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Unpacking student engagement with everyday ethics in GenAI mediated dialogue

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Abstract: With the rise of digital technologies, there is an increasing need for ethics education tailored to digital natives—children who have grown up in a technology-driven world. Traditional approaches to teaching ethics often fail to resonate with this generation, highlighting the need for innovative pedagogical methods. To address this, we designed a Generative AI (GenAI) chatbot that serves as a reflective agent, providing a platform for students to engage with ethical dilemmas and reflect on their values. Utilizing the Dialogue on Ethics (DoE) framework, this study analyzes the ethical thinking aspects during students' interactions with the chatbot. The findings suggest that students engage more actively with values through Interpretation and Judgement, moving beyond theoretical understanding to real-world ethical decision-making. The chatbot's role as a reflective agent, promotes a back-and-forth engagement with values. This research underscores the potential of AI-driven tools in supporting ethics education by encouraging dialogic pedagogy and empowering students to articulate and refine their personal ethical frameworks.

Keywords: ethics education, genAI ethics, dialogue on ethics framework, dialogic pedagogy

1. Introduction

The National Education Policy (NEP) 2020 of India, along with organizations like UNESCO, the World Bank, and the OECD, emphasizes the integration of values-based education as a central pillar of holistic development in schools (UNESCO, 2015; World Bank, 2018; OECD, 2019). However, teaching ethics to digital-native students, who are immersed in technology from an early age, presents new challenges. Traditional approaches to moral education often lack relevance or resonance with students accustomed to interactive, on-demand digital environments (Berkowitz & Bier, 2005).

Traditional ethics education often emphasizes abstract moral principles or adult-defined dilemmas that may lack relevance to children's lived experiences, particularly for digital-native learners who engage with technology from an early age (Bers, 2018). With rapid advancements in artificial intelligence (AI) and its increasing presence in daily life, new pedagogical challenges arise in teaching ethics that resonate with children's realities and fosters authentic moral reflection (Shaw & Brindle, 2020). Although digital tools and AI applications have been introduced to support ethics education, many remain limited in their capacity to facilitate dynamic, dialogic learning or to personalize engagement based on students' own values (Patry et al., 2008; Hollingsworth et al., 2003). This gap highlights the need for innovative approaches that integrate dialogic pedagogy (Wegerif, 2007) with AI technologies to nurture active and reflective ethical reasoning.

The present study applies this perspective to explore how 10- to 11-year-old students articulate and evolve their ethical reasoning through interaction with a generative AI (GenAI) chatbot. The learning experience was designed around dialogic pedagogy, where students act as co-constructors of ethical understanding rather than passive recipients of fixed moral content (Alexander, 2006; Wegerif, 2013). The chatbot serves as a reflective agent that

responds according to each student's personal value framework, enabling dialogues. Such a context offers a unique opportunity to explore the hypothesis—well-supported by moral development research—that *ethical growth emerges through iterative, situated dialogue, including interactions with non-human agents designed for pedagogical mirroring* (Brandel et al., 2024).

This study investigates student engagement with ethical values via GenAI chatbot conversations using the Dialogue on Ethics (DoE) framework (Cedar et al., 2021). It aims to unpack how students express and reflect on their chosen values and how the sequences of their moral reasoning unfold in dialogue with the chatbot. This approach advances the field of ethics education by situating ethical reflection within technology-enhanced dialogic contexts that align with the realities of digital-native learners. The findings have implications for the design of genAI-mediated pedagogies that foster authentic value-based learning and support the development of personal ethical frameworks in contemporary classrooms.

2. Theoretical Basis

2.1 *Dialogue for Ethical Development*

Ethical development in children has often been studied through frameworks emphasizing individual cognitive stages or externally imposed moral rules (Kohlberg, 1984). However, a growing body of research argues that moral understanding is socially constructed and dynamically shaped through interaction. From this perspective, dialogue becomes not just a method of communication but a core medium for ethical thinking and identity formation (Wegerif, 2013; Mercer et al., 2019).

Although ethics education has traditionally occurred in face-to-face contexts, digital platforms increasingly mediate values learning. Previous programs like VaKE (Values and Knowledge Education) and REACH Beyond Tolerance have incorporated structured digital or dialogic components to foster reflection and reasoning (Patry et al., 2008; Hollingsworth et al., 2003). However, Cedar et al. (2021) emphasize that many existing programs frame ethical development through adult-defined questions or moral exemplars, limiting opportunities for emergent ethical reflection. The potential of genAI and dialogic agents in this space remains underexplored and under-theorized.

2.2 *Dialogue on Ethics (DoE) Framework*

The Dialogue on Ethics (DoE) framework, as proposed by Cedar et al. (2021), offers a structured approach to analysing the ethical reasoning that emerges in student dialogue. The framework is grounded in micro genetic analysis of student talk, providing a fine-grained method to identify moments of ethical thinking within naturalistic dialogue.

DoE categorizes ethical engagement into three primary aspects:

- Conceptualization – when a value is explicitly or implicitly defined or discussed
- Interpretation – when a value is attributed to others, either ascriptions of motivation or situational analysis
- Judgement – when the speaker takes a personal moral position, often marked by evaluative language or commitments to action.

The strength of the DoE framework lies in its capacity to trace how ethical understanding develops within and across episodes of dialogue, rather than evaluating morality through externally imposed standards.

In the present study, the DoE framework was adapted to analyse student–chatbot interactions. Although the interaction partner is artificial, the structure of dialogue still allows for identification of ethical reasoning patterns. Each conversational turn was treated as a potential site of ethical engagement, and the three DoE dimensions were used to code and trace the development of ethical thinking.

3. Course Design and Implementation

3.1 *Course Structure*

The Personal Code of Ethics (PCOE) course was a 20-hour classroom-based program designed for Grade 5–6 learners (ages 10–11) to construct, test, and refine their personal ethical frameworks using genAI-enabled reflective tools. The course followed a scaffolded learning path, beginning with the real-world implications of ethics in an AI-driven world, progressing through the conceptual exploration of ethics, historical analysis, and applied moral dilemmas, and culminating in the creation of student-authored "digital twin" chatbots that embodied their chosen values. The capstone phase centered on a project where students designed a digital twin based on their PCOE for a selected value, created in Class 10, and built into a chatbot in Class 15. The chatbot acted as a reflective tool, allowing students to test and revise their ethical reasoning in response to new dilemmas, culminating in a reflective dialogue about their values. This paper focuses specifically on analyzing the interactions from Class 15, emphasizing the chatbot's role in facilitating ethical reflection and value articulation.

3.2 *Course Design Principles*

The course was explicitly built on constructivist foundations. Students were not given a fixed ethical doctrine; rather, they were guided to build meaning through exploration, discussion, and creation. For example, students developed their own value frameworks through mind maps, story-based analyses, and real-life reflection exercises—constructing a personalized "moral GPS" rather than adopting pre-given rules (Shah, 2019).

The approach was further rooted in dialogic pedagogies, drawing on traditions of ethical discussion, mutual respect, and value clarification. Classes incorporated structured group conversations, Socratic questioning, and peer feedback. Students were encouraged to confront contradictions, consider counterpoints, and revise their views, mirroring the iterative, social nature of ethical development (Alexander, 2005; Wegerif, 2013).

Significantly, the course departed from traditional moral education in its focus on everyday ethics. Instead of abstract moral dilemmas detached from students' lives, the curriculum prioritized interpersonal and culturally situated situations. Scenarios such as loyalty to a friend who has committed a mistake, or family practices conflicting with personal values, made ethics tangible and relatable. This emphasis on personalization also aligned with the emerging consensus in values education that encourages learner agency, relevance, and application (UNESCO, 2021).

3.3 *Technical Implementation*

To realize the pedagogical vision, a custom GenAI chatbot system was implemented, designed with the principle of value mirroring (Wegerif, 2013), the ability to reflect and respond according to student-authored ethical blueprints. The system's architecture used lightweight prompt-engineered LLMs (OpenAI's GPT-3 model) connected to a student interface that allowed learners to input, test, and revise their chatbot personas. The link to the chatbot is provided here for reference.

The value mirroring functionality was designed to constrain chatbot outputs to the student's ethical framework. For example, if a student prioritized honesty and empathy, the digital twin would be prompted to respond in dilemmas using only those values. The system avoided general ethical reasoning unless specified in the student's prompt, preserving the authenticity of student-authored ethics.

To support ethical engagement, dialogue structuring was built into the system: every chatbot interaction followed a turn-taking model prompting students to first input a dilemma, then receive a mirrored response, and finally reflect on their own feelings and possible divergence from the chatbot's decision. This enabled an internal dialogic loop, what we call "mirror as pedagogy" (Wegerif, 2013), where students encountered their values embodied

externally and reflected on alignment. The system thus served as both mirror and scaffold, a pedagogical agent that responds, provokes, and reflects alongside the learner.

4. Research Methodology

This is an exploratory study to investigate how Grade 5 students engage with values through AI-mediated dialogues using the Dialogue on Ethics (DoE) framework (Cedar et al, 2021). The primary research question (RQ) is- *How do the students engage with values using the genAI chatbot?* This study used a qualitative research approach to understand how Grade 5 students engage with everyday ethics while interacting with a genAI chatbot.

4.1 *Participants*

The study involved 23 Grade 5 students (ages 10–11) from an urban English-medium school, with 10 females and 13 males. The students come from an economically weaker section of the society with the parents' yearly income less than 7000 USD. Participants were selected through convenience sampling (Creswell & Creswell, 2017) from grade 5 class participating in a broader Skills Lab program on values and ethics. While students had no prior structured instruction in ethics, they navigated value-laden scenarios informally in daily life. Both parental consent and child assent were secured in accordance with ethical research protocols involving minors.

4.2 *Instruments and Data Collection*

The primary data source was chat logs generated from structured student–chatbot interactions. Students interacted with GenAI bots customized to reflect their own value systems, developed in earlier course sessions. Chatbots were hosted in a closed, supervised environment, and interactions were logged digitally. In total, students engage in a class session (~120 minutes) every week. To address the above mentioned RQ, this particular study focuses on the analysis of class 15 with an approximate duration of 60 minutes.

4.3 *Data Analysis*

For this study, chat logs constituted the data source, and were analysed using the Dialogue on Ethics (DoE) (Cedar et al, 2021) framework following the principles of content analysis and deductive coding. The analysis was majorly informed by the deductive codes: *Conceptualization*, *Interpretation*, *Judgement*, and any chat-based interactions other than these three codes were grouped under- *Other*. Three researchers (the first three authors of this paper) collaboratively coded the transcripts in iterative rounds. The first round of coding resulted in a percentage agreement of 45%, with discussions on how the definitions from DoE framework (Cedar et al, 2021) can be refined as per the study context (see Table 1). For example, the researchers arrived at a consensus to code for chatbot responses along with student responses where the chatbot asks or answers more than the predefined prompt. The coding cycles along with refinement of definitions continued with discussions on disagreements, and resolved through consensus resulting in a second-round percentage agreement of 70%, followed by a third-round percentage agreement of 91%.

As mentioned above, both the student and chatbot responses were coded for analysis to capture the full scope of the ethical dialogue. Each turn of conversation, whether initiated by the student or the chatbot, was treated as a distinct unit of analysis. This approach was done to understand the process of ethical thinking through back-and-forth exchanges. However, we noted that some turns, particularly those written by students, were lengthy and contained multiple ideas. In such cases, it was possible for a single turn to include more than one dimension of ethical engagement (e.g., a *conceptualization* followed by a *judgement*), and we applied multiple codes accordingly. This ensured that the coding remained sensitive to the richness and complexity of the students' responses.

Table 1. *DoE Coding Framework (Cedar et al., 2021) with adapted definitions*

Code	Original Definition (DoE)	Adapted Definition (this study & context)	Example
Conceptualization	concerns explicit/implicit discussion of ethical concepts	Definition, explicit or implicit discussion of a value	*Forgiveness means being generous and choosing to let go of hurt when someone has wronged you.*
Interpretation	concerns attributing beliefs, desires, and intentions to the characters and reconstructing causality between events	'You' or character-based assignments, attributions to characters	*You are too generous, you make your friend a king,but he is too clever (and) takes whole leadership (and) kills you*
Judgement	involves a move from the narrative towards ethical personal positioning	'I' and a personal positioning	*I use (this) with (my) friend when he blames me but I forgive him.*
Other	-	Greetings & pleasantries	*Great, nice*
Other	-	Gibberish text which had no context and incomprehensible	*I don't drive to understand*

Following the coding process, a frequency analysis was initially performed to quantify the occurrence of each code across all dialogues separately. This helped determine the dominant modes of ethical engagement for the student as well as the chatbot. Additionally, for selected cases, sample sequences of student dialogue codes were visualized as graphs to illustrate the transitions between different types of ethical reasoning across time. These visual representations provided insight into how individual students moved through ethical concepts within a session. Frequency analysis highlights dominant ethical reasoning modes, while time series analysis uncovers the temporal evolution of moral reasoning over the course of an interaction. Together, these methods allow us to understand not only the content of student ethical reasoning but also the process by which values are refined and internalized through dialogue. For each student, the full sequence of coded turns was preserved, maintaining the order in which ethical aspects emerged during the dialogue.

5. Findings

Research Question (RQ): How do the students engage with values using the genAI chatbot?

5.1 *Frequency of 'DoE' Aspects for Student and Chatbot Interactions*

To answer the RQ, the analysis of student and chatbot responses were done using the Dialogue on Ethics (DoE) framework. The most frequently observed DoE aspect in the students' responses (figure 1) was Other, accounting for the majority of coded turns (173 out of 431). This category includes greetings, procedural language, and conversational exchanges that do not directly address ethical aspects of the framework. For example, some of the user responses such as" *HI, it can change on View point on at online, okay*". While these interactions set the stage for more meaningful dialogue, they do not contribute directly to the ethical reasoning process.

Following Other, the second most frequent code was Judgement, with 96 instances. This reflects students taking a personal moral stance during the conversation, where they

actively evaluated scenarios and made value-based decisions centering around themselves. For example, "*With friend(s) I (will) be honest…..and respectful I (will) keep secrets and (stay true) to my promise and support their feelings*". These judgements were often related to personal experiences or hypothetical situations presented by the chatbot, and represented students' abilities to apply their personal value frameworks to real-world scenarios. In this example, the student is applying the personal code of ethics framework on the chosen value 'responsibility'.

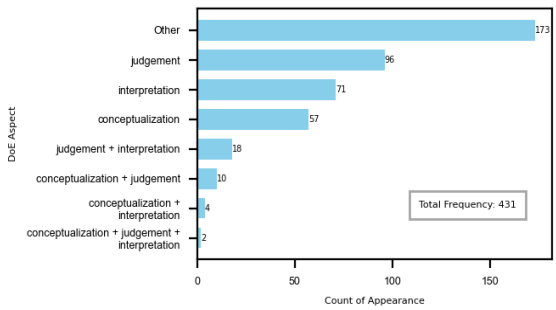

Figure 1. Frequency of 'DoE' Aspects for Student Interactions

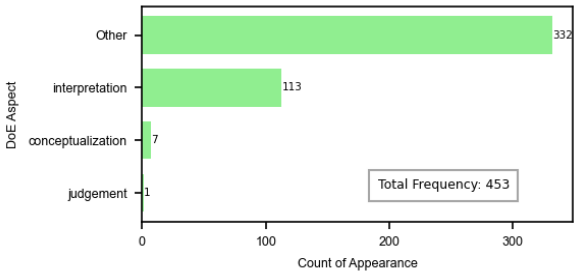

Figure 2. Frequency of 'DoE' Aspects for Chatbot Interactions

The third most frequent code was *Interpretation*, occurring 71 times. Students frequently engaged in interpreting ethical situations or attributions of values to characters, actions, or outcomes. For example, "*Your parents ask you to look after your younger sibling for an hour but your friends just invited you to play outside. Do you stay and watch your sibling like you were asked or do you leave without telling anyone*". This indicates that students often reflected on how values applied to others or how they were represented within the dialogue, without immediately asserting their own moral judgement.

Lastly, *Conceptualization* was the least frequent code, appearing 57 times. This suggests that while students did engage in defining or explaining values, much of the dialogue centered around applying and interpreting these values, rather than discussing or debating their theoretical meaning. For example, "*Generosity is not just about sharing material things; it's also about offering time, kindness, and support*". The relatively low frequency of *Conceptualization* points to a possible preference for action-oriented and contextual engagement with values over abstract discussions of their definitions.

Apart from the DoE codes, since the coding was performed for every turn of the interaction, some of the interactions were long (about 2-3 sentences). In a large chunk of dialogue, we often saw that the turns began with a particular code and then went on to another code. This is represented as code 1 + code 2. For example, *conceptualisation + judgement* code refers to this example, "*Online means using internet safely and respectfully thinking before posting protecting privacy and avoiding harmful behaviour example I don't share personal information avoid spreading rumours and report or block hurtful content instead of join again I also use the time wisely and don't let online distraction get in the way of the real-world duties.*"

The combination of codes demonstrates the complexity of ethical reasoning in longer dialogues. These combinations reflect the nuanced way in which students engage with values. Notably, the *judgement + interpretation* code appeared 18 times, indicating moments where students first made a personal moral judgment and then interpreted an ethical situation. This sequence demonstrates the students' ability to apply their own values and evaluate actions. The *conceptualization + judgement* code occurred 10 times, suggesting instances where students not only conceptualized ethics but also expressed a personal decision. A smaller number of interactions involved *conceptualization + interpretation* (4 occurrences) and *conceptualization + judgement + interpretation* (2 occurrences), pointing to rare instances where students simultaneously engaged in defining, interpreting, and judging ethical situations. These more complex combinations reflect the interconnected nature of moral reasoning, where students draw upon multiple ethical dimensions in their decision-making

processes.

Similar to the student interactions, the chatbot's responses were categorized using the Dialogue on Ethics (DoE) framework into *Conceptualization*, *Interpretation*, *Judgement*, and *Other* categories. The *Other* category again accounted for the highest frequency of responses, with 330 occurrences. This category primarily includes procedural language, technical instructions, and general conversational prompts by the chatbot, ensuring that the dialogue flowed smoothly without directly engaging in ethical reasoning. For example," Thank you for providing how someone would act responsibly online! Now, please share how your understanding of responsibility might change as you grow."

Figure 2 presents the frequency distribution of DoE aspects in chatbot interactions. *Interpretation*, with 113 occurrences, was the second most common, reflecting the chatbot's role in encouraging students to think about and interpret ethical dilemmas, often prompting them to reflect on how a value might apply in different contexts. For example," *Sure! Here's a scenario: You are working on a group project at school. One of your teammates isn't contributing and relies on you to do their part. What would a responsible person do in this situation according to your code?*"

Conceptualization, which involves the explicit or implicit definition of values, appeared only 7 times, suggesting that while the chatbot occasionally introduced definitions or contextual explanations of values, its primary role was to prompt ethical reasoning and decision-making rather than to provide fixed definitions. For example, "*PCOE stands for Personal Code of Ethics. It is a guide for how you want to act based on your values and beliefs. It helps you make choices that align with what is important to you. Now, please tell me about your chosen value. What is it?*"

The chatbot's dominant role in *Interpretation* aligns with its function as a reflective agent in the dialogue. The chatbot was designed to mirror the student's value framework, promoting reflection without offering its own moral judgments. By encouraging students to interpret ethical situations and make judgments based on their personal values, the chatbot facilitated an interactive learning experience in which the student's own ethical reasoning was actively tested, refined, and articulated.

5.2 *Case study of sample students' sequence analysis*

While frequency analysis provides an overview of common trends across all students, individual case studies allow for a more nuanced exploration of how ethical reasoning evolves in sample learners. This is critical for answering RQ, which seeks to explore how students engage with values using the chatbot. By closely analyzing sample sequences of DoE codes in a student's dialogue, we have attempted to uncover the processes that lead to ethical thinking.

5.2.1 *Sample Student 1 (S5)*

Student S5's interaction on the chosen value 'generosity' over 10 turns reveals a progression of ethical reasoning, illustrated by the line graph in Figure 3. The graph maps the frequency and sequence of different DoE aspects in the student's dialogue with the chatbot. Below is an analysis of the key stages and transitions observed in S5's engagement. The sequence shows a progression from initial conceptualization of values, through judgement and interpretation, followed by a back-and-forth engagement between interpretation and judgement. The analysis reveals several distinct phases in the student's moral reasoning, which are discussed below.

Initial Engagement (Turn 1–3): At the beginning of the interaction, the Other code is dominant, reflecting the procedural or introductory exchanges between the student and the chatbot. These early turns, which make up the majority of the dialogue initially, included greetings, setup prompts, or neutral questions. Once the student engages with the ethical content, the Conceptualization code appears. This phase is marked by the student's articulation of values or definitions. For example, "*Generosity, to me, means giving freely and*

selflessly to help others or bring joy, without expecting anything in return."

Moral Positioning - Judgement (Turns 4–6): As the conversation progresses, the student begins to engage more actively with the ethical dilemma, which is marked by the appearance of Judgement. The student moves from simply defining values to making personal ethical decisions. For example, "*At school I will share my supplies. And help my classmates. With friends I will help them when they need. And celebrate their achievements At home I will help my mom in doing the house chores. And share my things with my siblings*". This phase is critical because it demonstrates a personal commitment to a value. The student is not just reflecting on a value conceptually but is applying it to a real or hypothetical scenario.

Interpretation and Reflection - Interpretation (Turns 7–9): After establishing a judgement, the student begins to engage more deeply with the scenario by interpreting the situation in relation to the value. For example, "*Share Knowledge: Offer helpful advice, answer questions, or share useful resources without expecting anything in return. For example, contributing to forums or discussions to help others learn or solve problems*." This phase shows how students rethink or adjust their ethical decisions by considering the broader implications or complexities of a dilemma. The Interpretation phase appears more frequently in the latter half of the conversation, indicating that the student reflects on and revisits their earlier judgements.

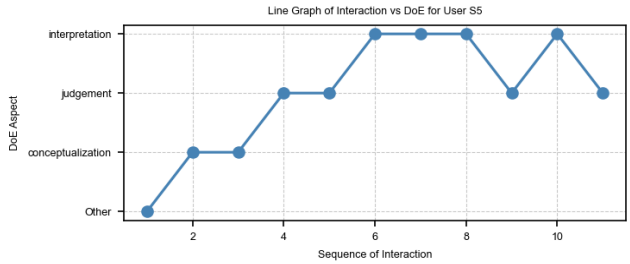

Figure 3. Time series analysis of a student's (S5) engagement

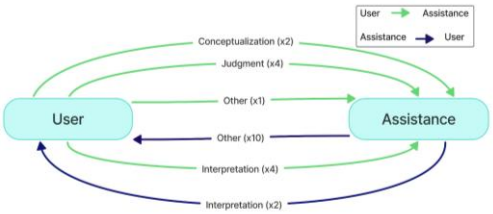

Figure 4. Interaction pattern between the student S5 (user) and genAI chatbot (assistance)

Back-and-Forth between Judgement and Interpretation (Turns 10+): The final phase of the interaction reveals a dynamic back-and-forth between Interpretation and Judgement, where the student revises or solidifies their moral reasoning through reflection. This phase is indicative of ongoing moral development, where the student continuously adjusts their stance, weighs alternative perspectives, and integrates emotional and rational responses into their ethical decision-making. The interaction pattern of the student (user) and genAI chatbot (assistant) is provided below in figure 4. This sequence reveals a dialogue pattern where the student progresses through various aspects of ethical thinking while the AI assistant primarily maintains a facilitative role.

5.2.2 *Sample Student 2 (S22)*

The student's interactions on the chosen value 'resilience' moves through phases of defining values, making moral decisions, reflecting on those decisions, and re-assessing them in light of the chatbot's responses. The time series graph (Figure 5) illustrates how the student takes 19 turns and shifts between Conceptualization, Judgement, Interpretation, and Other throughout the conversation. The dialogue follows a non-linear pattern.

Initial Conceptualization and Judgement (Turns 1–4): The student begins with Conceptualization, stating their understanding of a value. For example, "*Resilience is adopting Difficult Situation and face the struggle and win or try till he can*" This is followed by Judgement, where the student makes a moral decision about how they would act in a given scenario "*At school: In teamwork I will face the problem and will Adopt the difficult situation*".

Revisiting Conceptualization and Transition to Interpretation (Turns 5–8): The student re-engages with Conceptualization (Turn 5), refining or elaborating on their earlier

understanding of the value. For example, “sharing personal struggles, offering empathetic listening, and celebrating each other's achievements.” This is followed by a shift to Interpretation (Turn 8), where the student begins to apply the value to a more specific ethical situation or scenario. For example, *“My family members are facing problems in time management. What will you do*”.

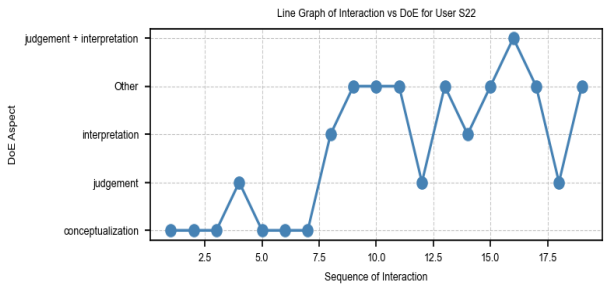

Figure 5. Time series analysis of a student’s (S22) engagement

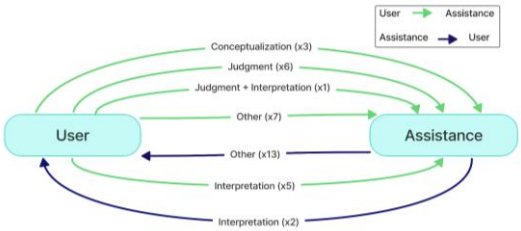

Figure 6. Interaction pattern between the student S22 (user) and genAI chatbot (assistance)

Intermittent Interactions with 'Other' and Reflection (Turns 9-11): The sequence moves into a phase marked by the Other code, reflecting procedural or contextual exchanges rather than ethical reasoning. This may include prompts from the chatbot that lead to new scenarios or brief responses to prior statements. This also marks a phase where the chatbot directs the students towards certain expected phases such as judgement & interpretation.

Iteration of Judgement and interpretation (12+): The student’s interaction transitions back into *Judgement* (Turn 12), where they reaffirm or reconsider their earlier stance. For example, “*I will not tell them to adopt, I will give strategies I will adopt when my group is struggling or in a difficult situation*”. This is followed by a return to *Interpretation* (Turn 14), where the student applies their moral stance to a new situation. For example, “*My group was stuck on a Slide. What will you do?*” This back-and-forth movement reveals the fluidity of ethical reasoning in the dialogue, where the student both asserts and reflects on their values in a dynamic, ongoing process. Additionally, as we see a combination code of interpretation + judgement we see this process to be complex and iterative.

An interesting feature of Student S22’s dialogue (Figure 6) is the frequent engagement with *Interpretation*, particularly in later turns. *Interpretation* allows the student to rethink and reframe their moral decisions in light of the chatbot’s reflective prompts, indicating a deeper level of ethical engagement. This aligns with the pedagogical goal of using the chatbot as a reflective agent, guiding students to engage in self-reflection and critical thinking about their values. Notably, the student’s dialogue alternates between *Judgement* and *Interpretation*, demonstrating the iterative process of refining ethical decisions through interaction with the chatbot.

6. Discussion and Conclusion

The findings of this study offer valuable insights into how students engage with values through GenAI-mediated dialogue, emphasizing the potential of technology in ethics education. The high frequency of Interpretation and Judgement codes in student responses reveals that students were deeply engaged in applying and evaluating values in real-world scenarios, rather than merely defining them. This shows that students moved beyond theoretical understanding to practical ethical decision-making. The chatbot’s role as a reflective agent is evident through its frequent use of Interpretation to prompt students to critically examine their decisions and consider multiple perspectives, encouraging a deeper level of reflection. While the Other codes were largely procedural, they highlight the chatbot’s role in maintaining an ongoing dialogue and facilitating the learning process.

The findings of this study extend existing theories of dialogic ethics education by demonstrating that AI, when designed as a reflective agent, can meaningfully support moral reasoning in young learners. Consistent with Wegerif’s (2013) and Mercer et al.’s (2019) view

that ethical development is socially constructed through dialogue, our results show that generative AI can facilitate Interpretation and Judgement, two markers of deeper ethical engagement, by prompting learners to reflect on value-laden scenarios. This supports Brandel et al.'s (2024) suggestion that dialogic exchanges, even with non-human agents, can serve as legitimate contexts for ethical growth. Furthermore, the chatbot's ability to mirror student-authored ethical frameworks offers a scalable pedagogical mechanism that aligns with and extends Cedar et al.'s (2021) Dialogue on Ethics framework, suggesting that dialogic AI agents can serve not only as facilitators but also as ethical mirrors in value-sensitive learning environments.

The study's findings, while promising, are limited by the small and homogeneous sample, potential interpretative bias, and the constraints of a single-session design with pre-programmed chatbot responses. Future research across diverse contexts and longitudinal studies will be essential, as advancing generative AI capabilities hold considerable promise for transforming values-based education into more interactive and personalized learning experiences.

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