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Exploring Suggestions from Educational Leaders and ChatGPT for Addressing Problems of Practice in TeleED: A Qualitative Case Study

Younglong Kim
Katherine A. Curry
Ashlyn M. Fiegener
Oklahoma State University, USA

ABSTRACT

Educational leaders are faced with multi-faceted dilemmas that place decision-making at the heart of their day-to-day work. For support, they often turn to collaborative networks of experienced educators, such as Project ECHO, for solutions to address challenges they encounter while working in the field. The availability of generative AI technology, however, may have potential for informing the solutions to complex educational dilemmas as well, saving time and offering efficiency for problem solving. This study compares solutions for three problems of practice (PoP) that were generated through ChatGPT software and those proposed by the educational leaders in TeleED, an online professional development platform. The problem of practice in this study refers to complex, real-world challenges or problems shared by educational leaders. Findings indicate that solutions to these PoPs showed similarities, suggesting that both ChatGPT and the educational leaders in TeleED highlight ideas such as documentation and peer mentoring to address challenges. This reflects ChatGPT's ability to generate applicable solutions to complex problems that somewhat mirror solutions posed by leaders. However, educational leaders offered solutions that were nuanced, context specific, and contained explanations of resources and experiences that enhanced discussions. Findings suggest that ChatGPT may have utility for enhancing decision-making but not replacing the human element.

***Keywords*:** TeleED, ChatGPT, AI, exploratory research, educational leaders

The work of educational leaders has become increasingly complex over time, challenging traditional conceptions of school leaders as simply managers of schools and districts. For example, increased accountability, complex social environments, and the influence of the pandemic on student learning have placed a greater demand on leaders to be experts in instructional supervision, culturally responsive leadership, data-driven decision-making, community relations, and communication, among other areas (Curry et al., 2016; Curry et al., 2018; Hackman & Johnson, 2013; Park & Datnow, 2009). In this complex environment, leaders are faced with multi-faceted dilemmas that place decision-making at the heart of their day-to-day work (Cranston et al., 2006; Curry et al., 2023; Mumford et al., 2012), and they often turn to collaborative networks for support in problem solving. Outcomes of collaborative problem-solving networks, such as Project ECHO (as explained below), represent the collaborative wisdom and expertise of experienced educators as they solve problems of practice that represent challenges they encounter while working in the field.

Even though leaders from ECHO networks have expressed confidence in the outcomes of their collaborative decision making (Curry et al., 2023; Egure et al., 2023), Artificial Intelligence (AI) may help to inform this decision-making process. Specifically, ChatGPT, a revolutionary generative AI technology (Kalla et al., 2023), may have potential for informing the solutions to complex educational dilemmas. Lee (2023) explored the potential for the use of AI in medical education and considered the possibility of ChatGPT as a virtual teaching assistant by emphasizing its potential for instant feedback. Kalla et al. (2023) stated that ChatGPT has the potential to be used in education to analyze large datasets from vast data sources.

Oranga (2023) added that AI can assess contexts or situations and respond to various questions. Specifically, instant feedback, collaborative learning, and exposure to diverse perspectives are described as advantageous elements of AI in educational sectors (Oranga, 2023).

What is not known, however, is how ChatGPT can be utilized to solve leadership dilemmas or how responses from ChatGPT compared to leader suggestions for solutions in problem solving networks. Additionally, the literature regarding AI and educational leadership is extremely limited (Tyson & Sauers, 2021). Therefore, the purpose of this study is to gain an understanding of ChatGPT responses to complex challenges that have been addressed in *TeleED*, a line of the professional development platform *ECHO*, and how ChatGPT responses compare to solutions suggested by educational leaders in these collaborative learning spaces. Specifically, this exploratory study seeks to understand how the collective knowledge generated from networks of school leaders in TeleED as they analyze real-life cases compares to the information produced by ChatGPT software.

Project ECHO: TeleED

Project ECHO is an online professional development platform facilitated through synchronous meetings among stakeholders (Curry et al., 2023; Egure et al., 2023). TeleED, an ECHO line that meets bi-monthly, brings together educational leaders from schools and districts across a Midwestern state in the United States for collaborative problem solving. Participants include field experts, called "hub-team" members, and educational practitioners in local communities, called "spoke" sites. Activities during each session consist of the presentation of an anonymous, problem of practice (PoP), a 10-minute didactic presentation by experts, and open discussion to suggest potential solutions/recommendations for the PoP. PoPs used in TeleED reflect real-life, scenario-based cases that have applicability across most districts. PoPs are submitted anonymously by educational leaders, and participants work together to collaboratively create solutions. The mantra of TeleED, "all teach; all learn," facilitates an environment that encourages the open and collaborative involvement of all participants.

METHODOLOGY

This study uses a comparative case study design to understand how knowledge generated from networks of school leaders compares to information produced by ChatGPT. An exploratory approach was applied because the use of AI for problem solving is an emerging topic (Swedberg, 2020) where limited knowledge or theories exist (Merton, 1973). An exploratory approach fits this study because of its flexible and open-ended nature (George, 2023). The cases identified for this work are three TeleED ECHO Problems of Practice (PoP) that were presented during the 2021-2022 academic year. TeleED participants met virtually twice each month, for a total of 16 sessions, to address complex challenges facing their districts. These meetings occurred during a time when educational leaders were addressing challenges that resulted from a return to in-person learning following the pandemic. Each of the TeleED sessions included a presentation of a PoP. All PoPs were presented in narrative format, and questions were posed to all participants regarding how to address the challenge(s) presented.

Data Collection and Generation

Data were collected through online recordings of these TeleED sessions, related documents, field notes, and materials utilized for didactic presentations. Additional data were generated through ChatGPT. As each PoP was entered into ChatGPT, solutions for the PoP were produced. It is recognized that, as a revolutionary technology, generative AI generates data according to prompts, leading to the creation of novel data and new ideas. Because output can vary based on the prompt that is introduced, three attempts for data generation over three consecutive days were made for each PoP.

Solutions for each PoP varied across each attempt. For PoP 1, eight suggestions were made through the first attempt, six suggestions were made through the second attempt, and seven suggestions were made through the third attempt. All suggestions were generated within one minute through ChatGPT.

Data Analysis

Researchers immersed themselves in data to gain a holistic understanding of data content. In each dataset, In Vivo coding (Saldana, 2013) was employed to "honor" the words of educational leaders and ChatGPT. Researchers analyzed each set of outputs using open and axial coding, resulting in a total of 37 distinct codes such as "frank communication," "data," and "professional development." Codes were used to develop categories, and categories were merged to finalize

themes/solutions for each PoP. Overarching ChatGPT solutions for each PoP were compared to educational leader solutions to understand the differences/similarities for each PoP. Following, solutions were analyzed across all PoPs to understand overarching similarities/differences between solutions posed by ChatGPT and educational leaders.

Common themes and solutions from ChatGPT and educational leaders included the importance of documentation, professional development, teamwork/collaboration, effective communication, and challenges and changes influenced by the pandemic. After finalizing the ideas of the solutions across PoPs, researchers thoroughly reviewed the entire dataset and utilized it to develop descriptions of each theme. The following section explains the three PoPs and presents the questions proposed to address the challenge of each PoP.

Problems of Practice in TeleED

In this study, three PoPs were selected from the TeleED repository of resources. Each topic included a teacher's class with disciplinary issues, toxic culture among teachers in a rural area, and student motivation and engagement. In each session of TeleED, the participants' questions were discussed and recorded, and the same PoPs, along with the participants' questions, were input into ChatGPT for comparison. The details of the PoPs and questions are provided in Table 1.

Table 1

Summary of Each PoP

	Topics	Questions Proposed by the TeleED participants
PoP 1	A teacher's class with disciplinary issues	1. How can I support this teacher's success since this teacher refuses any coaching or intervention to be a better teacher? 2. How can we meet student needs in this teacher's classroom?
PoP 2	Toxic culture among teachers in a rural area	1. How can I build a more positive school culture? 2. How can I help my administrative team work more cooperatively to support their teachers?
PoP 3	Student motivation and engagement	1. What challenges have schools experienced since returning to school after closures? 2. How have you addressed these challenges? 3. What strategies has your school implemented to increase student engagement? 4. How has your school incorporated families in efforts to improve student engagement?

FINDINGS

The findings provide a comprehensive understanding of how ChatGPT output compared to educational leaders' solutions within and across each PoP. The following section compares the overarching solutions from ChatGPT and educational leaders in each particular PoP. Subsequently, differences in solutions within each PoP are compared across the three PoPs.

Problem of Practice 1

The primary issues addressed in the first PoP were the relationships between the teacher and students as well as the teacher's refusal of coaching. Particularly, in this PoP, one teacher was having challenges with a particular student. The following themes were identified when analyzing the data generated by ChatGPT and recommendations from educational leaders.

Documentation

Some of the suggestions by ChatGPT were aligned with recommendations by educators such as documentation of teacher support and setting direct expectations for the teacher. For example, participants of TeleED suggested the need "to document everything that has been done to try to help this teacher succeed, along with what progress the teacher has or has not achieved." Similarly, the suggestions by ChatGPT included, "The administrator should document specific instances where the teacher's refusal to cooperate has affected the students' learning and well-being. This documentation can include details of missed coaching sessions, unimplemented strategies, and negative behavior towards students." Both ChatGPT and the educational leaders advocated for the use of a performance improvement plan and a formal meeting with the teacher as part of the documentation process.

One suggestion from the educational leaders that differed from those from ChatGPT included reviewing contracts to determine the specific roles of the teacher so that, if necessary, the teacher could be moved to another position. One of the leaders stated, "This could be a good opportunity to coach this teacher out of the position. If they are not willing to grow, they might just be in the wrong position which is not good for that individual."

Professional Development and Support for the Teacher

Both educational leaders and the ChatGPT output suggested professional development (PD) opportunities where the teacher could benefit from collaboration with peers, mentoring, and support for classroom management and instruction. Suggestions from ChatGPT focused on a breadth of PD opportunities and the importance of tailoring these supports to the specific needs of the teacher:

> Offer the teacher various PD opportunities that align with their needs. Ensure these are framed as opportunities for growth rather than interventions. If the teacher is reluctant to receive traditional coaching, explore alternative approaches such as peer mentoring, online resources, or workshops. Some teachers may be more receptive to different forms of PD.

Educational leaders also identified areas of PD for the teacher but focused primarily on mentoring and peer support. One leader shared,

> I always believe where there is a will, there is a way . . . so she just may need to determine if she still has the will as a teacher. If they have had successes with the student in the past, collaboration time of sharing can be beneficial.

Similarly, ChatGPT recommended peer mentoring as a support for the teacher: "Assign a mentor or involve a respected peer within the school who can provide guidance and support. Sometimes teachers are more receptive to advice from colleagues."

The solutions posed by educational leaders differed from those generated in ChatGPT, particularly in the level of specificity of the solutions. A leader suggested modeling by the administrator to coach the teacher in classroom management, and another participant added, "Good point. It also is helpful for administrators to be back in the classroom, and it sends a message to both the teachers and others that admin is willing to dive in." Another participant offered, "Classroom management coaching is most effective when there are clear steps for implementing the plan and performance feedback for the teacher. If anyone would like published research on this, I would be happy to share." In another comment, a participant utilized a quote to address the way to support the teacher: "Tough on the issue, kind on the person," and suggested being specific and direct and providing support to help the teacher improve.

Of the recommendations related to PD and mentoring opportunities, there was notable continuity in the framing of the solutions. Both ChatGPT and the leaders focused on support for the specific needs of the teacher rather than using these as punitive measures.

Differentiated Support for the Student

Another theme in the recommendations for PoP 1 was differentiated support for the student. While the primary focus of the PoP was on the struggling teacher, participants in TeleED and the ChatGPT output both noted the urgency of supporting the student and addressing disciplinary issues. The proposed solutions emphasized a differentiated support approach, including utilizing tiered systems of behavioral support and developing a customized behavior plan. ChatGPT generated broad solutions such as providing additional support services like counseling or specialized programs; seeking guidance from district resources, such as behavior specialists or counselors; developing a customized behavior plan that could be used to continually monitor the student's progress; involving parents in the management of student behavior; and

conducting frequent check-ins with the student. Further, the output specified that the behavior plan should be used to document student behavior and communicate consistently with parents about the student's progress.

Educational leaders generated similar approaches with an increased emphasis on tiered supports for the student. For example, one leader shared, "I would recommend looking into MTSS with those important tiers of support." Another participant shared the idea to

> schedule a Review of Existing Data Team to discuss current academic data, behavior information, and existing BIP. Educators collaborate to discuss what has been done, what is needed, additional classroom support, and/or existing documentation. If necessary, the team can begin the conversation of a special education referral.

Both ChatGPT and educational leaders agreed that less punitive discipline practices were important in this situation. A TeleED participant stated, "I would not recommend suspension for the student, particularly when they do not have a supportive environment that meets their needs in school." The ChatGPT output similarly focused on exploring "alternative disciplinary measures that do not involve suspension, such as in-school interventions, counseling, or restorative justice practices."

Problem of Practice 2

The second PoP addressed a toxic culture among teachers in a rural area. The common themes identified in responses from educational leaders and ChatGPT output were *teamwork and collaboration, communication, and emphasizing resources.*

Teamwork and Collaboration

The common solutions across both data sets from school leaders and ChatGPT underscore the importance of teamwork. Several educational leaders suggested that one way to build teamwork is utilizing personality assessments to increase awareness of self and others as well as to create an appreciation for the unique strengths each person brings to the team. One TeleED participant shared, "As a leader, maybe the best thing that they could do is help each individual understand better their own individual strengths and contributions to like a StrengthsFinder or understanding the role they play."

Both ChatGPT and educational leaders mentioned setting a shared vision and goals to ignite a sense of shared responsibility among team members. ChatGPT output stated,

> Remember, building a cohesive and collaborative team is an ongoing process that requires continuous effort and attention. By implementing these strategies and consistently reinforcing the importance of teamwork and shared goals, you (school leaders) can create a more supportive and cooperative administrative team.

ChatGPT and TeleED participants also identified team-building activities as a way to bring staff together toward a common purpose. Educational leaders suggested an external partnership with a university or consultant to lead the team-building activities. ChatGPT proposed additional strategies for teamwork such as fostering a culture of support and collaboration, leading by example as a model for team members, and implementing frequent team meetings.

Communication

Communication was another primary focus from educational leaders and ChatGPT regarding the second PoP. One leader shared that it is not only important to understand individual teacher strengths but also to "communicate [the strengths] outwardly to the group . . . so that the other members can hear each individual talk about the roles they're playing." Suggestions from the leaders focused on vulnerable and transparent communication, and an example was given of "leaders being willing to say these might be areas that I have weaknesses in and demonstrating that process of discussing those." Similarly, ChatGPT emphasized positive, honest communication through formal and informal meetings, specifically communication that reinforces the vision and goals of the team.

Both datasets mentioned communication as a way to praise and recognize team members. Educational leaders specified that when giving praise, leaders should be cognizant of how they're talking about things in social media or outward facing communication because sometimes one group or organization or part of the team gets more praise externally, which can cause jealousy or a misconception that the work isn't equally appreciated.

ChatGPT emphasized praise to reinforce examples of teamwork and collaboration. While educational leaders added contextual stories highlighting the importance of frank communication to work through conflict, ChatGPT provided a

summary in the statement, “Encourage ongoing communication and feedback from team members to identify areas for improvement and ensure that everyone feels valued and supported.”

Emphasizing Resources

Finally, to address a toxic culture among teachers in a rural area, both leaders and ChatGPT recommended intentional use of resources. ChatGPT output included the word “resources” more than eight times. A primary focus was to identify and provide “resources for stress management,” to “promote self-care,” and “to help team members cope with the emotional and mental strain” from the pandemic. ChatGPT also gave a broader recommendation of offering “support, guidance, and resources to help individuals develop their skills and overcome their concerns.” Leaders in TeleED mentioned the use of resources in a recommendation about partnering with external agencies or institutions: “Tak[e] advantage of nearby *resources*, there might be a state agency, a tech center, or even university faculty, or regional or state institutions that could come and help lead and team building activity as an outside member.”

Problem of Practice 3

The third PoP addressed a decrease in student motivation and engagement influenced by the pandemic. The common themes identified were *different points of view regarding engagement, challenges and opportunities from the pandemic, and strategies for student engagement.*

Different Points of View Regarding Engagement

In the third PoP, ChatGPT output and educational leaders shared how engagement was influenced by the pandemic, but there were different perspectives with some explaining trends of increased engagement while others identified a decrease. ChatGPT captured nationwide trends in student engagement during the pandemic: “Schools worldwide faced challenges with student motivation and engagement, especially during the COVID-19 pandemic. Remote learning often led to a sense of isolation and disconnection for both students and teachers.” On the other hand, one school leader shared a positive situation from the pandemic in which students in special education programs displayed an increased connection to their learning. The leader explained,

> In the traditional school setting, it actually impeded engagement, whereas having a more hybrid approach at home, being more engaged with the family, helped these special education students to be a little bit more connected to the learning process.

On the other hand, other TeleED participants shared concerns and challenges that differed based on their diverse contexts. They gave specific examples of how engagement compared across grade levels and student populations. For instance, one leader mentioned,

> Well, we kind of found the opposite in terms of engagement versus secondary versus elementary level. Whereas the elementary level there really is, was no attachment to the school with the community or with the students. So they were less engaged in having more of a difficult time than the older kids. And just there, there continues to be no engagement, no involvement with the community, and parents don't often feel like they're a part of the school or a part of the district.

Challenges and Opportunities from the Pandemic

A primary theme in both datasets was the challenges caused by the pandemic. While both educational leaders and ChatGPT discussed these challenges, TeleED participants also focused heavily on how the pandemic brought opportunities in education, particularly how it illuminated areas that had long needed change in education. A participant in TeleED stated, “Certain contexts could have had different experiences with the pandemic that weren't necessarily only negative, that there were positive things to be gleaned from engagement with both students and with families.”

Another leader added, “The pandemic probably just accelerated some of the things that we're gonna change in education . . . some of those changes are for the better. Some of them are taking a little more adjustment to, but change is always hard.” A participant shared,

> The fact is education's changing whether we like it or not. And in some ways, we can make the change for the better. In some ways, we look back, and we miss what used to be, but change is stressful, and we need to understand that. And perhaps that's what we're seeing with all of us is now we're taken a chance to catch our breath and it's catching up to us.

Educational leaders shared specific examples of opportunities and positive changes in student engagement that have occurred during the pandemic. One leader explained,

> We actually saw that COVID potentially helped catapult parent engagement to the next level where they already had high parent engagement, but now parents even had to focus more on their individual student learning as they were brought at times and not as often, but back into the home with more hybrid learning schedule.

Another leader shared how students with severe behavior challenges "fared much better on a two-day schedule" during the pandemic but struggled with previous behavior issues once returning to a full week schedule. One participant added that "the pandemic brought some unity or increased unity between home and school because we were working together on projects and assignments." Unity and coordination across departments in the school increased as there was increased awareness of others' responsibilities and roles in supporting students.

A major theme in TeleED discussions was a focus on "the essentials" of student learning and teaching responsibilities during the pandemic. For example, one leader stated,

> There were other things that teachers were not responsible for; some of those ancillary things that happen in a school building that you don't have to worry about . . . duties and some of those other things . . . We're saying what's essential because [that's] when the plate feels too big.

Participants explained that this focus on essentials in teaching ignited the love and passion for teaching and brought teachers together to support students. Leaders also discussed how the pandemic was about "getting down to essential objectives for students." Participants agreed that this was a positive outcome that will likely shape education moving forward.

Strategies for Student Engagement

Another theme in PoP 3 was strategies for increasing student engagement. TeleED suggestions focused on specific examples and stories from leaders across districts that built on opportunities that emerged from the pandemic. ChatGPT identified a wide range of strategies: integration of interactive technologies and platforms to enhance engagement during virtual learning, implementation of project-based learning and collaborative activities in virtual settings, providing additional support services for struggling students, such as tutoring or counseling, and using data to assess metrics of engagement such as attendance rates. ChatGPT and educational leaders advocated for involving families in the learning process to increase student engagement.

Themes Across Problems of Practice

The analysis of recommendations across the three problems of practice revealed several themes that provide further distinction between solutions from ChatGPT and educational leaders. The leaders provided nuanced, context-based solutions while ChatGPT offered general, comprehensive solutions. Additionally, TeleED leaders offered interpersonal support in addressing PoPs which could not be offered by ChatGPT.

Context-Specific vs. Comprehensive Solutions

While there was overlap in the content of suggestions between ChatGPT and school leaders, there were also notable differences. Because most TeleED participants were practitioners in the same Midwestern state in the United States, proposed solutions were often context specific. This contextual knowledge was beneficial for participants as they were able to share and apply common solutions. For example, leaders shared strategies and stories of student engagement from their districts during the pandemic:

> We actually saw that Covid potentially helped catapult parent engagement to the next level where they already had high parent engagement, but now parents even had to focus more on their individual student learning as they were brought back into the home with more hybrid learning schedule.

Additionally, ChatGPT offered a variety of recommendations while overall, TeleED suggestions were more specific. Many times, suggestions were shared by practitioners who had experienced similar situations and implemented the solutions they were proposing. TeleED participants often gave specific examples and shared resources they had used. For example, leaders gave specific examples of personality assessments they had used during team-building activities in their districts.

The specificity of ChatGPT recommendations varied across PoPs. For example, for the first PoP, ChatGPT produced step-by-step recommendations of "Document and share specific concerns, have a formal meeting, set clear expectations, offer different approaches . . . consider a Performance Improvement Plan." However, for the second PoP, broader advice for leaders was provided: "Promote a culture where team members celebrate each other's successes and work together to overcome challenges."

The specificity of lived experiences, examples, and resources shared in TeleED seemed to bring meaning to recommendations and may have enriched practical application. On the other hand, ChatGPT created a larger number of solutions for each PoP, which may provide a wider variety of options for solving complex challenges.

Interpersonal Support from TeleED

Another distinction in solutions between educational leaders and ChatGPT lies in their communication styles. Data from TeleED recordings suggest that as participants in TeleED gave recommendations, they also shared their own feelings, experiences, and advice in a way that provided interpersonal support for participants. Additionally, as TeleED participants shared stories and challenges from the pandemic, a sense of unity and camaraderie developed among leaders. Participants expressed encouragement as they related to one another's experiences and challenges. For example, a leader in TeleED highlighted, "Tough on the issue, kind on the person," demonstrating respect to humans that came from years of experience in leadership.

Empathetic and supportive interaction also resulted from common challenges that these leaders faced. Words of dedication emerged, emphasizing an ongoing commitment to serve students. One participant stated,

> It's a superintendent who takes his job very seriously, wants to be the very best, one that wants to serve students the very best that his team can that their teaching staff can and so it's a matter of good to better to best . . . and then make progress not perfection.

The human connection that emerged as educational leaders collaboratively addressed problems during TeleED sessions was a factor that was clearly missing from the use of ChatGPT output. While ChatGPT created strategies and steps to solve problems, it was not able to replicate the nuance or support that was created by leaders.

DISCUSSION

This study compared solutions generated through ChatGPT software with those proposed by the educational leaders in TeleED for solving complex problems. The information generated by ChatGPT were varied across iterations due to ChatGPT's generative nature as it learns over time by receiving and analyzing massive amounts of data. ChatGPT produced slightly different answers for the same questions for each of the three days. ChatGPT produced relevant solutions, demonstrating its capacity for human-like responses (Kalla et al., 2023). Further, it produced solutions that were aligned with decision-making of educational leaders in these controlled scenarios (Long & Magerko, 2020). The distinction was that ChatGPT offered generalized comprehensive step-by-step solutions that were not context specific. Educational leaders in TeleED, however, shared specific resources they had used in practice, offered varied perspectives on issues, and provided relational support through connections that developed (Swartz & Benz, 2022).

This exploratory study shows possibilities of ChatGPT for supporting educational leaders as they address challenges in their schools (Delcker et al., 2024; Duha, 2023; Kalla et al., 2023). Findings suggest that AI may support school leaders as they consider a variety of ways to address complex issues that may involve contrasting interests among teachers, students, or parents. This process can happen within a short timeframe and may serve as a tool for initial ideas in problem solving.

Findings from this study further support understandings that, as ChatGPT continues to evolve as a transformative tool (Delcker et al., 2024; Kalla et al., 2023), human wisdom, expertise, and experience are necessary for complex, context-specific problem solving. This finding supports findings in the literature that tasks requiring "creativity, emotion, knowledge transfer, and social interaction" (Long & Magerko, 2020, p. 4) also require a human component. Professional development could include training on how to integrate AI into problem solving so that leaders are equipped with the essential knowledge to effectively address issues and challenges that will inevitably arise (Ross, 2023). Further, leadership development programs could include AI skill development to support successes of emerging leaders as they develop skills and knowledge for success in leadership roles (Ross, 2023).

CONCLUSION

This study illuminates practical implications of AI utilization, particularly, in collaborative problem-solving networks. Our findings suggest that AI could be used as a resource as leaders contemplate potential solutions to problems. This resource could help spark active discussions among participants as it has potential to provide suggestions based on emerging understandings related to complex problems. It could also serve as an active participant as an "artificial educational leader" in professional development.

Additional research is needed to consider ways that ChatGPT can be utilized. For example, additional research is needed regarding how to develop prompts for ChatGPT that enhance outcomes. Specifically, little is known about effective inquiry strategies that may be used in the input prompt to generate high quality information for school leaders (Hamzah et al., 2014; Tyson & Sauers, 2021). Importantly, we were limited to the questions that were posed in each TeleED session. Asking effective questions seems to be a much-needed skill for effective AI use. What is not known is how responses would have been enhanced if question prompts had been altered or modified.

Further, little is known about how AI could be used as a virtual assistant for school leaders. Further studies are needed to understand its impact on educational leadership and how AI could provide efficiencies that enhance the human element of leadership (Fullan et al., 2023). As creative ways to effectively utilize ChatGPT in schools evolve, educational leaders may experience increased efficiencies in applying the human element to their responsibilities. Also, it is possible that ChatGPT output could be introduced in collaborative discussions to introduce robust options for solving educational dilemmas that facilitate interaction and engagement to encourage the creation of a professional community. This suggestion aligns with previous findings that leaders from ECHO networks found satisfaction in their collaborative decision making (Curry et al., 2023; Egure et al., 2023).

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Younglong "Rachel" Kim, PhD, is a Coordinator of Multicultural Affairs in the Division of Access and Community Impact and an Adjunct Faculty in the College of Education and Human Sciences at Oklahoma State University. Her major research interests lie in the area of professional development, educational technology, psychological needs support, and instructional design. Email: younglong.kim@okstate.edu

Katherine A. Curry, EdD, is a Professor and Williams Chair of Educational Leadership and Policy in the College of Education and Human Sciences at Oklahoma State University. Her major research interests lie in the areas of family/school/community collaboration, transformative equitable collaboration, educational leadership and school reform. Email address: katherine.curry@okstate.edu.

Ashlyn M. Fiegener, PhD, is an Assistant Professor in the College of Education and Human Sciences at Oklahoma State University. Her major research interests lie in the areas of instructional program coherence, teacher well-being, and transformative leadership conversation. Email: ashlyn.fiegener@okstate.edu

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