

REFLECTION ON THE BELIEFS OF PROSPECTIVE GENERATION Z TEACHERS IN LANGUAGE LEARNING IN THE DIGITAL ERA

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Abstrak

Penelitian ini berangkat dari refleksi terhadap keyakinan pedagogis calon guru dalam pengambilan keputusan pembelajaran—khususnya dalam memilih strategi, teknik, materi, dan instrumen evaluasi. Kajian mengenai keyakinan pedagogis calon guru Generasi Z dalam konteks pembelajaran bahasa di era digital masih terbatas, terutama terkait integrasi teknologi dan praktik reflektif dalam pembelajaran. Tujuan penelitian ini adalah untuk menganalisis keyakinan pedagogis calon guru Generasi Z dalam menentukan strategi pembelajaran bahasa, teknik pengajaran, pemilihan materi, serta instrumen penilaian. Data dikumpulkan melalui kuesioner daring dengan skala Likert (1–5) yang diisi oleh mahasiswa Program Studi Pendidikan Bahasa dan Sastra Indonesia FKIP Universitas Bung Hatta. Penelitian ini menggunakan pendekatan deskriptif kualitatif dengan interpretasi kuantitatif yang mencakup lima domain utama: (1) peran guru bahasa, (2) strategi dan teknik mengajar, (3) pemilihan materi ajar, (4) evaluasi dan penilaian, serta (5) persepsi tentang guru Generasi Z. Hasil penelitian menunjukkan bahwa seluruh domain memiliki skor rata-rata di atas 4,0 yang mengindikasikan tingkat keyakinan pedagogis yang tinggi. Responden menunjukkan preferensi kuat terhadap pendekatan kolaboratif, pembelajaran berbasis proyek, penggunaan materi autentik, serta penilaian formatif berbasis umpan balik. Analisis mendalam memperlihatkan bahwa calon guru Generasi Z memiliki orientasi pedagogis yang sejalan dengan paradigma pembelajaran abad ke-21, terutama dalam penerapan teknologi dan praktik reflektif. Temuan ini memberikan implikasi langsung pada desain kurikulum pendidikan guru, terutama dalam integrasi literasi digital dan pedagogi reflektif.

Kata Kunci: guru, keyakinan, pedagogis, Generasi Z, pembelajaran digital

Abstract

This study begins with a reflection on prospective teachers' pedagogical beliefs in making learning decisions—particularly in selecting strategies, techniques, materials, and evaluation instruments. Studies on the pedagogical beliefs of prospective Generation Z teachers in the context of language learning in the digital era are still limited, especially regarding the integration of technology and reflective practice in learning. The purpose of this study is to analyze the pedagogical beliefs of prospective Generation Z teachers in determining language learning strategies, teaching techniques, material selection, and assessment instruments. Data were collected through an online questionnaire with a Likert scale (1–5) completed by students of the Indonesian Language and Literature Education Study Program, FKIP, Bung Hatta University. This study used a qualitative descriptive approach with quantitative interpretation covering five main domains: (1) the role of language teachers, (2) teaching strategies and techniques, (3) selection of teaching materials, (4) evaluation and assessment, and (5) perceptions of Generation Z teachers. The results showed that all domains had an average score above 4.0, indicating a high level of pedagogical beliefs. Respondents showed a strong preference for collaborative approaches, project-based learning, the use of authentic materials, and feedback-based formative assessment. In-depth analysis shows that Generation Z teacher candidates possess pedagogical orientations aligned with 21st-century learning paradigms, particularly in the application of technology and reflective practice. These findings have direct implications for teacher education curriculum design, particularly in the integration of digital literacy and reflective pedagogy.

Keywords: teachers, beliefs, pedagogy, Generation Z, digital learning

1. INTRODUCTION

The rapid development of digital technology has transformed various aspects of education, including teaching practices, learning environments, and teacher preparation programs (Makarova & Makarova, 2018; Saravanakumar et al., 2023; Schmidt & Tang, 2020). Educational institutions are increasingly required to respond to technological changes by preparing future teachers who can effectively integrate digital tools into learning processes. This transformation is particularly relevant to Generation Z, a cohort that has grown up in a technology-rich environment and is characterized by high digital engagement, visual learning preferences, and collaborative learning tendencies (Prensky, 2010; Seemiller & Grace, 2016). Consequently, understanding the pedagogical perspectives of Generation Z pre-service teachers has become an important issue in contemporary teacher education.

Generation Z pre-service teachers enter teacher education programs with experiences and learning habits that differ from those of previous generations (Chand et al., 2022; Mäkinen et al., 2018; Mikušková, 2023). Their familiarity with digital technology potentially influences how they perceive teaching, learning, and classroom interaction. As future educators, they are expected not only to possess subject-matter expertise but also to demonstrate the ability to utilize technology meaningfully in instructional settings. Such expectations are consistent with the demands of 21st-century education, which emphasize adaptability, creativity, collaboration, critical thinking, and digital literacy (Trilling & Fadel, 2009).

From a pedagogical perspective, teachers' instructional decisions are closely related to their pedagogical beliefs. These beliefs influence how teachers select instructional strategies, organize learning activities, choose teaching materials, and conduct assessment practices. Previous studies have suggested that pedagogical beliefs serve as

an important foundation for teaching behavior and professional decision-making (Graves & Xu, 2000; Richards & Renandya, 2002). However, the effectiveness of these decisions increasingly depends on teachers' ability to combine pedagogical knowledge with technological competence in contemporary educational contexts (Mishra & Koehler, 2006).

The importance of integrating pedagogy and technology has been highlighted through the Technological Pedagogical Content Knowledge (TPACK) framework proposed by (Mishra & Koehler, 2006). This framework emphasizes that effective teaching requires the intersection of content knowledge, pedagogical knowledge, and technological knowledge. In language education, the TPACK framework is particularly relevant because language teachers are expected to employ diverse instructional resources, digital learning platforms, and assessment tools that support meaningful communication and student engagement. Therefore, investigating pedagogical beliefs within a technology-rich environment provides valuable insights into future teachers' professional readiness.

In Indonesia, educational reform through the implementation of the Merdeka Curriculum further reinforces the importance of flexible, student-centered, and reflective teaching practices. The curriculum encourages teachers to design learning experiences that are responsive to students' needs while promoting creativity, autonomy, and critical thinking. Consequently, pre-service teachers are expected to develop pedagogical orientations that align with these principles and prepare them to navigate increasingly complex digital learning environments (Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi, 2022).

Despite the growing body of literature on digital pedagogy, teacher competence, and technology integration, empirical studies specifically examining the pedagogical beliefs of Generation Z pre-service language teachers in

Indonesia remain limited. Existing research has predominantly focused on in-service teachers, digital learning implementation, or general teacher competencies, while relatively little attention has been paid to how digital-native pre-service teachers conceptualize teaching strategies, instructional materials, and assessment practices. Recent studies have primarily investigated pre-service teachers' digital competencies and technological readiness rather than their pedagogical belief systems (Chu et al., 2023; Rahim et al., 2023). As a result, there is still insufficient empirical evidence regarding the pedagogical beliefs of future language teachers who belong to the digital generation. This gap highlights the need for more focused investigation in the Indonesian context.

Based on the foregoing discussion, this study aims to analyze the pedagogical beliefs of Generation Z pre-service teachers regarding language teaching strategies, instructional techniques, material selection, assessment practices, and their perceptions of teacher identity in the digital era. Understanding these beliefs is essential because pedagogical orientations influence how future teachers integrate technology, design learning experiences, and respond to the demands of contemporary education. Previous studies have emphasized that strengthening digital competence alone is insufficient without a corresponding development of pedagogical understanding and reflective teaching capacity among pre-service teachers (Quast et al., 2025; Rahim et al., 2023). Therefore, the findings of this study are expected to contribute to the development of teacher education programs that are responsive to digital transformation and capable of preparing future language teachers for effective instructional practice.

2. METHOD

This study employed a descriptive quantitative design complemented by qualitative

interpretation to investigate the pedagogical beliefs of Generation Z pre-service teachers in language learning. The survey-based approach was selected to identify patterns and tendencies in participants' pedagogical beliefs regarding teaching strategies, instructional materials, assessment practices, and teacher identity in the digital era. Quantitative findings were subsequently interpreted to provide a deeper understanding of participants' pedagogical orientations and professional readiness.

The participants consisted of 20 undergraduate students enrolled in the Indonesian Language and Literature Education Program, Faculty of Teacher Training and Education (FKIP), Universitas Bung Hatta. The participants represented different academic semesters and varying levels of teaching experience, including students who had completed Microteaching or Field Teaching Practice (PPL) and those who had not yet participated in formal teaching activities. This variation provided diverse perspectives on pedagogical beliefs and teaching readiness.

Data were collected using an online questionnaire comprising 29 items measured on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). The instrument was organized into five domains: (1) Role of the Language Teacher (4 items), (2) Teaching Strategies and Techniques (5 items), (3) Selection of Learning Materials (5 items), (4) Evaluation and Assessment (9 items), and (5) Perceptions of Generation Z Teachers (6 items). The questionnaire was developed based on the TPACK framework (Mishra & Koehler, 2006). To establish content validity, the instrument was reviewed by three experts in language pedagogy and digital education. Based on their feedback, several revisions were made, including refining item wording, eliminating ambiguous statements, and improving the alignment between questionnaire items and the intended constructs. A pilot review involving several students was also conducted to ensure readability and clarity.

Instrument reliability was examined using internal consistency analysis, which indicated an acceptable level of reliability for educational research.

Data were collected through an online survey distributed via institutional communication channels over a two-week period. The analysis employed descriptive statistics, including mean, median, mode, and standard deviation, to examine the tendency and distribution of pedagogical beliefs across domains. To avoid misunderstanding regarding sample size, the value of *N* reported in each domain represents the total number of responses for all items within that domain rather than the number of participants. The statistical findings were complemented by interpretive analysis to explain the observed score patterns in relation to the TPACK framework and previous studies on teacher digital competence (Instefjord & Munthe, 2017; Preeti et al., 2026).

3. RESULTS AND DISCUSSION

Overview of Respondents

The majority of respondents in this study were between 20 and 22 years old, representing the early adulthood stage typically associated with emerging professional awareness and reflective thinking. The gender composition showed a higher proportion of female participants, which is consistent with enrollment patterns commonly found in language education programs.

Participants also varied in terms of teaching experience. Some had participated in teaching practicum programs such as Microteaching and Field Teaching Practice (PPL), while others had not yet engaged in classroom teaching. This variation contributed to a broad range of pedagogical perspectives. Participants with prior teaching experience tended to demonstrate more reflective and application-oriented thinking, whereas those

without experience generally expressed more conceptual and idealistic viewpoints. Such diversity provides important insight into how professional exposure contributes to shaping pedagogical beliefs among Generation Z pre-service teachers.

Descriptive Statistical Results

Table 1 presents the descriptive statistical results across the five domains of pedagogical beliefs measured in this study.

Table 1
Descriptive Statistics of Pedagogical Beliefs by Domain

| Domain | N | Mean | Median | SD |
|------------------------------------|-----|------|--------|------|
| Role of the Language Teacher | 80 | 4.31 | 4.25 | 0.48 |
| Teaching Strategies and Techniques | 100 | 4.42 | 4.40 | 0.46 |
| Selection of Learning Materials | 100 | 4.10 | 4.05 | 0.52 |
| Evaluation and Assessment | 180 | 4.10 | 4.00 | 0.57 |
| Generation Z Teachers | 120 | 4.11 | 4.00 | 0.50 |

Note. The number of participants in this study was 20. The value of *N* reported in each domain refers to the total item responses within the domain (e.g., 20 participants × 4 items = 80 responses for the Role of the Language Teacher domain).

As shown in Table 1, the domain Teaching Strategies and Techniques obtained the highest mean score ($M = 4.42$, $SD = 0.46$). This finding suggests that Generation Z pre-service teachers possess strong confidence in implementing innovative, collaborative, and technology-supported instructional approaches. The prominence of this domain may be explained by the participants' familiarity with digital technologies and online learning environments. As digital natives, they tend to view technology not merely as a supporting tool but as an integral component of effective teaching and learning processes.

The relatively low standard deviation in this domain ($SD = 0.46$) indicates a high degree of agreement among participants. Similar patterns can also be observed in the domains of Role of the Language Teacher ($SD = 0.48$) and Generation Z Teachers ($SD = 0.50$), suggesting that respondents shared relatively homogeneous beliefs regarding the importance of learner-centered instruction and technology integration. In contrast, the domain Evaluation and Assessment recorded the highest standard deviation ($SD = 0.57$), indicating greater variation in participants' understanding of formative assessment, authentic evaluation, and feedback-based learning practices. This variation may be associated with differences in teaching experience and exposure to assessment-related coursework.

The findings further support the relevance of the Technological Pedagogical Content Knowledge (TPACK) framework proposed by (Mishra & Koehler, 2006). The high scores in the domains related to instructional strategies and teacher roles demonstrate that participants recognize the importance of integrating pedagogical knowledge with technological competence. Their beliefs reflect an understanding that effective language teaching requires not only mastery of content and pedagogy but also the ability to utilize technology to facilitate meaningful learning experiences.

The results are also consistent with the concept of 21st-Century Skills, which emphasizes communication, collaboration, creativity, critical thinking, and digital literacy (Trilling & Fadel, 2009). This alignment can be observed in participants' positive perceptions of collaborative learning, project-based learning, and the use of authentic digital resources. For instance, respondents generally believed that language learning materials should be connected to real-life contexts and supported by relevant digital resources. They also showed strong preferences for learning activities that encourage

students to collaborate, discuss ideas, and produce meaningful learning outcomes through active participation.

Overall, the findings indicate that Generation Z pre-service teachers possess positive and relatively consistent pedagogical beliefs. Their strong orientation toward learner-centered instruction, technology integration, and collaborative learning suggests that they are well positioned to meet the demands of 21st-century education. Nevertheless, the relatively higher variation observed in the assessment domain suggests the need for greater emphasis on formative and authentic assessment practices within teacher education programs. Such efforts may help strengthen the alignment between pedagogical beliefs and future classroom practices.

DISCUSSION

The findings indicate that Generation Z pre-service teachers possess strong pedagogical beliefs across all measured domains, as reflected in the mean scores exceeding 4.00. The highest score in the domain of Teaching Strategies and Techniques ($M = 4.42$) suggests that participants strongly value collaborative, student-centered, and technology-supported learning approaches. This finding is consistent with the characteristics of Generation Z described by Prensky (2010) and Seemiller & Grace (2016), who argue that digital-native learners tend to prefer interactive, flexible, and collaborative learning environments. The prominence of this domain may also reflect participants' familiarity with digital technologies, which has shaped their positive perceptions of innovative instructional practices. The relatively low standard deviation ($SD = 0.46$) further indicates a high degree of consensus among respondents regarding the importance of adaptive and technology-enhanced teaching strategies.

The results also reinforce the relevance of the TPACK framework proposed by (Mishra & Koehler, 2006). Participants demonstrated strong

beliefs regarding the integration of pedagogy and technology in language instruction, suggesting an awareness that effective teaching requires more than content mastery alone. Their positive responses toward collaborative learning, project-based activities, and the use of digital learning resources indicate an emerging understanding of how technological knowledge can support pedagogical decision-making. These findings correspond with the concept of 21st-century skills (Trilling & Fadel, 2009), particularly in relation to communication, collaboration, creativity, critical thinking, and digital literacy. For example, respondents generally agreed that language learning materials should be contextualized through authentic resources and supported by digital media that facilitate active student engagement.

Another important finding concerns the domain of Evaluation and Assessment ($M = 4.10$). Although this domain did not obtain the highest mean score, participants generally expressed positive beliefs toward formative assessment, feedback-oriented learning, and authentic evaluation practices. This tendency reflects the concept of *assessment-as-learning*, which emphasizes continuous feedback, learner reflection, and active student involvement in the assessment process (Redecker, 2017). The findings suggest that participants view assessment not merely as a tool for measuring achievement but as a mechanism for supporting learning improvement. However, the relatively higher standard deviation observed in this domain ($SD = 0.57$) indicates greater variation in respondents' understanding of assessment practices. This variation may stem from differences in teaching experience, exposure to assessment-related coursework, or opportunities to apply assessment concepts during teaching practicums.

The findings further reveal that participants perceive the role of the language teacher as extending beyond the traditional

function of knowledge transmission. The high mean score for the Role of the Language Teacher domain ($M = 4.31$) suggests that respondents view teachers as facilitators, motivators, and learning partners. This perspective is consistent with constructivist learning theory, which positions learners as active participants in the construction of knowledge and emphasizes the teacher's role in creating meaningful learning experiences. Such beliefs indicate that Generation Z pre-service teachers are developing professional identities aligned with contemporary educational expectations, particularly those promoted within learner-centered and reflective teaching paradigms.

Nevertheless, the consistently high scores across all domains should be interpreted with caution. Since the study relied on self-report questionnaire data, the possibility of social desirability bias cannot be excluded. Participants may have provided responses that reflected pedagogical ideals commonly promoted in teacher education programs rather than beliefs that would necessarily guide their actual classroom practices. Concepts such as technology integration, collaborative learning, and formative assessment are widely recognized as desirable educational practices in contemporary discourse, potentially encouraging respondents to provide socially acceptable answers. Consequently, the high scores reported in this study may not fully represent authentic pedagogical beliefs or future instructional behavior. This interpretation is supported by previous research showing that discrepancies often exist between teachers' stated beliefs and their classroom practices due to contextual, institutional, and practical constraints (Richards & Renandya, 2002).

Teaching experience also appears to play an important role in shaping pedagogical beliefs. Participants who had completed Microteaching or Field Teaching Practice generally demonstrated stronger confidence in instructional planning and assessment practices than those without

classroom experience. This finding aligns with Bandura's (1997) theory of self-efficacy, which emphasizes the importance of mastery experiences in developing professional confidence. Direct teaching experiences allow pre-service teachers to test theoretical knowledge in authentic settings, evaluate instructional effectiveness, and refine pedagogical decisions through reflection. Therefore, experiential learning opportunities remain essential for strengthening the relationship between pedagogical beliefs and actual teaching competence.

Overall, the findings suggest that Generation Z pre-service teachers possess pedagogical beliefs that are broadly aligned with the principles of TPACK and 21st-century education. Their strong orientation toward learner-centered instruction, collaborative learning, authentic materials, and formative assessment reflects a professional readiness to engage with contemporary educational demands. However, the possibility of social desirability bias and the limited teaching experience of some participants indicate that pedagogical beliefs should not be viewed as direct indicators of teaching performance. Future studies employing classroom observation, interviews, or longitudinal designs are therefore needed to examine the extent to which these beliefs are translated into authentic instructional practices.

4. CONCLUSION

The findings of this study indicate that Generation Z pre-service teachers possess strong pedagogical beliefs across all measured domains. The highest mean score was found in the domain of Teaching Strategies and Techniques ($M = 4.42$), followed by Role of the Language Teacher ($M = 4.31$), suggesting that participants demonstrate a strong orientation toward learner-centered instruction, collaborative learning, and technology-supported teaching. These findings reflect pedagogical beliefs that are consistent

with the TPACK framework and the principles of 21st-century learning, particularly regarding communication, collaboration, creativity, and digital literacy.

The study also highlights the importance of strengthening digital pedagogical literacy within teacher education programs. Digital competence should be developed not only as a technical skill but also as a pedagogical capacity that supports reflective and adaptive teaching practices. Accordingly, teacher education institutions are encouraged to integrate technology-based microteaching activities, promote the use of digital portfolios as tools for reflection and professional growth, and provide metacognitive training to help pre-service teachers critically evaluate their instructional decisions and reduce the potential gap between pedagogical beliefs and classroom practices.

Several limitations should be acknowledged. First, the study involved a relatively small sample drawn from a single teacher education program, limiting the generalizability of the findings. Second, the data were collected through self-report questionnaires, which may be influenced by social desirability bias and may not fully represent participants' actual teaching behavior. Third, the absence of methodological triangulation, such as classroom observations or in-depth interviews, restricts the ability to verify whether the reported beliefs are consistently reflected in authentic instructional practices.

Future studies should involve larger and more diverse samples from different institutions and regions to obtain broader insights into the pedagogical beliefs of Generation Z pre-service teachers. Furthermore, mixed-method and longitudinal approaches incorporating observations, interviews, and teaching performance analyses are recommended to explore how pedagogical beliefs develop over time and how they are translated into actual classroom practice in the digital era.

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