USER'S PERSPECTIVES ON AI- POWERED VIRTUAL ASSISTANT IN EDUCATION AND EVERYDAY LIFE

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ABSTRACT

As AI-powered virtual assistants increasingly mediate the knowledge we access, produce, and share, their epistemic authority, social acceptability, and pedagogical role are becoming urgent considerations. Even with the fast-paced changes in daily life and formal education, especially in areas with limited resources, there is a lack of empirical insights into user experiences with these tools. This study examines how users experience AI structures like ChatGPT. The focus is on their perceived accuracy, usefulness, and implications for ethics in both educational and out-of-school contexts.

Grounded in sociocultural learning theory and critical algorithm studies, the researcher frames AI as not just a source of insights but rather as an agentic actor that changes how we think, labor, and assert autonomy. The study involves qualitative interviews with 15 diverse key informants in the Philippine context. The collected data conducts a thematic analysis to recognize and examine participants' views and feelings regarding AI-enabled assistance. Findings will reveal the relationship between convenience and dependence, automation and critical thinking, and usefulness and ethics. Overall, participants acknowledged that AI-powered assistance supports, accelerates, and facilitates learning. It represents a significant area of opportunity, knowledge accessibility, excessive data collection, misinformation, and charges against intellectual agencies

Keyword: AI in Education, Educational Technology, Virtual Assistants, Digital Ethics, Postdigital Pedagogy, User Agency

1. INTRODUCTION

The explosive growth of artificial intelligence (AI) technologies has drastically changed learning environments worldwide. One of those technologies, AI-assisted virtual assistants (VAs), has emerged as a valuable resource for personalized learning experiences, improving administrative processes, and increasing student engagement (Aparicio Gómez, 2023). As adaptive learning and natural language processing capabilities have improved, these brilliant tools are finding their way into teaching-learning environments to support students and teachers. With this increasing use of VAs, important questions arise about their impact, ethics, and user experiences in various contexts. This research explores user perceptions of AI-driven virtual assistants in educational contexts and life outside the classroom, focusing on perceived benefits, challenges encountered, ethical issues, and suggestions for improvement. This research study seeks to understand these issues to present a holistic understanding of how VAs influence educational experiences, especially within the socio-cultural context of the Philippines.

Recent critical discourse on AI in education refers to its potential for transformative effects: it can help students learn more individually, automate assessments, and provide an Immediate response (Garcia Villarroel, 2022). Research indicates that virtual assistants offer students assistance and motivation that can lead to increased engagement and success in their studies (Vieriu & Petrea, 2025). Both policy and practice are fraught with controversy. Numerous ethical concerns have arisen about data privacy, algorithmic bias, and the loss of critical thinking skills (Akgun & Greenhow, 2022; Du Boulay, 2023). In addition, access to AI technologies contributes to

questions about equity and inclusion in educational opportunities (Barrios Tao, 2019). While global debates on AI in education are multifaceted and sensitive, the research on user experiences in the Global South has been scarce, with some suggesting that contextual factors may significantly affect the adoption and impact of the technologies.

Despite the increasing body of scholarship and literature on AI in education, there remains a notable scarcity of research focusing on the perspectives and experiences of users in developing countries. Study emphasizes Western contexts, overlooking the genuine challenges and opportunities that will arise in various environments. For example, in the Philippines, we have disparities in infrastructure, culture, and digital literacy across the country. An issue that requires attention is that emerging AI applications must be operational, accountable, and customized for these circumstances. As a result, this research will contribute to better understanding of AI's role in education and the ability to develop more socially just technological solutions.

Its theoretical contribution enhances sociocultural learning theory by emphasizing how VAs of AI-powered learning models can facilitate learning within cultural and social contexts; it draws attention to ethical issues of technology use in education, and asks how users will cope with the moral dilemmas using artificial intelligence. In practical terms, the analysis of users' needs and concerns in the Global South can help policymakers, educators, and AI developers address policy concerns in ways that are more readily accessible, ethical, and effective. We apply the findings to the Philippine case study, contributing to our consistency with the need for localized perspectives in the global conversation about AI in education and for policy development and implementation that will be responsive to various user experiences.

1.1 Theoretical Framework

In an era where artificial intelligence (AI) embeds into various educational domains, it is crucial to understand how individuals interact with AI-powered virtual assistants (VAs) from a multidisciplinary perspective. This study will employ Sociocultural Learning Theory, Critical Algorithm Studies, and Postdigital Pedagogy to comprehensively explore users' perspectives, benefits, challenges, ethical considerations, and recommendations for improving AI-driven VAs within academic settings and daily life. The intricate relationships between technology, society, and individual agency through a unified framework with sociocultural learning theory, critical algorithm studies, and postdigital pedagogy.

Sociocultural Learning Theory (Vygotsky's model) posits that, since learning is social and culturally motivated (Vygotsky, 1978), AI-driven virtual assistants are medial artifacts that impact cognitive development by influencing how individuals acquire and process information. The theory shows the importance of context in that the impact of VAs and their perceived effectiveness depend on the cultural and social contexts used.

Critical Algorithm Studies are concerned with the social and political aspects of algorithmic systems, algorithms can reinforce biases and the current state of power relations (Gillespie & Seaver, 2020). This perspective allows a more thorough examination of the ethical issues associated with AI-powered VAs in data privacy, algorithm transparency, and the danger of relinquishing socio-economic inequalities.

Post digital Pedagogy questions the difference between digital and non-digital education, transcends technology and technological determinism (Jandri et al., 2018). From this perspective, an inquiry can be made into how virtual assistants using artificial intelligence work in educational contexts, highlighting the confluence of technology, pedagogy and the critical interaction with digital tools.

The convergence of these theories provides a scope to examine the diverse experiences that users may derive from working with artificially intelligent VAs, taking account of the potential benefits as well as the challenges inherent in such technologies. This comprehensive theoretical framework informs the research design by guiding the creation of an interview protocol that explores the users' socio-cultural context, ethical dimensions, and teaching experience with AI-based virtual assistants. Through the analysis process, the theoretical framework helps to identify themes linked to cultural mediation, algorithmic effects, and teacher–student convergence. For example, Socio-cultural Learning Theory offers a deeper understanding of how users' socio-cultural context affects how they interact with virtual assistants, Critical Algorithm Studies provides insights on how users know and are nervous about algorithmic biases, and Postdigital Pedagogy looks into how users interpolate traditional learning methods with AI tools.

1.2 Conceptual Framework

In support of this study, various mandates and policy directions from the Department of Education (DepEd) and related Philippine education bodies provide significant conceptual grounding, especially in terms of digital transformation, responsible technology integration, and learner-centered innovation.

DepEd Order No. 42, s. 2017: National Adoption and Implementation of the Philippine Professional Standards for Teachers (PPST). This order emphasizes Domain 4 (Curriculum and Planning) and Domain 2 (Learning

Environment), which promote the integration of digital tools to enhance learning. AI-powered virtual assistants, when critically used, support teachers' roles in designing and managing tech-enhanced learning environments and making informed instructional decisions. This concept supports the relevance of evaluating AI in both formal teaching and everyday knowledge application.

DepEd ICT Strategic Framework (2020–2025). The framework underscores digital citizenship, ethical use, and data privacy, aligning with your focus on ethical dilemmas, cognitive impact, and over-reliance on AI assistants. It mandates the integration of digital technologies while also warning of risks associated with privacy and misuse. This supports your inclusion of concerns such as AI-generated information, cognitive outsourcing, and surveillance in your framework.

Republic Act No. 10173 – Data Privacy Act of 2012. This law is highly relevant. Your study's exploration of privacy risks and ethical dilemmas in AI usage reflects this legal standard. It justifies why learners and educators must be critically aware of how virtual assistants collect, process, and store personal data—a vital layer in your conceptual mapping.

CHED Memorandum Orders on Flexible Learning (e.g., CMO No. 4, s. 2020). Within the DepEd sector, it aligns with inter-agency efforts to promote flexible, technology-enabled education. AI-powered tools support self-paced, independent learning models advocated by CHED and DepEd alike, reinforcing the importance of user autonomy and critical engagement as part of the digital learning experience.



1.3 Objectives of the Study

This study explores users' experiences, challenges, and perceptions regarding AI-powered virtual assistants. Specifically, it aims to address the following questions:

1. What are users' perceptions of the role of AI-powered virtual assistants in education and everyday life?

- 2. What benefits do AI-powered virtual assistants provide in learning and personal productivity?
- 3. What challenges do users encounter when interacting with AI assistants?
- 4. How do users address concerns relate to AI-generated information, privacy, and ethical considerations?
- 5. What are the potential improvements needed to enhance AI-powered virtual assistants for better user experiences?

2. METHODOLOGY

2.1 Research Design

This study adopts a qualitative phenomenological research design to explore the lived experiences and perceptions of users of AI-powered virtual assistants. Grounded in the philosophy of Edmund Husserl (1970) and further guided by Moustakas (1994), phenomenology seeks to uncover the essence of participants' interactions, thoughts, and feelings by setting aside researcher biases. This approach is well-suited to investigate how users perceive, engage with, and reflect on the role of AI in both educational and personal settings.

2.2 Research Participants

A total of 15–30 participants will be selected through purposive sampling, ensuring diverse representation. Participants will include: Students, Teachers, Office workers and Freelancers

Inclusion Criteria:

a. Must be at least 18 years old.

b. Must have regular experience using AI-powered virtual assistants (e.g., ChatGPT, Google Assistant, Alexa, Siri).

c. Must use AI in at least one of the following areas: education, work, or personal productivity.

d.Must be willing to participate in either an interview or qualitative questionnaire.

Data Saturation

The data collection process involved interviews continuing until data saturation—meaning no new themes or significant variations in themes were being expressed in participant accounts. By the 13th to 15th participant, responses began to represent consistent themes of trust, usability, and ethical issues suggesting the depth and range of user experiences had been captured.

2.3 Research Instruments

The primary research instruments include:

1.A semi-structured interview guide with open-ended questions based on the research questions.

2.A researcher's journal for recording observations, impressions, and emerging insights during data collection.

2.4 Data Analysis Procedure

The study will employ thematic analysis as proposed by Braun & Clarke (2006). The steps include:

1.Familiarization - Transcribing and reviewing interviews and questionnaire responses.

2.Initial Coding – Identifying and labeling significant data segments.

3. Theme Identification – Clustering codes into meaningful themes (e.g., trust, usability, privacy concerns, AI dependence).

4. Theme Refinement and Synthesis - Connecting themes to research questions and literature.

5.Interpretation – Drawing conclusions regarding the perceived roles, challenges, and improvements of AI-powered virtual assistants.

2.5 Trustworthiness and Rigor

To ensure credibility and rigor, the following strategies will be implemented:

1.Member Checking - Participants will review transcripts or summaries to validate accuracy.

2. Triangulation – Using both interviews and questionnaires to compare and enrich data.

3. Audit Trail - Maintaining detailed documentation of procedures and analysis steps.

4. Thick Description – Providing rich, contextual narratives to support transferability.

5.Peer Debriefing – Engaging a fellow researcher for external feedback on coding and theme development.

2.6 Ethical Considerations

1.Informed Consent – All participants will receive detailed information about the study and sign a consent form prior to participation.

2. Confidentiality - Participant identities will be anonymized using pseudonyms.

3. Voluntary Participation – Participants can withdraw from the study at any time without consequences.

4.Data Security - Digital files will be password-protected and securely stored to prevent unauthorized access.

2.7 Researcher Reflexivity

As a teacher-researcher who has experience with effective integration of digital tools in classrooms, the researcher understands the implications of their own beliefs and expectations about the potential usefulness of AI-based virtual assistants. Bracketing strategies were used throughout the study, including a utilization of a reflexive journal to articulate assumptions, observations, and personal responses. The researcher was always mindful to set personal assumptions aside and allow the lived experience of the participants to shape the thematic interpretation. The reflexive stance supported a credible representation of the lived experiences and voices of the participants, which suggests the findings are the accounts of participants rather than researcher influence.

3. RESULTS AND DISCUSSION

This chapter mainly presents the data gathered in the study. These data gathered were tabulated, analyzed and interpreted. Statistical testing was employed to facilitate the interpretation of the data.

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		Table 1. SOP 1
Main Theme	Themes	Narratives
		Very quick and fast in giving information for in-demand and scheduled reports. AI assistants guide me in my work. However, the trust in responses depends on how they align with human understandingk1
		They are time-saving tools but not always trustworthy. I use them carefullyk10
	trust	<i>I like using AI for checking and drafting content. I don't fully trust the answers, but they're helpful for referencek15</i>
		AI tools are useful especially when I need to submit work on time. But I double- check because it doesn't always understand the local contextk2
		I feel AI makes things more accessible, especially in research. But I still don't rely on it 100%k5
Perceived Accuracy and Reliability of AI information aid	usability	They are like a starting point when I don't know where to begin, especially in making presentationsk7
		It's convenient, but sometimes generic. I prefer it for reminders and research drafts, not final answersk8
		They are like on-call assistants. I like how fast I get results, but sometimes it's not always the answer I'm looking fork3
	information aid	Helpful in planning lessons and writing. They give structure to my thoughts, but they lack emotional understandingk4
		AI assistants are modern tools we must adapt to. I appreciate their help in writing reports and summarizing topicsk6
		In education, it works like a quick tutor, but it sometimes lacks localized examples or referencesk9
	planning and	AI supports my routine tasks, especially with paperwork and forms. But sometimes it needs clearer instructionskl l

	structure	<i>I see it as an aid in research, but I still apply my own knowledge and experiencek12</i>
	caution and	Helpful for idea generation. I use it to brainstorm when I'm stuck, but always revise itk13
validation	validation	Good for students and teachers who want to catch up with trends. Still, human judgment is neededk14

The participants' narratives on the perceived accuracy and reliability of AI-powered virtual assistants coalesced into five themes: trust, usability, information aid, planning and structure, and caution and validation. These themes collectively address the core research question: "What are users' perceptions of the role of AI-powered virtual assistants in education and everyday life?"

The theme of trust reflects users' ambivalence about AI's reliability. Participants acknowledged the efficiency and immediacy of AI-generated responses but emphasized the importance of human oversight. This aligns with Mittelstadt's (2019) warning on the epistemic opacity of algorithmic outputs and confirms Gillespie & Seaver's (2020) critique of AI's performative confidence despite potential factual inaccuracies.

Usability, on the other hand, highlights the instrumental value of AI tools. Users find AI beneficial in initiating tasks and providing basic guidance, echoing the findings of Winkler and Söllner (2021) that chatbots and virtual assistants enhance user experience through accessibility and ease of use, even though limitations remain.

Information aid captures how AI functions as an always-available assistant. This role is particularly valuable in academic tasks, such as drafting summaries and responding to queries. As Luckin (2019) argued, when AI tools are used to supplement rather than replace human thinking, they can enhance productivity and learning outcomes.

The planning and structure theme suggests that AI is perceived as a tool for organizing thoughts and facilitating workflow. Users turn to AI for brainstorming and scaffolding their outputs—an observation that parallels the concept of AI as a cognitive amplifier (Holmes et al., 2023).

Finally, caution and validation speaks to ethical reflexivity. While users value AI's speed and assistance, they stress the need to validate outputs critically. This underscores the growing concern around AI dependence and the need for AI literacy, as emphasized by Porayska-Pomsta et al. (2024).

The data suggest that users perceive AI-powered virtual assistants as supportive but not autonomous tools. AI is trusted when its responses align with human expectations and are grounded in context; otherwise, it is treated with skepticism. The assistant's perceived role is thus dual: a productivity partner and a learning scaffold, but never a replacement for human reasoning.

Key challenges include the lack of contextual awareness, overly generic outputs, and occasional factual errors. Users compensate by validating content and selectively trusting AI outputs. This highlights the importance of digital discernment, a critical skill in the age of ubiquitous AI. Participants also offered insights for improvement. They desire more emotionally intelligent, context-aware systems that provide nuanced, locally relevant, and ethically sound support. These expectations push AI development toward value-sensitive design and localized pedagogical alignment.

In summary, AI-powered virtual assistants are appreciated for what they are—fast, accessible, and helpful—but they must evolve toward being more adaptive, transparent, and pedagogically ethical. Trust in AI is conditional and coproduced through human oversight and reflective engagement.

Main Theme	Themes	Narratives
		I use AI to organize my daily tasks. It saves me time and keeps me focusedk2
Benefits in		When I feel stuck, I ask it for suggestions or starting points. It makes writing easierk6
Learning		AI serves as a quick research tool. I use it to get ideas before I dig deeper into

3.2 Benefits in Learning and Personal Productivity

Table 2. SOP 2

and Personal		sourcesk8
Productivity	efficiency	During online classes, I used it to clarify topics I didn't understand right awayk9
		It gives me faster answers, so I don't spend too much time on one taskk13
		<i>AI improved my productivity by helping me schedule study time efficientlyk14</i>
		<i>AI helped me finish my thesis outline quickly by giving sample formats and ideas to start.kl</i>
	task automation	It gives me a head start on writing assignments. I use it to draft before polishing the final outputk3
		It helps me plan my activities and create reminders so I don't miss deadlinesk7
		<i>I use AI to compare different solutions or approaches, especially for technical tasksk15</i>
		<i>AI tools like ChatGPT helped me summarize long readings and understand difficult termsk4</i>
	study assistance	<i>AI</i> gave me step-by-step solutions in math problems which I could then verify myselfk10
		I rely on AI to break down lessons when I review at home, especially in science and Englishk12
	miscellaneous	<i>I use it to check grammar and improve my writing. It acts like a second reviewerk5</i>
		It has improved my confidence in writing. I use it to test if my ideas are cleark11

This table directly addresses the research question:

"What benefits do AI-powered virtual assistants provide in learning and personal productivity?"

Five themes emerged from the narratives: efficiency, task automation, study assistance, and a small set under miscellaneous uses.

The efficiency theme highlights how AI helps users streamline daily academic and professional routines. Tasks like organizing schedules, accessing quick information, and clarifying topics are made faster and more accessible. This reflects the findings of Holmes et al. (2023), who argue that AI enhances "cognitive offloading," allowing learners to reallocate attention to higher-order thinking.

Task automation encompasses AI's role in generating outlines, drafting content, and providing technical comparisons. This supports Luckin's (2019) claim that when repetitive processes are delegated to AI, learners gain cognitive bandwidth for deeper reflection and creativity.

The study assistance theme shows that AI helps in comprehension, summarization, and conceptual clarification. It assists with reviewing difficult content, which resonates with Winkler and Söllner's (2021) insight that AI supports metacognitive functions by giving learners feedback and structure.

While labeled miscellaneous, the responses here focus on writing improvement and confidence-building—two outcomes that are pedagogically significant. This suggests the value of renaming the theme to something more reflective, such as "academic enhancement" or "writing support".

These findings are consistent with the notion that AI functions not merely as a tool, but as a learning partner—supporting executive functioning, autonomy, and confidence in various tasks.

3.3 Challenges Encountered When Using AI Assistants

Main Theme	Themes	Narratives
	inaccuracy	Sometimes the AI gives answers that sound right but are actually wrong. I have to double-check everythingkl
Challenges Encountered		Some technical terms are misused or not properly explained by AI. I need to verify from textbooksk3
When Using AI Assistants		Once, it gave me an answer that was completely false. I had to consult other reliable sourcesk9
	misunderstanding	I struggle when it doesn't understand my question. I end up rephrasing many timesk2
	3	AI doesn't always understand open-ended questions or real-life scenariosk13
		It gives outdated or unrelated answers, especially for current eventsk4
	technical issues	It doesn't always work well on my phone—slow loading or connection issuesk5
		I had trouble accessing it when the server was down. That affected my schedulek11
	overload	<i>AI tools sometimes give too much information that isn't directly usefulk6</i>
		It gives different answers to the same question, which is confusingk12
	repetition	It repeats answers or gives general info when I need something specifick8
	language barrier	When I ask in Filipino or mixed language, it sometimes doesn't get the meaningk14
	irrelevance	<i>I find it hard to ask follow-up questions. The flow of conversation gets lostk7</i>
		It doesn't know local context or curriculum-specific terms. That makes its help limitedk10
	inaccessibility	Some features are not available unless you subscribe, which limits full use for students like mek15

Table 3- SOP 3

The themes derived—inaccuracy, misunderstanding, technical issues, overload, repetition, language barrier, irrelevance, and inaccessibility—capture the multifaceted challenges users face in relying on AI-powered virtual assistants. These directly respond to the research question:

"What challenges do users encounter when interacting with AI assistants?"

The theme of inaccuracy is critical. Participants reported encountering seemingly confident yet false information, which aligns with Gillespie & Seaver's (2020) argument that AI often projects certainty despite lacking factual

grounding. Users' need to verify from textbooks or consult other sources reflects Mittelstadt's (2019) concern on the ethical implications of epistemic opacity in algorithmic systems.

Misunderstanding and irrelevance highlight a disconnect between AI's processing logic and the user's communicative intent, especially in open-ended or culturally contextual queries. This echoes the findings of Porayska-Pomsta et al. (2024) who warn that AI may fail to interpret user meaning unless trained through value-sensitive, diverse datasets.

Technical issues and inaccessibility raise concerns about the infrastructural limitations of deploying AI tools in resource-constrained settings. These barriers reflect what Navarro & Lumbres (2020) found in Philippine schools: that EdTech often assumes ideal connectivity, which is not always realistic.

Overload and repetition suggest cognitive strain from interacting with AI. When users receive too much or redundant information, their engagement declines. Holmes et al. (2023) note that AI systems need to be designed with cognitive load theory in mind to avoid overwhelming users.

Language barrier was notably expressed when local or mixed-language queries were misunderstood, reaffirming Perez & Magsino's (2021) call for more linguistically inclusive AI systems in the Philippines.

Together, these themes emphasize that while AI has utility, its effectiveness is bounded by design, infrastructure, and cultural fit. The responses suggest that AI's utility is directly tied to how well it understands context, adapts linguistically, and respects the human need for precision and relevance.

The findings reveal that technical, cognitive, and socio-cultural challenges hinder the full adoption and trust of AIpowered virtual assistants in educational and personal contexts. Participants frequently expressed the need to double-check outputs, rephrase inputs, or abandon AI usage altogether due to inaccuracies or poor comprehension.

This suggests that AI is not yet perceived as a fully autonomous cognitive partner, but rather as a tentative tool useful when convenient, unreliable when nuanced interpretation is required. Users expect intelligent assistance but often receive templated responses that lack personalization, depth, or cultural relevance.

Moreover, challenges such as limited offline access, language mismatches, and lack of curriculum-specific support underscore the inequities in AI readiness. These must be addressed through localization, teacher involvement in design, and inclusive AI training models that prioritize accuracy and context sensitivity.

In conclusion, while AI promises efficiency, its challenges expose a need for human-AI co-regulation, digital literacy, and ethical design practices. These challenges are not barriers to usage—but opportunities for smarter, more human-centric AI development.

Main Theme	Themes	Narratives
Concerns Related to Accuracy, Privacy, and Ethics	privacy concerns	 Privacy is a big concern. I don't know where my questions and data go after I use the AIk2 Sometimes I hesitate to use AI for personal tasks because I'm not sure it's securek4 I avoid sharing my full questions when I know it involves private school data or recordsk8 There's no clear way to know if the tool is collecting personal data. That worries mek10 It feels risky to use AI for tasks that involve student names or personal reflectionsk11
		I worry that some of the information might be fake or misleading, especially if I don't verify itkl

3.4 Concerns Related to Information Accuracy, Privacy, and Ethics Table 4- SOP 4

ethical risks	I'm concerned that too many people rely on AI without thinking critically about the answersk6 I've heard AI responses are based on training data that could be biased or
	inaccuratek9
	I once used it for a reflection and realized the tone was too impersonal, which felt wrongk13
	Ethics is important. AI doesn't always know what's morally right in human situationsk14
	We should be cautious because AI can influence how we think without us noticingk15
distrust	I'm afraid someone might use the information I type for other purposesk3
and fear	The tool gives fast info, but not always ethical advice or culturally appropriate responsesk7
	I believe people should always double-check what they read, even if it sounds rightk12

This section responds to the research question:

"How do users address concerns related to AI-generated information, privacy, and ethical considerations?"

Three core themes emerged from the narratives: privacy concerns, ethical risks, and distrust and fear.

The theme of privacy concerns reveals that participants are deeply uncertain about how AI tools collect, use, and store their data. Worries about exposing private records or sensitive student information suggest a lack of transparency and consent protocols. These concerns reflect global calls for stronger data governance in AI systems (Mittelstadt, 2019; Veale & Edwards, 2018), especially in educational environments.

Ethical risks go beyond data security. Participants expressed discomfort with the impersonality of AI responses and the potential of AI to embed biased, inaccurate, or culturally inappropriate content. This aligns with Porayska-Pomsta et al. (2024), who emphasize the need for value-sensitive design in AI that accounts for contextual ethics and user dignity.

Distrust and fear illustrate the emotional and psychological dimension of AI interaction. Informants shared fears about how AI could influence thinking, especially when answers are received without critical analysis. Gillespie & Seaver (2020) argue that such fears are rooted in the epistemic authority users unwittingly give AI. Without proper digital literacy, users may over-rely on AI even when its ethical implications remain unclear.

Taken together, these themes emphasize that concerns with AI are not purely technical—they are relational, ethical, and epistemological. Participants desire not only better performance, but also greater transparency, moral accountability, and personal safety when engaging with AI systems.

Participants' responses demonstrate that while AI assistants offer fast, automated help, they also introduce vulnerabilities related to information control, ethical ambiguity, and psychological influence. The lack of clarity around how AI stores and processes data—especially for educational tasks involving minors or sensitive reflections—raises concerns that echo those of global digital rights advocates.

The ethical tensions arise not from malicious design, but from a lack of clear boundaries, human oversight, and ethical training in both users and systems. As AI becomes more integrated into classrooms and professional life, participants call for human-centered design, where ethical guidelines and user empowerment are built into the AI experience.

The theme of distrust and fear is particularly telling. It points to a deeper discomfort—users sense that AI may subtly shape their thinking, preferences, or even moral intuitions. This highlights the urgent need for AI literacy programs that promote not just technical usage, but critical reflection, informed consent, and ethical awareness.

In conclusion, users do not reject AI, but rather, they seek reassurance, transparency, and ethical safeguards. AI systems in education must evolve beyond efficiency toward accountability, fairness, and relational trust.

3.5 Suggested Improvements for Enhanced User Experience

Main Theme	Themes	Narratives
Suggested Improvements	language support	I hope they add more local language support like Cebuano or Filipinok1
for Enhanced User Experience	verification	It would be better if AI can cite sources or give links for fact-checkingk2
	and citations	AI should warn users when it's unsure about an answer or if data might be outdatedk7
		There should be clear disclaimers on accuracy and data safety when using itk9
	human- centered	Developers should include a "human tone" option to make responses feel more naturalk3
	design	I wish it had a real-time voice feature that works like a talking assistantk4
		It should be able to ask follow-up questions to improve the conversationk5
		A simpler interface and offline access would be helpful for those with poor internetk6
	privacy and	I'd suggest more control over privacy—like choosing what info gets storedk8
	comroi	Developers need to train AI to respond ethically to sensitive or moral issuesk10
	educator involvement	I want to see more features for teachers like creating customized quiz templatesk11
		Developers should include more educational content matched with the local curriculumk13
		<i>My advice is: Always involve real educators in improving AI tools for learning usek15</i>
	curriculum	The AI should allow users to correct or flag wrong responsesk12
	integration	AI must be updated regularly with the latest info, especially in educationk14

Table	5-SOP5
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This section addresses the fifth research question:

"What are the potential improvements needed to enhance AI-powered virtual assistants for better user experiences?"

The participants' recommendations organized into six actionable themes:

language support, verification and citations, human-centered design, privacy and control, educator involvement, and curriculum integration.

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The demand for language support stems from the lack of inclusivity in current AI tools. Calls for support in Cebuano, Filipino, and other local dialects affirm Perez & Magsino's (2021) argument that Western-centric EdTech designs risk marginalizing non-native English speakers. This theme stresses the importance of linguistic equity in global AI adoption.

Verification and citations were emphasized to improve trust and accountability. Informants want AI to flag outdated data and provide verifiable sources. This aligns with Mittelstadt (2019) and Gillespie & Seaver (2020) who advocate for epistemic transparency—making AI-generated information traceable, debatable, and grounded in credible data.

The human-centered design theme reflects participants' desire for AI that communicates more naturally, handles follow-ups, and offers offline functionality. These align with Postdigital Pedagogy (Jandrić et al., 2018), which encourages technologies that are empathetic, accessible, and responsive to diverse learner needs.

Privacy and control echo global concerns. Participants want better consent protocols, control over stored data, and AI that handles sensitive topics with care. These insights are consistent with the GDPR's guidelines on user agency and data sovereignty (Veale & Edwards, 2018).

The theme of educator involvement underscores that AI cannot evolve effectively without the input of those it aims to support. Teachers asked for custom content creation tools and emphasized the inclusion of local curriculum—a point supported by Porayska-Pomsta et al. (2024) in their advocacy for value-sensitive co-design with educational stakeholders.

Finally, curriculum integration suggests that AI must be dynamically updated to align with contemporary pedagogical standards. This theme resonates with Luckin (2019), who calls for AI to evolve with curricular changes and learning goals to remain pedagogically meaningful.

Participants envision AI not as a fixed product but as an adaptive educational ecosystem—one that evolves with relevance, empathy, and contextual awareness. The insights gathered point toward a more localized, ethical, and user-responsive AI future. Rather than calling for broad, generic improvements, users advocate for specific enhancements that increase AI's relevance and effectiveness within diverse educational settings. These include cultural and linguistic customization to accommodate non-English speakers and local dialects; verifiable outputs to ensure that the information provided is accurate and trustworthy; and real-time responsiveness with voice capabilities that mimic more human-like interaction. Additionally, users emphasized the importance of data transparency and ethical sensitivity to safeguard personal information and uphold responsible digital practices.

Moreover, teacher empowerment through co-design was identified as crucial, ensuring that educators are active collaborators in shaping AI tools that reflect real classroom needs. This is closely tied to the demand for better alignment with local curricula, making AI a supportive tool that complements rather than conflicts with established learning objectives. Such feedback strongly suggests that effective AI in education must be designed not only for learners but in collaboration with them and their educators. The human element—cognition, language, emotion, and context—must be fully embedded in AI systems to sustain trust, engagement, and learning efficacy. In summary, these improvements are not optional add-ons—they are fundamental to positioning AI as a legitimate and effective pedagogical partner.

4. CONCLUSIONS

This study critically explored the lived experiences, perceptions, challenges, and aspirations of users engaging with AI-powered virtual assistants (VAs) across educational and personal contexts. The findings reveal a complex interplay of trust, functionality, ethical apprehensions, and adaptive expectations—with AI seen not merely as a tool but as a co-evolving actor in the learning process. Participants recognized the benefits of efficiency, task automation, and personalized support, yet consistently voiced concern over inaccuracies, contextual insensitivities, ethical opacity, and the potential erosion of critical thinking. These insights underscore the dual nature of AI: its promise as a learning aid and its peril as an uncritical source of epistemic authority.

Theoretically, the study extends discourse in educational technology by bridging Sociocultural Learning Theory, Post digital Pedagogy, and Critical Algorithm Studies—demonstrating that AI use in education is not only shaped by individual utility, but by broader sociotechnical systems, cultural norms, and evolving notions of cognition and agency. The user narratives contribute to the repositioning of AI not as an independent pedagogical force, but as a relational entity embedded in human contexts.

Practically, the study calls for policy frameworks and instructional models that integrate AI literacy, ethical design standards, and co-development with educators. These findings urge education systems—especially in Global South contexts like the Philippines—to invest in locally grounded, culturally responsive, and inclusive AI integration strategies. Moreover, it challenges developers to create platforms that are not only efficient but transparent, contextual, and accountable to real-world classroom conditions.

Methodologically, while the qualitative phenomenological design allowed for rich interpretive depth, it is limited by the absence of longitudinal or multimodal interaction data. Future research should incorporate mixed methods, cross-regional comparisons, and longitudinal studies to further elucidate how trust, ethics, and pedagogical alignment evolve over time in AI-supported environments.

This study ultimately contributes to the global discourse by urging a paradigm shift: from AI as an innovation to be deployed, to AI as a socio-educational system to be co-designed, contested, and continually reimagined. In an age increasingly shaped by algorithmic mediation, the true measure of educational technology is not its efficiency—but its ethical capacity to honor learning as a deeply human endeavor.

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