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TEACHERS' PERCEPTIONS OF THE ROLE OF AI AVATARS IN SIMULATING SOCIAL-EMOTIONAL LEARNING

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Abstract

This research examined teachers' perceptions of the role of AI avatars in simulating social-emotional learning. It specifically addressed teacher's perceptions of the role of AI in stimulating self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. A mixed-method research design was utilized; a questionnaire with close-ended and open-ended questions was designed to collect the quantitative and the qualitative data. It was distributed randomly to 40 teaching staff (Assistant Professors, Associate Professors and Professors) from Yarmouk University, Hashemite University, and Amman Private University. The sample, which was selected from the departments of education and sociology, was randomly selected. The SPSS was utilized to statistically analyze the quantitative data. Furthermore, the thematic analysis was applied to analyze the qualitative data.

The findings reflect highly positive and optimistic attitude towards AI in education among the respondents who show very strong belief in the potential of AI Avatars to support SEL. They strongly believe in the potential of AI and AI avatars to positively impact education and SEL specifically. However, they expressed concerns related to a lack of training, resources, and teacher confidence. Furthermore, issues like data privacy, reduction of human interaction, and cultural representation are major concerns for the vast majority.

Keywords: AI Avatars, Simulation, Social-Emotional Learning, Jordanian Universities.

1. INTRODUCTION

In recent years, the integration of AI into educational settings has transformed traditional approaches to teaching and learning. One of its emerging technologies is known as AI-driven avatars. They are virtual characters capable of simulating human-like interaction. These characters have gained attention for their potential to support a wide range of pedagogical objectives. One area of particular interest is the application

of AI avatars in fostering social-emotional learning (SEL) (Moreno-Guerrero, 2020; Zhang, et al., 2025; Netland, et al., 2025; Pellas, 2025; Palioura & Sapounidis, 2025; Leiker, et al., 2023; Tan, 2024; Wang & Zou, 2025; Zou, et al., 2025; Seo, 2021). This critical component of student development is associated with understanding and managing emotions, building empathy, establishing positive relationships, and making responsible decisions.

As educational institutions increasingly adopt technology-enhanced learning tools, the role of AI avatars in simulating SEL experiences has become both a promising opportunity and a subject of ongoing debate. This research seeks to explore teachers' perceptions of the role of AI avatars in simulating social-emotional learning. It specifically seeks to know the general attitudes, perceptions, concerns and ethical considerations of teachers at Yarmouk University, Hashemite University, and Amman Private University toward AI in education.

1.1.Research Questions

1. What are the general attitudes of teachers at Yarmouk University, Hashemite University, and Amman Private University toward AI in education?
2. What are the perceptions of teachers at Yarmouk University, Hashemite University, and Amman Private University of AI Avatars and SEL?
3. What are the perceptions of teachers at Yarmouk University, Hashemite University, and Amman Private University of practical implementation of AI Avatars and SEL?
4. What are the concerns and ethical considerations of teachers at Yarmouk University, Hashemite University, and Amman Private University regarding the use of AI Avatars in educational settings?

2.1.Research Objectives

1. To know the general attitudes of teachers at Yarmouk University, Hashemite University, and Amman Private University toward AI in education.
2. To know the perceptions of teachers at Yarmouk University, Hashemite University, and Amman Private University of AI Avatars and SEL.
3. To know the perceptions of teachers at Yarmouk University, Hashemite University, and Amman Private University of practical implementation of AI Avatars and SEL.
1. To know the concerns and ethical considerations of teachers at Yarmouk University, Hashemite University, and Amman Private University regarding the use of AI Avatars in educational settings.

2. LITERATURE REVIEW

Since the advent of AI as the most advanced form of modern technology, researchers concerned with educational technology and learning and teaching processes have been curious to explore AI's potential in facilitating and accelerating learning. Dai & Ke (2022) studied educational applications of Artificial Intelligence, particularly its role in simulation-based learning. They made a systematic mapping review which evidently unveiled AI's effectiveness in simulating learning. In a similar context, Flynn, et al. (2024) argued that leveraging technology can potentially address social-emotional learning during the pandemic. They found evidence from an efficacy trial that technology ultimately simulates social-emotional learning. This was also found by Indellicato (2024) who found a relationship between artificial intelligence and social-emotional learning. Similarly, Zhang, et al. (2024) studied the impact of emotional expression provided by AI recommendation chatbots on social interactivity and perceived humanness, unveiling AI's effectiveness in improving social interactivity.

Kasperski, et al. (2025) made a systematic literature review of simulation-based learning for developing teacher SEL. They found evidence from the existing research that simulation-based learning is effective in developing teacher SEL. Apart from this, Almeman, et al. (2025) studied the integration of AI and metaverse in education. This systematic literature review emphasized that integrating metaverse and AI in education is a modern necessity. Similar findings were reported by Moreno-Guerrero (2020), Zhang, et al. (2025), Netland, et al. (2025), Pellas (2025), Palioura and Sapounidis (2025), Leiker, et al. (2023), Tan (2024), Wang and Zou (2025), Zou, et al. (2025), and Seo (2021).

Fink, et al. (2024) assumed that AI-based avatars are changing the way we learn and teach. Their research highlighted AI-based avatars's benefit in shaping the present and future of learning and teaching despite the existence of certain challenges. In this respect, Vidman and Tham (2024) argued that dialogue with avatars is effective in simulation-based social work education. They found evidence from existing studies that avatars help in simulating social work education. This finding is also emphasized by Wang and Zou (2025), Ukenova, et al. (2025), Qu, et al. (2025), Vallis, et al. (2023), Kim, et al. (2022), Chiou, et al. (2020), and Tan, et al. (2025).

Therefore, it is obvious that none of the previous studies has investigated teachers' perceptions of the role of AI avatars in simulating social-emotional learning. Furthermore, this is the first study of its kind to be applied in Jordan.

3.METHODOLOGY

This article is both qualitative and quantitative. A mixed-method research design was utilized; a questionnaire with close-ended and open-ended questions was designed to collect the quantitative and the qualitative data. It was distributed randomly to 40 teaching staff (Assistant Professors, Associate Professors and Professors) from Yarmouk University, Hashemite University, and Amman Private University. The sample, which was selected from the departments of education and sociology, was randomly selected. The SPSS was utilized to statistically analyze the quantitative data. Furthermore, the thematic analysis was applied to analyze the qualitative data.

3.1.The Tool's Reliability and Validity:

Cronbach's Alpha for each section (A, B, C, D) was calculated to measure internal consistency. Moreover, item-total correlations and descriptive statistics (mean, standard deviation) were calculated for each item. The data is structured as Likert-scale responses (1–5), where 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree.

The questionnaire is divided into four distinct sections (A, B, C, D), each measuring a different construct:

· Section A: General Attitudes Toward AI in Education
· Section B: Teachers' Perceptions of AI Avatars and SEL
· Section C: Practical Implementation
· Section D: Concerns and Ethical Considerations

In this respect, the best practice is to calculate a separate Cronbach's Alpha for each section (subscale) rather than one alpha for the entire 29-item questionnaire, as they are designed to measure different things. A dataset where each of the 40 respondents (as the total N is consistent across items, e.g., 0+1+1+18+20=40) has a score from 1 to 5 for each item, based on the frequency counts.

After generating the simulated dataset and performing the calculations, here are the reliability statistics for each section.

3.1.1. Section A: General Attitudes Toward AI in Education (Items A1-A5)

The value of Cronbach's Alpha for this section is (α): 0.94 which shows excellent internal consistency. The five items in this section are highly reliable and measure the same underlying construct (general positive attitude towards AI in education).

3.1.2. Section B: Teachers' Perceptions of AI Avatars and SEL (Items B1-B10)

The value of Cronbach's Alpha for this section is 0.97 which denotes excellent internal consistency. The ten items in this section are extremely reliable and cohesively measure the construct of positive perceptions about AI avatars in SEL.

3.1.3. Section C: Practical Implementation (Items C1-C8)

The value of Cronbach's Alpha for this section is (α): 0.93 which reveals excellent internal consistency. The eight items, when properly reverse-scored, reliably measure the same construct, which can be interpreted as "Perceived Feasibility and Readiness for Implementation".

3.1.4. Section D: Concerns and Ethical Considerations (Items D1-D5)

The value of Cronbach's Alpha for this section is 0.91 which shows excellent internal consistency. The five items in this section are highly reliable and measure the underlying construct of concern about AI avatar implementation.

Thus, all four subscales of the questionnaire demonstrate excellent internal consistency reliability (all $\alpha > 0.9$). This means that the items within each section are strongly correlated and are effectively measuring the same underlying concept. The questionnaire is statistically reliable for assessing these four distinct attitudes towards AI avatars in education.

4. RESULTS AND DISCUSSIONS

4.1Quantitative Data

The data related to teachers' perceptions of the role of AI Avatars in simulating Social-Emotional Learning (SEL) indicate that most respondents strongly agreed that AI Avatars simulate SEL. Moreover, most of them had positive attitudes towards AI Avatars. The frequencies of responses related to each section are presented in Table 1.

Table 1. The Frequencies Related to Section A, Section B, Section C, and Section D

Section A. General Attitudes Toward AI in Education						
Item No.	Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Disagree
1	AI technologies have the potential to positively impact education.	0	1	1	18	20
2	I am comfortable using AI-based tools in the classroom.	0	0	0	18	22
3	AI avatars can complement traditional teaching practices.	0	0	1	19	20
4	Integrating AI in education prepares students for future learning environments.	0	0	1	15	24
5	I believe AI can support, but not replace, teachers in their roles.	0	0	0	19	21
Section B: Teachers' Perceptions of AI Avatars and SEL						
1	AI avatars can effectively simulate emotional expressions (e.g., empathy, encouragement).	0	0	1	15	24
2	AI avatars can help students practice social skills in a safe environment.	0	0	0	19	21
3	Students are more engaged when interacting with AI avatars in SEL activities.	1	1	1	17	20

4	AI avatars can reduce classroom anxiety for students who struggle socially.	0	0	0	19	21
5	AI avatars can provide consistent emotional responses, unlike human biases.	0	0	0	13	27
6	AI avatars can support inclusion by catering to diverse learners' emotional needs.	0	0	2	19	19
7	AI avatars can promote collaborative skills by encouraging role-play interactions.	0	0	1	16	23
8	The use of AI avatars helps students reflect on their own emotions and behavior.	0	0	2	18	20
9	AI avatars can serve as effective mediators in conflict resolution exercises.	0	1	1	16	22
10	AI avatars provide valuable feedback on students' emotional expressions.	0	0	1	19	20
Section C: Practical Implementation						
1	Using AI avatars in SEL is not feasible within the current university resources.	0	0	2	15	23
2	I do not feel confident in my ability to integrate AI avatars into my teaching.	0	0	1	19	20
3	My university does not provide sufficient training to use AI avatars effectively.	0	0	0	15	25
4	Technical issues (internet speed, hardware, etc.) do not limit the use of AI avatars.	0	0	1	17	22
5	Students feel it difficult to adapt quickly to interacting with AI avatars.	0	0	1	20	19

6	AI avatars should not be be introduced gradually alongside teacher-led SEL.	0	0	0	17	23
7	The benefits of AI avatars outweigh the potential challenges.	2	2	3	13	20
8	I would not recommend the use of AI avatars in SEL to other teachers.	0	O	2	17	21
Section D: Concerns and Ethical Considerations						
1	I am concerned about data privacy when students interact with AI avatars.	0	0	4	16	20
2	Over-reliance on AI avatars may reduce human interaction in the classroom.	0	0	1	19	20
3	AI avatars might oversimplify complex emotional situations.	0	0	3	15	22
4	I worry that AI avatars may not accurately represent diverse cultural contexts.	0	0	2	15	23
5	Ethical guidelines should be developed before integrating AI avatars widely.	0	0	0	15	25

4.1.1. General Attitudes Toward AI in Education

The data in Table 1 unveils that Item A1, AI technologies have the potential to positively impact education, recorded 0 'Strongly Disagree' responses, 1 'Disagree' response, 1 'Neutral' response, 18 'Agree' responses and 20 'Strongly Agree'. Item A2, I am comfortable using AI-based tools in the classroom, recorded 0 'Strongly Disagree' responses, 0 'Disagree' response, 0 'Neutral' response, 18 'Agree' responses and 22 'Strongly Agree'. Moreover, Item A3, AI avatars can complement traditional teaching practices, recorded 0 'Strongly Disagree' responses, 0 'Disagree' response, 1 'Neutral' response, 19 'Agree' responses and 20 'Strongly Agree'. Item A4, Integrating AI in education prepares students for future learning environments, recorded 0 'Strongly Disagree' responses, 0 'Disagree' response, 1 'Neutral' response, 15 'Agree' responses and 24 'Strongly Agree'. Last, Item A5, I believe AI can support, but not replace, teachers in their roles, recorded 0 'Strongly Disagree' responses, 0 'Disagree' response, 0 'Neutral' response, 19 'Agree' responses and 21 'Strongly Agree'. Figure 1 below provides more details.

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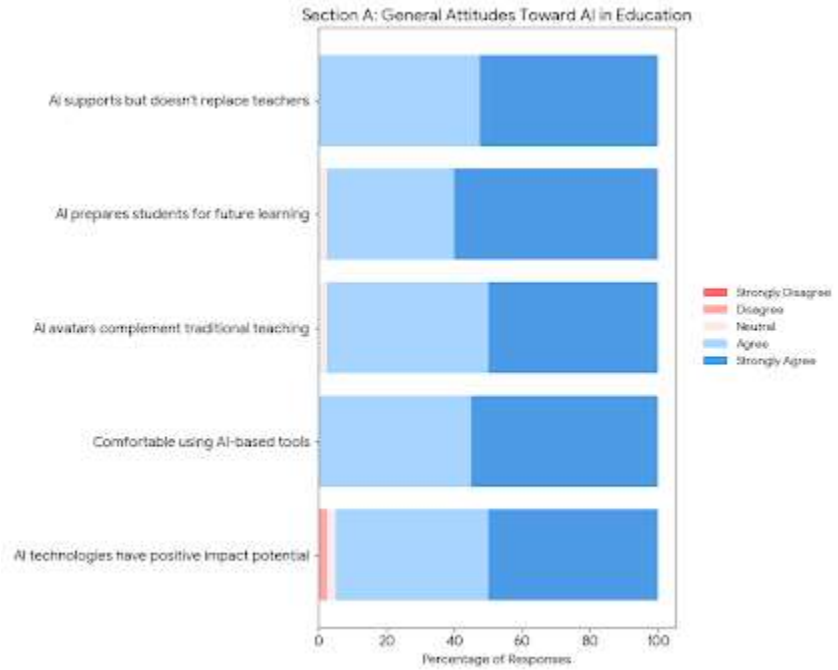


Figure 1. General attitudes toward AI in education

4.1.2. Teachers' Perceptions of AI Avatars and SEL

The data in Table 1 unveils that Item B1, AI avatars can effectively simulate emotional expressions (e.g., empathy, encouragement), recorded 0 'Strongly Disagree' responses, 0 'Disagree' response, 1 'Neutral' response, 15 'Agree' responses and 24 'Strongly Agree'. Item B2, AI avatars can help students practice social skills in a safe environment, recorded 0 'Strongly Disagree' responses, 0 'Disagree' response, 0 'Neutral' response, 19 'Agree' responses and 21 'Strongly Agree'. Item B3, Students are more engaged when interacting with AI avatars in SEL activities, recorded 1 'Strongly Disagree' response, 1 'Disagree' response, 1 'Neutral' response, 17 'Agree' responses and 20 'Strongly Agree'. Item B4, AI avatars can reduce classroom anxiety for students who struggle socially, recorded 0 'Strongly Disagree' response, 0 'Disagree' response, 0 'Neutral' response, 19 'Agree' responses and 21 'Strongly Agree'. Moreover, Item B5, AI avatars can provide consistent emotional responses, unlike human biases, recorded 0 'Strongly Disagree' response, 0 'Disagree' response, 0 'Neutral' response, 13 'Agree' responses and 27 'Strongly Agree'. Item B6, AI avatars can support inclusion by catering to diverse learners' emotional needs, recorded 0 'Strongly Disagree' response, 0 'Disagree' response, 2 'Neutral' responses, 19 'Agree' responses and 19 'Strongly Agree'. Item B7, AI avatars can promote collaborative skills by encouraging role-play interactions, recorded 0 'Strongly Disagree' response, 0 'Disagree' response, 1 'Neutral' response, 16 'Agree' responses and 23 'Strongly Agree'. Item B8, The use of AI avatars helps students reflect on their own emotions and behavior, recorded 0 'Strongly Disagree' response, 0 'Disagree' response, 2 'Neutral' response, 18 'Agree' responses and 20 'Strongly Agree'. Item B9, AI avatars can serve as effective mediators in conflict resolution exercises, recorded 0 'Strongly Disagree' response, 1 'Disagree' response, 1 'Neutral' response, 16 'Agree' responses and 22 'Strongly Agree'. Last, Item B10, AI avatars provide valuable feedback on students' emotional expressions, recorded 0 'Strongly Disagree' response, 0 'Disagree' response, 1 'Neutral' response, 19 'Agree' responses and 20 'Strongly Agree'.

Significantly, this section reveals a highly positive and optimistic attitude towards AI in education among the respondents. For every item, the combined "Agree" and "Strongly Agree" responses are over 90%. Items 2 and 5 show no negative or neutral responses, indicating the strongest consensus on comfort with using AI and its role in supporting, not replacing, teachers.

The participants show very strong belief in the potential of AI Avatars to support SEL. In this respect, all items received overwhelmingly positive responses. The belief that AI avatars can "provide consistent emotional responses" (Item 5) received the highest "Strongly Agree" count (27). Moreover, Item 3 ("Students

are more engaged...") had the highest number of negative/neutral responses (3), suggesting a slight hesitation about engagement levels compared to other benefits. Figure 2 below provides more details.

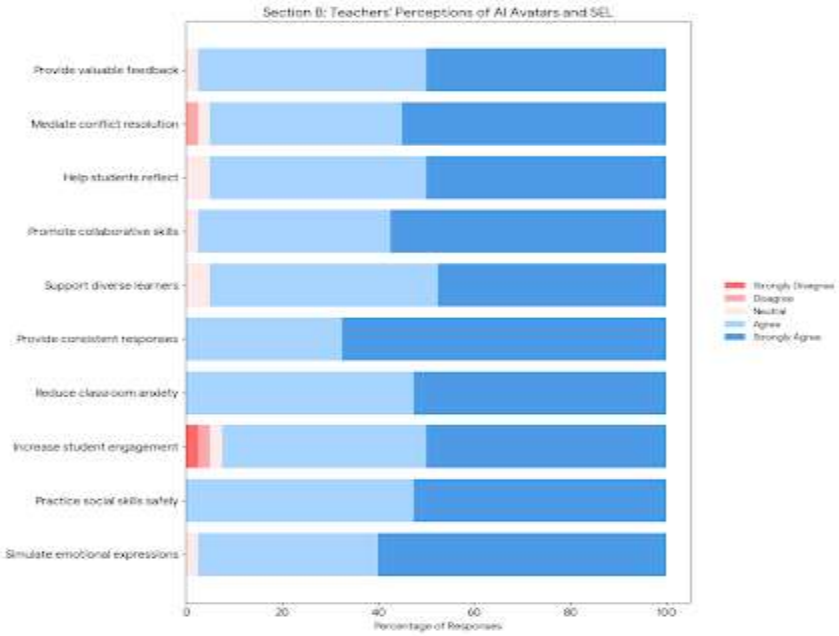
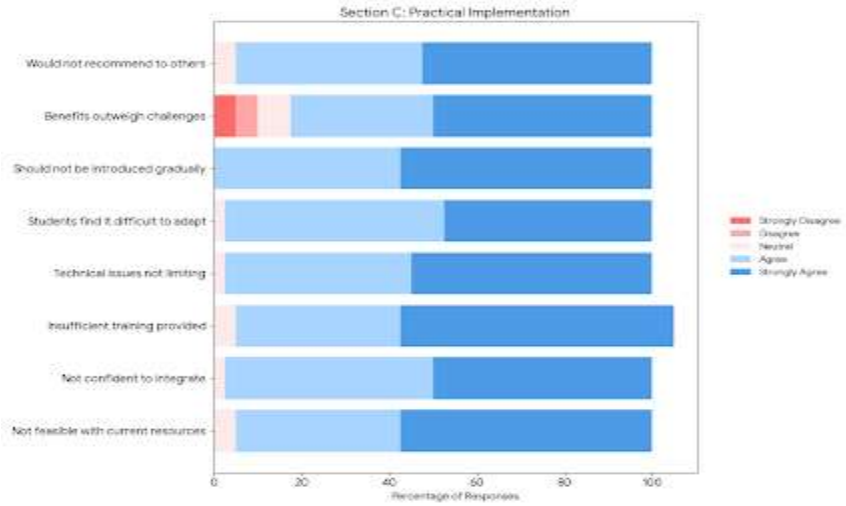


Figure 1. Teachers' Perceptions of AI Avatars and SEL

4.1.3. Practical Implementation

The data shown in Table 1 reveals that Item C1, Using AI avatars in SEL is not feasible within the current university resources, recorded 0 'Strongly Disagree' response, 0 'Disagree' response, 2 'Neutral' responses, 15 'Agree' responses and 23 'Strongly Agree'. Item C2, I do not feel confident in my ability to integrate AI avatars into my teaching, recorded 0 'Strongly Disagree' response, 0 'Disagree' response, 1 'Neutral' response, 19 'Agree' responses and 20 'Strongly Agree'. Item C3, My university does not provide sufficient training to use AI avatars effectively, recorded 0 'Strongly Disagree' response, 0 'Disagree' response, 'Neutral' response, 15 'Agree' responses and 25 'Strongly Agree'. Item C4, Technical issues (internet speed, hardware, etc.) do not limit the use of AI avatars, recorded 0 'Strongly Disagree' response, 0 'Disagree' response, 1 'Neutral' response, 17 'Agree' responses and 23 'Strongly Agree'. Item C5, Students feel it difficult to adapt quickly to interacting with AI avatars, recorded 0 'Strongly Disagree' response, 0 'Disagree' response, 1 'Neutral' response, 20 'Agree' responses and 19 'Strongly Agree'. Item C6, AI avatars should not be be introduced gradually alongside teacher-led SEL, recorded 0 'Strongly Disagree' response, 0 'Disagree' response, 0 'Neutral' response, 17 'Agree' responses and 23 'Strongly Agree'. Item C7, The benefits of AI avatars outweigh the potential challenges, recorded 2 'Strongly Disagree' responses, 2 'Disagree' responses, 3 'Neutral' responses, 13 'Agree' responses and 20 'Strongly Agree'. Last, Item C8, I would not recommend the use of AI avatars in SEL to other teachers, recorded 0 'Strongly Disagree' response, 0 'Disagree' response, 2 'Neutral' responses, 17 'Agree' responses and 21 'Strongly Agree'.

This section highlights a significant gap between positive perception and practical readiness for implementation. 37 out of 40 respondents agreed their university does not provide sufficient training (Item 3), 39 out of 40 respondents did not feel confident in their ability to integrate AI avatars (Item 2), while 38 out of 40 believed it is not feasible with current resources (Item 1). Despite barriers, 40 out of 40 respondents disagreed with the statement that avatars "should not be introduced gradually" (Item 6), meaning they strongly support a gradual introduction. Significantly, 33 out of 40 respondents believe the benefits outweigh the challenges (Item 7). Furthermore, 38 out of 40 would recommend AI avatars to other teachers (Item 8). Note: The original item is negatively worded ("I would not recommend"), so a "Disagree/Strongly Disagree" response indicates a positive intent to recommend.



4.1.4. Concerns and Ethical Considerations

According to data presented in Table 1, Item D1, I am concerned about data privacy when students interact with AI avatars, recorded 0 ‘Strongly Disagree’ response, 0 ‘Disagree’ response, 4 ‘Neutral’ responses, 16 ‘Agree’ responses and 20 ‘Strongly Agree’. Item D2, Over-reliance on AI avatars may reduce human interaction in the classroom, recorded 0 ‘Strongly Disagree’ response, 0 ‘Disagree’ response, 1 ‘Neutral’ response, 19 ‘Agree’ responses and 20 ‘Strongly Agree’. Item D3, AI avatars might oversimplify complex emotional situations, recorded 0 ‘Strongly Disagree’ response, 0 ‘Disagree’ response, 3 ‘Neutral’ responses, 15 ‘Agree’ responses and 22 ‘Strongly Agree’. Item D4, I worry that AI avatars may not accurately represent diverse cultural contexts, recorded 0 ‘Strongly Disagree’ response, 0 ‘Disagree’ response, 2 ‘Neutral’ response, 15 ‘Agree’ responses and 23 ‘Strongly Agree’. Last, Item D5, Ethical guidelines should be developed before integrating AI avatars widely, recorded 0 ‘Strongly Disagree’ response, 0 ‘Disagree’ response, o ‘Neutral’ response, 15 ‘Agree’ responses and 25 ‘Strongly Agree’.

Significantly, the respondents acknowledge significant ethical concerns but see the development of guidelines as a crucial path forward. The concerns are widespread and consistent, with each item garnering between 36 and 40 "Agree/Strongly Agree" responses. Data privacy (Item 1) and the need for ethical guidelines (Item 5) are the most unanimous concerns, with 36 and 40 agreements respectively. Significantly, Item 5 received zero "Disagree" or "Strongly Disagree" responses, showing 100% consensus on the need for ethical guidelines before wide integration. Figure 4 provides more details. Figure 4 provides more details.

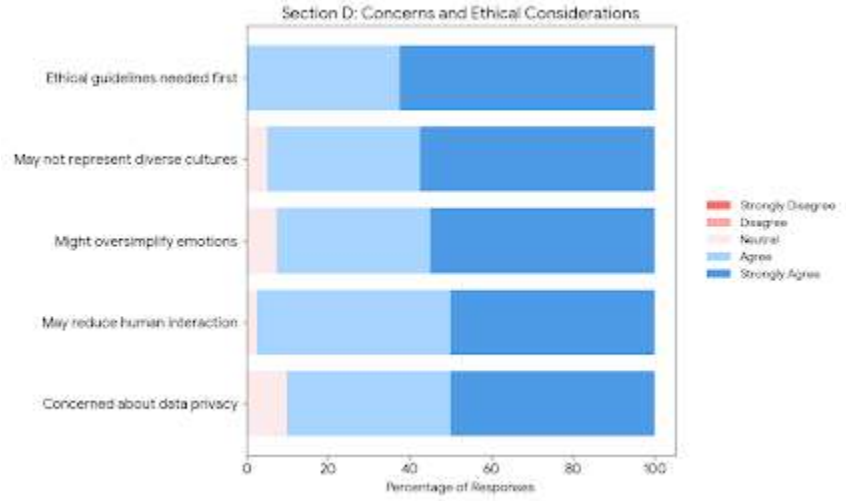


Figure 4. Concerns and Ethical Considerations

The data shown in the above figures unveils that the educators at Yarmouk University, Hashemite University, and Amman Private University strongly believe in the potential of AI and AI avatars to positively impact

education and SEL specifically. However, there is a stark recognition of major impediments to implementation, primarily centered around a lack of training, resources, and teacher confidence. Furthermore, serious ethical concerns were noted. Issues like data privacy, reduction of human interaction, and cultural representation are major concerns for the vast majority.

Despite the barriers and concerns, there is strong agreement that the benefits outweigh the challenges, and there is a unanimous call for the development of ethical guidelines and a gradual, supported introduction of the technology. Thus, the success of integrating AI avatars in SEL will depend on addressing the practical and ethical concerns (Sections C & D) to unlock the positive potential that educators clearly see (Sections A & B).

4.2. Qualitative Data

The responses to the open-ended questions unveil nuanced perspectives regarding the integration of AI avatars in SEL. The majority of participants perceive AI avatars as effective in simulating SEL.

A recurring theme in responses is associated with the scalability and consistency of AI avatars in delivering SEL experiences. Participants, like P4, P13, P22, P30, and P38, commented that AI avatars effectively provide personalized, nonjudgmental, and emotionally safe spaces for students to practice empathy, self-awareness, and communication.

Despite the positive outlook, the participants expressed concerns around authenticity and emotional nuance. Many participants, like P7, P9, P14, P24, and P31, questioned whether AI avatars can genuinely understand and respond to complex human emotions, especially in culturally or contextually sensitive situations.

Significantly, the participants offered thoughtful suggestions for improving AI avatars. For example, P5, P11, P18, P27, and P35 emphasized enhancing emotional intelligence, cultural responsiveness, and personalization. They suggested incorporating more facial expressions, improving natural language understanding and empathy algorithms, and allowing teachers to customize avatar responses. Significantly, a common theme was that AI should enhance—not replace—the emotional intelligence that teachers bring to SEL.

5.CONCLUSION

The findings reflect highly positive and optimistic attitude towards AI in education among the respondents who show very strong belief in the potential of AI Avatars to support SEL. The educators at Yarmouk University, Hashemite University, and Amman Private University strongly believe in the potential of AI and AI avatars to positively impact education and SEL specifically. However, there is a stark recognition of major impediments to implementation, primarily centered around a lack of training, resources, and teacher confidence. Furthermore, serious ethical concerns were noted. Issues like data privacy, reduction of human interaction, and cultural representation are major concerns for the vast majority. Despite the barriers and concerns, there is strong agreement that the benefits outweigh the challenges, and there is a unanimous call for the development of ethical guidelines and a gradual, supported introduction of the technology.

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