

Artificial Intelligence as A Pedagogical Assistant in Hindu Religious Learning: Perspectives of Prospective ECE Teachers

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Abstract

Artificial Intelligence (AI) offers new possibilities for supporting learning preparation. In Hindu religious learning for early childhood education, however, its use requires attention to children's developmental characteristics, cultural and religious contexts, and the teacher's role. This study aims to analyze the perspectives of prospective Early Childhood Education (ECE) teachers on the use of AI as a pedagogical assistant in Hindu religious learning. A descriptive qualitative approach was employed through semi-structured interviews with eight prospective ECE teacher students at Institut Agama Hindu Negeri Gde Pudja Mataram, selected through purposive sampling. Data were analyzed through data collection, condensation, presentation, and conclusion drawing, supported by qualitative coding procedures. The findings show that participants perceived AI as useful for generating ideas and preparing RPPH, learning activities, stories, songs, games, and visual media. AI was also used to support Hindu religious learning related to *bhakti*, *Tri Hita Karana*, *Tri Kaya Parisudha*, and religious practices. However, participants did not directly adopt AI-generated outputs, instead, the outputs were selected, modified, simplified, and validated according to children's characteristics, learning objectives, curriculum, cultural context, and Hindu religious values. Participants also expressed concerns about potential dependence on AI and reduced independence in developing learning ideas. The study concludes that AI is perceived as a supporting pedagogical resource rather than a replacement for teachers. Responsible use requires human judgment in selecting, adapting, and validating AI-generated content, while teachers remain essential in providing direct interaction, guidance, and exemplary behavior in Hindu religious learning.

Keywords: Artificial Intelligence; Pedagogical Assistant; Prospective ECE Teachers; Hindu Religious Learning

Abstrak

Artificial Intelligence (AI) menawarkan berbagai peluang baru untuk mendukung persiapan pembelajaran. Namun, penggunaannya dalam pembelajaran agama Hindu pada pendidikan anak usia dini memerlukan perhatian terhadap karakteristik perkembangan anak, konteks budaya dan agama, serta peran guru. Penelitian ini bertujuan untuk menganalisis perspektif calon guru Pendidikan Anak Usia Dini (PAUD) mengenai penggunaan AI sebagai asisten pedagogis dalam pembelajaran agama Hindu. Penelitian ini menggunakan pendekatan kualitatif deskriptif melalui wawancara semi-terstruktur dengan delapan mahasiswa calon guru PAUD di Institut Agama Hindu Negeri Gde Pudja Mataram yang dipilih secara purposive. Data dianalisis melalui tahapan pengumpulan data, kondensasi data, penyajian data, dan penarikan kesimpulan, yang didukung oleh prosedur pengodean kualitatif. Hasil penelitian menunjukkan bahwa peserta mempersepsikan AI bermanfaat dalam menghasilkan ide dan mempersiapkan RPPH, kegiatan pembelajaran, cerita, lagu, permainan, dan media visual. AI juga

digunakan untuk mendukung pembelajaran agama Hindu yang berkaitan dengan bhakti, Tri Hita Karana, Tri Kaya Parisudha, dan praktik keagamaan. Namun, peserta tidak secara langsung menggunakan keluaran yang dihasilkan AI, sebaliknya, keluaran tersebut dipilih, dimodifikasi, disederhanakan, dan divalidasi berdasarkan karakteristik anak, tujuan pembelajaran, kurikulum, konteks budaya, dan nilai-nilai agama Hindu. Peserta juga mengungkapkan kekhawatiran terhadap potensi ketergantungan pada AI dan berkurangnya kemandirian dalam mengembangkan ide pembelajaran. Penelitian ini menyimpulkan bahwa AI dipersepsikan sebagai sumber pendukung pedagogis, bukan sebagai pengganti guru. Penggunaan AI secara bertanggung jawab memerlukan pertimbangan manusia dalam memilih, mengadaptasi, dan memvalidasi konten yang dihasilkan AI, sementara guru tetap memiliki peran penting dalam memberikan interaksi langsung, bimbingan, dan keteladanan dalam pembelajaran agama Hindu.

Kata Kunci: *Artificial Intelligence; Asisten Pedagogis; Calon Guru PAUD; Pembelajaran Agama Hindu*

Introduction

The transformation of education in the digital era has been accompanied by rapid developments in science and technology, including Artificial Intelligence (AI) (Chiu, 2024; Strielkowski et al., 2025). In educational contexts, AI encompasses a broad range of computational technologies that can support tasks such as information processing, prediction, personalization, and content generation. One increasingly visible form is generative artificial intelligence (generative AI), which can produce text, images, and other forms of content in response to user instructions. Generative AI applications such as ChatGPT have therefore attracted increasing attention in educational settings because they can assist educators and learners in generating ideas, drafting instructional materials, and supporting learning preparation (Moundridou et al., 2024; Ruiz-Rojas et al., 2023). At the same time, digital platforms such as Canva may incorporate AI-supported features alongside conventional digital design functions. Therefore, the use of digital design applications should not automatically be equated with the use of generative AI. This distinction is important when examining how prospective teachers actually utilize AI-supported technologies in educational practice.

The integration of AI-supported technologies is also emerging in Early Childhood Education (ECE). At this developmental stage, the preparation of learning activities requires careful consideration of children's developmental characteristics, safety, language, interests, and learning needs. AI and AI-supported applications may provide prospective teachers with alternative ideas for learning activities, instructional materials, stories, games, assessments, and visual media (Rong et al., 2024; Wang et al., 2025). From a pedagogical perspective, these technologies can function as supporting resources during the preparation stage by helping prospective teachers explore alternatives and organize initial drafts. However, the usefulness of AI-generated content depends on the ability of educators to evaluate its accuracy, developmental appropriateness, contextual relevance, and alignment with learning objectives. AI-generated outputs are therefore not inherently suitable for direct implementation in early childhood classrooms.

This consideration is reflected in the experiences of prospective ECE teachers in the ECE Teacher Education Study Program. The participants in this study reported using AI-supported technologies for several preparatory activities, including generating ideas for children's activities, preparing Daily Learning Implementation Plans, identifying song and educational game references, developing simple assessment ideas, and modifying visual learning materials. These practices suggest that prospective teachers perceive AI as a source of assistance in the preparation of learning. However, their experiences also

indicate that AI-generated outputs require further evaluation and adaptation because the information or ideas provided may be too general or may not fully correspond to children's characteristics, classroom conditions, or particular learning objectives.

The use of AI in education therefore raises questions not only about efficiency but also about the continuing role of human judgment in educational decision-making. Previous studies have discussed both the opportunities and concerns associated with generative AI, particularly in relation to creativity, critical thinking, and dependence on AI-generated content (Habib et al., 2024; Alzubi et al., 2025). These concerns should not, however, be interpreted as evidence that AI use inevitably causes a decline in creativity or critical thinking. Rather, they indicate that the effects of AI use may depend on how users interact with and evaluate AI-generated content. Recent research has also emphasized the importance of users' ability to critically assess and appropriately use AI-generated outputs (Jose et al., 2025; Zhang et al., 2025). In educational practice, this process includes formulating appropriate prompts, evaluating and verifying outputs, modifying generated content, and making final pedagogical decisions. Consequently, prospective teachers need to remain active decision-makers rather than treating AI-generated outputs as authoritative or ready-to-use instructional content.

This issue becomes particularly important in religious education, including Hindu religious learning in ECE. Religious education in early childhood involves more than the transmission of conceptual knowledge; it also concerns the development of character, ethical understanding, moral dispositions, and lived values through interaction and exemplary behavior (Istiyani et al., 2024). Within Hindu education, the teacher's role is closely associated with guidance, example, and the cultivation of values through the relationship between teacher and learner. The *Guru-Sisya* relationship emphasizes the importance of guidance and exemplary conduct in the learning process, while the principle of *Tri Kaya Parisudha* provides an ethical orientation concerning the purification of thought, speech, and action. Similarly, the development of *sraddha-bhakti* involves not merely understanding religious concepts but also nurturing attitudes and practices through meaningful educational experiences. These dimensions indicate that technology can support the preparation of learning, but it cannot simply be positioned as the primary agent responsible for interpreting, exemplifying, and transmitting religious values.

From this perspective, the integration of AI into Hindu religious learning requires a context-sensitive approach. AI-generated content may provide an initial source of ideas, but its suitability must be considered in relation to Hindu teachings, children's developmental characteristics, local educational contexts, and the ethical responsibilities of teachers. Prospective teachers therefore occupy an important position as mediators between technological outputs and educational values. They are not merely users of AI tools but also need to act as selectors, adapters, and final decision-makers concerning the content that will be used in learning. This human responsibility is particularly relevant in early childhood education because religious and moral learning is closely connected to interaction, habituation, modeling, and emotional engagement between teachers and children (Suci and Suyanta, 2025; Winia et al., 2020).

Existing literature demonstrates growing interest in AI in education, but much of the research has focused on applications in STEM education and on secondary or higher education contexts (Avci et al., 2025; Xu and Ouyang, 2022). Research concerning AI in ECE has also expanded, particularly in areas such as digital literacy, storytelling, visual media, and creative learning activities (Kazanidis and Pellas, 2024; Lim, 2023). Nevertheless, the intersection of AI, ECE teacher preparation, and Hindu religious learning remains comparatively underexplored. More importantly, limited attention has

been given to how prospective teachers negotiate AI-generated content with religious values, developmental considerations, and their own pedagogical responsibilities. Thus, the research gap is not merely the absence of studies on AI in Hindu education, but the limited conceptual understanding of how human judgment mediates the use of AI within a specific religious and early childhood educational context.

Based on this gap, this study proposes a human-in-the-loop perspective for understanding the use of AI as a pedagogical assistant in Hindu religious learning. In this perspective, AI is positioned as a supporting technology that can generate initial ideas or drafts, while prospective teachers remain responsible for selecting, adapting, validating, and determining the final use of AI-generated content. The proposed perspective places human pedagogical judgment at the center of technology integration and connects it with the values and responsibilities embedded in Hindu education. In particular, the study examines how prospective ECE teachers evaluate AI-generated outputs in terms of children's developmental characteristics, learning objectives, contextual suitability, and Hindu religious values. This perspective provides a conceptual contribution by framing AI use not as a transfer of pedagogical responsibility to technology, but as a collaborative process in which technological assistance remains subject to human, pedagogical, ethical, and spiritual judgment.

Therefore, this study aims to analyze the perspectives of prospective ECE teachers regarding the utilization of AI as a pedagogical assistant in Hindu religious learning. Specifically, it explores how prospective teachers perceive the benefits and limitations of AI, how they select and adapt AI-generated outputs, and how they position AI in relation to their pedagogical responsibilities and the transmission of Hindu religious and moral values. Theoretically, this study contributes to the discussion on responsible AI integration by connecting the human-in-the-loop perspective with early childhood and Hindu religious education. Practically, the findings may provide contextual insights for prospective ECE teachers and higher education institutions in developing responsible and context-sensitive approaches to the use of AI as a supporting tool in Hindu religious learning.

Method

This study employed descriptive qualitative research to examine the perspectives of prospective Early Childhood Education (ECE) teachers regarding the use of Artificial Intelligence (AI) as a pedagogical assistant in Hindu religious learning. The study was conducted in the ECE Teacher Education Study Program at Institut Agama Hindu Negeri Gde Pudja Mataram. Primary data were obtained from eight prospective ECE teacher students selected through purposive sampling, consisting of one third-semester, one fifth-semester, four seventh-semester, and two eighth-semester students with varied teaching and AI-use experiences. Supporting data included RPPH documents and AI-assisted visual media shown by participants. The research instrument was a semi-structured interview guide covering AI use, perceived benefits and limitations, learning preparation, selection and modification of AI-generated outputs, and consideration of children's characteristics, learning objectives, and Hindu religious values. Data were collected through in-depth semi-structured interviews conducted on August 1-3, 2026, lasting 15-20 minutes per participant, recorded with consent and transcribed verbatim. Data were analyzed through data collection, condensation, presentation, and conclusion drawing, supported by open, axial, and selective coding to identify meaning units and themes. The coding was used as a qualitative procedure and was not intended to develop Grounded Theory. Data trustworthiness was strengthened through source and method triangulation by comparing interview data across participants and with supporting documents and visual media.

Results and Discussion

Based on the participants' experiences and perceptions, the pattern of AI use in Hindu religious learning is synthesized into a conceptual model that highlights the role of human judgment in selecting, adapting, and validating AI-generated outputs, as illustrated in Figure 1:

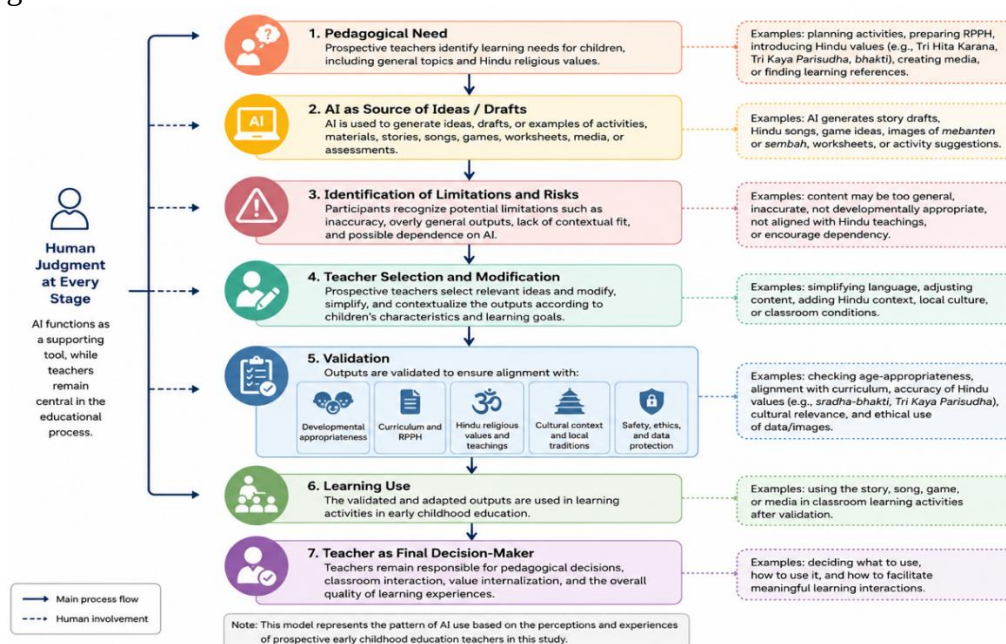


Figure 1. Conceptual Model of Human-in-the-Loop (HITL) AI Use in Hindu Religious Learning in Early Childhood Education

The conceptual model presented in Figure 1 illustrates how prospective early childhood education teachers integrate AI into the preparation and implementation of Hindu religious learning. The model shows that AI is positioned as a supporting resource rather than an autonomous decision-maker, with human judgment involved throughout the process, particularly in selecting, adapting, and validating AI-generated outputs. The following discussion elaborates the four main themes emerging from the participants' experiences and perceptions:

1. AI as a Source of Pedagogical Inspiration And Learning Preparation Support

The interview findings show that the participants generally perceived Artificial Intelligence (AI) as a useful supporting tool in preparing learning activities for early childhood education (ECE). The reported uses included generating ideas for learning activities, stories, songs, educational games, worksheets, learning media, RPPH, and simple assessments. AI was particularly used when participants experienced difficulties generating ideas independently or needed alternative activities that could be adapted to children's needs.

Ni Kadek Brahmi Iswarya Ray, who works as a tutor at Widya Sastra Tutoring Center, stated that AI helped her prepare learning activities for young children, particularly when she needed ideas for activities, learning materials, RPPH, examples of learning media, and questions or games appropriate for children's age. AI was generally used before learning activities to help prepare materials that were more engaging and easier for children to understand (Interview, August 1, 2026). Brahmi's statement indicates that AI was perceived as a source of pedagogical inspiration that helped prospective educators address practical needs during the learning preparation stage. AI was used to generate alternative ideas for activities, materials, media, RPPH, questions, and games, which could then be considered according to children's age and needs.

A similar view was expressed by Kadek Imar Wijayanti, an educator at Pratama Widyalaya Dharma Kumara, who stated that AI could help in preparing learning activities, particularly when she needed new activity ideas or alternative games that were appropriate to the learning theme and children's age (Interview, August 2, 2026). Imar's statement indicates that AI served as a source of inspiration by providing alternative learning activities, particularly when teachers needed new ideas or variations of games. Such use still required teachers' consideration in selecting and adapting the ideas obtained from AI to the learning theme and children's age characteristics.

Ni Ketut Dewi Ariani Separsa, a second-semester student, stated that AI supported the learning process through various applications, such as Quizlet for quizzes, ChatGPT and Canva AI for developing interactive teaching materials, thereby supporting teachers' administrative tasks (Interview, August 2, 2026). Dewi's statement indicates that AI can support the learning process while also assisting teachers with administrative tasks through the provision of learning materials, interactive media, and assessment activities.

The participants' experiences suggest three related forms of support. First, AI provided administrative support, particularly in drafting RPPH, modules, and other learning materials. Second, AI provided pedagogical inspiration, especially when participants experienced a lack of ideas for activities, games, songs, or stories. Third, AI expanded the range of activities that teachers could consider in designing more engaging and varied learning experiences. These findings are consistent with previous studies describing generative AI as a potential assistant for educators in learning design and preparation (Moundridou et al., 2024; Ruiz-Rojas et al., 2023).

However, these findings should be interpreted in terms of participants' experiences rather than objective effectiveness. The study did not measure preparation time, workload, children's learning outcomes, or learning quality. Therefore, the appropriate interpretation is that participants perceived AI as helpful in facilitating aspects of learning preparation, rather than that AI was proven to improve teaching effectiveness.

2. AI-Assisted Hindu Religious Learning

A significant finding of this study is that AI was not used only for general ECE learning preparation but was also utilized in the preparation of Hindu religious learning materials. The interview data provide several concrete examples, including Hindu religious songs, *bhakti*-related materials, *Tri Hita Karana*, *Tri Kaya Parisudha*, Hindu moral stories, religious games, and visual representations of Hindu religious practices.

Ni Made Dytha Vinaya Laksmi, a student participating in the Field Teaching Practice (PLP) at SMPN 9 Mataram, stated that she used AI to search for ideas for Hindu religious songs and accompanying body movements. The purpose was to make the activities more engaging, help children remember the songs more easily, and prevent them from becoming bored (Interview, August 1, 2026). Based on Dytha's statement, the use of AI in Hindu religious learning served not only to obtain information but also as a source of inspiration for developing more engaging religious activities for children. The use of AI to search for ideas for Hindu religious songs and accompanying movements demonstrates an effort to integrate verbal, musical, and movement elements into learning activities.

Another participant, Ni Kadek Brahmi Iswarya Ray, who works as a tutor at Widya Sastra Tutoring Center, described using AI to find alternative educational games integrated with the values of *Tri Hita Karana*, particularly relationships between humans and nature and among people. AI provided ideas such as a game involving sorting waste in the school environment, combined with storytelling about caring for God's creations.

The basic idea came from AI and was subsequently developed within the local Hindu cultural and religious context (Interview, August 1, 2026). Brahmi's statement indicates that AI can function as an initial source of ideas for developing educational games that integrate Hindu values. However, AI-generated ideas still require adaptation to the local cultural and religious context to make them relevant to children's learning experiences.

Similarly, Ade Leandra Putri Vitari, a fourth-semester student who had previously taught at PAUD Sandat Kuning, reported using AI for materials related to *bhakti* and for university assignments involving Hindu religious learning (Interview, August 1, 2026). Meanwhile, Ni Made Dwi Kartika, a PLP student who taught at TK Dwijendra, stated that AI was used to develop simple moral stories involving *Tri Kaya Parisudha* or the value of tolerance (Interview, August 1, 2026). In these cases, AI primarily functioned as a source of initial ideas or drafts rather than as the final source of learning content.

Creative Hindu religious learning supported by AI was also reported by Cokorda Istri Ayu Intan Permata Sari, an educator at Pratama Widyalya Jnana Vidya, who described the use of AI in developing Hindu-themed visual materials. She reported transforming images of Hindu religious activities into black-and-white animated sketches for children's coloring worksheets (Interview, August 3, 2026). This was also supported by Ni Putu Wiwik Anggarini, an eighth-semester student who had previously taught at PAUD Gerung. She reported using Canva AI to create visual materials depicting children learning *mebanten* and performing *sembah*. She subsequently edited the clothing and ornaments to make the visual representations more consistent with Balinese/Nusantara Hindu traditions (Interview, August 3, 2026).

The use of visual learning media is particularly relevant in early childhood education because visual representations can help stimulate children's curiosity and make learning materials more accessible and engaging (Lu et al., 2024; Novaliendry et al., 2022). In the context of Hindu religious learning, AI may therefore serve as a technical extension that assists teachers in visualizing abstract Hindu values and religious practices through more concrete learning materials. However, the interview findings also reveal a gap between AI-generated representations and the psychological and sociocultural realities of children, indicating that such visual outputs still require careful selection, contextualization, and adaptation by teachers.

These findings provide an important contribution to understanding AI use in Hindu religious learning. AI was not simply used to generate generic learning activities; it was also used to produce initial representations of religious values, practices, stories, and cultural elements. At the same time, the participants' accounts show that AI-generated material was not automatically accepted. Instead, participants selected, contextualized, simplified, or edited the outputs. For example, the adaptation of visual representations of *mebanten* and *sembah* demonstrates that technological output may require cultural and religious adjustment before it is considered appropriate for use with children.

The finding is particularly relevant to Hindu religious education because learning at the early childhood level involves not only introducing concepts but also developing values and habits through meaningful experiences. The participants' use of AI for *bhakti*, *Tri Kaya Parisudha*, *Tri Hita Karana*, religious songs, stories, and representations of Hindu practices indicates that AI can function as an initial creative resource. Nevertheless, the religious meaning of the content remains dependent on human interpretation, contextualization, and pedagogical judgment.

In this context, the concepts of *Guru-Sisya*, *Tri Kaya Parisudha*, and *sradha-bhakti* provide an important interpretive framework. The *Guru-Sisya* relationship emphasizes the role of guidance and exemplary conduct, while *Tri Kaya Parisudha* provides an ethical orientation concerning thought, speech, and action. *Sradha-bhakti*

similarly involves the cultivation of faith, devotion, and religious attitudes rather than merely the transmission of factual information. The empirical findings do not indicate that AI independently performs these functions. Rather, they show that AI-generated materials remain subject to human selection and adaptation before being incorporated into learning activities.

Thus, the specific contribution of this finding is that AI can assist the preparation of Hindu religious learning content, but the religious and cultural appropriateness of that content remains under the responsibility of the prospective teacher. This position prevents the study from treating AI as an autonomous religious educator and instead situates it as a technological resource within a human-led pedagogical process.

3. Contextual Adaptation and Validation of AI-Generated Outputs

Although participants perceived AI as useful, they also consistently emphasized that AI-generated outputs should not be adopted without further examination. The main limitation identified was the general nature of some AI-generated suggestions. Ni Made Dytha Vinaya Laksmi, a PLP student who taught at TK Dwijendra Mataram, reported checking AI-generated suggestions against ECE guidelines before applying them (Interview, August 1, 2026). Dytha's statement indicates that the use of AI was accompanied by a process of examination and adaptation to ensure its alignment with ECE learning guidelines. This demonstrates the importance of the teacher's role in validating AI-generated outputs before they are used in learning.

Another participant, Ni Kadek Brahmi Iswarya Ray, a tutor at Widya Sastra Tutoring Center, explained that she examined the content and adapted it to children's age, developmental stage, abilities, needs, and classroom conditions (Interview, August 1, 2026). Brahmi's statement indicates that AI-generated outputs need to be adapted to children's characteristics and needs as well as the learning context before being used. Ade Leandra Putri Vitari, a fourth-semester student, emphasized the need to select and modify AI-generated outputs by using simple and safe language and consulting ECE theory (Interview, August 1, 2026). Ade's statement indicates that AI-generated outputs need to be selected and modified by considering language simplicity, safety, and ECE theoretical foundations before being used in learning.

Ni Made Dwi Kartika, a PLP student at TK Dwijendra Mataram, also stated that AI could only provide a general description of an activity and that the suggested activity might not necessarily correspond to children's characteristics (Interview, August 1, 2026). Kartika's statement indicates that AI-generated outputs remain general and therefore need to be further adapted to children's characteristics and needs before being implemented in learning. Ni Putu Wiwik Anggarini, an eighth-semester student, stated that she checked whether the proposed activities were consistent with the RPPH and learning themes used at the school. Wiwik's statement indicates that AI-generated outputs were not directly used in learning but were first examined for their consistency with the RPPH and established learning themes. This demonstrates that teachers continue to play an important role in selecting and adapting AI-generated ideas to align with learning objectives and planning.

These findings indicate that participants followed a process of selection, modification, and validation rather than simply adopting AI-generated outputs. Validation involved several considerations: developmental appropriateness, language simplicity, safety, learning objectives, thematic relevance, school-based planning, and comparison with other references. The teacher therefore acts as an intermediary between the technological output and the actual learning context, retaining responsibility for evaluating and contextualizing AI-generated materials before their use in learning (Pei and Wu, 2019; Wu et al., 2022).

This process becomes even more important when AI is used to prepare Hindu religious learning. For example, the participant who used AI to generate a game incorporating *Tri Hita Karana* explicitly described adapting the AI-generated idea to the local cultural and religious context. Similarly, the participant who used Canva AI to generate *mebanten* and *sembah* imagery edited the visual elements to make them more consistent with Hindu Balinese/Nusantara traditions. Therefore, contextual validation in this study involves more than checking whether an AI-generated answer is technically correct. In Hindu religious learning, it may also involve considering whether representations, language, activities, and values are appropriate for children's developmental characteristics and consistent with the religious and cultural context. However, the study does not claim that participants systematically performed doctrinal verification of every AI-generated religious statement. Rather, the evidence demonstrates that participants recognized the need to examine and adapt AI-generated materials before use.

4. Perceived Risks of Dependence and The Need for Responsible Use

In addition to perceived benefits, participants expressed several concerns regarding AI use. These included potential dependence on technology, reduced initiative to generate ideas independently, inappropriate or overly general content, and concerns about originality. Ni Kadek Brahmi Iswarya Ray, a tutor at Widya Sastra Tutoring Center, stated that dependence on AI could make users less motivated to add to or modify ideas independently (Interview, August 1, 2026), while Ni Putu Wiwik Anggarini, an eighth-semester student, expressed concern that teachers might become overly dependent on AI when searching for ideas (Interview, August 3, 2026). These statements should not be interpreted as evidence that AI causes creativity loss, cognitive decline, or reduced critical thinking ability. Rather, they represent participants' perceptions and anticipated risks associated with excessive reliance on AI. This distinction is important because the present study did not measure creativity, critical thinking, cognitive ability, or changes in these capacities before and after AI use.

Ade Leandra Putri Vitari, a fourth-semester student, provides an important example of this distinction. The participant had not used AI directly during previous teaching experience at a kindergarten but had used AI for university assignments (Interview, August 1, 2026). Therefore, concerns expressed by this participant regarding AI should be understood as perceptions derived from academic use and expectations about future educational use, rather than as evidence of direct classroom effects. This heterogeneity further reinforces the importance of distinguishing reported experiences from anticipated consequences. At the same time, participants' awareness of these potential risks was accompanied by an emphasis on maintaining their own role in the learning process. Participants repeatedly stated that AI should be used as an aid or source of inspiration rather than as a substitute for the teacher. They emphasized the need to edit, adapt, and develop AI-generated ideas using their own judgment. This finding suggests that responsible AI use is not determined solely by the availability of the technology but also by how users position and control it (Lim, 2023; Su and Zhong, 2022). The participants' responses indicate an emerging awareness that convenience should not eliminate human judgment or independent pedagogical decision-making.

5. Human-in-the-Loop as a Conceptual Synthesis of the Findings

Taken together, the findings reveal a consistent pattern in which AI functions as a supporting resource while prospective teachers retain control over pedagogical decisions. Participants described using AI to respond to specific pedagogical needs, such as a lack of activity ideas, the need for teaching materials, or the preparation of Hindu

religious learning activities. AI then generated possible ideas, drafts, or visual representations. These outputs were subsequently selected, modified, simplified, contextualized, and validated before potential use in learning.

This process can be conceptually synthesized as:

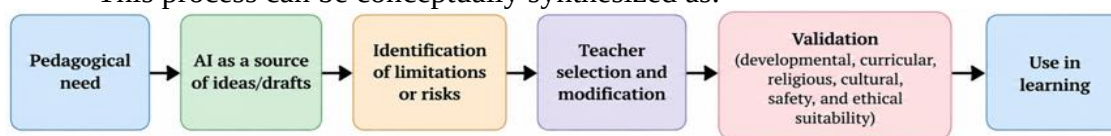


Figure 2. Conceptual Model of Human-in-the-Loop AI Use in Hindu Religious Learning

The pattern represents a human-in-the-loop approach to AI-assisted pedagogy, in which AI contributes to the preparation process but the teacher remains the final decision-maker. This interpretation is grounded in participants' repeated descriptions of checking, editing, adapting, and aligning AI-generated outputs with children's needs and the learning context. In Hindu religious learning, this human-in-the-loop position is particularly important because the teacher's role extends beyond delivering information. Religious and moral learning involves modelling behavior, establishing relationships, guiding children's experiences, and contextualizing values. Participant explicitly emphasized that AI should not replace direct interaction between teachers and children because communication, play, closeness, and teacher guidance remain important in ECE.

The findings therefore support a complementary relationship between AI and teachers. AI can provide speed, alternatives, and creative starting points, while teachers remain responsible for pedagogical interpretation, contextual adaptation, cultural and religious appropriateness, ethical consideration, and direct interaction with children (Barbosa and Costa, 2024; Morrow et al., 2023). Within the Hindu educational context, this position is compatible with the broader emphasis on teacher guidance, exemplary conduct, and the cultivation of religious values through lived educational experiences.

Accordingly, the conceptual contribution of this study is not the claim that AI is simply beneficial or harmful. Rather, the findings suggest that the educational value of AI depends on how prospective teachers position, evaluate, adapt, and control its outputs. The human-in-the-loop perspective therefore places prospective ECE teachers as selectors, adapters, validators, and final decision-makers, while AI functions as a supporting resource in the preparation of Hindu religious learning.

Conclusion

Based on the findings, prospective early childhood education teachers at IAHN Gde Pudja Mataram perceived Artificial Intelligence (AI) as a useful pedagogical assistant for preparing learning activities, RPPH, learning media, stories, songs, games, and other instructional materials. In Hindu religious learning, AI was used to support materials related to Hindu religious songs, *bhakti*, *Tri Hita Karana*, *Tri Kaya Parisudha*, Hindu stories, religious practices, and visual media. However, AI-generated outputs were not treated as final products but were selected, adapted, and validated according to children's developmental, curricular, cultural, religious, and contextual needs. These findings support a human-in-the-loop approach in which teachers remain responsible for pedagogical decisions and direct interaction with children. Participants also expressed concerns about dependence on AI and reduced independent idea generation, although these were perceptions rather than measured effects. Given the small sample, single institutional context, and descriptive qualitative design, the findings cannot be generalized broadly. AI should therefore be positioned as a supporting resource, while prospective teachers maintain independent pedagogical judgment in using and validating AI-generated outputs.

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