

 Research Article

# Exploring AI-Educator Co-Creation in Curriculum Design: Effects on Time Efficiency and Learning Outcomes

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## Abstract

Rapid adoption of Artificial Intelligence (AI) into the learning setting has dramatically altered the methods of curriculum design and the process of instructional planning. As technological efficiency and analytics of learners are often mentioned in modern studies, the actual experiences of the educators who take part in the process of co-creating the curriculum based on AI are rather under-researched. This qualitative phenomenological research examines the experiences of educators regarding the perception of AI as a co-developer of the curriculum, focusing specifically on the perceived time efficiency, the quality of instructions, and professional identity. The collection of data was performed with the help of semi-structured interviews with the participation of twelve educators and instructional designers who represented various institutional settings, including secondary schools, colleges, and universities. Thematic analysis showed that participants thought mostly that AI is an augmentative tool that facilitates the early phases of curriculum planning by lightening cognitive workload and speeding up structural drafting. The respondents also cited that the AI-generated recommendations helped to enhance the pedagogical fit and diversification of the instructional approaches; however, the quality of the meaningful curriculum remained left to contextual adaptation and professional judgment. Also, the interaction with AI systems was observed to promote more creative confidence and reflective pedagogical experimentation, and, at the same time, raise ethical transparency and over-reliance issues on automated outputs. The results highlight the fact that the successful implementation of AI in curriculum design is defined by a mutually beneficial co-creative relationship that does not undermine the agency of educators but uses the technological affordances. This work provides a contribution to the developing rhetoric in the adoption of responsible AI in the educational field with a focus on the relationships between human professionalism and intelligent systems.

**Keywords:** Artificial Intelligence in Education, Curriculum Co-Creation, Teacher Professional Identity, Instructional Design, Educational Technology Integration

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## 1. INTRODUCTION

AI has become a radical entity in modern educational frameworks that have revolutionized the way teaching is conducted, how it is evaluated, and the way it is being designed to follow a curriculum. The swift adoption of AI-based technologies in the educational setting has facilitated adaptive learning systems, automated feedback, and data-driven instructional decision-making that improve the overall performance of teaching and learning (Chiu et al., 2023; Crompton & Burke, 2023). In educational institutions, AI has been put in an increasingly prominent role as the driver of digital transformation, with innovative teaching approaches that can meet the changing technological and socio-economic requirements (Klopov et al., 2023). Recent research highlights the fact that AI does not need to be understood as a tool of operational efficiency, but, instead, as a cognitive associative partner who can supplement pedagogical know-how. The given view corresponds to the new theoretical frameworks that emphasize the synergistic interaction

between teachers and smart systems in promoting meaningful knowledge building and teaching improvement (Ungerer & Slade, 2022; Zhai et al., 2023). The use of AI in creating curriculum development has presented new opportunities to improve alignment of instructional strategies, teaching diversification, and learner-centred educational design (Garzón et al., 2025).

Although these developments have occurred, ethical, professional, and epistemological issues about the adoption of AI in learning have also become prominent. The problem of algorithmic bias, data governance, and the possible reorganization of pedagogical authority have been emphasized as essential problems that affect the sustainable integration of AI by researchers (Selwyn, 2022; Williamson & Eynon, 2024). Moreover, although the issue of AI and performance and learning analytics among students has been covered with abundant quantitative research, less attention has been paid to the experiential involvement of educators in the AI-assisted curriculum co-creation. This gap is especially applicable to the setting of dynamic digital learning environments in which the role of educators is to reconcile technological effectiveness with professional autonomy and critical pedagogical judgment. To fill this gap, the current investigation will take a qualitative approach to investigate the dynamics of AI-educator collaboration during curriculum design with references to perceived time efficiency, quality of instruction, and professional identity change. This study will make a contribution to the developing field of responsible AI implementation and anthropocentric educational innovation in modern academic settings by documenting the lived experiences of educators.

## 2. LITERATURE REVIEW

### 2.1. Artificial Intelligence in Learning

There is a growing trend in the use of AI in the modern learning context to facilitate adaptive learning systems, intelligent tutoring approaches, and data-driven instructional decision-making. The recent systematic reviews emphasize that the AI-based learning environment promotes personalized learning, increases the levels of engagement, and improves academic outcomes with the help of real-time feedback and predictive analytics (Chiu et al., 2023; Garzón et al., 2025; Zhai et al., 2023). In fact, according to empirical research, AI integration leads to enhanced academic growth and the learning process through the promotion of cognitive engagement with learning and differentiated learning trajectories (Vieriu and Petrea, 2025). The introduction of AI technologies into digital education systems has also been linked to institutional change on a larger scale and reorganization of the pedagogical process. It has been shown that the digital transformation based on AI will provide greater accessibility, flexibility, and efficiency in teaching in a variety of educational environments (Klopov et al., 2023; Tang, 2024). Besides, the virtual classroom setting developed with the use of AI has demonstrated the great potential of enhancing training effectiveness, interaction in the instructional process, and competency development, especially in technology-mediated learning environments (Elgohary & Al-Dossary, 2022).

### 2.2 Curriculum Design and Pedagogical Planning

Designing a curriculum is commonly understood as a multifaceted and repeated process that involves matching learning goals, teaching methods, evaluation systems, and learner diversity. The introduction of AI into curriculum planning has brought in a new possibility of streamlining instructional coherence and pedagogical innovation. Research shows that AI-based curriculum design tools could simplify the planning process, enable systematic content alignment, and encourage learner-centered instructional methods (Cheah et al., 2025; Hwang et al., 2020). Nevertheless, the success of the AI-supported curriculum innovation relies heavily on the willingness of educators, institutional support, and AI literacy competency development. Studies emphasize the readiness and attitude of educators toward AI solutions as the key elements of successful implementation of intelligent instructional systems and sustainability of pedagogical changes (Afzal et al., 2026; Ali, 2025). Moreover, AI literacy and perceived technological support were also reported as vital variables according to which the interest of educators in the processes of AI-based instructional design is mediated (Eyal, 2025; Shen & Cui, 2024).

### 2.3. Co-Creation and Collaborative Intelligence between Human and AI

Human-AI collaborative intelligence promotes co-creation and research, allowing AI to become more effective than a human being in creating new solutions to current issues. Human-AI cooperation is a growingly popular idea in educational studies, and this is also indicative of a more general theoretical change to hybrid intelligence and socio-technical learning. Recent research views AI as a mutual cognitive collaborator that can be used to control socially shared controls, creative problem-solving, and distributive knowledge building between educators and learners (Edwards et al., 2025; Guo et al., 2025). These interaction models accentuate synergetic interplay between human skills and algorithmic reasoning in improving innovativeness in instruction and pedagogical decision-making. Empirical research also shows that AI-supported academic writing and knowledge generation environments transform the conventional courses of academic collaboration by permitting fresh human-machine interactions and cognitive enhancement (Nguyen et al., 2024). Likewise, the study of the role of human-AI cooperation in the educational setting at higher institutions also brings up the issue of opportunities and threats in the field of trust, ethical governance, and the redesign of professional roles in digitally mediated learning environments (Atchley et al., 2024; Du et al., 2026).

### 2.4 Time Efficiency and Instructional Quality in Technology-Enhanced Design

Among the key reasons why it is necessary to implement AI technologies in learning practice is the possibility to increase time efficiency and the quality of instruction. Research proves that AI-based instructional systems may mechanize repetitive processes, optimize the planning of the curriculum process, and allow the use of data to guide pedagogical decisions, which helps teachers spend more time on reflective provisions and interaction with students (Long et al., 2026; Milinthapunya et al., 2025). Nevertheless, researchers warn that the delegitimacy of technology is not necessarily pedagogical effectiveness. The studies propose that teachers consider the quality of instruction according to relevance to context, responsiveness of the learners, and philosophical compatibility, but not only the technological measures of productivity (AlAli & Wardat, 2024; Alwaqdani, 2025). In turn, the strategies of balanced AI integration, which do not harm professional judgment and contextual adaptability, are the keys to meaningful educational innovation.

### 2.5 Teacher Identity, Technology Implementation, and Teacher Perception

The professional identities, beliefs, and perceptions of educators are important to establish the adoption of technology and long-term pedagogical innovation. According to recent findings, a positive attitude towards AI technologies is linked to greater readiness to participate in the digital transformation programs and in experimentation in instruction (Hopcan et al., 2023; Zuo et al., 2025). On the other hand, ethical implications, dependency on technology, and deskilling raise ethical issues that can make the efficient use of AI-supported instructional practices difficult.

Research also shows that AI integration is able to trigger identity change processes as teachers can renegotiate their professional roles in digitally mediated educational spaces (Afzal et al., 2026). Ethical consciousness, technological and institutional support systems are thus seen to be the key elements in order to achieve a sustainable implementation of AI in learning settings (Crompton & Burke, 2023; Ungerer & Slade, 2022).

### 2.6 Identified Research Gap

Although the literature in the field of AI-enhanced education is growing, there is much to learn about the lived experiences of educators in AI-assisted curriculum co-creation. Existing scholarly works are mostly concerned with learner analytics, technological performance measurements, or institutional implementation models, and very little is known about the qualitative understanding of how instructors interpret and negotiate AI-mediated instructional design processes. To fill this gap, the current study will follow a phenomenological approach to explore the interaction of perceived time efficiency with the quality of the instruction and the professional identity in the AI-supported contexts of curriculum development. This

study, by foregrounding educator experiences, adds to the developing conversation about responsible AI implementation and creative educational innovation that is based on humanity.

### 3. RESEARCH METHODOLOGY

#### 3.1. Research Design

The research design used in this study was qualitative phenomenological research in which the authors aim to determine the lived experiences of educators when using AI tools in curriculum development. Phenomenology is specifically applicable when dealing with subjective interpretations, professional reflections, and context-related pedagogical decision-making with respect to emerging technology practices. Methodological studies in the recent past further point to the fact that the qualitative method is indispensable in the effort to capture the experiential aspects of intricate socio-technical phenomena like AI-mediated instructional design (Ahmed et al., 2025). The phenomenological orientation allowed exploring the perception of educators toward AI as a working partner that affects time organization, quality of instruction, and change in professional identity. Such an interpretive approach is consistent with the recent studies pointing to the necessity to comprehend the perceptions and ethical concerns of educators with AI-enhanced learning settings (Ungerer & Slade, 2022; Williamson & Eynon, 2024).

#### 3.2. Research Questions

The following research questions led to the study that was conducted:

- What is the perception of educators regarding Artificial Intelligence as a co-curricular designer?
- How does the integration of AI make curriculum planning processes perceived to be time-efficient?
- What impact does AI-assisted curriculum development have on the quality of instruction and pedagogical decision-making?
- How does AI collaboration affect the professional identity and creative involvement of educators?

#### 3.3. Participants and Demographic Characteristics

The sample was recruited through purposive sampling by including participants who have prior experience with AI-assisted tools for instructional planning or curriculum design. The participants of the study were twelve teachers and instructional designers who were employed in higher education institutions, colleges, and secondary schools. This sampling methodology guaranteed the coverage of information-rich cases that may yield significant information on AI-mediated curriculum practices. Recent methodological studies indicate that qualitative interview studies are generally able to reach out to thematic saturation with small yet well-chosen samples where the participants have an excellent level of experience regarding the topic (Squire et al., 2024).

The demographic variables of the participants were:

- Age range: 28–52 years
- Gender breakdown: 7 males and 5 female teachers.
- Teaching experience: 4–14 years
- Institutional context, educational institutions, public and private.
- Experience in the use of AI: 6 months to 3 years.

Such demographic differences contributed to the contextual diversity and further comprehensiveness of the findings.

#### 3.4. Data Collection Methods

Information was gathered by semi-structured interviewing using supplementary document analysis of AI-based curriculum resources. The semi-structured interviews allowed the participants to give the

narration of their experiences and provided them with the flexibility to probe context-related knowledge. The interviews were done in real-life meetings (facilitated by video conferencing) or online (30 to 60 minutes). The interview guide was aimed at recording perceptions regarding time efficiency, instructional quality, and professional identity change. The example interview questions were:

1. What has been the effect of the application of AI tools on the amount of time you spend on curriculum planning?
2. How do AI-generated suggestions impact the quality of your teaching choices?
3. What is your professional confidence and creative involvement with AI?

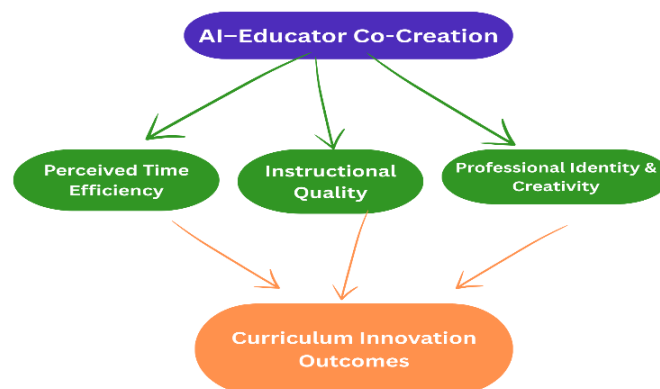
The process of document analysis included the review of the chosen lesson plans, curriculum drafts, and AI-generated instructional outlines that were voluntarily provided to the participants. This triple combination contributed to the interpretive validity and contextual insights into AI-mediated practices of curriculum design.

### 3.5. Data Analysis

Thematic analysis was used to analyze qualitative data, which included processes of coding, categorizing, and theme development, which are systematic. This is an analytical method that helps build structured patterns of meaning in participant narratives and encourages interpretive rigor in qualitative research in schooling. Thematic analysis is identified in current methodological literature as a versatile but strong approach to studying complex phenomena of experience in socio-technical settings (Ahmed et al., 2025). Inductive and deductive coding strategies were also used to provide correspondence between emergent themes and the conceptual focus of the study. Repeated working with interview transcripts, reflexive memoing, and repeated cross-case comparison enhanced the depth of analysis and coherence.

### 3.6 Trustworthiness and Rigor

To guarantee the rigor of the methodology, the study embraced the developed qualitative validation approaches such as member checking, maintenance of the audit trail, and rich description of context. The long-term interaction with the narratives of the participants was a factor that contributed to the development of credibility, whereas transferability was facilitated by the reporting of institutional and technological contexts that impact the adoption of AI. Systematic documentation of the choices made in the process of analytical decisions and reflexive attention to researcher positionality enhanced dependability and confirmability. The practices are consistent with the modern standards of qualitative research, which focus on transparency and methodological integrity.



**Figure 1.** AI-Educator Co-Creation Conceptual Framework for Curriculum Innovation

### 3.7. Conceptual Framework

The paper is informed by a people-centered conceptual model that places AI-educator collaboration as an interaction process between technological offers and pedagogical professional drivers. The framework

demonstrates that AI-assisted curriculum co-creation determines the impact on the perceived time efficiency, quality of instruction, and professional identity, which in turn affect the innovative instructional outcomes (see Figure 1).

#### 4. RESULTS

In this chapter, the authors include the findings of the qualitative analysis of the interview transcripts and artifacts of the curriculum design. This analysis was aimed at investigating the lived experiences of teachers working with AI tools in the curriculum development process. The patterns of meaning were recurrent, and using thematic analysis, the codes were made and categorized into larger conceptual themes. The findings reflect the perception of teachers towards AI as a co-creative collaborator in terms of efficiency, quality of instruction, and professional identity. The conceptual anchoring of these findings, when interpreted considering the recent scholarship of educational technology, makes them stronger (Ungerer & Slade, 2022).

The results are presented in three broad themes and sub-themes to support them, the opinions of the participants, and tables of visual summary to make it clear and scholarly.

##### 4.1. Participant Profile Overview

The sample size of the participants was 12 educators and instructional designers. The subjects were from varied institutional settings and teaching experience levels, which enhanced the depth of the views obtained.

**Table 1.** Participant Demographic Summary

| Participant Code | Role                   | Teaching Experience | AI Tool Experience | Institution Type   |
|------------------|------------------------|---------------------|--------------------|--------------------|
| P1               | Lecturer               | 8 Years             | 2 Years            | Public University  |
| P2               | Curriculum Designer    | 5 Years             | 1 Year             | Private College    |
| P3               | Senior Teacher         | 12 Years            | 2 Years            | Public School      |
| P4               | Assistant Professor    | 6 Years             | 1 Year             | Private University |
| P5               | Teacher                | 4 Years             | 6 Months           | Public School      |
| P6               | Instructional Designer | 9 Years             | 2 Years            | Private University |
| P7               | Lecturer               | 7 Years             | 1 Year             | Public College     |
| P8               | Teacher                | 10 Years            | 2 Years            | Public School      |
| P9               | Academic Coordinator   | 11 Years            | 1.5 Years          | Private University |
| P10              | Lecturer               | 5 Years             | 8 Months           | Public University  |
| P11              | Teacher                | 6 Years             | 1 Year             | Private School     |
| P12              | Curriculum Specialist  | 14 Years            | 3 Years            | Public University  |

##### 4.2. Overview of Emergent Themes

Thematic coding led to three main themes that had several supporting sub-themes. These themes explain the complex role of AI–educator co-creation in curriculum design.

**Table 2.** Major Themes and Sub-Themes

| Major Theme                        | Sub-Themes                                       | Conceptual Meaning                                                  |
|------------------------------------|--------------------------------------------------|---------------------------------------------------------------------|
| Time Efficiency                    | Draft Acceleration, Reduced Repetition           | AI shortens planning cycles and minimizes routine tasks             |
| Instructional Quality              | Alignment, Pedagogical Variety, Resource Support | AI broadens instructional options and improves structural coherence |
| Professional Identity & Creativity | Confidence, Innovation, Ownership                | AI enhances creative engagement and professional assurance          |

Such thematic trends are aligned with the current literature highlighting AI as an augmentative, as opposed to a substitutive power, in education (Selwyn, 2021).

### 4.3. Theme 1: Perceived Curriculum Planning Time Efficiency

One of the prevailing pieces of evidence in interviews was the view that AI tools made the early phases of curriculum design much faster. Respondents continually referred to AI as an engine that was initially turned on and alleviated cognitive load during blank-page planning. Activities like creating lesson plans, proposing evaluation strategies, and resource search were also common when people were asked about the time-saving areas that were most evident. This finding is in line with the recent research that states that AI-assisted systems enable decreasing the amount of routine work and optimizing instruction planning (Ungerer & Slade, 2022; Zhai et al., 2021).

Nonetheless, teachers explained that though AI made the process faster, it was still a task of a human being to make the final refinements. The efficiency in terms of time was thus defined as supportive as opposed to substitutive, which bolsters the idea of augmented intelligence in learning.

#### Illustrative Quote:

*“AI gives me a ready structure in minutes. I still adjust it, but it saves the exhausting first step.”*

**Table 3.** Coding Matrix – Time Efficiency

| Raw Statement                         | Initial Code  | Category       | Final Theme     |
|---------------------------------------|---------------|----------------|-----------------|
| “It cuts my planning time in half.”   | Time Saving   | Efficiency     | Time Efficiency |
| “I don’t start from scratch anymore.” | Draft Support | Workflow       | Time Efficiency |
| “Formatting and outlines are faster.” | Automation    | Task Reduction | Time Efficiency |

### 4.4. Theme 2: Quality Instructional and Alignment Improvement

The respondents indicated that AI tools have a positive impact on curriculum coherence, especially in the alignment of the objectives, activities, and assessment practices. The suggestions of AI were frequently referred to as alternative lenses that enlarged pedagogical thinking. The recent literature, in which AI can be useful to provide a variety of instructional options and evidence-based design solutions, confirms this interpretation (Williamson & Eynon, 2020).

However, the participants stressed that adaptation to context was required. The results of AI were seen as a suggestion instead of a decisive solution, which supports the further role of professional judgment and ethical choices in digital pedagogy (Selwyn, 2021).

#### Illustrative Quote:

*“The quality improves because I see options I wouldn’t usually consider, but I always modify them for my class.”*

**Table 4.** Coding Matrix – Instructional Quality

| Raw Statement                      | Initial Code  | Category  | Final Theme           |
|------------------------------------|---------------|-----------|-----------------------|
| “It aligns objectives better.”     | Alignment     | Structure | Instructional Quality |
| “I get new teaching strategies.”   | Variety       | Pedagogy  | Instructional Quality |
| “I still review every suggestion.” | Human Control | Judgment  | Instructional Quality |

### 4.5. Theme 3: Professional Identity, Creativity, and Confidence

One of the strengths was the impact of AI collaboration on the sense of creativity and professional identity of educators. Most interviewees noted that they were now more confident in trying out curriculum frameworks and practices. AI tools were often characterized as a co-invention collaborator that caused a decreased fear of failure and motivated exploration. It is consistent with the modern views according to which AI is viewed as a mental partner contributing to human creativity and not reducing professional power (Ungerer & Slade, 2022). The few who had initially feared over-dependence on technology, the majority of teachers indicated that after some time, they feared it less as they had devised strategies to use technology at moderate levels. This observation is in line with recent qualitative studies that focus on the adaptive development of professional identity in technology-intensive learning settings (Tondeur et al., 2021).

**Illustrative Quote:**

*“It doesn’t replace me; it pushes me to be more creative and confident in my choices.”*

**Table 5.** Coding Matrix – Professional Identity & Creativity

| Raw Statement                   | Initial Code | Category    | Final Theme           |
|---------------------------------|--------------|-------------|-----------------------|
| “I feel more confident now.”    | Confidence   | Empowerment | Professional Identity |
| “It sparks new ideas.”          | Creativity   | Innovation  | Professional Identity |
| “I still own the final design.” | Ownership    | Agency      | Professional Identity |

**4.6. Cross-Theme Pattern**

In all interviews, there was one common trend, namely, when educators referred to AI as a partner, but not as a substitute. The interaction of the technology support and human control was considered to be crucial in the attainment of valuable curriculum results. This interpretation trend is based on the wider academic discourse in support of responsible AI adoption that does not eliminate educator agency but makes use of computational aid (Selwyn, 2021).

**Table 6.** Theme Occurrence Overview (Mention Frequency)

| Theme                              | Participants Mentioning | Interpretive Strength |
|------------------------------------|-------------------------|-----------------------|
| Time Efficiency                    | 11 / 12                 | Strong                |
| Instructional Quality              | 10 / 12                 | Moderately Strong     |
| Professional Identity & Creativity | 9 / 12                  | Emerging Strong       |

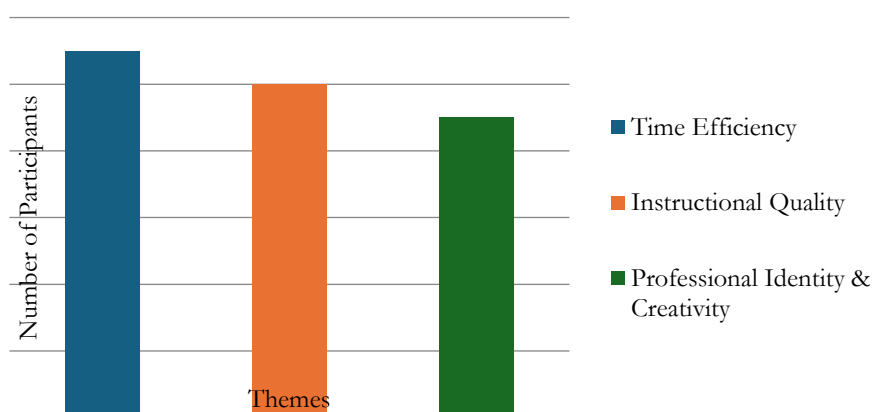
**Figure 2.** Theme Occurrence Overview Based on Participant Narratives

Figure 2 shows the frequency of the main qualitative themes obtained in the narratives of participants. The number of educators who mentioned each theme specifically in the interviews is the bar height. The most mentioned feature is Time Efficiency, which means that shorter time of planning and faster drafting were the most commonly identified advantages of AI-assisted curriculum design. The next step is Instructional Quality, which indicates that educators have realized that AI recommendations enable them to better align and enhance teaching diversity. Although with a smaller percentage, Professional Identity and Creativity is still one of the important outcomes of AI collaboration, which proves that the use of AI in curriculum development also fosters confidence, innovation, and ownership. The graph does not suggest that they are statistically significant, but summarizes thematically salient aspects in the qualitative data.

**4.7. Summary of Results**

All of the qualitative data yield evidence to show that AI and educator co-creation is facilitative and augmentative in the process of curriculum creation and not substitutive. The respondents always felt that AI tools are tools that could help hasten the early drafting, but retain the need to polish and contextually judge the document. The quality of instruction was understood as the increase in the alignment of



objectives, activities, and assessment strategies, especially in the case of educators who actively assessed and adjusted AI-generated recommendations. Additionally, the experience with the AI systems had a positive effect on professional confidence and creative exploration, giving educators the opportunity to experiment with new pedagogical frameworks without losing a sense of ownership. Through themes, the overwhelming pattern of interpretation was that of collaboration, reflection, and balanced control; meaningful innovation in curriculum was not collaboratively realized through automation but through the mutually reinforcing relationship between technological support and professional knowledge.

## 5. DISCUSSION

The rationale behind the study was the need to understand the lived experiences of educators working with Artificial Intelligence tools when designing the curriculum. The results all prove that AI does not act as a substitute for pedagogical expertise but as an augmentative and co-creative collaborator. Human oversight, contextual adaptation, and reflective judgment were always highlighted by the participants and considered to be the key elements of successful AI use. Such interpretations are consistent with the modern educational technology literature that views AI as an extension of cognition that offers assistance and not a replacement of professional decision-making (Ungerer & Slade, 2022; Selwyn, 2021).

### 5.1. AI-Assisted Curriculum Co-Creation and Perceived Time-Efficiency

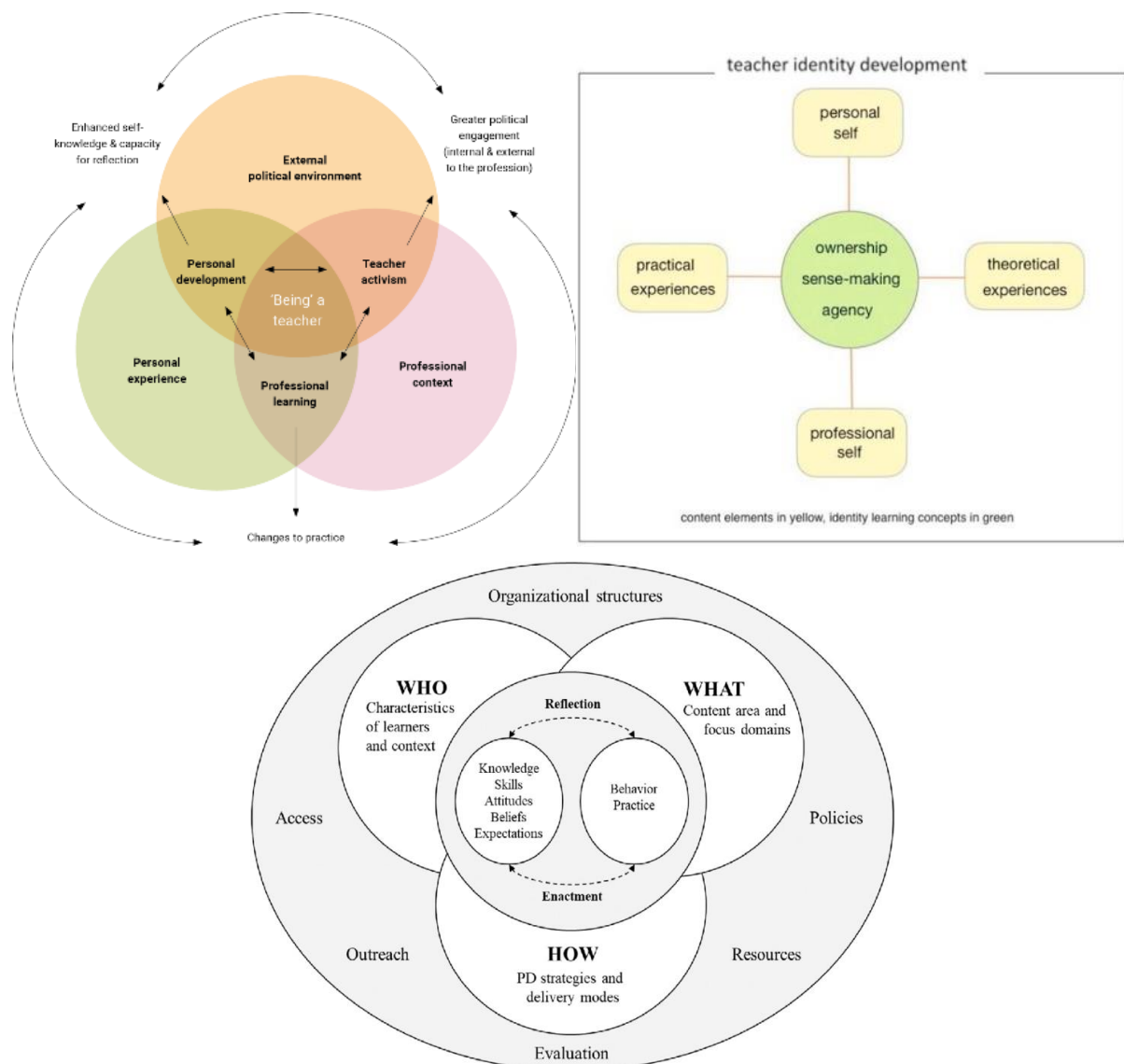
The present research results suggest that teachers view AI-based curriculum-co-creation as a powerful driver of efficiency in the processes of instructional planning. According to the respondents, AI tools decreased the administrative load, fast-tracked the initial structuring of the content, and allowed prioritizing reflective pedagogical decisions. The results are consistent with prior studies that show that AI-based instruction systems simplify repetitive design tasks and optimize the workflow in technology-mediated learning settings (Chiu et al., 2023; Garzón et al., 2025). Likewise, Long et al. (2026) highlight that the introduction of AI could enhance the productivity of instruction via automatic content creation and real-time changes to the pedagogy. Nevertheless, the current research also emphasizes that the perceived efficiency benefits are dependent on the level of educator acquaintance with AI tools and their ability to critically evaluate an automated recommendation. This is a subtlety that indicates the general issues in the literature that technological acceleration does not necessarily imply pedagogical efficiency, especially when it is necessary to adjust to the context and use professional discretion (AlAli & Wardat, 2024). Thus, AI also helps to optimize time, but the constructive curriculum change is still tied to the interpretive interaction of educators with intelligent systems.

### 5.2. Teaching and Learning in AI-Mediated Curriculum Design

The findings also indicate that curriculum co-creation with the help of AI allows improving the perceived quality of instruction through the process of alignment of the learning objectives, teaching strategies, and assessment practices. The respondents stated that AI tools helped to experiment with different teaching methods and assist with the creation of more logical and organized curriculum structures. The results are consistent with the previous findings that AI-driven educational technologies could facilitate adaptive design and learner-centered pedagogical innovation (Zhai et al., 2023; Vieriu & Petrea, 2025). However, there was a consensus among teachers that contextual alteration and professional control were also required in the process of incorporating AI-created content. This finding is consistent with the studies that have shown that AI systems are best applied as augmentative and not substitutive tools in pedagogical practice (Ungerer & Slade, 2022). Also, Cheah et al. (2025) observe that the successful implementation of AI in a curriculum design process involves the preparedness of educators, institutional support, and critical digital literacy abilities. The current results, hence, support the claim that the quality of instruction in AI-mediated contexts is influenced by the dynamism in the relationship between technological opportunities and human pedagogical skill.

### 5.3. Professional Identity, Creativity and Human-AI Co-operation

One of the most important contributions of the current study is the discussion of the influence AI collaboration has on the professional identity of teachers and their creative involvement in curriculum development. The respondents also noted that the use of AI tools led to heightened confidence in pedagogy, creative experimentation, and reflective practices of teaching. The results contribute to the emerging theoretical views on human-to-AI collaboration, as intelligent systems are perceived as socio-cognitive partners with the potential to improve creative problem-solving and distributed knowledge construction (Edwards et al., 2025; Nguyen et al., 2024). Simultaneously, the participants reported their fears of overtrusting AI and the consequences of automated decision-making on professional autonomy. These strains have been broadly reported in the current literature that analyzes ethical and epistemological aspects of AI adoption in education (Selwyn, 2022; Williamson & Eynon, 2024). The current paper is thus an addition to the current literature on hybrid intelligence because it has shown that the optimal solution to AI-educator partnership entails a moderate stance that does not jeopardize professional agency but takes advantage of technological advancement.



**Figure 3.** Professional Identity and Technology Integration Cycle

Technology Integration Cycle Professional Identity (adapted by Tondeur et al., 2021)

This paradigm indicates how reflection, experimentation, and a feedback loop can lead to identity development in technologically enriched settings. The current results are compatible with such a cycle, as

the educators stated that they felt more confident and creative when interacting with AI tools repeatedly, instead of adopting them in a single instance.

#### 5.4. Implications for Human-Centered AI Integration in Curriculum Innovation

All of this leads to the state of values that human-oriented AI models should be implemented with a focus on pedagogical values, contextual flexibility, and moral responsibility. The interaction of time efficiency, quality of instruction, and professional identity underlines the multidimensional character of AI-co-creation of curriculum. Such a view is consistent with current studies that claim that the integration of AI in the educational process should be approached as a sustainable practice based on institutional support systems, teacher training, and participatory design (Afzal et al., 2026; Eyal, 2025).

This research contributes to knowledge about how AI will be used as an augmentative collaborator in curriculum development and not as a deterministic technological fix by anticipating and describing the lived experiences of educators. The findings thus add to the discussion on the future of intelligent systems in defining pedagogical practice and transformation in a digitally mediated learning context.

### 6. PRACTICAL IMPLICATIONS

The results of the current research have significant practical implications for the stakeholders engaged in curriculum innovation and integration of AI in education. The study expands the existing discussion on the human-centered implementation of AI in education by showing how AI-educator co-creation supports the development of perceived time efficiency, improved instructional quality, and human development as a professional. Modern research also says that to be successful in adopting AI, linking technological innovation with institutional preparedness, pedagogical values, and ethical governance frameworks is essential (Yang et al., 2021; Ifenthaler et al., 2024).

#### 6.1. Implications for Educators

The findings denote the fact that AI-assisted curriculum co-creation can be efficient in assisting in the enhancement of the efficiency of instructional planning, and allow educators to devote their attention to the reflectivity of their practices and creative pedagogical experimentation. Therefore, teachers must be facilitated in acquiring AI literacy skills and critical analysis to make sure that smart technologies are used as enhancing tools and not replacement mechanisms. AI approaches with a human-focused emphasis emphasize the significance of maintaining professional agency and situational decision-making in technology-supportive educational settings (Yang et al., 2021).

#### 6.2. Implications for Curriculum Designers

Curriculum developers can use AI-supported design models to improve the compatibility of learning goals, teaching plans, and assessments. The results indicate that the combination of AI advice and contextual pedagogical knowledge can lead to the development of innovative curricular models responding to the needs of different learners. This point of view is compatible with more general studies in which interdisciplinary cooperation and design-based solutions have been viewed as a key component of sustainable AI-based curriculum innovation (Ifenthaler et al., 2024).

#### 6.3. Implications for Higher Education Institutions

Learning institutions should develop overall AI implementation plans that involve the development of technological infrastructures, training of faculty, and ethical policies. The adoption of AI by institutions should be encouraged in accordance with the principles of responsible AI use, and the challenges connected with the concept of data privacy, the transparency of the algorithms, and their fair access to digital assets. Research focused on policy matters indicates the need to work together as an institution in order to make

sure that AI technologies make a valuable contribution to educational change (Ally & Mishra, 2024; Li et al., 2024).

#### 6.4. Implications for Researchers

The article highlights the necessity of conducting additional qualitative and longitudinal studies on the socio-professional nature of AI-collaboration in curriculum development. Future studies should focus on cross-disciplinary context, comparative institutional setting, and the dynamics of human-AI interaction in teaching and learning settings that are changing. Policymaking and dialogue on research are the key to the development of evidence-based frameworks to promote responsible AI use in education (Ifenthaler et al., 2024).

#### 6.5. Implications for Policy Makers

Educational policy frameworks need to take into account ethical issues, regulatory requirements, and national approaches to the integration of AI in curriculum design. The rules that foster transparency, accountability, and inclusivity in AI-driven educational systems should be made by policymakers. The recent policy discussions reveal that a balance in technological innovation and academic integrity, holistic assessment practices, and human-centered pedagogical principles should be taken into account (Ateeq et al., 2024; Li et al., 2024).

#### 6.6. Implications for AI Developers

The developers of AI should pay special attention to the principles of user-centred design that will incorporate the pedagogical requirements of the educators, limitations of the situation, and ethical demands. The AI-assisted curriculum tools can be improved by the following methods: transparent recommendation systems, adaptive customization features, and participatory development models to increase the level of trust and usability. Human-centered AI models emphasize the role of integrated collaboration between teachers and technology developers to achieve pedagogical relevance and sustainability (Yang et al., 2021).

### 7. CONCLUSION

The present research paper aimed to investigate the experiences of the educators regarding collaboration with Artificial Intelligence tools in the process of curriculum development in a qualitative context. The results show that AI should be most appropriately viewed and used not as a substitute for pedagogical expertise but as an augmentative and co-creative collaborator that helps in making reflective choices. In the stories of the participants, AI tools were always linked to faster initial planning, wider-range instructional opportunities, and more professional confidence, whereas overall final authority and contextual adaptation were absolutely in the realm of the educator.

The initial significant point that can be drawn out of the research is that perceived time efficiency is a substantial but subtle advantage of AI integration. Teachers failed to explain AI as something that completely removed the workload; instead, the burden was shifted off the mundane organizational efforts, and instead, the weight was transferred to greater pedagogical thought. Such a change means that the efficiency of AI-assisted curriculum design is both time-dependent and cognitive, which allows teachers to focus more on learner-oriented modifications and innovative experimentation.

Secondly, the paper comes to the conclusion that AI recommendations based on professional judgment can improve the quality and alignment of instruction. Respondents appreciated the capacity of AI to bring in new approaches to teaching and systematic planning routes, but they stressed that the quality improvement would be meaningful only when the results were evaluated and properly put in context. This observation supports the philosophy that technology brings in breadth of choices, whereas educators bring in depth of knowledge and moral sensitivity.

Another valuable finding is related to professional identity and creativity. Instead of reducing the power of educators, AI collaboration often enhances confidence, innovation, and curriculum decision-making ownership. The engagement with intelligent systems promoted understanding and trial, and it is possible to say that AI-assisted settings can become the booster of professional development in harmony with human supervision.

The overall findings suggest that successful AI-educator co-creation is characterized by cooperation, not automation, thoughtfulness, and contextualism, but not consistency. AI is useful in curriculum development because it will help to generate ideation, increase structural coherence, and promote professional agency without reducing the central profession of the educator as a decision-maker and moral compass.

### 7.1. Limitations

The study has some limitations as it is only qualitative and the sample size is quite small, which limits generalization. The results are subjective experiences, that is, not measurable, and thus reflect interpretive trends as opposed to universal effects. Moreover, the perceptions and the degree of engagement of the participants might have been affected by the different degrees of familiarity with AI tools.

### 7.2. Recommendations and Future Directions

Mixed-method or longitudinal studies involving experiential and measurable learning outcomes can be useful in the future. Neo-comparative research across the levels of education, cultural setting, and technological platforms may provide additional insight into the way AI co-creation practices change over time. In practice, educational establishments are prompted to introduce professional development opportunities that would focus on reflective and ethical AI implementation so that teachers could continue to be active participants and not inactive consumers.

To sum up, the research paper confirms that AI-aided curriculum development has significant potential in presenting itself as a human-based, co-creative process. The mutual dependence between technological support and professional skills becomes the determinant of efficiency and quality of instruction and long-term professional development in modern educational settings.

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**Research Ethics.** This research was carried out following the set principles of ethical research in qualitative studies that involve human subjects. This research did not need formal ethical approval. All participants had informed consent before the interviews were held. The method of participation was completely voluntary, and the participants were made aware of their right to withdraw at any given time. Strict confidentiality was given on all responses, and anonymity was observed during the research.

**Data Availability Statement.** The supporting data of this study can be obtained from the relevant author upon reasonable demand. The data are not publicly available because of the characteristics of the qualitative interview data and the need to ensure that the participants will remain confidential.

**Conflicts of Interest.** The authors assert that they do not have any conflicts of interest in the publication of this paper.

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