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Evaluation Report for EL Paso Computes – Teacher Workshops (Oct. 2025)

1. Workshop Overview (Oct 2025)

El Paso Computes hosted the 4th K-12 computer science (CS) and artificial intelligence (AI) professional developments (PDs) from Oct. 8-11th, 2025. Based on feedback from previous workshops (including both teacher participants and instructors), the project adjusted its format to better help teachers across different grade levels build the necessary competencies to teach CS and AI. Instead of hosting two workshops (one for elementary level and one for secondary level teachers), the project separated middle school level teachers from high school teachers. The rationale is that we noticed the gap in CS knowledge and skills between these two level teachers. This gap meant middle school teachers found it difficult to keep up with the secondary level workshop content, which required a background in certain programming languages (e.g., Java and Python) that most lacked. This strategic restructuring proved effective, resulting in higher engagement and more positive feedback from each level school participants as the results shown in this report. Consequently, the project moved to a three-workshop model, creating separate tracks for elementary, middle, and high school teachers.

For each Professional Development (PD) workshop, we designed distinct themes tailored to help teachers build their Computer Science (CS) content knowledge and pedagogical content knowledge.

- The elementary level teachers' PD maintained the original focus: designing activities to build teachers' fundamental understanding and practical application of computational thinking (CT). We also introduced basic CS and AI concepts, primarily demonstrating how to use AI tools, such as MagicSchool, to assist with teaching.
- The middle school level workshop combined CT knowledge and AI literacy development. Teachers explored the role of AI in CT teaching and learning, specifically learning how Machine Learning (ML) models recognize patterns and make decisions. Through this exploration, we aimed to provide middle school teachers with a new lens on how to teach CT concepts central to AI, moving instruction beyond just coding and algorithms to a more realistic and comprehensive view of how AI works.
- The high school level workshop focused strongly on enhancing teachers' AI literacy and upskilling their foundational CS skills through AI. We also helped teachers develop the capacity to integrate CS and AI literacy into their instruction.

To achieve these goals, we designed the workshop activities with a clear structure and progression, moving from fundamental CS and AI concepts to practical lesson creation and ethical considerations. We demonstrate the design for each PD in the following Tables 1, 2, and 3. By focusing on CT knowledge and skills for the lower level, connecting CT and AI literacy development at the middle school level, and ultimately enhancing AI literacy for high school, our El Paso Computes project aims to create a coherent, vertical K-12 pathway for CS and AI literacy development.

Table 1. Elementary CT Workshop Overview

	Topic	Content/Activity
Day 1	CT and CS	The instructor introduced the basic knowledge of CS and CT knowledge, namely decomposition, algorithm, pattern reorganization and abstract.
Day 2	CT Unplugged Activities	▪ The instructor introduced two unplugged activities to teachers first and then explained the goal and rules. Teachers worked in groups to collaborate on the task. Finally, the instructor led

		discussions about what they did and connected their actions to CT concept -Algorithm. ▪ The instructor introduced the resources where teachers can find more CT unplugged activities, how to assess the resource whether it is fit for teachers' own teaching goal.
	CS and CT Plugged Activities	▪ The instructor introduced a plugged activity "Analyzing Orbital Motion" using excel. This activity connects to multiple CT concepts, such as Abstraction, Pattern Recognition, and Algorithm etc. ▪ Teachers were introduced to Scratch and tried programming on Scratch for their first time.
	AI as a tool to teach CS and CT	▪ Teachers were introduced to *MagicSchool* (http://www.magicschool.ai) – an AI tool to help teachers create TEKS-based lesson plan to enhance a specific teaching or learning task.
Day 3	Creating a CT Class Module	▪ To consolidate teachers' understandings of CT concepts, the instructor led teachers through a real-world case analysis using their knowledge. ▪ The instructor demonstrated some CT module classes. Teachers then work in groups to create a CT module class. ▪ Teachers showcased their module classes.

Table 2. Middle School CT and AI Workshop Overview

	Topic	Content/Activity
Day 1	CT and CS	▪ Same as elementary workshop, the instructor introduced the basic knowledge of CS and CT knowledge.
Day 2	CT Unplugged Activities	▪ The instructor introduced two unplugged activity to teachers first and then explained the goal and rules. Teachers worked in groups to collaborate on the task. Finally, the instructor led discussions about what they did and connected their actions to CT concept -Algorithm. ▪ The instructor introduced the resources where teachers can find more CT unplugged activities, how to assess the resource whether it is fit for teachers' own teaching goal.
	CT and AI	▪ Instructors introduced the fundamental AI and ML concepts. ▪ Teachers learned about ML through hands-on activities using tools and AI teaching curriculum, such as Teachable Machine for AI model training and a lesson teaching about decision tree developed by Georgia Tech University. The design of the activities aimed help teachers understand the concept. No coding involved.
	AI Tool for Curriculum Design	▪ Teachers were introduced to *MagicSchool* (http://www.magicschool.ai) – an AI tool to help teachers create TEKS-based lesson plan to enhance a specific teaching or learning task.
Day 3	Creating a CT Class Module	▪ To consolidate teachers' understandings of CT concepts, the instructor led teachers through a real-world case analysis using their knowledge.

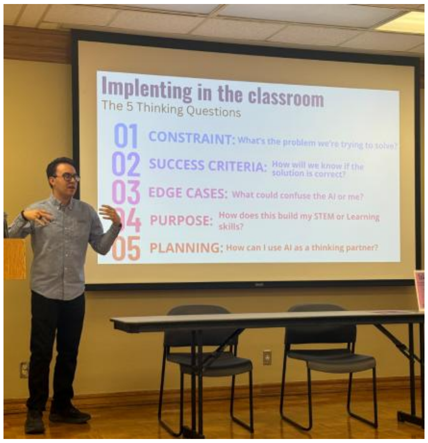
		▪ The instructor demonstrated some CT module classes. Teachers then work in groups to create a CT module class. ▪ Teachers showcased their module classes.

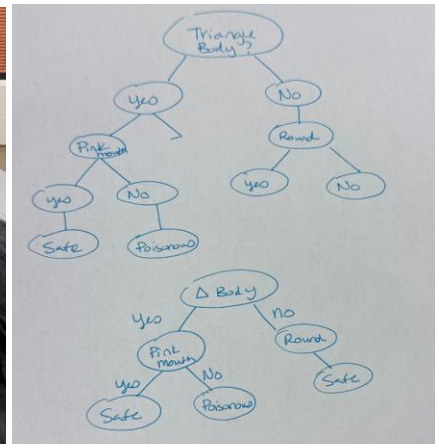
Table 3. High School CS and AI Workshop Overview

	Topic	Content/Activity
Day 1	Introduction to CS, AI, and Prompt Engineering	▪ Instructors helped teachers clarify the relationships between the main foundational CS and AI concepts. ▪ Instructors briefly reviewed computing languages (e.g. Java, C#, and Python) in terms of the compatibility, ease of use and applications of three computing languages. ▪ Instructors introduced teachers to AI prompt-engineering.
Day 2	Introduction to Generative AI (GenAI) and ML	▪ Instructors led teachers to dive into GenAI and ML models through hands-on activities using tools and AI teaching curriculum, such as Teachable Machine for AI model training and a lesson teaching about decision tree developed by Georgia Tech University. Teacher then tried to decision tree algorithm in Python to accomplish a classification task. ▪ Instructors led a discussion on ML in real-world applications, and the kinds of decisions computers make (e.g., Classification, Prediction, Recommendation, Planning & Scheduling).
	Pedagogical Application	▪ Teachers also explored pedagogical approach to teach AI to high school students. ▪ Instructors introduced various resources where teachers can find ready-to-use materials for their own classroom teaching. ▪ Teachers were encouraged to plan and design an AI module lesson, with demonstrated examples across subject such as Math and Science. ▪ Three teacher participants eventually showcased their design of AI module lesson for teaching CS, Math, and Graphic Design.
Day 3	AI ethics, Societal Impacts	▪ The workshop designed a dedicated session on AI Ethics in Computing and Ethical Use of AI. Discussion topics include AI Bias, the societal impacts of AI, and whether AI makes better decisions than people. ▪ Teachers shared their understandings and thoughts on how to properly use AI in learning and teaching.

Eventually, the project attracted 50 participants in total. Elementary PD accommodated 30 in-service and pre-service teachers; the middle school PD hosted 12 in-service teachers; high school workshop had 8 participants. We included some of the pictures taken during the workshop demonstrating their activity and engagement.

Figure 1. Teachers presenting, doing hands-on activities





2. Evaluation Description

For the Oct. evaluation, the research team conducted the evaluations by using the same retrospective pre-test surveys as we did in March, June and July 2025 with minor changes. We changed all negative statements to positive ones (e.g., "I am not comfortable with talking about ethical use of AI in my classroom." Changed into "I am comfortable with talking about ethical use of AI in my classroom".) Briefly, we performed a five-point Likert-scale retrospective pre-test survey on all teacher participants (1 = not at all to 5 = very much). The survey posed questions to assess teachers perceived confidence in terms of their basic computer science (CS) and artificial intelligence (AI) knowledge (8 questions) and computational thinking (CT) knowledge and skills (9 questions), teachers' attitude to use and teach CS and AI (10 questions), and their willingness to use and teach CS and AI (4 questions). In the survey, we asked teachers to rate the level for each statement before and after attending the workshop. Table 3 presented the constructs the survey examined aligned with each individual question. We used the survey to gather teachers' perceptions about both before and after the workshop.

Table 4. Retrospective pre- and post-survey

Constructs	Item
CS & AI content knowledge	▪ My understanding of basic CS concepts ▪ My knowledge of programming language(s) ▪ My understanding of Generative AI ▪ My knowledge of ethical issues of using AI ▪ My ability to explain CS concepts to my students ▪ My ability to explain programming language(s) to my students ▪ My skills in using AI ▪ My skills in finding resources (i.e. AI tools) to help my students with their coding problems ▪ My ability to teach CS using prompt-engineering
CT knowledge and skill	▪ I can describe fundamental computing concepts (e.g., loops, variables, algorithms, conditional logic). ▪ I can read a formula (e.g., algorithm, equation, input/output process) and explain what it should do. ▪ I can plan out the logic for a computer program even if I don't know the specific programming language.

	▪ When I'm presented with a problem, I have difficulty breaking it down into smaller steps. ▪ I struggle to generalize solutions that can be applied to many different problems. ▪ I am good at finding patterns in data. ▪ Computational thinking can be incorporated in my current curriculum. ▪ Computational thinking can be incorporated in the classroom by allowing students to solve problems. ▪ I can create computing activities at the appropriate level for my students.
Teacher attitude to use/teach CS &AI	▪ Learning about computing can help my students become more engaged in school. ▪ Knowledge of computer programming is needed for my students to remain competitive for jobs by the time they are adults. ▪ I am comfortable with learning computing concepts. ▪ I think computer science is interesting. ▪ The challenge of solving problems using computer science appeals to me. ▪ I am always interested in taking computing courses if I were given the opportunity. ▪ AI is something that should be taught to K-12 students. ▪ I am comfortable with using AI to help my students solve coding problems. ▪ I am comfortable with teaching my students how to use AI to solve coding problems. ▪ I am comfortable with talking about ethical use of AI in my classroom.
Teacher willingness to use/teach CS & AI	▪ I am willing to teach CS concepts that I learnt from this workshop to my students. ▪ I am willing to use GenAI by myself. ▪ I am willing to use GenAI to help my students learn CS and solve their coding problems. ▪ I am willing to teach my students how to use GenAI to generate code and solve coding problems by themselves.

The survey was disseminated at all workshops through using google form. In this report, we presented the pre- and post-survey results of teachers' perceptions based on their overall survey responses as well as their responses in each construct.

In addition to surveys, we also collected qualitative data to understand teachers' experience, their perceptions of their CS, CT and AI knowledge and skill development. The questionnaire asked teachers to provide a short answer to the questions: 1) *What's your overall experience with our 3-day workshop 2) What is the most surprising or impactful insight you gained from this professional development?* 3) *What changes would you like to make to your classroom after participating the workshop?* 4) *What further support or resources do you feel you need to effectively implement the knowledge learnt from this workshop in your classroom?* The answers were collected through Google Form at Elementary and Middle School workshops, and in-person discussion at High School workshop. In this report, we highlight teachers' responses, which indicate their experience.

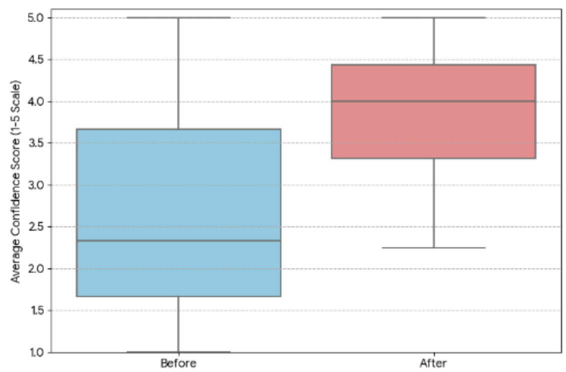
3. Evaluation Results

In this section, we present the results from the qualitative and quantitative data analyses, focusing on teachers' capacity development and their perceptions of the El Paso Computes program. The findings are structured to first report on the collective data from all participants, followed by a detailed breakdown based on the specific workshop level of participation. For grade-level specific analysis, we report the findings in terms

3.1. Overall Evaluation

We first performed paired sample t-test comparing all teacher participants' overall average confidence level before and after the workshop. The result indicates a statistically significant increase in confidence after the PD, with an overall average mean score increase from (M = 2.538, SD = 1.134) before workshop participation to mean (M = 3.878, SD = 0.691) after the workshop (t (49) = - 8.458, $p < .001$, d = 1. 196). Figure 2 presents the overall mean difference of before and after our PD workshops.

Figure 2. Boxplot of mean difference of teachers before and after attending the workshop



3.2. Elementary Teacher CT Workshop Evaluation Results

The paired sample t-test examined the overall differences of elementary teachers' perceptions of their confidence growth regarding CT knowledge and teaching CT before and after they attended the workshop. In addition, we also evaluated the differences in terms of each survey contract, such as teachers' confidence on CT knowledge and skill, their attitudes on using AI to teach, and their willingness to teach CT, CS and AI. The results showed that there was a statistically significant difference between teachers' perceptions before (M = 2.607, SD = 1.134) and after workshop (M = 3.873, SD = 0.691). Teachers perceived their confidence in CT knowledge and their attitude of using the knowledge and skills to teach CT were significantly increased after attending the workshop (t (29) = -5.938, $p < .001$, d = 1.07).

In terms of each construct, as shown in Table 4, the results indicate significant differences between pre- and post-survey responses on all four constructs, which indicates that there were increases in teachers perceived confidence of CS, CT and AI knowledge, meanwhile, their attitude and willingness to teach CS and using AI also increased.

Table 5. Results of paired sample t-tests of elementary teacher retrospective pre- and post-survey by each construct ($p < .001$)

Construct	Pre-survey		Post-survey		t (29)
	M	SD	M	SD	
CS & AI content knowledge	2.625	1.153	3.854	0.670	5.406
CT knowledge and skill	2.794	0.909	3.806	0.518	5.348
Teacher attitude to use/teach CS &AI	3.414	0.763	4.316	0.572	6.377

Teacher willingness to use/teach CS & AI	3.241	0.972	4.310	0.577	5.407

We further inquired about the reasons for the increases by using teachers' questionnaires and analyzed the responses. We performed thematic analysis on the questionnaire questions. There are four major themes emerged from data.

Theme 1: Enhancing teachers' understanding of CT concept

When inquiring what was the main takeaway of the workshop, teachers shared the most impactful insight that they realize computational thinking is not solely about coding or computers, but a set of problem-solving skills they and their students already use in everyday life. In addition, teachers appreciated that the workshop reframed CT as a literacy skill that students should develop at early stage of education, which can be used to solve not only computing problems but applicable to problems in real-world. In general, our workshop reconstructs CT as "unplugged" and ubiquitous form of metacognition.

> "*The most impactful insight I gained was learning the academic vocabulary of computational thinking, I had not realized that we were already incorporating these skills in the classroom*."

> "*Plenty of ways we could implement computational thinking without the use of computers*."

While the overall response to the content regarding CT concepts was positive, the concept of *Abstraction* was repeatedly cited as the most difficult or abstract content to fully grasp and apply in practice. Teachers also noted a general challenge in differentiating and correctly categorizing the four core CT concepts (decomposition, pattern recognition, abstraction, and algorithms).

> *"I still find abstraction a little challenging, I'm not too clear on where to draw the line between what's important and what can be left behind."*

> *"The most challenging concept of computational thinking I encountered is abstraction. While I understand that it involves focusing on the most important details and ignoring unnecessary information, I sometimes struggle with deciding which details are important or not."*

Theme 2: Shifting in educator role from content deliverer to thinking coach

We also inquired about how and whether the PD changed their understanding of their roles as an educator. Teachers shared that they experienced a significant expansion in their understanding of teacher's role. They now view themselves less as mere content deliverers and more as coaches or facilitators responsible for explicitly teaching problem-solving, logical thinking, and critical analysis across all subjects. There is also a strong sense of empowerment to prepare even their youngest students for the future. Some direct quotes shared by the teachers are retrieved to show as evidence, as follows.

> *"It made me see my job less as 'deliver the lesson' and more as 'coach a thinking process.' With CT, I'm guiding kids to break things into steps, name patterns, test ideas, and fix them without melting down."*

> *"I see my role as an educator in a new way, I can help students become problem solvers and critical thinkers, not just learn how to follow directions."*

> *"This is going to be great at making the students responsible for their own learning. They will be able to take ownership and it will be more meaningful for them."*

Theme 3: High demand for practical, ready-to-use resources and ai training

When asking about what additional support they need from the workshop, teachers responded that their foremost need for future support is for practical, classroom-ready materials that simplify implementation. This includes grade-level-specific examples, printable guides, and more hands-on activities. Additionally, many teachers expressed a desire for more training on Artificial Intelligence (AI) tools demonstrated in the workshop, such as Magic School AI.

> "*I need practical lesson examples, step-by-step guides for teaching CT skills, digital tools for visualizing problems, and opportunities to collaborate with other teachers to improve implementation*."

> "*I would like to receive trainings on AI and how/what ways to incorporate it into the classroom effectively and efficiently*."

> "*I would like to complete the certifications for magicschool.ai to have a better understanding of all the AI tools offered that I can use in my classroom*."

The project team members well received the feedback. We acknowledged the challenges and expectations teachers expressed. The feedback will help us improve our elementary workshop in terms of providing more classroom facing and more ready-to-use materials. In addition, with increasing interest toward AI education, our team will work on reimaging the role of AI in early childhood education through focusing on enhancing the teacher's capacity to deliver personalized learning, rather than replacing the essential human interaction. Through that, we hope teachers can focus on developing young children's awareness of AI.

3.3. Middle Teacher CT and AI Workshop Evaluation Results

We collected 9 responses out of 12 participants. Similarly, we conducted paired sample t-test to examine the differences of teachers' perceptions before and after they attended the workshop based on the overall survey results. Due to the low number of total participants and survey responses, we included Cohen' d to show the effect size, which indicates the significance of the t-test results and its practical importance. Cohen's d with a value larger than 0.8 indicates large effect. The result shows that there is a statistically significant difference between teachers' perceptions of their confidence before the workshop ($M = 2.125$, $SD = 1.409$) and after they attended the workshop ($M = 3.578$, $SD = 0.938$, $t\ (8) = 3.220$, $p < .01$, $d = 1.138$).

In terms of each construct, as shown in Table 6, the results showed marginal to significant differences between the pre- and post-survey responses on the four constructs. Teachers perceived their confidence increased significantly in terms CT knowledge and skills, attitude and willingness to use/teach CS and AI ($p <. 001$). However, marginal increase in their confidence of CS and AI knowledge ($p < .05$). This

Table 6. Results of paired sample t-tests of secondary teacher retrospective pre- and post-survey by each construct ($p < .05$)

Construct	Pre-survey		Post-survey		*t* (8)
	M	*SD*	M	SD	
CS & AI content knowledge	2.208	1.656	3.771	1.014	2.570
CT knowledge and skill	1.833	0.695	3.870	0.622	8.447
Teacher attitude to use/teach CS &AI	2.883	0.646	4.483	0.534	8.593
Teacher willingness to use/teach CS & AI	3.300	1.408	4.600	0.548	2.764

For the questionnaire responses, middle school teachers reported an overall positive experience, highlighting that they appreciated the project workshop strengthen their understanding of CT knowledge through the introduction of fundamental CT concepts and through some AI activities. In general, two main themes emerged indicating teachers' PD experience.

First, similar as elementary teachers, middle school teachers also recognize the universal applications of computational thinking skills to problem-solving. They further shared that

> "*One key shift is that I've started to view my lessons through the lens of process over product. Instead of focusing solely on whether students arrive at the correct answer... I'm more intentional about teaching them how to think.*"

> "*After learning about computational thinking, I now see my role as helping students become problem solvers, not just learners. It's about guiding them to think logically, break down tasks, and find creative solutions.*"

Second, we are thrilled to see that teachers shared specific feedback and comments related to Artificial Intelligence (AI) and Machine Learning, primarily from the perspective regarding the integration of these concepts into a Developmental Skills Classroom. Teachers shared that they found the introduction of accessible AI tools (e.g., Google Teachable Machine) highly valuable for students.

> "*I liked the google teachable machine website that was shared. I think that this is an amazing opportunity to show students with moderate to severe disabilities how you can train an AI model. It's a great start to getting my students into this subject*."

Teacher also shared that the primary challenge they met regarding teaching AI is the conceptual difficulty of explaining how AI works, specifically the lack of transparency in its decision-making process.

> "*I think I don't quite understand how to explain what happens in an AI that is a "black box" with its own pattern recognition/analysis to students. I don't often see a confidence interpretation with that kind of AI, so it feels challenging to explain that it can still be wrong despite the technology advancements*."

During the workshop, the project team introduced machine learning along with a hand-on activity explaining decision tree. As the content was the first time added to middle school workshop, we only planed 1 hour to cover both the machine learning knowledge and complete the activity. Based on this feedback, we will plan dedicated sessions in the future to help teachers gain the confidence to explain AI models and discussing ethical issues of AI with their students.

3.4. High School Teacher AI Workshop Evaluation Results

All high school teacher participants completed the survey. The paired sample t-test results also show a statistically significant difference between teachers' perceptions before the workshop (M = 2.688, SD = 1.025) and after the workshop (M = 4.118, SD = 0.445, t (7) = 4.579, $p < .01$, d = 1.526). The result indicates that the workshop has a positive effect on teachers' overall perceptions.

In terms of each construct, as shown in Table 6, the results showed marginally to no significant differences between the pre- and post-survey responses. Among all four constructs, only teachers' attitude to use and teach CS and AI showed no significant differences before and after workshop. However, among all four constructs, teachers' attitudes showed the highest mean score (M = 3.800) before teachers participated in the workshop. Therefore, this ceiling effect makes hard to detect the difference before and after workshop. We will use the qualitative data to further investigate their attitudes.

Table 7. Results of paired sample t-tests of secondary teacher retrospective pre- and post-survey by each construct

Construct	Pre-survey		Post-survey		*t* (7)
	M	*SD*	M	SD	
CS & AI content knowledge	2.375	1.122	4.188	0.488	3.725
CT knowledge and skill	2.889	0.770	3.644	0.308	2.814
Teacher attitude to use/teach CS &AI	3.800	1.239	4.740	0.313	1.970
Teacher willingness to use/teach CS & AI	3.300	1.408	4.600	0.548	2.764

At the last day of the 3-day workshop, high school teacher participants engaged in a discussion with the workshop instructor regarding. Teachers shared their overall experiences with the workshop, their main takeaways, and their plans of teaching AI in the future. Based on the discussion, we summarized the results in xx themes.

Theme 1: Workshop Demystifying AI

Teachers shared that they gained a better understanding of what is AI throughout the 3 days of workshop. A primary theme is that teacher believe they need to move their students' belief beyond viewing AI as a "cure-all" or an "all-knowing thing" and to educate students on the underlying mechanisms and limitations of the technology. As the workshop designed to enhance teachers' AI literacy through AI content knowledge, teachers gained a better understanding of the processes involved in AI, moving past the misconception that AI simply generates answers "out of nothing". Participants felt they gained critical knowledge about the specific algorithms driving AI, such as KNN and Decision Tree classifiers, which they were previously unaware of. They also realized that AI education is about teaching students *how* the processes work—that the information they feed into it is the information they get out. It involves understanding concepts like classification and pattern recognition. In general, the focus on AI content knowledge helped broaden the teachers' perspective on AI beyond just chatbot tools, such as ChatGPT.

> "*I think my biggest take away on what AI education is is the algorithms. I think understanding algorithms is the key because prior to this past summer. I had never heard of KNN. I had never heard of Naive Bayes or Random Forest classifiers or any of that...*"

Theme 2: AI as a tool, not a replacement for thinking

A second theme emerged from the data is that teachers consistently emphasized that AI should be treated as a tool to assist and augment learning, similar to a calculator or a hammer, which requires proper knowledge and judgment to use effectively. Students must be taught to think critically and use their own judgment instead of blindly following AI's output.

> "*Teaching our students to like **critically think** while they're using the AI tools as a tool, understanding that AI is not always correct and it can be biased...*"

> "*I said well, hold on as like, just because you get to use a tool, **doesn't mean you know how to use the tool**... without the knowledge of using the tool, that calculator is just a fancy paperweight with buttons on it. And so does AI.*"

Theme 3: Ethical and Safety Concerns

Teachers also shared that they appreciated that the workshop included a significant portion of the discussion centered on the ethical implications and safety concerns that must be addressed with students, especially regarding data privacy and the integrity of their work. A major concern is the issue of privacy, specifically the mechanism of how devices like phones and smart speakers are constantly "listening" and collecting data. Students must be made aware that their data is stored and does not "just go away".

> "*I think I mentioned it the other day about them [students] being careful with what they say. Since the phones are always listening... So don't go saying that you're going to, you know, someone important. And I'm not even going to say it because I know my phone's listening...*"

Theme 4: Classroom Implementation and Pedagogical Change

Teachers expressed enthusiasm and a concrete plan to integrate AI into their teaching, both as a subject of study and as an educational tool. Some teachers plan to dedicate entire units to teaching AI concepts, focusing on the underlying algorithms. Other teachers plan to model ethical and appropriate use of AI in front of their students and introduce concepts "little by little" in everyday conversations. Most teachers expressed interest to focus on project-based learning approach that connect AI knowledge to real-world community problems.

> "*For sure I'm Going to be teaching AI for the next 9 weeks. So, we will talk about the prompt-engineering and prepare for artificial intelligence project challenge*."

> "*I've already kind of started looking at what are El Paso's community problems and. How can AI help that?*"

As shown, the results of data analysis indicate that El Paso Computes workshop has a positive effect on teachers from all grades level on their confidence, attitude, and their willingness to teach CS and even to use AI to facilitate their students learning.

4. After Workshop Follow-up and Support

Following the El Paso Computes PD workshop, the research team from UTEP college of education is committed to sustained engagement to ensure the successful and impactful integration of AI education into the classroom. Thus, we have been providing ongoing support includes fostering a collaborative professional learning community where teachers and researchers can co-author and present at joint conferences. In early October, research team and two teachers have submitted a proposal to Computer Science Teacher Association Annual conference. The proposal focuses on integrating AI into developing crucial problem-solving and critical thinking skills in the Computer Science (CS) classroom. Two teachers collaboratively designed an AI toolkit based on prompt-engineering approach. This pedagogical tool can help students transition from basic AI use to thoughtful collaboration by addressing key steps, including clearly defining purposes and constraints of a task, setting success criteria, identifying edge cases, and instructing AI to lay out step-by-step guidance before providing final answer. Furthermore, the project team also provided targeted assistance to teachers in implementing key projects, such as supporting their students' participation in the Presidential AI Challenge, where students develop AI solutions to community problems. Thee research team is offering in-classroom implementation support, helping teachers tailor AI learning activities to meet the specific needs of their students and subject matter, ensuring the curriculum grows and adapts to the local school district's requirements. This continuous partnership aims to build the teachers' knowledge base and broaden the impact of AI education across different curricula.