demonstrations or practical introductions to the implementation of technology in the assessment process, to increase confidence in their use.

10. Appropriateness of the training period
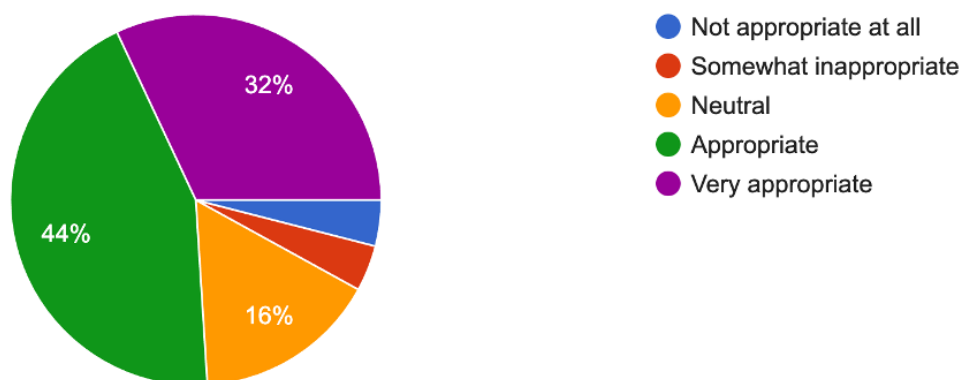
44% felt that the timing was appropriate, and 32% indicated that it was very appropriate. However, 16% had a neutral opinion, and 4% felt it was a little inappropriate. This shows that some people feel that the time should be improved more appropriately.

The results of this survey can be concluded that the training is effective in terms of time allocation, with 76% of the respondents (including appropriate and very appropriate) agreeing that the duration of the training is appropriate and sufficient for learning and activities. At the same time Groups that expressed a neutral opinion or believed the duration was slightly inappropriate may benefit from some future adjustments, such as extending or shortening certain sessions of the training to meet the needs of the participants better.

11. Satisfaction with the training venue
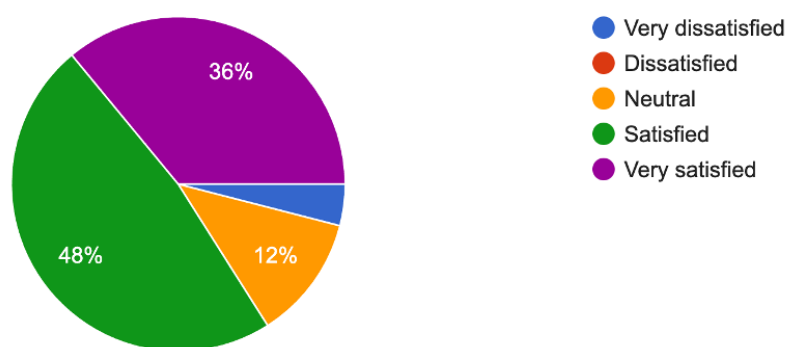
48% are satisfied with the location, 36% are very satisfied, 12% have a neutral opinion, and 4% feel slightly dissatisfied, indicating overall satisfaction but still room for improvement.

The results of this survey can conclude that most of the participants had a high level of satisfaction with the training location. 84% of respondents (including satisfaction level and very satisfied) felt that the venue was suitable for learning and helped them to participate in the training activities effectively. At the same time Groups with neutral or slightly dissatisfied opinions may benefit from some future adjustments, such as exploring new places that may better cater to a diverse range of participants.

12. Consistency of content with teaching needs
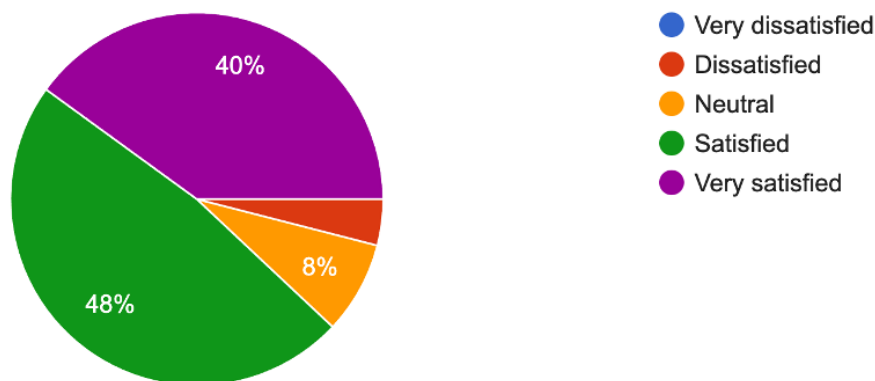
48% are satisfied with the consistency of the content, 40% are very satisfied, 12% are moderately satisfied, and 4% feel dissatisfied. This indicates the need to improve the content more appropriately.

The results of this survey can conclude that the training is effective in meeting the needs of the participants. 88% of the respondents (including the level of satisfaction and very satisfied) think that the content they receive is consistent and can be applied well to teaching. At the same time, Groups with moderate or slightly dissatisfied content may benefit from improving some of the content to better meet the needs of the participants.

13. Additional Comments or Suggestions

Many participants gave positive feedback using short responses such as "Good, Good training, and the lecturers are very skilled." They demonstrated their overall satisfaction with the content and the way the instructor presented it. These messages reflect the appreciation of the training and the knowledge and competence of the instructors whom the participants have recognized.

In terms of suggestions for improvement. Some participants commented on reducing the gap between presentations to reduce the boredom that may arise during the training. This suggestion points to the importance of keeping the presentation continuous and engaging so that participants do not lose interest. In addition, there is a proposal to increase the time and

days for the training, reflecting the needs of some participants who need more time to learn and understand the content in detail.

Some participants have also expressed interest in participating in additional training. It stated that "more seminars to come" which shows the need to continue to develop technology knowledge and is a suggestion that shows positive feedback on the training held as useful and interesting that the participants want to learn more.

Based on the reviews of the participants, it can be concluded that the training has received positive feedback. Participants are satisfied with the content and quality of the instructors. At the same time, there are suggestions for improvement, such as continuing the presentation time and extending the training time to fully cover the content, as well as the need to organize additional training in the future, which shows the interest of participants in learning about technology tools continuously.

14. Need for additional training or support in the field of teaching technology tools

Several responses indicated an interest in the application of AI and related applications in the field of teaching, such as AI applications and Apps in teaching, the use of AI, and others about AI tools, which clearly reflects an interest in the field of learning more about AI technology and how to apply AI in the teaching process. Responses in this manner suggest that participants see the value and potential of AI to help strengthen teaching and are interested in exploring how AI can be used in the real world in the classroom.

In addition, there were responses that indicated an interest in mathematics teaching, including a suggestion to focus on the use of technological tools adapted to teaching specific subjects or fields, such as mathematics. This may help the training be more effective in strengthening teaching skills in various subjects.

For some participants who answered yes or no, it showed that they were satisfied with the training they received and did not feel that they needed additional support, indicating that the current training has fully met the needs of some of the participants.

Based on the participants' feedback, it can be concluded that further training in AI and the application of AI in teaching is in high demand, and participants see the benefits that can be gained from in-depth training on AI technology in teaching. In addition, the need for specialized teaching content, such as the use of technology in mathematics, demonstrates

the need for training that can be adapted to different teaching contexts. At the same time the current level of satisfaction of some of the participants indicates the success of the training that has already been organized in meeting the basic needs of the participants well.

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October 26 , 2024