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When Love Meets AI: Humanizing EFL Classrooms through Loving Pedagogy in Digital Times

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ABSTRACT

Objective: The increasing use of Artificial Intelligence (AI) in English as a Foreign Language (EFL) education has transformed classroom interaction, raising new emotional and ethical questions for teachers. Grounded in the framework of AI-informed Loving Pedagogy, this study examined how EFL teachers experience and sustain love, empathy, and moral awareness in AI-mediated teaching contexts.

Methods: A qualitative research design was adopted to capture the nuanced emotional, ethical, and pedagogical experiences of EFL teachers who integrate AI tools into their instruction. Fifteen EFL teachers in Tehran, Iran, participated in semi-structured interviews and reflective journals.

Results: Thematic analysis yielded three interrelated themes of 1) Relational Presence in Algorithmic Spaces, 2) Moral Ambiguity and Emotional Labor, and 3) Pedagogical Renewal through AI Partnership.

Conclusion: The findings revealed that teachers intentionally personalized machine-generated communication to maintain emotional authenticity, navigated ethical uncertainty and affective fatigue while adapting to technological change, and reframed AI as a creative partner for enhancing empathy and reflective care. These insights show that love and ethical responsibility can be redefined by technological mediation. The study advances the AI-informed Loving Pedagogy framework, demonstrating how affective literacy, moral discernment, and critical AI awareness can coexist within sustainable digital teaching. The results have implications for teacher education and educational policy, emphasizing the need to prepare educators for the emotional, ethical, and cognitive dimensions of AI integration.

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1. Introduction

The rapid advancement of Artificial Intelligence (AI) has profoundly transformed educational practice, redefining how teachers design instruction, assess learning, and interact with students (Barjesteh et al., 2026; Isaee & Barjesteh, 2026; Manoocherzadeh et al., 2025). In English as a Foreign Language (EFL) contexts, tools such as automated writing assistants, adaptive learning platforms, and conversational agents promise unprecedented personalization, feedback accuracy, and pedagogical efficiency (Barjesteh & Isaee, 2024; Li, Dewaele & Jiang, 2020). However, these innovations also raise pressing questions about the fate of human connection in increasingly data-driven classrooms. When communication is mediated through algorithms, the relational and affective dimensions of teaching (empathy, care, and emotional attunement) can easily be overshadowed by efficiency and standardization (Derakhshan & Pawlak, 2025; Dewaele & Li, 2020).

In this evolving landscape, Loving Pedagogy offers a counterbalance to the mechanization of education (Isaee et al., 2025; Wang et al., 2022). Grounded in humanistic and positive psychological tradition (Fredricksons, 2013), it positions teachers as compassionate professionals who nurture belonging, trust, and emotional safety (Zhao & Li, 2021). Within EFL education (where communication and emotion intertwine), this framework underscores the moral and relational dimensions of teaching. Yet, despite its growing prominence in affective and positive education research (Laakso et al., 2021; Loreman, 2011), the integration of Loving Pedagogy with AI-enhanced instruction remains largely underexplored. Most existing studies on AI in education emphasize cognitive gains, technological adoption, or ethical concerns, often neglecting the affective and humanistic aspects that sustain genuine teacher–learner connection (e.g., Seo et al., 2021; Yan et al., 2024). This gap underscores the need for an approach that reconciles technological innovation with the emotional and moral responsibilities of teaching.

Despite the growing adoption of AI technologies in language education, persistent challenges remain regarding how teachers preserve empathy, relational presence, and ethical responsibility in AI-mediated environments. National-level research in EFL contexts has reported ongoing concerns about the erosion of teacher–student interaction quality and the limited pedagogical guidance available for integrating AI tools in ways that sustain emotional engagement and moral accountability. Similarly, international scholarship has highlighted tensions between technological efficiency and humanistic teaching values, emphasizing the risk that algorithmic decision-making may unintentionally marginalize the relational and affective dimensions that define meaningful learning experiences. These concerns collectively illustrate a clear problem in contemporary digital education: the need to ensure that technological innovation does not compromise the human-centered foundations of teaching and learning.

To address this gap, the present study introduces and explores the concept of AI-informed Loving Pedagogy as a framework that merges Loving Pedagogy, Positive Psychology, and Critical AI Literacy (CAILL) to guide the ethical, affective, and human-centered use of AI in EFL contexts. This model conceptualizes love not as sentimentality but as a pedagogical stance that informs how teachers critically and compassionately engage with technology. Accordingly, this study seeks to answer the following research questions:

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RQ1: How do EFL teachers experience and interpret love, empathy, and care within AI-mediated teaching environments?

RQ2: What challenges and ethical tensions do teachers encounter when integrating AI tools while maintaining affective connections with learners?

RQ3: In what ways can the principles of Loving Pedagogy inform a sustainable and humanizing model for AI-assisted language education?

By investigating teachers' reflections and practices, this research contributes to the emerging dialogue on the humanization of digital education. Its novelty lies in bridging affective pedagogy and AI literacy through an ethically grounded, emotion-centered framework (one that moves beyond the dichotomy of human versus machine).

The significance of the study lies in its potential to extend current understandings of AI integration beyond technical efficiency toward relational, ethical, and emotionally responsive teaching practices. By articulating a human-centered framework for AI-assisted instruction, this research provides conceptual and pedagogical guidance for educators, curriculum designers, and policymakers seeking to implement AI technologies in ways that sustain empathy, trust, and moral responsibility in educational settings.

The findings aim to offer both conceptual clarity and pedagogical guidance for fostering emotionally intelligent, critically aware, and compassion-driven AI integration in EFL classrooms. Ultimately, this study reframes love as a transformative force in digital pedagogy as an ethical compass that ensures technology remains in service of human flourishing rather than its replacement. It contributes to ongoing discussions about the future of education by affirming that sustainable digital learning depends not solely on innovation, but on the enduring presence of care, empathy, and moral responsibility at its core.

1.1 Significance of the Study

This study is significant for several theoretical, pedagogical, and practical reasons. First, it contributes to the growing body of research on AI in education by integrating a humanistic perspective through the lens of Loving Pedagogy. While previous studies have largely focused on the technical efficiency and instructional benefits of AI-supported learning, fewer investigations have examined how affective and relational dimensions of teaching can be preserved within technology-mediated environments. By addressing this gap, the present study expands current understanding of how emotional support and ethical responsibility can coexist with technological innovation in language education.

Second, the study offers practical implications for EFL teachers who increasingly rely on AI-assisted tools in their classrooms. The findings provide insights into how teachers can maintain empathy, care, and meaningful interpersonal relationships while utilizing digital technologies for instruction and assessment. This is particularly important in contemporary educational settings where rapid technological adoption may unintentionally reduce opportunities for human connection.

Finally, the study holds policy and professional development relevance by highlighting the importance of balancing technological advancement with socio-emotional support in language learning environments. By emphasizing the integration of Loving Pedagogy within AI-supported

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instruction, the research informs curriculum designers, teacher educators, and educational institutions seeking sustainable and ethically grounded approaches to technology-enhanced learning.

1.2 Objectives of the Study

The present study aims to examine the role of Loving Pedagogy in AI-supported EFL instruction. Specifically, the study seeks to investigate how teachers and learners perceive the integration of emotional support, empathy, and care within technology-mediated learning environments. In addition, the research aims to explore the relationship between the use of Artificial Intelligence (AI) tools and the maintenance of positive teacher–student relationships in contemporary language classrooms.

More specifically, the study pursues the following objectives:

1. To examine teachers' and learners' perceptions of Loving Pedagogy in AI-supported EFL classrooms.

2. To investigate the extent to which AI-assisted instruction influences emotional engagement and classroom interaction.

3. To explore the relationship between technology integration and the preservation of supportive teacher–student relationships.

4. 5To identify practical implications for implementing emotionally responsive teaching practices in AI-mediated language learning environments.

2. Literature Review

2.1 Loving Pedagogy: Foundations and Principles

Loving Pedagogy arises from humanistic and positive educational thought, both of which view teaching as a relational and ethical practice rather than a technical delivery of knowledge (Derakhshan & Pawlak, 2025; Isaee et al., 2025; Isaee & Barjesteh, 2025a). According to Loreman (2011), love in education involves empathy, respect, kindness, compassion, and care (qualities that nurture learners' well-being, motivation, and self-belief). Within EFL classrooms, such affective engagement fosters students' sense of belonging and participation (Dewaele & Li, 2020). Teachers guided by this philosophy act not simply as instructors but as caring facilitators who build emotional safety and growth-oriented relationships (Li et al., 2020; Wang et al., 2022).

Recent research has further emphasized the importance of relational warmth and emotional support in sustaining learner engagement and psychological well-being, particularly in technology-mediated learning environments (Derakhshan & Pawlak, 2025; Dewaele & Li, 2020; Wang et al., 2022).

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2.2 Artificial Intelligence in EFL Education

The recent proliferation of AI has redefined language education through tools that provide adaptive feedback, intelligent tutoring, and automated assessment (Isaee, 2026). Platforms such as AI-based writing assistants and learning analytics systems promise individualized instruction and continuous monitoring (Zawacki-Richter et al., 2019). Yet, these developments also invite pedagogical and ethical scrutiny. Scholars warn that the prioritization of efficiency and data optimization may unintentionally de-emphasize empathy, dialogue, and human presence as elements central to communicative language teaching (Derakhshan & Fathi, 2025). More recent investigations have documented both the pedagogical benefits and the ethical tensions associated with AI integration, highlighting concerns about teacher autonomy, learner dependency, and the need for critical and responsible AI use in language education (Crompton & Burke, 2023, 2024; Derakhshan & Fathi, 2025; Isaee & Barjesteh, 2026; Zawacki-Richter et al., 2019).

2.3 Affective Education in the Digital Era

Affective education underscores the pivotal role of emotions in cognition and learning, aligning with Positive Psychology principles emphasizing well-being, engagement, and resilience. Empirical studies demonstrate that emotions directly influence motivation, cognitive processing, and language acquisition (MacIntyre, Gregersen & Mercer, 2019). Nevertheless, the digitalization of classrooms has complicated teachers' capacity to project warmth and empathy through mediated communication. Integrating Loving Pedagogy within AI-supported contexts provides a potential remedy: it can restore emotional resonance and help maintain the human dimension of learning while taking advantage of technological affordances (Crompton & Burke, 2023, 2024). Such integration not only safeguards emotional presence but also promotes balanced development of learners' cognitive and affective capacities. Teaching (Crompton, Jones, & Burke, 2022). Emerging research in digital and hybrid learning environments has also emphasized the importance of socio-emotional support and teacher immediacy in sustaining learner motivation and psychological well-being, particularly in technologically mediated classrooms (Barjesteh et al., 2025; Isaee & Barjesteh, 2025; Li et al., 2020; MacIntyre et al., 2019; Wang et al., 2022).

2.4 Toward an AI-Informed Loving Pedagogy

Bringing these strands together, this study advances the idea of AI-informed Loving Pedagogy as a model that unites affective and technological literacies. Grounded in Positive Psychology and Critical AI Literacy, the framework envisions educators as empathetic and ethically aware mediators who embed care, responsibility, and relational awareness into digital learning design. AI-informed Loving Pedagogy positions teachers as emotionally intelligent professionals who critically and compassionately employ technology to enrich rather than diminish the human experience of learning (Zhao & Li, 2021). By bridging emotional, ethical, and technological

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dimensions, this approach contributes to a new vision of language education (i.e., one that promotes inclusion, empathy, and moral integrity while embracing innovation).

This study conceptualizes AI-informed Loving Pedagogy as an integrative framework that draws upon three complementary traditions: 1) Loving Pedagogy, which centers empathy and care; 2) Positive Psychology, which emphasizes emotional well-being and motivation; and 3) Critical AI Literacy, which promotes ethical awareness and reflective use of technology. The intersection of these perspectives forms the theoretical foundation for investigating how love and technological engagement can coexist within contemporary EFL classrooms (Figure 1).

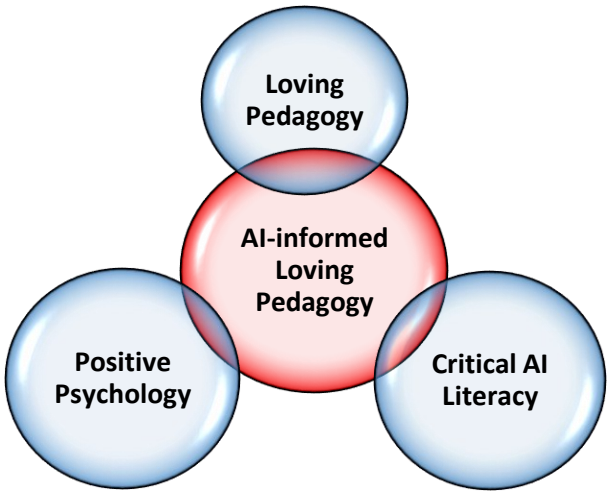


Figure 1. The conceptual model of AI-informed Loving Pedagogy

As illustrated in Figure 1, the model positions AI-informed Loving Pedagogy at the nexus of emotional, psychological, and ethical engagement. Loving Pedagogy contributes the affective foundation of care and relational attunement; Positive Psychology provides the motivational and well-being dimensions that sustain learner and teacher growth; and Critical AI Literacy ensures ethical and reflective interaction with intelligent technologies. Together, these strands construct a dynamic view of love and not as a sentimental remnant of pre-digital education but as a transformative, ethical force guiding humane teaching in AI-enhanced environments. This integrative perspective informs the interpretive lens for the study's analysis and discussion.

Building on this conceptual foundation, the following section reviews empirical and theoretical studies that have explored the affective, psychological, and technological dimensions of EFL pedagogy to situate the present research within the broader scholarly context.

2.5 Related and Empirical Studies

Building on the conceptual model of AI-informed Loving Pedagogy presented above, this section reviews empirical and theoretical studies that have examined the affective, psychological, and

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technological dimensions of EFL education. Research grounded in Loving Pedagogy emphasizes the centrality of teacher care, empathy, and compassion in fostering learner motivation and emotional well-being (e.g., Li et al., 2020; Mercer & Gregersen, 2025; Wang & Kang, 2023).

For instance, Wang et al. (2023) found that teacher empathy enhances learners' confidence and classroom engagement, while Loreman (2011) identified love as the moral foundation of effective pedagogy. More recent studies, such as Derakhshan and Pawlak (2025) and Dewaele and Li (2020), reaffirmed that relational warmth and teacher sensitivity are key to sustaining positive classroom climates in EFL contexts.

Parallel developments within Positive Psychology have expanded these affective insights by focusing on learners' strengths, resilience, and self-efficacy as determinants of academic success. MacIntyre and Mercer (2014) highlighted the value of emotional intelligence and self-regulation in language learning, and Dewaele and Li (2020) demonstrated that positive emotions such as enjoyment and hope strongly predict learner persistence. Similarly, Oxford (2016) proposed peacebuilding and empathy as cornerstones of well-being-oriented language education. Together, these works establish that emotional and psychological flourishing are indispensable to effective pedagogy. Additional empirical evidence has confirmed that emotionally supportive teacher behaviors remain a strong predictor of learner engagement and classroom participation, even in environments where instructional processes are partially automated through AI-supported tools (Derakhshan & Pawlak, 2025; Isaee & Barjesteh, 2025b).

At the same time, the rapid expansion of AI in education has prompted new discussions about teacher agency, ethics, and emotional presence. Zawacki-Richter et al. (2019) identified global trends in AI integration but noted limited attention to humanistic dimensions. More recent research has begun to explore affective and ethical concerns directly. For example, Wang et al. (2022) examined teachers' attitudes toward AI-assisted writing tools and found that while AI improved efficiency, it also provoked anxiety about authenticity and interpersonal connection. Similarly, Alonazi (2024) revealed that emotional intelligence mediates teachers' acceptance of AI, underscoring the enduring relevance of affect in digital pedagogy. Recent literature has also highlighted the importance of integrating ethical awareness and emotional sensitivity into AI-supported pedagogy, emphasizing that sustainable technology adoption depends on maintaining trust, empathy, and professional judgment in teacher–AI interactions (Derakhshan & Pawlak, 2025).

Despite these contributions, few studies have synthesized the affective, ethical, and technological dimensions of teaching into a single coherent framework. Much of the existing research treats emotions and AI separately, leaving unanswered questions about how teachers experience and negotiate love, care, and moral responsibility within algorithmic environments.

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Moreover, most prior investigations rely on survey-based or evaluative designs, offering limited insight into the lived emotional realities of teachers who work with AI in classroom settings.

The present study addresses these limitations by adopting a qualitative, experience-oriented approach to explore how teachers articulate and enact love in AI-mediated EFL teaching. By examining reflective narratives, it advances an AI-informed Loving Pedagogy that integrates emotional authenticity, ethical reflection, and technological literacy. In doing so, this study extends earlier empirical work by positioning love not as an abstract virtue but as an actionable pedagogical and ethical principle guiding human–AI collaboration in language education.

3. Theoretical Framework

This study draws upon three complementary frameworks (Loving Pedagogy, Positive Psychology, and Critical AI Literacy) to conceptualize the idea of AI-informed Loving Pedagogy. Each framework contributes a distinct yet interrelated perspective on how emotional, ethical, and technological dimensions can coexist in EFL instruction. Together, they form a holistic lens for understanding how love can function as both an affective force and a moral compass in digital education.

3.1 Loving Pedagogy

At its core, Loving Pedagogy positions education as a relational and moral endeavor. Building on Loreman's (2011) formulation, it includes elements such as empathy, compassion, respect, patience, and community, emphasizing teaching as an act of genuine care rather than a mechanical process. In EFL contexts, where learning depends heavily on emotional safety and authentic communication, love-centered instruction supports motivation, trust, and learner autonomy. Within AI-mediated learning environments, however, this relational depth faces new challenges (Mercer & Gregersen, 2025). The teacher's emotional presence may be diluted by digital mediation or replaced by automated feedback. By grounding pedagogy in love, educators can intentionally restore emotional reciprocity and ethical sensitivity to technologically driven settings (Wang et al., 2022). In this study, Loving Pedagogy thus serves as the emotional foundation of the proposed framework, ensuring that affect remains central to both teacher identity and instructional design.

3.2 Positive Psychology

Positive Psychology, as articulated by Seligman (2018) and expanded by MacIntyre and Mercer (2019) in applied linguistics, focuses on human flourishing, resilience, and emotional well-being. Rather than centering on deficits or stress, it promotes optimism, engagement, and meaning-making in the learning process (Dewaele & Li, 2020). When applied to EFL education, it encourages teachers to cultivate environments that enhance learners' self-efficacy, motivation, and joy in language learning. The newer strand, Positive Psychology 2.0 (PP 2.0), proposed by Wong

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(2019), acknowledges the coexistence of positive and negative emotions in growth and transformation. This broader view allows teachers to interpret technological tensions (such as frustration with AI or ethical dilemmas) as opportunities for reflection and adaptive learning. Within the AI-informed Loving Pedagogy model, Positive Psychology provides the well-being orientation, balancing affective depth with cognitive engagement and enabling emotional resilience in digital teaching.

3.3 Critical AI Literacy (CAILL)

The third pillar, Critical AI Literacy (CAILL), introduces the ethical and sociotechnical dimension. Grounded in critical pedagogy, it invites educators and learners to question how AI systems shape communication, decision-making, and power relations (Velander, Otero & Milrad, 2024). CAILL frames teachers as reflective co-learners who critically engage with algorithmic systems rather than adopting them uncritically.

In the context of Loving Pedagogy, CAILL ensures that love extends beyond interpersonal empathy to encompass ethical awareness and social responsibility (Klemettilä, 2025). It urges educators to interrogate issues such as bias, transparency, and data privacy while using AI tools. This alignment allows affective teaching to merge with digital ethics, creating a form of critical compassion as the capacity to care while remaining analytically and ethically vigilant. compassionately.

3.4 Integrative Model

Integrating these three perspectives, the study proposes the AI-informed Loving Pedagogy model. Within this framework:

- *Loving Pedagogy* provides the emotional and relational core.
- *Positive Psychology* contributes the orientation toward well-being and growth.
- *Critical AI Literacy* embeds the ethical and reflective dimension.

Together, these elements envision EFL teachers as emotionally intelligent, ethically grounded, and technologically literate practitioners capable of humanizing AI-mediated learning. The model posits that love (expressed through empathy, integrity, and critical awareness) serves as a transformative pedagogical stance. It reframes digital teaching not as a loss of humanity, but as an opportunity to expand it through intentional care and moral reflection (Figure 2).

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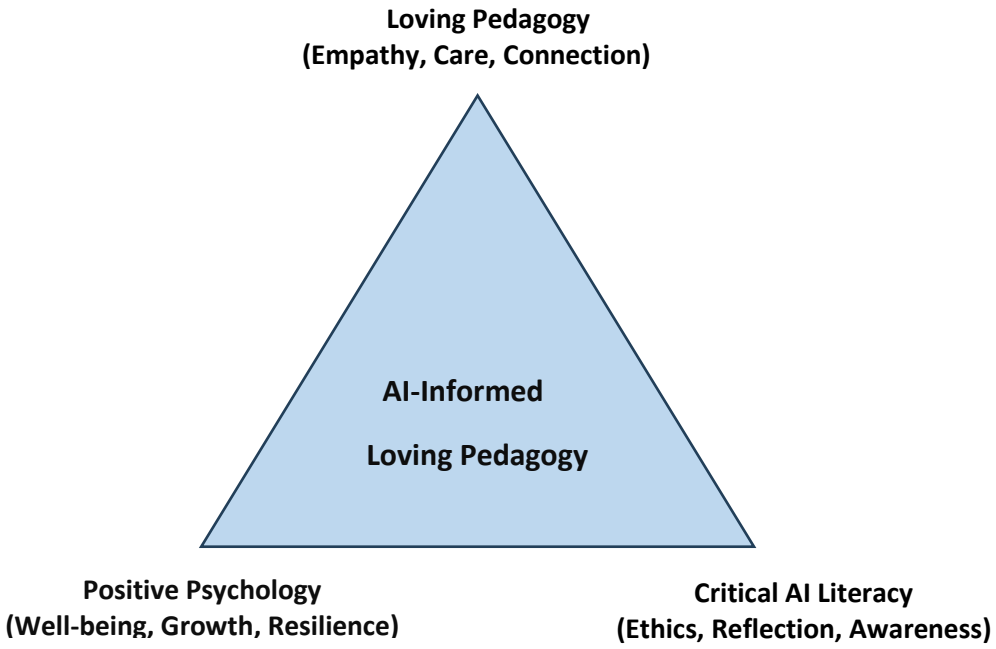


Figure 2. Conceptual model of ai-informed loving pedagogy

4. Methodology

4.1 Research Design

Given the exploratory and interpretive aims of this study, a qualitative research design was adopted to capture the nuanced emotional, ethical, and pedagogical experiences of EFL teachers who integrate AI tools into their instruction. Qualitative inquiry allows the researcher to investigate participants' lived experiences and meaning-making processes that cannot be quantified or generalized statistically. This approach aligns with the study's purpose, which is to conceptualize AI-informed Loving Pedagogy through teachers' reflections on empathy, care, and ethical awareness in AI-mediated teaching.

4.2 Participants and Context

This study was conducted in Tehran, Iran, a multicultural urban center known for its linguistic diversity and widespread use of digital learning technologies in language education. The research context provided a rich environment for examining how EFL teachers negotiate emotional and ethical dimensions of teaching in AI-assisted classrooms.

A total of 15 EFL teachers participated in the study. They were drawn from a variety of institutions, including three public universities, two private language academies, and several online teaching platforms serving adult learners. All participants possessed a minimum of one year of

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experience integrating AI tools, such as ChatGPT, Grammarly, or adaptive language learning systems, into their instruction. Teaching experience ranged from 3 to 18 years, with participants holding degrees in TESOL, applied linguistics, or educational technology.

The selection followed a purposeful sampling strategy, chosen to ensure diversity in teaching backgrounds, institutional types, and levels of digital literacy. This approach was appropriate for capturing multiple perspectives on how teachers interpret love, empathy, and care in AI-mediated pedagogy.

Recruitment occurred through professional teaching networks, institutional mailing lists, and social media groups related to TESOL and EFL education in the capital of Iran, Tehran. An open invitation letter was circulated describing the study's focus on "AI and emotional engagement in language teaching." Interested teachers contacted the researcher via email and received a detailed information sheet outlining the study's purpose, confidentiality measures, and voluntary participation rights. Following initial responses, participants were screened based on two inclusion criteria: 1) having practical experience with at least one AI-based teaching tool, and 2) demonstrating interest in reflective or affective dimensions of teaching.

All teachers who met these criteria were invited to participate in semi-structured interviews and to maintain short reflective journals over a four-week period. The Tehran setting was particularly significant because of its cultural and linguistic heterogeneity, which shaped how participants understood the interplay between emotion, ethics, and technology in teaching. The variety of institutional contexts and teacher backgrounds allowed the study to reflect a broad spectrum of perspectives on the emerging concept of AI-informed Loving Pedagogy. Table 1 shows participants' demographic characteristics, degree, specialization, and AI tool used by them.

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Table 1. Summary of participants' demographic characteristics and AI tool use

Variable	Category	Frequency	Percentage (%)	Degree / Specialization	Common AI Tools Used
Gender	Female	10	70	Mostly MA TESOL / Applied Linguistics	Grammarly, ChatGPT
	Male	5	30	MA / PhD Applied Linguistics & Ed. Tech	ChatGPT, QuillBot
Years of Teaching Experience	3–5 years	4	27	MA TESOL / Education	Grammarly, ChatGPT
	6–10 years	6	40	MA Applied Linguistics	ChatGPT
	11–15 years	3	20	PhD Educational Technology	Grammarly, AI Tutor
	16 or more years	2	13	PhD TESOL / Ed. Tech	ChatGPT
Educational Background	TESOL	7	47	—	Grammarly, ChatGPT
	Applied Linguistics	5	30	—	ChatGPT, QuillBot
	Educational Technology	3	23	—	AI Tutor, Grammarly
Institution Type	University	5	33	PhD / MA in Applied Linguistics	ChatGPT, Grammarly
	Private Academy	4	27	MA TESOL / Education	ChatGPT
	Online Platform	6	40	MA TESOL / Applied Linguistics	Grammarly, AI Writing Assistant

4.3 Data Collection Instruments

Data were collected through 1) semi-structured interviews, and 2) reflective journals, both designed to elicit participants' emotional and ethical experiences in using AI for teaching. The interviews encouraged teachers to share how AI tools influenced their capacity to express empathy, sustain care, and maintain authentic relationships with learners. Open-ended questions allowed participants to elaborate freely on their experiences, dilemmas, and adaptive strategies. The reflective journals invited participants to document real classroom moments where they consciously balanced technological efficiency with emotional presence. These reflections offered insight into teachers' affective labor and ethical awareness in everyday practice. Using two

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complementary tools ensured data triangulation, enhancing both depth and credibility of interpretation.

4.4 Procedure

The research process was conducted over a period of approximately four months in Tehran, Iran, and followed a carefully structured sequence designed to ensure transparency and ethical integrity. Recruitment began with the circulation of an invitation letter through TESOL professional networks, institutional mailing lists, and social media forums for language teachers in the Greater Toronto Area. The letter briefly introduced the study's focus on artificial intelligence and affective engagement in EFL teaching. Teachers who expressed interest received an information sheet and a consent form outlining the voluntary nature of participation, data confidentiality, and withdrawal rights.

Following recruitment, a short online orientation session was held to clarify the aims of the project, explain the procedures for interviews and reflective journaling, and answer any participant questions. This meeting, conducted through Zoom or Microsoft Teams, ensured that participants were fully informed and comfortable with their roles in the study.

Data collection unfolded in two stages. In the first stage, each teacher participated in a semi-structured interview lasting approximately 45 to 60 minutes. These interviews explored personal experiences with AI tools, reflections on empathy and care, and ethical considerations in digital instruction. All interviews were audio-recorded with participant consent and later transcribed for analysis. In the second stage, participants maintained reflective journals over four weeks, documenting specific teaching moments that involved AI use. Weekly prompts guided participants to reflect on situations that illustrated emotional connection, ethical dilemmas, or pedagogical adaptation.

After data collection, the interviews were transcribed verbatim and the journal entries were anonymized to create a unified dataset. This material was then subjected to thematic analysis, following the six-phase process proposed by Braun and Clarke (2006). The analysis began with inductive open coding, followed by the development of categories and broader themes that aligned with the study's theoretical foundations: Loving Pedagogy, Positive Psychology, and Critical AI Literacy.

To enhance the credibility and trustworthiness of the findings, validation occurred through member checking and peer debriefing. Participants were invited to review summarized interpretations of their narratives and provide feedback, while a peer researcher reviewed the coding and theme development for consistency. Throughout the entire process, the researcher maintained reflexive notes to ensure that emotional engagement and ethical sensitivity were preserved in both interpretation and presentation of results.

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4.5 Data Analysis

Data analysis followed the principles of thematic analysis as outlined by Braun and Clarke (2006). An inductive coding process was first used to identify recurring patterns and significant expressions related to affective teaching, ethical reasoning, and technological engagement. These initial codes were then refined into broader categories corresponding to the three theoretical pillars: Loving Pedagogy, Positive Psychology, and Critical AI Literacy.

Cross-case comparisons were conducted to examine similarities and divergences in teachers' experiences across institutional contexts. To ensure analytical rigor, member checking, peer debriefing, and audit trails were employed. These measures enhanced trustworthiness by validating interpretations through participant feedback and independent review.

4.6 Ethical Considerations

Ethical approval for the study was obtained from the relevant institutional review board. Participants were informed about the research purpose, the voluntary nature of participation, and confidentiality procedures before data collection began. Pseudonyms were assigned to all participants to ensure anonymity. Given the emotional sensitivity of topics such as care, vulnerability, and teacher well-being, ethical sensitivity guided every stage of the process, from interview design to interpretation. The researcher maintained reflexive notes to monitor positionality and emotional influence, ensuring that participants' voices were represented with respect and integrity. spaces.

5. Results

5.1 Process of Theme Development

Thematic analysis of interview and reflective journal data was conducted using Braun and Clarke's (2006) six-phase model. The researcher began with deep immersion in the data, reading transcripts multiple times to capture emotional nuances and repeated metaphors describing love, empathy, and technology. Over 180 initial codes were generated, such as *"losing human warmth," "balancing efficiency and care," "guilt about AI use,"* and *"new ways to express connection."*

These codes were clustered into broader categories representing patterns of emotional negotiation and ethical reflection. Through iterative interpretation and peer debriefing, three major themes were identified: 1) Relational Presence in Algorithmic Spaces, 2) Moral Ambiguity and Emotional Labor, and 3) Pedagogical Renewal through AI Partnership. Each theme encompassed two or more subthemes reflecting the affective, ethical, and pedagogical dimensions of teachers' experiences, as depicted in Figure 3.

The qualitative findings were analyzed in direct relation to the study's research questions and their associated variables, including relational presence, emotional labor, ethical reflection, and

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pedagogical renewal in AI-supported teaching contexts. Each theme presented below addresses specific dimensions of these variables and provides empirical evidence illustrating how teachers interpret and enact Loving Pedagogy within technology-mediated learning environments. Accordingly, the thematic structure ensures clear alignment between the research questions and the participants' reported experiences.

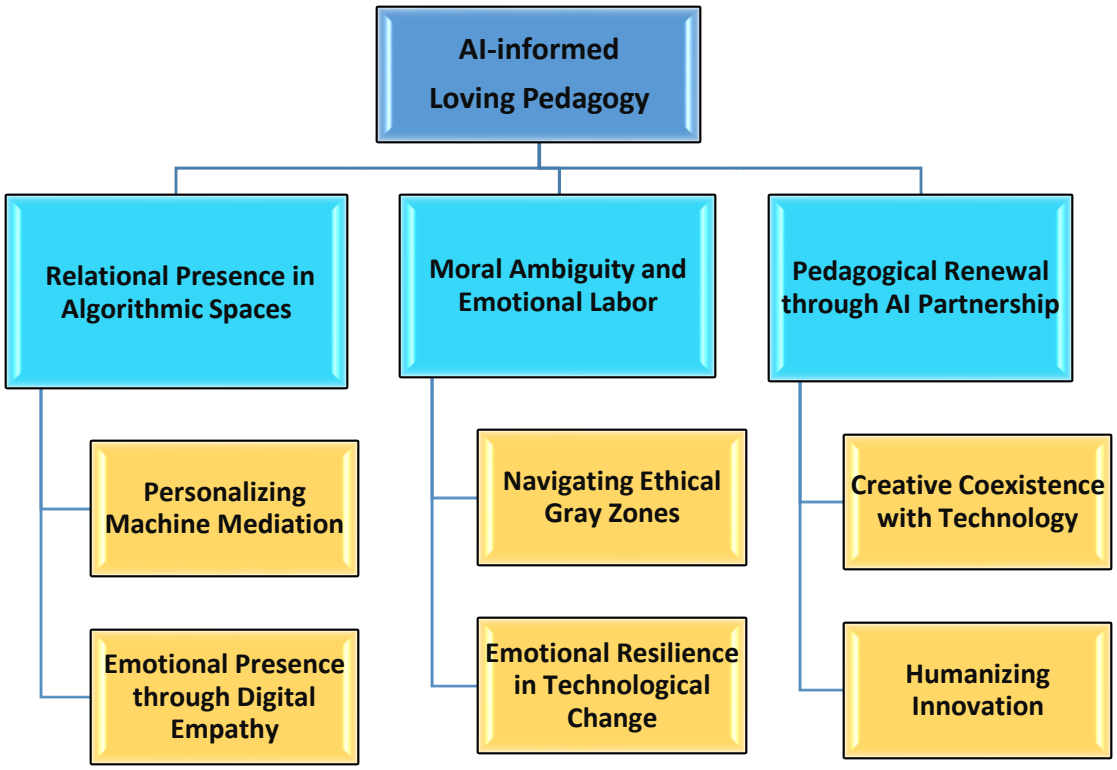


Figure 3. Thematic map of emergent themes and subthemes

5.2 Emerged Themes and Subthemes

5.2.1 Theme 1: Relational Presence in Algorithmic Space

This theme captures teachers' determination to sustain warmth and human presence while working with AI-driven systems. Many participants described deliberate strategies to personalize machine outputs and keep interaction emotionally genuine.

Extract:

"Even when an app gives automated feedback, I always rewrite a line in my own tone, something caring, so students still hear me," (T2, Interview).

"Technology doesn't remove empathy; it just changes how we show it," (T7, Reflective Journal).

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The subtheme *Personalizing Machine Mediation* highlights teachers' creative adjustments like rewording AI messages, adding humor, or inserting encouragement to preserve authenticity. Meanwhile, *Emotional Presence through Digital Empathy* describes the subtle ways teachers projected sincerity in text-based exchanges, such as timing replies to match students' moods.

Extract:

"I try to sense emotion through screens; emojis, tone, timing, and all become part of empathy," (T4, Interview).

Together, these subthemes show that relational presence in digital space is not spontaneous but an intentional practice of emotional translation and moral attention. These findings directly address Research Question 1 by demonstrating how teachers sustain relational presence and emotional connection while integrating AI-supported instructional tools.

5.2.2 Theme 2: Moral Ambiguity and Emotional Labor

The second theme reflects teachers' tension between enthusiasm for AI's pedagogical promise and discomfort about its ethical limits. Participants spoke of feeling both empowered and uneasy when delegating tasks to machines.

Extract:

"It's efficient, yes,…but,…. sometimes I wonder whose values the AI really carries" (T6, Interview).

The subtheme *Navigating Ethical Gray Zones* conveys teachers' uncertainty about fairness, authorship, and the blurred boundary between assistance and replacement. Alongside this, *Emotional Resilience in Technological Change* describes the psychological effort required to stay optimistic amid constant updates and shifting norms.

Extract:

"Keeping pace with new versions feels endless. I remind myself that caring for students matters more than mastering every tool" (T10, Journal).

These accounts reveal that the burden of AI adoption lies not only in technical training but in the sustained moral reflection and affective energy demanded of educators. Teachers' emotional labor illustrates that love and ethics are intertwined acts of professional responsibility. These results address Research Question 2 by illustrating the emotional and ethical tensions teachers experience when balancing technological efficiency with professional responsibility and care.

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5.2.3 Theme 3: Pedagogical Renewal through AI Partnership

The final theme portrays how teachers reframed AI as a creative partner for re-imagining care and connection. Under the subtheme *Creative Coexistence with Technology*, participants described integrating AI support while retaining personal agency.

Extract:

"Working with AI made me rethink love. Not as sentimentality but as courage to design better human moments." (T1, Interview).

The subtheme *Humanizing Innovation* captures teachers' experiments with prompts, tone, and scenario-based dialogues to make digital environments emotionally engaging.

"I ask the system to write like a real person, then I fine-tune it so students feel a genuine voice behind the message," (T8, Journal).

These narratives suggest that rather than displacing affection, AI inspired pedagogical renewal. Teachers transformed technological mediation into opportunities for creativity, empathy, and ethical reflection. Across all three themes, the findings reveal an evolving understanding of love as both design principle and ethical stance. Educators continuously negotiate boundaries between automation and affection, confirming that human presence remains the heart of meaningful language teaching in AI-enhanced contexts. These insights address Research Question 3 by revealing how teachers reinterpret AI as a collaborative partner that supports pedagogical creativity and the humanization of digital instruction.

To ensure transparency in the analytical process, Table 2 illustrates the alignment between the study's research questions, associated variables, emergent themes, and illustrative data excerpts, demonstrating how each research question was addressed through systematic thematic analysis.

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Table 2. Alignment of research questions, variables, themes, and supporting evidence

Research Question	Key Variables	Theme / Subtheme	Illustrative Evidence from Data	Interpretation
RQ1: How do teachers sustain relational presence and emotional connection in AI-supported teaching environments?	Relational presence; Emotional connection; Digital empathy	Theme 1: Relational Presence in Algorithmic Space Subthemes: Personalizing Machine Mediation; Emotional Presence through Digital Empathy	"Even when an app gives automated feedback, I always rewrite a line in my own tone, something caring, so students still hear me." (T2, Interview)	Teachers intentionally adapt AI outputs to maintain emotional authenticity and human connection in technology-mediated instruction.
RQ2: What emotional and ethical challenges do teachers experience when integrating AI into pedagogical practice?	Emotional labor; Ethical reflection; Professional responsibility	Theme 2: Moral Ambiguity and Emotional Labor Subthemes: Navigating Ethical Gray Zones; Emotional Resilience in Technological Change	"It's efficient, yes… but sometimes I wonder whose values the AI really carries." (T6, Interview)	Teachers experience tension between technological efficiency and ethical responsibility, requiring sustained emotional reflection and resilience.
RQ3: How do teachers reinterpret AI as a partner in supporting pedagogical innovation and humanized learning?	Pedagogical renewal; Teacher agency; Humanizing technology	Theme 3: Pedagogical Renewal through AI Partnership Subthemes: Creative Coexistence with Technology; Humanizing Innovation	"Working with AI made me rethink love. Not as sentimentality but as courage to design better human moments." (T1, Interview)	Teachers reconceptualize AI as a collaborative tool that enables creativity and reinforces human-centered pedagogy.

6. Discussion

This study set out to explore how EFL teachers conceptualize and enact love, empathy, and ethical awareness within AI-mediated educational settings. Guided by the framework of *AI-informed Loving Pedagogy*, the discussion interprets the results in relation to the three research questions and to existing scholarship connecting affective, psychological, and technological dimensions of teaching. Overall, the findings extend current understanding by showing that love, as a relational and ethical practice, remains a powerful pedagogical force even amid the increasing automation of language instruction.

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Considering the first research question **(**How do EFL teachers experience and interpret love, empathy, and care within AI-mediated teaching environments?), the theme of 'Relational Presence in Algorithmic Spaces' revealed that teachers consciously cultivated warmth and authenticity in digital interaction. Participants emphasized *personalizing machine mediation* by re-phrasing AI outputs, adding human tone, and embedding small signals of empathy. These findings resonate with Derakhshan and Pawlak (2025), who stress that relational sensitivity is essential for learner engagement, and with Wang et al. (2022), who demonstrate that empathy can be deliberately sustained through digital communication. However, this study extends previous work by portraying empathy as an *intentional design act* rather than an instinctive trait. Teachers' ability to project emotional presence through "digital empathy" (timing, tone, and micro-interaction), illustrates the emergence of new affective literacies in AI-mediated education.

This insight aligns with Positive Psychology's emphasis on emotional regulation and resilience (Dewaele & Li, 2020; Isaee & Barjesteh, 2025; MacIntyre & Mercer, 2014), yet it also reframes love as *pedagogical craftsmanship*: the reflective skill of transforming algorithmic neutrality into humane dialogue. The findings, therefore, confirm that love and empathy can thrive in virtual spaces when mediated through conscious, ethical intent.

Considering the second research question **(**What challenges and ethical tensions do teachers encounter when integrating AI tools while maintaining affective connections with learners?)**,** the theme of 'Moral Ambiguity and Emotional Labor' illustrated teachers' complex responses to technological acceleration. They experienced excitement and empowerment alongside moral unease and fatigue, as an ambivalence echoed in Yan et al. (2024), who argued that AI scholarship often privileges efficiency and ethics of compliance while overlooking emotional sustainability. Teachers in this study confronted such gaps directly: they questioned the moral agency of algorithms, struggled with blurred authorship, and invested emotional effort in "humanizing" their digital classrooms.

This moral tension mirrors Zawacki-Richter et al. (2019), who found that empirical work on AI in education frequently isolates technical performance from ethical reflection. Yet the teachers here positioned care itself as an ethical stance, transforming anxiety into what they called "professional conscience." Their experiences of exhaustion resemble the *affective fatigue* noted by '-, but participants in this study reinterpreted fatigue as evidence of their moral engagement rather than deficiency. Thus, ethical tension became a catalyst for reflective practice, as a lived expression of *ethical endurance* grounded in love. These findings highlight that technological competence alone is insufficient; sustaining empathy in algorithmic environments requires emotional resilience and moral clarity.

Considering the third research question, (In what ways can the principles of Loving Pedagogy inform a sustainable and humanizing model for AI-assisted language education?), the theme of

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'Pedagogical Renewal through AI Partnership' shows how teachers reframed AI as a collaborator rather than competitor. Through *creative coexistence with technology*, they balanced automation with personal agency, using AI to free time for deeper relational engagement. This aligns with Isaee et al. (2025) and Kelley and Wenzel (2025), who demonstrated that collaborative inquiry with AI tools promotes both technical fluency and ethical reflection in teacher education. Likewise, Yan et al. (2024) urged models that integrate empathy and human values into AI-enhanced pedagogy. This as a call that the present study directly answers.

Teachers' reflective narratives reveal that love acted as a design principle for *humanizing innovation*. By embedding empathy into prompts, feedback, and classroom interactions, they ensured that technological efficiency did not eclipse emotional connection. This dual focus on creativity and care embodies the balance envisioned by *AI-informed Loving Pedagogy*, where Positive Psychology nurtures emotional well-being and Critical AI Literacy fosters ethical discernment. Consistent with Isaee et al. (2025), love here is not sentimentalism but moral intelligence which guides teachers' judgments about when to rely on automation and when to intervene personally. In this view, sustainability in AI-assisted education depends on maintaining affective equilibrium and ethical intentionality.

Taken together, the three research questions converge on a central insight: the affective, ethical, and technological dimensions of EFL teaching are inseparable. Teachers who enact *Loving Pedagogy* in digital contexts transform the potential alienation of AI into opportunities for renewed empathy and ethical creativity. In contrast to prior studies that emphasize cognitive or technical gains (e.g., Wang et al., 2023), the current findings highlight the humanistic potential of AI when guided by moral care.

The emerging picture is one of *affective stewardship*, as teachers acting as custodians of emotion and ethics in technologically complex classrooms. Their relational presence anchors students' trust; their moral reflection ensures responsible AI use; and their imaginative engagement keeps learning humane. These insights reinforce the notion that technology can assist, but not replace, the emotional labor and ethical awareness that define meaningful language education.

In summary, EFL teachers experience love and empathy as deliberate, adaptive responses to AI integration. They navigate moral ambiguities through emotional resilience and transform technological challenges into occasions for pedagogical renewal. The principles of *AI-informed Loving Pedagogy* thus offer both a conceptual and practical framework for sustaining humane education in digital contexts. Even as algorithms evolve, the essence of teaching endures in empathy, care, and reflective love, which is the timeless foundations of human connection in a changing technological world.

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7. Conclusion

This study explored how EFL teachers experience love, empathy, and ethical awareness within AI-mediated teaching contexts through the lens of AI-informed Loving Pedagogy. The findings illuminated three interrelated themes (Relational Presence in Algorithmic Spaces, Moral Ambiguity and Emotional Labor, and Pedagogical Renewal through AI Partnership), which together demonstrate that emotional and ethical engagement remains central to language education even in technologically saturated environments. Teachers consciously reintroduced human warmth into machine-mediated exchanges, navigated ethical uncertainty while managing affective fatigue, and creatively transformed AI tools into opportunities for moral reflection and pedagogical innovation.

These insights reaffirm that technology, when guided by empathy and ethical intention, can serve as a catalyst for deeper human connection rather than a threat to it (Isaee & Barjesteh, 2023). The study contributes to theory by extending the framework of AI-informed Loving Pedagogy and to practice by highlighting the importance of cultivating affective literacy, moral resilience, and critical AI awareness in teacher education. Sustainable and human-centered digital pedagogy thus depends not only on technical proficiency but on the ability to infuse algorithms with care, reflection, and compassion.

While this study provides valuable qualitative insights, it is limited by its relatively small sample size and focus on teachers from a single urban context. Future research could employ mixed-method or longitudinal designs to examine how emotional and ethical engagement with AI evolves over time and across educational cultures. Comparative studies across countries and institutional types would deepen understanding of how cultural values shape perceptions of love and care in digital pedagogy. Moreover, future work might explore learners' perspectives on relational presence in AI-mediated classrooms or investigate professional development programs that integrate Loving Pedagogy with AI literacy.

By addressing these areas, future studies can expand the emerging dialogue between technology, ethics, and affect, helping educators worldwide to design digital environments that sustain the human essence of teaching.

Author Contributions

Conceptualization, H.I. and H.B.; methodology, H.I.; software, SH.SH.; validation, H.B.; formal analysis, M.M.; investigation, M.M.; resources, SH.SH.; data curation, H.B.; writing—original draft preparation, H.I.; writing—review and editing, H.I.; visualization, H.B; supervision, H.B.; project administration, SH.SH.

All authors have read and agreed to the published version of the manuscript."

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All authors contributed equally to the conceptualization of the article and writing of the original and subsequent drafts.

Data Availability Statement

Data available on reasonable request from the corresponding authors.

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Ethical considerations

This study was reviewed and approved by the Ethics Committee of Islamic Azad University, Ayatollah Amoli Branch (Approval No. 2025-618). All participants provided written informed consent before taking part in the research. This study was conducted in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki Declaration and its later amendments.

Confidentiality and Anonymity

All personal information was anonymized using numeric participant codes. Audio recordings, transcripts, and digital data were stored on encrypted drives accessible only to the research team. Identifying information was removed before analysis, and confidentiality was strictly maintained throughout the project.

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Conflict of interest

The authors declare no conflict of interest.

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