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Strategies and Challenges in Compiling Instructional Design with a Critical Pedagogical Approach for Generation Z Students in State Hindu Institute of Gde Pudja Mataram

Gusti Ngurah Ketut Putera* **and I Wayan Agus Gunada**
Institut Agama Hindu Negeri Gde Pudja Mataram
Mataram, Indonesia

Abstract. Generation Z students, born and raised amidst technological advancements, require a distinct set of approaches to learning. This study examines the hurdles that senior lecturers at Hindu religious universities have had to face in adapting instructional designs to Generation Z learners. A qualitative case study approach is undertaken to study the integration of information technology and the upgradation of contextual materials by lecturers to facilitate learning. Major findings stress the need for lecturers to be equipped in digital tool integration, updating course content, and instructional design developments catering specifically to the learning characteristics of Generation Z. The study further points to some major phases of instructional design, including the analysis of learning objectives, designing and developing teaching materials, and evaluating the outcomes of learning. This research, therefore, aims to assist instructors in designing technology-based learning environments that are better suited to Generation Z by making instructional design more compatible with this generation. Such insights contribute to the development of instructional design and provide valuable directions for future research.

Keywords: Instructional Design; Generation Z; Learning; Higher Education; Hindu

1. Introduction

The dynamics and global phenomena emerging today significantly impact the learning characteristics of Generation Z (Lazar et al., 2023; Onjewu et al., 2025), including the rapid advancement of digital technology and the transformation of information access methods (Liu et al., 2025; Rohayati & Abdillah, 2024). The widespread use of the internet for social media and the development of mobile

*Corresponding author: Gusti Ngurah Ketut Putera;
gustingurahketutputera@iahn-gdepudja.ac.id

devices have made Generation Z thrive in the digital ecosystem (Lazar et al., 2023). The phenomenon causes the learning approach of Generation Z to be more varied. On the other hand, global phenomena such as the COVID-19 pandemic have also inevitably accelerated the adaptation and integration of online learning and blended learning (Helaluddin et al., 2023; Katleyana et al., 2023). These two learning approaches are now an integral part of the educational process in all parts of the world, including Hindu religious universities, particularly at the State Hindu Institute of Gde Pudja Mataram.

In addition, globalisation, which has an impact on cultural aspects and the digitalisation of social life, also emphasises the need to strengthen learning that is not only theoretical but also critical and reflective of religious values, cultural identity in Generation Z, and complex contemporary social issues in society (Alkharafi & Alsabah, 2025; Balogun & Aruoture, 2024). Therefore, in the context of critical pedagogy, the learning design that forms the foundation of learning for lecturers must be able to accommodate digital needs while providing skills for Generation Z students to became agents of change who are critical and aware of both global and local contexts.

Generation Z is an age group or generation born between the mid-1990s and the early 2010s (Afifi et al., 2025). Generation Z is a generation that grew up in the era of rapid advancement in digital and information technology (Chang & Chang, 2023). In the context of learning in higher education today, the learning characteristics of this generation differ significantly from those of previous generations (Kim & Ryoo, 2025). This generation is known to have more visual and interactive learning references or guidelines (Harb et al., 2024; Lyu & Park, 2024), this generation is also used to learning by needing quick access to information through digital technology media, as well as focusing more on learning that requires engagement and invasion (Lim et al., 2024; Steils & Hanine, 2016).

In addition, Generation Z also shows the habit of learning through hands-on experience, and collaboration through the empowerment of intense digital tools (Seemiller & Grace, 2017; Steils & Hanine, 2016), generation z is also characteristically very focused on their active involvement in the learning process (Kim & Ryoo, 2025; Lyu & Park, 2024). Therefore, conventional teaching methods that still integrate many traditional learning strategies and methods are no longer feasible in addressing the learning needs of Generation Z. This requires lecturers in universities to adapt and innovate in learning methods, especially in Hindu religious universities that have strong and distinctive learning habits.

An effective learning method for Generation Z is to integrate innovative and participatory learning processes that focus on developing critical thinking (Nguyen & Petchsawang, 2024; Rospigliosi, 2019). One approach to achieving this is by incorporating critical pedagogical aspects into learning (Mínguez et al., 2021; Santoso, 2021). The challenges of pedagogical adaptation in Hindu religious universities are currently becoming increasingly complex, as the

existing learning system and learning curriculum are still dominated by formal and textual approaches (Jevisa & Suwendra, 2024; Paramartha et al., 2023). This is also due to the learning undertaken by students, focusing on mastering scripture texts, memorisation of the implementation of religious rituals in several study programs, and religious values and norms, which, of course, are still dogmatic (Kultsum et al., 2023; Paramartha et al., 2023). This learning process often fails to provide space for the representation of critical thinking and open dialogue that Generation Z students need. This can also significantly reduce the effectiveness and efficiency of the learning process and the development of critical thinking in the academic and social lives of students. The lack of effectiveness of this pedagogical aspect also poses challenges in building students' competence to think critically and dare to question everything in order to understand the broader theological, social, and cultural context.

In these academic contexts, the integration of learning with a critical pedagogical approach is employed to offer a more relevant and urgent solution for adapting learning practices to students in Hindu religious universities. The critical pedagogy approach emphasises the importance of learning that prioritises a dialogue space in critical analysis (Santoso, 2021). In addition, it is also necessary to build social-moral awareness in students, enabling them not only to understand the material textually (Aryal, 2023; Lunevich, 2022), but also to internalise religious values with reflective awareness and critical thinking.

This critical pedagogical approach is designed to equip students with the ability to think deeply analytically about social and cultural structures (Jiang & Alizadeh, 2023; Pittard, 2015), and plays a role in strengthening students as active and responsible agents of change (Gan & Bai, 2023; Johnson & Mughal, 2024). With a critical pedagogical approach to the learning process, it is hoped that the educational process through learning will became more transformative (Ujaque & Degen, 2024; Majola et al., 2025). In addition, it will also be able to encourage students to be more active in receiving learning materials, and also actively involved in the development of the meaning and implementation of religious education in their daily lives.

However, although the importance of a critical pedagogical approach has been sufficiently recognized in various fields of education, especially in the learning process (Ujaque, 2024; Majola et al., 2025), the implementation of a critical pedagogical approach in the learning process in Hindu religious universities is still quite limited and has not been widely researched. Some research still focuses on the aspects of learning and educational challenges in universities in Indonesia that are still general (Aisyah & Novita, 2025; Arif et al., 2024; Azman et al., 2024; Dami et al., 2025; Dwi Lestari & Riatun, 2024; Kudus et al., 2025; Maboe, 2024; Romlah et al., 2023), and has not discussed in depth the critical pedagogical aspects for Generation Z students, especially in Hindu religious universities.

This existing research gap shows that there is still no attention to the unique challenges faced in integrating critical pedagogical approaches into instructional

design in learning in several study programs in universities, especially at the State Hindu Institute of Gde Pudja Mataram, especially in the context of the scope of Generation Z students who have quite different characteristics and learning needs. Previous research has also not explicitly examined the obstacles related to potential solutions, and efforts in determining the implementation strategy of the critical pedagogical approach, especially in the Hindu religious education environment, especially at the State Hindu Institute of Gde Pudja Mataram, which is still quite conventional in terms of learning methods and approaches by lecturers in teaching.

Therefore, this research is fundamental to be carried out, aiming to fill the gap related to the application of critical pedagogical approaches in learning at the State Hindu Institute of Gde Pudja Mataram, a Hindu religious university in Indonesia. In addition, this research aimed to address the two primary issues that became the focus of the study: what are the main challenges and obstacles faced by lecturers in the learning process for Generation Z students, and how do lecturers employ concepts and strategies in designing instructional designs that integrate critical pedagogical approaches.

This study is limited to the analysis of the abilities and experiences of several senior lecturers at the State Hindu Institute of Gde Pudja Mataram, specifically related to challenges in the learning process and efforts to conceptualise strategies for integrating learning with critical pedagogical aspects for Generation Z students. Innovative and critical in Hindu religious colleges in general. The results of the research are expected to play a significant role in promoting learning transformation in Hindu religious universities that are better equipped to adapt to the times. At the same time, it is also able to form students as a young generation of Hindus who are not only academically intelligent but also possess critical and reflective competence in understanding and practising the values of religious education, thereby contributing to a better life in the future.

2. Theory and Conceptual Framework

The critical approach in education is one of the approaches developed by Paulo Freire. This concept and approach form a paradigm within the scope of macro education that emphasizes the importance of critical awareness in students (Asman, 2023; Cavalcanti & Silva, 2024). Education, in essence, is not only meaningful as a process of knowledge transfer by educators to students, but also as a means to transform knowledge into practical values that aim to develop self-awareness and critical thinking in students towards the social, cultural, and political realities in their environment (Karatsiori, 2023).

In the context of Hindu religious universities, this critical education approach is very relevant in motivating Generation Z students, so that in the learning process they do not just passively accept materials and information but can criticize and build awareness of the application of religious, social and cultural values in depth.

The theory of andragogy is also the theoretical foundation in this study, a theory developed by Malcolm Knowles (1970), which is a theory of learning that focuses on adult education (Knapke et al., 2024). This learning theory focuses on the typical characteristics of adult learners, the characteristics of learning that are contextual and according to needs, independent, and aimed at solving a problem (Almulla, 2023; Loeng, 2020). Andragogy as a theory emphasizes that individuals as adult learners have life experiences that can be a source of knowledge, driven by strong internal motivation, and tend to learn when the learning material is highly relevant to the principles and needs of life (Clair, 2024).

In the context of Generation Z students in Hindu religious colleges, this theory was quite relevant. In the context of andragogy theory, Generation Z students can be categorized as adult learners, considering their physical characteristics and mindset, which are more similar to those of adults. So that in the learning process in the learning environment, it requires a learning structure and design, which is informative, relevant, and contextual to the surrounding reality, and empowering through the participation of the students themselves.

The focus of the study was the challenges of lecturers in the learning process in the era of digital disruption, and how to design learning that adapts to the learning needs of Generation Z. In essence, the concept of learning design is a way to organize the learning planning process, and organize learning elements, including learning objectives, teaching materials, learning methods, learning media, and evaluation techniques to measure the success of the learning process (Navaitienė & Stasiūnaitienė, 2021). In practice, in the learning process, learning design is closely related to the process that aims to achieve learning outcomes according to the needs and characteristics of learners (Oo et al., 2024; Rincon-Flores et al., 2024). In this study, the concept of learning design was prepared by integrating a critical pedagogical approach, which seeks to accommodate the learning needs and the characteristics of Generation Z, who are active and critical.

Another conceptual framework in this study was the context of critical pedagogy as an approach in the learning process for Generation Z students. The learning approach for students in this university focuses on and emphasizes open dialogue, understanding, and awareness of injustice, and efforts to transform knowledge of social reality through educational channels (Aryal, 2023). In this study, the critical pedagogical learning approach was the main basis in developing a learning design that not only aims to transfer information but also develops aspects of critical thinking of Generation Z students towards every material learned by lecturers, including Hindu values, local wisdom, and the challenges of the times.

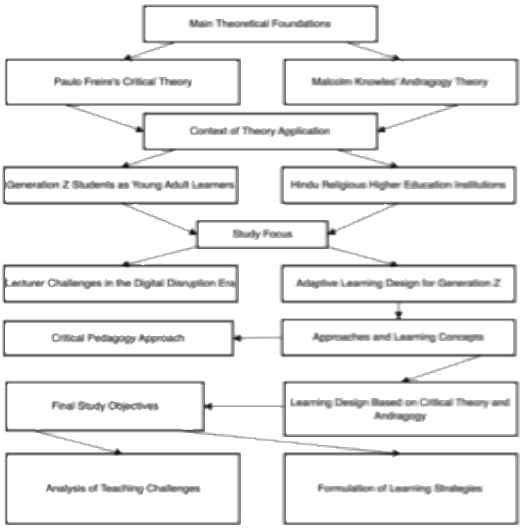

Figure 1: Conceptual Framework in this Study

Based on the foundation of critical theory and andragogy theory, as well as the integration of conceptual frameworks, namely learning design and critical pedagogical approaches, this study sought to analyze in depth the challenges faced by lecturers in providing learning for generation Z students, as well as formulate a learning design strategy that adapts critical pedagogy to build critical awareness and active participation of generation Z students in higher education Hindu religious high. A strong conceptual framework provides a deep theoretical foundation to understand learning challenges in the era of digital disruption, the characteristics of Generation Z students, and the appropriate critical pedagogical approach in the scope of learning in Hindu religious universities.

3. Methods

The study process in this study is explained in several stages as follows:

3.1 Research Design

This study was carried out by applying qualitative research to explore every aspect of the problem in the research objective (Patton, 2015). In addition, a case study approach was also applied, for an in-depth analysis related to a case or an event, to obtain comprehensive knowledge or information about events and their impact on social reality (Jenkins et al., 2018; Yin, 2003). Referring to the research definition, it can be stated that the research aims to analyse and assess the teaching challenges faced by senior lecturers at the State Hindu Institute of Gde Pudja Mataram, and the concept of strategies to prepare this instructional design employs a qualitative research design with a case study approach. In general, the researcher analyses the experiences of senior lecturers in carrying out learning, analysing every word and statement from senior lecturers. In addition, the case study approach was chosen considering that the analysis process is guided by the teaching experience of senior lecturers in providing material to Generation Z students. The data is then analysed and tested for validity.

3.2 Research Instruments

By definition, a research instrument can be interpreted as a tool to obtain data in a study (Merriam, 2009; Yilmaz, 2013). Referring to the definition of research instruments, in this study, the key instrument was the researcher. In the field, the researcher prepared all research plans related to analyzing challenges in the learning process faced by senior lecturers at the State Hindu Institute of Gde Pudja Mataram. The next stage is for the research team to apply for a research permit, ensuring the study is conducted legally. The next stage is for the research team to determine the participants to be interviewed, the next stage was for the researcher and his team to formulate a data analysis process and conceptually formulate an instructional design formulation strategy that integrates critical pedagogical approaches and finally publish the results of the research that has been produced.

3.3 Data Collection Techniques

The data in this study were collected through several techniques, including observation, interviews, and analysis of relevant documents. Observation is the process of direct observation of the object of study (Weston et al., 2022). In this study process, the researcher carried out several stages related to observation, namely 1) determining the observed senior lecturer, 2) the researcher prepared non-participant observation guidelines to observe the entire learning process carried out by the lecturer who was the subject of the research, 3) the researcher made observations according to the learning time by the agreement and approval of the participating lecturer, 4) the researcher records the entire process observed, 5) the researcher analyzes data related to the observation results of several lecturers who are the subject of observation, and 6) the researcher confirms the data produced in the lecturers who are research participants.

The interview is a question-and-answer process conducted by the researcher and the informant (Rutledge & Hogg, 2020). A purposive sampling technique is used to determine the informant. During the interview process, the researcher identified the lecturer as the participant, using several predetermined criteria as listed in Table 1. The interview process is carried out in several important stages, namely: 1) the researcher holds initial communication with the participants to ask for approval as an informant, 2) the researcher carries out discussions and questions and answers by first conveying the reasons and objectives of the research to the senior lecturers who are participants, 3) the researcher records all arguments, answers and statements from the lecturer participants, 4) The researcher reconfirms the data that has been recorded in the lecturer participants to avoid bias.

While document study was the process of analyzing documents relevant to the problem's focus (Morgan, 2022), in this study, the analyzed documents were learning administration tools owned by senior lecturers. Several stages are carried out in the process of analyzing this document, namely: 1) the research team collects documents owned by the participants, 2) the researcher also collects several previous research results that have conceptual and theoretical relevance to the aspects studied in the research, 3) the researcher records all

findings in the document based on the focus of the problem studied, 4) the researcher confirms the data findings in the document to the lecturer participants.
The number of participants, the criteria, and some questions asked can be seen in Table 1 below:

Table 1: Number, Criteria and List of Interview Questions

No	Number of Participants	Participant Criteria	Interview Questions
1	10	Permanent lecturer	What are the learning methods used?
2		Have a Minimum Senior's Lecturer Position	
3		Teaching Experience ten Years	What are the common challenges faced in the learning process?
4		Minimum Qualifications for Master's Education	

(Source: Research team documentation)

3.4 Data Analysis Techniques

The data analysis techniques applied using a thematic model were combined with the qualitative analysis model of Miles et al. (2014). The thematic model is an analysis technique by distributing data on predetermined themes (Kiger & Varpio, 2020), while the Miles et al. (2014) model is carried out by the process of data reduction, data display and drawing conclusions or data verification (Miles et al., 2014). Regarding the data analysis process, the research team undertook several key steps, as the results of data analysis are a crucial factor in implementing this research.

The researcher carried out several important stages, namely: 1) selecting and eliminating data that is by the focus of the problem, namely the learning challenges carried out by lecturers on generation Z students, 2) the data that has been selected and then distributed in predetermined codes guided by the research questions, 3, the data was then concluded and relevant to the theory and results of previous research, which supports the findings, especially in formulating conceptual strategies in formulating instructional designs that integrate critical pedagogical approaches in learning for generation Z students, and 4) the researcher conducts the final stage by conducting a source triangulation process, this process is carried out by confirming the results of data analysis that have been concluded in lecturer participants who are the subject of the research to avoid bias.

3.5 Trustworthiness

To prioritise the validity of the data, the researcher employed the data triangulation technique in this study. The triangulation technique is carried out by comparing data (Noble & Heale, 2019), all the results of observations,

interviews, and document analysis, to keep the data that has been analyzed and discussed from bias, and to minimize the researcher's subjectivity. To keep the research process more directed, the researcher stated that the entire research process has received approval from all participants. Any data provided is for research purposes only and has been given the participant's permission to be published.

4. Result

Based on the findings of the data that has been analyzed, data that has been distributed on two major themes related to the analysis of challenges and constraints, and the form of learning methods used by senior lecturers at the State Hindu Institute of Gde Pudja Mataram, these themes include:

4.1 Forms of learning methods commonly used by Senior Lecturers

Referring to the findings in the interview process related to the form of learning method used, data can be presented in accordance with Table 1 and Figure 2 below.

Table 2. Learning Methods Applied by Senior Lecturers

Participants	Interview Questions	Participant Answers
Participant 1	What are the learning methods used?	I use the Discussion method.
Participant 2		I use the Discussion method. I usually do combinations such as Lectures and Discussions.
Participant 3		Usually adjust the material, but generally discuss, often also using problem-based learning.
Participant 4		Uncertain, can give a lecture, or use a discussion model
Participant 5		Although there are many other learning methods, I am most comfortable using the lecture method
Participant 6		I tend to refer to the syllabus and materials, and I often direct students to presentations and discussions
Participant 7		Currently, I prefer to use the Problem-Based Learning method
Participant 8		Discussion and lecture methods, lectures to provide material, and discussions to discuss the material I give.
Participant 9		I always ask students to look for problems around them, present them in class, and discuss them together.
Participant 10		Some of the methods used include the discussion method and the question-and-answer method with students. Additionally, it employs problem-based learning and project-based learning.

(Source: Results of interviews with ten senior lecturers as research participants)

Based on the results of data analysis, as visualized in Figure 2, it was found that the lecture and discussion method was the most common learning method, as often mentioned by senior lecturers. In addition, there are also presentation, problem-based learning, and project-based learning approaches. The selection of

methods used by senior lecturers is quite varied, adjusting to the curriculum and course materials taught.

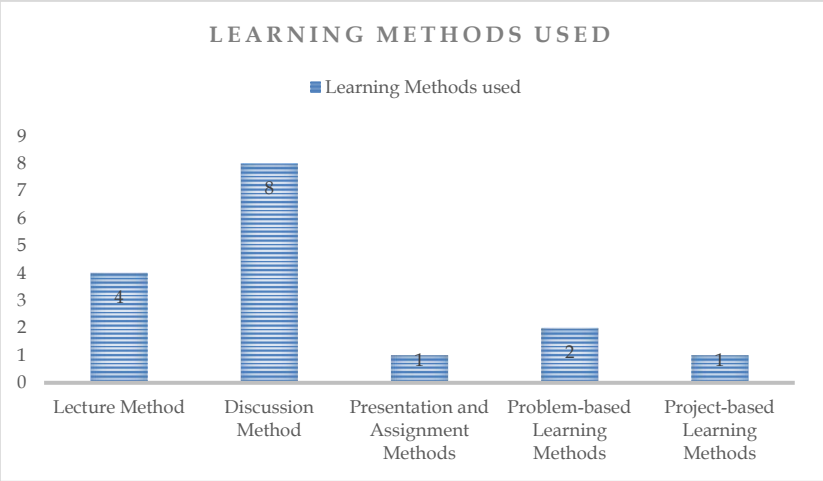

Figure 2: Percentage of the Number of Learning Methods Used

4.2 The data findings are related to the challenges and obstacles experienced by senior lecturers

Based on the results of data analysis related to the observation and interview process, several challenges and obstacles commonly encountered by senior lecturers when providing learning to Generation Z students are identified. The results of the findings are listed in Table 3 below.

Table 3. Lecturers' Challenges in Teaching

Participants	Interview Questions	Participant Answers
Participant 1	What are the common challenges and obstacles encountered in the learning process?	Regarding learning challenges, I am usually constrained by technology but try to adapt.
Participant 2		Generally, the challenge is in the large workload; besides, problems often arise with the device used, especially during online learning, and internet problems are quite challenging.
Participant 3		For me, challenges usually arise from the use of technological devices,
Participant 4		In learning, the biggest challenge is, of course, building active student participation. Besides, I am not proficient in using technological devices that are quite advanced today.
Participant 5		When learning in a challenging classroom, students get bored quickly because the material or my teaching method do not meet their needs.
Participant 6		My biggest challenge in teaching is adapting to current technological developments.
Participant 7		My challenges arise from internal motivation. Being quite senior, I have to relearn to use diverse technological devices.
Participant 8		In addition to the challenges in the classroom, the obligations and workload are also hindering my

		innovation in teaching.
Participant 9		My challenges usually relate to technology devices that often experience errors, especially LCD Projector devices in inadequate classes.
Participant 10		Internally, my challenge is related to technology adaptation, as external factors are usually due to students' lack of response in learning, which often permits activities other than teaching.

(Source: Results of data analysis based on interviews with senior lecturers)

Based on the results of data analysis, as shown in Table 3, the teaching challenges experienced by lecturers can be categorized into two aspects. The internal aspect is still unaccustomed to using technology and digital devices proficiently, while the external aspect is related to the lack of active student participation. These challenges and obstacles are associated with findings in the methods used by lecturers, due to the lack of innovation in the learning style and approach used. Generation Z students require a learning approach that encourages active engagement; therefore, lecturers must consider more effective learning methods to meet this need. To ensure that the lack of student activity in learning is not only due to external factors, but also because lecturers as educators are unable to capture the wants and needs of students.

5. Discussion

Referring to the results of data analysis and existing findings, in this section the discussion was focused on two important aspects, namely findings regarding lecturers' challenges and obstacles in teaching, as well as strategic concepts in developing learning designs that integrate critical pedagogical approaches for Generation Z students at Hindu religious universities. The two aspects of the discussion were described as follows:

5.1 Challenges and Obstacles for Lecturers in Teaching Generation Z

In the era of digital communication technology that is increasingly developing, universities as an institution certainly face various challenges in adapting to the learning process (Chusniyah et al., 2025; Silva, 2020). Especially now, most students are included in Generation Z with characteristics quite different from those of the previous generation, especially the massive use of technology in this generation (Febliza et al., 2025). The characteristics of this generation, which are quite distinctive, require a more adaptive, creative, and innovative approach to the learning process from lecturers as educators (Chan & Lee, 2023; Febliza et al., 2025). Of course, lecturers at Hindu religious colleges, who specifically integrate religious, traditional values and strong local wisdom, are no exception.

Therefore, adapting and integrating technology and digital media in the learning and teaching process in this environment must be implemented while still considering the harmony between modernity and tradition (Gamage et al., 2021; Kerimbayev et al., 2023). However, the fact is that technological advances are a challenge for senior lecturers, who are not fully able to use various technological tools and digital media. This factor will likely hinder the learning process and social interaction with Generation Z students, who are characteristically quite dependent on digital technology in their daily lives.

One of the main findings in this study was that senior lecturers at Hindu religious universities are still not proficient in operating digital technology devices that are currently an integral part of the teaching and learning process. The lack of ability to use technology will be an obstacle in the teaching process because Generation Z, who are characteristically very familiar and dependent on digital technology devices (Haleem et al., 2022; Kaminskienė et al., 2022).

Generation Z grows and develops in an environment where all digital devices are used; the use of devices such as laptops, tablets, smartphones, and various applications and platforms in learning has become quite a basic need (Haleem et al., 2022; Siagian & Yuliana, 2023). The inability of senior lecturers to use technology that develops learning not only limits the adaptation of innovative digital media in teaching but also tends to hinder dynamic social interaction between lecturers and students in the classroom (Onjewu et al., 2025; Timotheou et al., 2023).

The development of digital media also plays a role in improving the competence of educators and students in accessing materials and information that are relevant to learning, especially access to learning outside the classroom (Haleem et al., 2022; Mhlongo et al., 2023). Digital platforms that are based on internet connections allow Generation Z students to learn flexibly and independently; besides that, digital media in the learning process is also a means of collaboration and discussion that is wider and not limited by distance (Dwivedi et al., 2021; Onjewu et al., 2025). However, lecturers are unable to leverage existing technological devices and digital media; in that case, learning will be less effective, as the positive impact provided by technological advances will not yield optimal benefits, leading to a lack of participation in learning. After all, it is not tailored to the needs and characteristics of Generation Z students.

This inability tends to affect the decline in learning motivation from students, because the methods applied by lecturers seem outdated and not innovative. In terms of student needs, of course, learning methods that are not innovative are no longer relevant to the current learning style of Generation Z. This program also has the potential to reduce the quality of educational outputs and hinder the strengthening of student competencies in the digital era. Several studies on the current aspect of education state that the mastery of adaptive learning technology by educators is one of the important factors in increasing effectiveness for learning progress in the current digital era (Onjewu et al., 2025; Timotheou et al., 2023). In addition, educators, in this case, teachers and lecturers who are able to adapt technology in an integrated manner in the learning process, will be able to form an academic environment that is more innovative and responsive to the needs of students (Ali et al., 2024; Hennessy et al., 2022).

In the context of the learning environment in Hindu religious universities, the challenge of technology adaptation became more complex because lecturers as educators are required to master technology, but must also be able to internalize spiritual values, local wisdom and Hindu culture in digital learning, so that the

negative impact of technological advances in the learning process can be prevented by integrating religious values, so that generation Z students can became learners and more responsible technology users. Furthermore, the unpreparedness of lecturers in operating and integrating technology and digital media will certainly hinder the learning process, so that teaching materials that were transformed tend to receive less participation and appreciation from students. So that students will only consider the learning process to be just a routine, and do not get the meaning and value of life from each material learned. Suppose every educator does not realize this learning challenge.

In that case, the quality of learning in the classroom will decrease. It will have a negative impact on the quality of educational outputs, especially the decline in the quality of the formation and development of human resources in Hindu religious universities. In this regard, it can be explained that there are limitations in the section regarding the analysis of challenges and obstacles experienced by senior lecturers, the first limitation is that the findings certainly have not been able to answer the overall challenges that are most likely to be faced by all lecturers at the State Hindu Institute of Gde Pudja Mataram considering the relatively small number of participants.

In addition, challenges are only observed in a small sample of senior lecturers who teach in one study program; therefore, the findings cannot be generalized to other lecturers who teach in other study programs at the State Hindu Institute of Gde Pudja Mataram. Finally, the limitations are related to challenges and obstacles that remain general, so that specific challenges have not been fully addressed in the findings and still require further study and analysis.

5.2 Concepts and Strategies for Developing Instructional Designs with a Critical Pedagogical Approach for Generation Z Students

Instructional design is an important aspect of the learning process that serves as a systematic structure for planning, developing, executing, and evaluating the learning process (Giacumo et al., 2024; Kusnendar et al., 2024). In Hindu religious universities, lecturers in designing learning not only transfer theological knowledge, but also develop character, spirituality, intelligence, and form awareness and critical thinking in students towards textual, contextual, and reality teachings that exist around students. Therefore, in religious universities, instructional design ideally adapts the application of technology and digital media, as well as integrates a critical pedagogical approach for Generation Z students (Jarmer, 2025; Jasminto & Rofi'ah, 2024; Reza et al., 2025).

Academically, in the learning environment in Hindu religious universities, learning design is prepared through complex stages starting from the planning process, followed by organizing all learning components such as learning objectives, teaching materials, learning methods, media, and forms of evaluation to measure the extent of the learning outcomes achieved. Instructional design for lecturers is a bridge between theory and practice in the teaching process, and instructional design aims to form a meaningful and relevant learning experience for students (Hickey & Correia, 2024; Senadheera et al., 2024). At this time, the most important function of instructional design is to arrange learning that suits

the needs of students, as well as how lecturers are able to utilize all forms of resources efficiently (Rozitis, 2017; Senadheera et al., 2024).

Various educational experts have developed various instructional design models to assist educators in designing a structured and systematic learning process. In Hindu religious colleges, lecturers are given the freedom to choose and use existing models. However, from the results of an analysis of existing learning documents, the most widely used model tends to be the ADDIE model. The ADDIE model is one of the instructional design models that consists of five important stages and is quite simple but very complex and structured, the stages that must be carried out are Analysis, Design, Development, Implementation, and Evaluation which was developed in the 1970s at Florida State University, and then more rigidly developed by Robert Maribe Branch (Branch, 2009; Kamnardsiri et al., 2024; Saeidnia et al., 2022; Tung, 2017), each stage in the model is relevant to be applied to learning in college Hindu religion.

This is because this model provides a clear structural framework and can integrate technology and critical pedagogical approaches. This critical pedagogical approach in compiling instructional designs emphasizes deep reflection and interactive discussions between lecturers and students, so that the learning process can run transformatively, and not just transmissively.

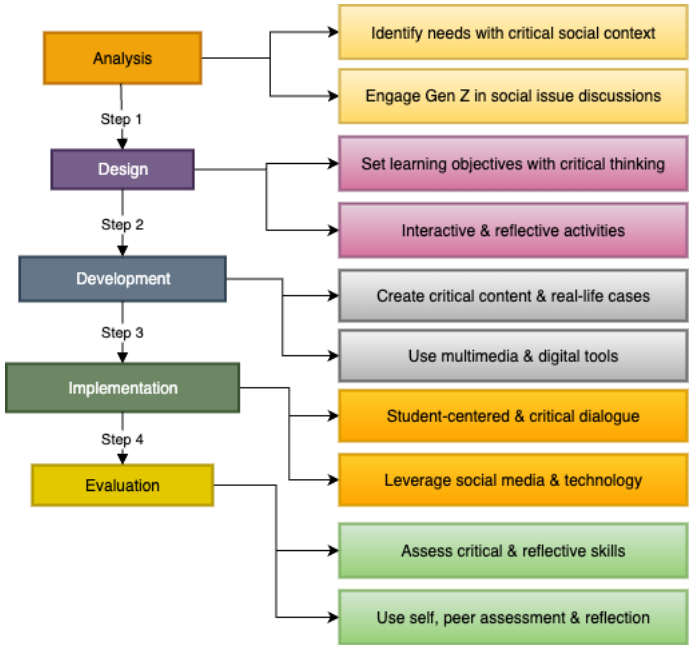

Figure 3: Instructional Design Flowchart with Critical Pedagogy Approach for Generation Z Students

In instructional design preparation as seen in Figure 3, lecturers at Hindu religious universities could formulate the integration of technology and critical pedagogy in five structured stages. In the initial stage, namely Analysis, lecturers must be able to identify the cognitive needs and critical thinking of students towards the social and cultural context of Hinduism. In this stage of analysis, lecturers must also be able to analyze learning problems, determine

learning objectives, identify a suitable learning environment for students, and assess the initial abilities of students (Branch, 2009; Saeidnia et al., 2022). Data can be collected through a survey process of student experience and student expectations for the learning that will be provided, which is to analyze the relationship between learning theory and real practice in the field. Lecturers can use technology and free digital media such as Google Forms and SurveyMonkey to facilitate the collection of this data quickly and accurately.

The second stage of lecturers carries out the Design process, which focuses on the preparation of learning plans, including specific instructional objectives, appropriate learning strategies and methods, and media and learning resources are also determined at this stage (Candiasa, 2022; Tung, 2017). Digital technology at the design stage plays an important role in shaping interactive and interesting learning. Lecturers can use software such as Canva to create digital modules that combine various types of text, visuals, and attractive ornaments to attract learning participation from students.

At this design stage, learning strategies that motivate open discussion and critical awareness are also determined. Examples are strategies and learning methods of discussion models and problem-based learning, which can be a relevant choice of methods in implementing critical pedagogical approaches in learning. The selection of multiple applications and digital media, such as online forums and interactive videos, can be useful in strengthening the learning experience and increasing student engagement.

The next stage is the Development process, this stage is the process of making teaching materials that will be given to students, determining the learning media used, and selecting and developing evaluation tools in accordance with the initial design (LaMarca & LaMarca, 2024; Liu & Xiao, 2025). In this process, lecturers integrate aspects of technology and digital media that allow the development of varied and interactive materials, learning media such as videos, simulations, or tutorials, and can apply software for video editing. In addition, the development of interactive modules based on the internet, or mobile applications that can be operated on mobile phones, can also be developed by lecturers to make it easier for students to access materials for independent learning.

Learning materials and media developed by lecturers must support a critical pedagogical approach; materials can be filled with reflective questions, and media that can form active interaction between students. Integration of the development of relevant learning materials and media with critical pedagogy, to form critical thinking skills for students. The selection of evaluation tools or instruments is also developed to measure critical thinking skills and awareness; instruments can be designed in the form of portfolios, essay questions, and presentations that integrate critical analysis of social, cultural, and religious realities.

The next stage is the implementation process, which is the application of the learning plan that has been prepared in practice in the classroom. Meanwhile, digital technology such as Zoom and Google Meet can be applied if lectures are conducted in a flexible virtual space. Interactive learning media, such as videos and gamification, can increase student motivation and participation in a sustainable manner. At this stage, lecturers must play the role of facilitators; this role is to encourage the creation of open discussions and empower students' abilities to be more active in criticizing and understanding deep social, cultural, and religious realities.

The final stage is the evaluation process. This stage in instructional design seeks to measure the extent of the learning process in terms of achieving goals and process quality (LaMarca & LaMarca, 2024; Tung, 2017). Evaluation in instructional design is ideally summative and formative. This means that the measurement process is carried out during the learning process, and also after the entire learning process is completed. In addition, the implementation of evaluation not only measures the grades obtained by students, but also assesses qualitative abilities such as critical thinking, reflection, and the application of teaching materials in student life. Digital evaluation tools can be used at this stage, such as online quizzes and student satisfaction surveys, which can be applied to provide a holistic view of the entire learning process. Formative evaluations that are carried out on an ongoing basis are useful for providing constructive feedback for the improvement of the learning process.

The application of the ADDIE model, an instructional design model integrated with technology and critical pedagogical approaches, is expected to have a positive impact on Generation Z students in Hindu religious universities. This impact is undoubtedly expected to be evident in increased learning motivation, the development of critical thinking skills, and readiness to face complex challenges in the world in the future. Technology integration will enable personalisation of the learning process according to the needs and learning styles of Generation Z students. At the same time, a pedagogical approach is crucial to strengthen students' empowerment and active involvement in the learning process.

Based on the in-depth discussion results, the researcher can further conclude that there are still limitations in this section. The first limitation of preparation remains conceptual, so it requires more careful planning to be effectively implemented in classroom learning practices. The second limitation is related to the need to integrate critical pedagogical aspects into several elements of instructional design, so that the goal of critical pedagogy can address the needs of Generation Z students and enable every student to actively build knowledge while still relying on logical and critical thinking. The last limitation is that conceptual design related to instructional design cannot be applied thoroughly to all study programs, considering that each program has different scientific characteristics.

6. Conclusion

Several conclusions can be drawn from the analysis results and existing findings. In general, several learning methods are employed, but most are still conventional. The most common challenge identified is the suboptimal use of digital technology in the learning process. Conceptually, preparing learning designs that integrate a critical pedagogical approach is highly relevant and can be used to support the development of critical skills in Generation Z students. However, the implementation must certainly be carefully planned to provide significant benefits, considering that the critical pedagogical approach emphasises strengthening logical and critical thinking skills. Therefore, lecturers must be able to adapt to the development of digital technology and innovative learning methods. This ensures that students have significant awareness and involvement in the learning process.

The researchers stated that the results of this study have many limitations. The limitation primarily lies in the results, which cannot be generalized to other study programs at other Hindu religious universities due to the small sample size. Additionally, the aspect of preparing instructional designs is still at the conceptual and theoretical level. Therefore, the researcher recommends continuing the study using a mixed-methods approach, so that it can present more accurate and comprehensive research results. Additionally, it is recommended to implement instructional design in the learning process to test whether the formulated design can run according to the set instructional objectives. This recommendation is crucial to follow up on, so that it can create a learning environment that meets the learning needs of Generation Z students.

7. References

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