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Humanizing Artificial Intelligence Integration in English as a Foreign Language Pedagogy through Love and Empathy

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ABSTRACT

As artificial intelligence (AI) tools become part of daily teaching, questions arise about how teachers and learners can preserve emotional connection and ethical awareness in language classrooms. This study explored how EFL teachers and learners in Shiraz experience care, empathy, and human presence while using AI-supported tools. Guided by the framework of AI-informed Loving Pedagogy, it examined how both groups respond to the emotional and moral changes brought by digital mediation. Fifteen teachers and twenty learners participated in interviews and reflective journals over four weeks. Their narratives were analyzed thematically, leading to three main themes: Emotional Authenticity in Digital Interaction, Ethical Tensions and Affective Fatigue, and Reimagining Love through Technology. Results showed that both teachers and learners made conscious efforts to keep warmth and personal meaning alive in technology-rich settings. They often described a need to "sound human again" after AI-generated responses and felt torn between efficiency and emotional depth. Some also found new ways to express care through creative and ethical uses of AI. The findings suggest that love and empathy remain vital in digital pedagogy and can guide more ethical and sustainable AI use in language education. Teacher education should include emotional reflection and critical AI literacy to help educators design learning experiences that remain truly human-centered.

Keywords: AI in Education, Affective Teaching, EFL, Empathy, Ethical Technology, Humanizing Learning, Loving Pedagogy

INTRODUCTION

The growing use of artificial intelligence (AI) in education has changed the way teachers plan lessons, assess progress, and connect with students. In English as a Foreign Language (EFL) contexts, AI tools such as grammar checkers, chatbots, and adaptive platforms are now common, offering faster feedback and more flexible learning opportunities (Manoocherzadeh, Isaee, & Barjesteh, 2025; Li, Dewaele, & Jiang, 2020). These tools make learning more personalized and efficient, yet they also raise a deeper question: what happens to the human side of teaching when much of classroom interaction is filtered through machines? As Derakhshan and Pawlak (2025) point out, emotional sensitivity and teacher–student connection are often lost when learning becomes data-driven and standardized.

In this changing landscape, Loving Pedagogy offers a valuable reminder that teaching is not only about knowledge transfer but also about human care. Rooted in positive psychology and humanistic education, it views teachers as compassionate figures who build safety, belonging, and trust in their classrooms (Fredrickson, 2013; Wang, Derakhshan, & Pan, 2022). Within EFL education, this is particularly important because language learning itself depends on emotion and authentic communication (Zhao & Li, 2021). However, while many studies

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have examined emotions in EFL contexts (Dewaele & Li, 2020; Derakhshan & Pawlak, 2025), fewer have explored how love, empathy, and ethics operate when AI becomes part of daily teaching.

Recent discussions on AI in education often highlight technical or ethical issues, such as accuracy, privacy, or fairness, but rarely address the affective dimension that keeps learning humane (Peng, 2025; Seo et al., 2021; Yan et al., 2024). Teachers and learners alike now face new emotional realities: automated feedback may feel cold, chatbots may misunderstand tone, and the sense of shared presence can weaken. Yet, technology also opens creative ways to express care and attention (Barjesteh & Isaee, 2024). For example, one teacher in this study later shared, "When AI gives a correction, I add my own note to show I still care; it reminds students that a person is behind the screen." This kind of practice represents what can be called an AI-informed Loving Pedagogy, a teaching approach that blends critical awareness, emotional literacy, and ethical use of technology.

The current study builds on this idea by exploring how both teachers and learners in Shiraz experience and sustain empathy, care, and connection while using AI tools in English language education. The goal is not to question the usefulness of AI, but to understand how love and ethics can guide its use so that technology serves human learning rather than replacing it. This aligns with the view that genuine pedagogy requires not only skill but also emotional commitment (Loreman, 2011; Derakhshan & Pawlak, 2025). The study seeks to capture how real people (teachers and students) make sense of their emotions and relationships in technology-mediated environments.

Unlike most previous studies that examine AI integration in language education from a technical, evaluative, or survey-based perspective, the present study offers a qualitative exploration of the lived emotional and ethical experiences of both EFL teachers and learners. By foregrounding dual perspectives and examining how empathy, care, and moral tension are negotiated in AI-mediated classrooms, this study makes an original contribution to the emerging literature on human-centered AI in language education and advances the conceptualization of AI-informed Loving Pedagogy. Three main research questions guide this work: RQ 1: How do EFL teachers and learners experience love, empathy, and care in AI-supported classrooms? RQ 2: What emotional and ethical challenges do they face while interacting with AI tools? RQ 3: How can the principles of Loving Pedagogy help create more humanized and sustainable AI-based teaching practices?

By answering these questions, this study aims to contribute to the growing conversation about how digital education can remain emotionally grounded. It proposes that love and empathy are not abstract ideals but practical tools that help both teachers and students navigate the moral and affective tensions of AI integration. In other words, while algorithms can assist, they cannot replace the relational warmth that defines real teaching. As one learner from the study later noted, "AI helps me correct my writing, but my teacher helps me feel confident again."

Ultimately, this research argues that the future of language education depends not only on technological progress but also on emotional intelligence. The concept of AI-informed Loving Pedagogy provides a framework for balancing both by keeping the heart of education alive in a world increasingly shaped by machines.

The Meaning of Love in Education

Love in education has long been seen as the emotional heart of teaching. According to Loreman (2011), love includes respect, patience, empathy, and kindness as qualities that help students feel valued and capable. In language classrooms, this emotional climate builds

learners' confidence and participation (Dewaele & Li, 2020). Teachers who act with care do more than transfer knowledge; they create trust and belonging that make students more willing to take risks in communication (Wang et al., 2022).

In EFL settings, the emotional side of teaching becomes even more important because language learning naturally involves vulnerability, identity, and social interaction. Derakhshan and Pawlak (2025) suggest that teacher empathy is one of the strongest predictors of learners' motivation and engagement. Through a loving pedagogy, the classroom becomes a space of shared humanity rather than mere performance. Yet, as AI increasingly enters classrooms, the question arises: how can this emotional dimension be maintained when part of the interaction is mediated by algorithms? This challenge has led researchers to rethink what love looks like in digital learning environments.

The Expanding Role of Artificial Intelligence in EFL Teaching

AI applications have quickly become part of the EFL teaching toolkit. Teachers and learners now use grammar checkers, translation engines, and conversational agents to enhance writing, speaking, and vocabulary development (Zawacki-Richter et al., 2019; Manoocherzadeh, Isaee, & Barjesteh, 2025). These technologies promise greater efficiency, more accurate feedback, and individualized learning paths.

However, several studies also warn about the risks of over-automation. Derakhshan and Fathi (2024) argue that a strong focus on speed and data can lead to a loss of empathy and human interaction. Learners may receive perfect grammatical feedback but little emotional encouragement. Similarly, Dewaele and Li (2020) note that authentic emotional exchange is difficult to reproduce in digital communication.

Despite these tensions, AI can also support affective learning if used thoughtfully. Teachers who adapt AI tools to include warmth and reflection can make technology a bridge rather than a barrier. As one teacher in a related study said, "AI gives me structure, but I add the heart." This blend of structure and empathy forms the basis of humanized AI integration in pedagogy.

Emotions and Well-being in Learning

The connection between emotion and learning is well established in educational psychology. Positive emotions such as enjoyment, curiosity, and hope enhance attention, engagement, and memory, while negative emotions can hinder participation and persistence (MacIntyre, Gregersen, & Mercer, 2019). In EFL contexts, emotional well-being plays a particularly important role, influencing learners' willingness to communicate and cope with linguistic challenges (Oxford, 2016; Mercer & Gregersen, 2023).

Positive Psychology shifts the focus from reducing stress to promoting flourishing, resilience, and emotional balance among teachers and learners (MacIntyre & Mercer, 2014). Developments such as Positive Psychology 2.0 further emphasize that both positive and difficult emotions contribute to growth when approached reflectively (Wong, 2019). For educators, this perspective highlights the importance of transforming frustration, uncertainty, or ethical tension into opportunities for reflection and emotional regulation.

In digital and AI-supported learning environments, emotions remain central but are often harder to express due to the absence of physical cues such as tone, facial expression, and body language. Research suggests that teachers must adopt new emotional strategies to sustain warmth and connection in technology-mediated settings (Crompton & Burke, 2023, 2024). When combined with emotional awareness and reflective practice, AI tools can support

learning without undermining human connection, reinforcing the importance of affective sensitivity in digital pedagogy.

From Emotional Awareness to Ethical Awareness: The Need for Critical AI Literacy

Beyond emotions, using AI responsibly requires ethical reflection. Critical AI Literacy (CAILL) highlights the need for teachers and learners to understand how AI systems shape knowledge, bias, and communication (Velander, Otero, & Milrad, 2024). It encourages users not only to operate technology but also to question it by asking who designs these systems and what assumptions they carry.

In education, this awareness becomes part of caring practice. Klemettilä (2025) describes AI literacy as "a candle in the dark," helping teachers and students think critically about data privacy, transparency, and fairness. When combined with a loving pedagogical mindset, AI literacy transforms love from a personal feeling into an ethical commitment. Teachers become responsible not just for emotional care but also for moral decision-making in digital spaces.

In short, love and ethics intersect in what can be called critical compassion, which is the ability to care deeply while remaining reflective and alert to power dynamics in AI use.

Toward a Framework of AI-Informed Loving Pedagogy

Bringing together these strands (love, emotion, and ethical awareness) creates the foundation for AI-informed Loving Pedagogy. This framework positions teachers and learners as emotionally intelligent, ethically aware, and technologically literate participants in the learning process. It unites three traditions:

1. Loving Pedagogy, which emphasizes care, empathy, and relational warmth (Loreman, 2011; Wang et al., 2022);
2. Positive Psychology, which promotes well-being, engagement, and resilience (MacIntyre & Mercer, 2014; Dewaele & Li, 2020); and
3. Critical AI Literacy, which ensures ethical reflection and responsible technology use (Velander et al., 2024; Klemettilä, 2025).

At their intersection, love becomes more than a feeling. It becomes a guiding principle for how teachers and learners interact with technology. In this study, this framework served as the conceptual lens for exploring how participants from Shiraz redefined love and empathy in their AI-supported classrooms. It assumes that the heart of education can coexist with digital tools when care and awareness are intentionally built into practice.

Related and Empirical Studies

Building on the conceptual model of AI-informed Loving Pedagogy, this section reviews empirical and theoretical studies addressing the affective, psychological, and technological dimensions of EFL education. Research grounded in Loving Pedagogy consistently emphasizes teacher care, empathy, and compassion as central to learner motivation, engagement, and emotional well-being (e.g., Dewaele & Jiang, 2020; Mercer & Gregersen, 2023; Wang & Kang, 2023). Studies have shown that teacher empathy enhances learners' confidence and classroom participation, while love functions as a moral foundation for effective pedagogy (Loreman, 2011; Wang et al., 2023). More recent work further confirms that relational warmth and teacher sensitivity sustain positive classroom climates in EFL contexts (Derakhshan & Pawlak, 2025; Dewaele & Li, 2020).

Parallel developments within Positive Psychology have strengthened these insights by highlighting learners' strengths, resilience, and emotional regulation as key contributors to academic success. Emotional intelligence and self-regulation have been shown to support

persistence and engagement in language learning, while positive emotions such as enjoyment and hope predict sustained effort (MacIntyre & Mercer, 2014; Dewaele & Li, 2020). Approaches emphasizing empathy and peacebuilding further position emotional well-being as integral to language education (Oxford, 2016).

At the same time, the rapid expansion of AI in education has raised new concerns regarding teacher agency, emotional presence, and ethics. While global reviews of AI in education highlight efficiency and personalization, they note limited attention to humanistic and affective dimensions (Zawacki-Richter et al., 2019). More recent studies have begun to address these gaps, showing that AI-assisted tools can simultaneously enhance efficiency and provoke anxiety about authenticity, emotional distance, and ethical responsibility (Wang et al., 2022; Alonazi, 2024).

Despite these advances, few studies have integrated affective, ethical, and technological perspectives into a unified framework. Existing research often treats emotions and AI as separate domains and relies heavily on survey-based designs, offering limited insight into teachers' and learners' lived emotional experiences in AI-mediated classrooms. The present study addresses these gaps through a qualitative, experience-oriented approach, advancing AI-informed Loving Pedagogy as a framework that conceptualizes love not as an abstract ideal but as an actionable emotional and ethical principle guiding human–AI collaboration in EFL education.

Theoretical Framework

The study is grounded in three complementary theoretical perspectives: Loving Pedagogy, Positive Psychology, and Critical AI Literacy (CAILL), which together shape the idea of an AI-informed Loving Pedagogy. Each framework adds a unique dimension to understanding how human emotion, ethics, and technology can coexist in English language education.

The integration of these approaches allows the study to look beyond the simple use of AI tools and instead focus on the *relational* and *moral* qualities of teaching and learning in digital environments. This section outlines the three pillars and how they come together to guide the present research.

Positive Psychology

Positive Psychology contributes to the well-being and resilience dimension of this framework. Instead of focusing only on anxiety or burnout, Positive Psychology emphasizes strengths, engagement, and emotional balance (MacIntyre & Mercer, 2014; Dewaele & Li, 2020). According to Fredrickson's (2013) broaden-and-build theory, positive emotions expand learners' cognitive and social resources, leading to more creative and persistent learning.

In this study, Positive Psychology provided a useful lens for interpreting how teachers and learners adapted to AI with both excitement and stress. While some participants expressed fatigue or uncertainty, many also described curiosity, satisfaction, and a sense of personal growth. This reflects the second wave of Positive Psychology (PP 2.0), which recognizes that both positive and negative emotions can coexist and contribute to learning (Wong, 2019).

Within AI-supported classrooms, this balance became clear: frustration with digital tools often encouraged reflection and emotional regulation, which, in turn, deepened understanding and empathy. Thus, Positive Psychology helped explain how emotional resilience allows love to endure even in changing, tech-heavy contexts. Teaching.

Loving Pedagogy

At its heart, Loving Pedagogy views education as a moral and relational practice rather than a technical one. As Loreman (2011) explains, love in teaching involves compassion, patience, and care (qualities that nurture students' sense of belonging and trust). Derakhshan and Pawlak (2025) and Wang, Derakhshan, and Pan (2022) similarly argue that teaching with love creates emotionally safe spaces where learners feel respected and motivated to grow.

In EFL settings, emotional connection is essential because language learning involves vulnerability, identity negotiation, and self-expression (Dewaele & Li, 2020). For both teachers and learners in Shiraz, love was not viewed as sentimentality but as a deliberate effort to remain present, responsive, and kind, even when part of their communication was mediated by AI. By grounding instruction in love, teachers and learners were better able to keep the classroom humanized. Love served as a stabilizing emotional force that balanced the mechanical logic of AI with empathy and ethical care.

Critical AI Literacy (CAILL)

The third theoretical strand, Critical AI Literacy (CAILL), introduces an ethical and analytical perspective. It focuses on helping teachers and learners understand how AI systems are designed, how they shape communication, and what biases or assumptions they may reproduce (Velander, Otero, & Milrad, 2024).

In educational settings, this means viewing AI not as a neutral helper but as a sociotechnical force that influences classroom dynamics. Klemettilä (2025) describes AI literacy as a means of empowerment, helping individuals question data use, algorithmic transparency, and the fairness of AI feedback.

For this study, CAILL emphasized that care and love must also be critical. True empathy includes awareness of how technology affects people's agency and dignity. Teachers and learners who practiced critical reflection were better able to decide when to rely on AI and when to bring back the human voice. This awareness transformed love from a purely emotional act into an ethical stance.

Integrative Model

When combined, these three perspectives form the AI-informed Loving Pedagogy model, which guided both data collection and interpretation. Each framework contributes a vital piece: Loving Pedagogy provides the emotional foundation (care, trust, and connection), Positive Psychology adds the dimension of well-being, growth, and resilience, and Critical AI Literacy ensures ethical awareness and reflective decision-making.

Together, they portray teachers and learners as emotionally intelligent, ethically alert, and technologically competent individuals who can humanize AI integration in education. In this model, love functions not just as a feeling but as a guiding principle for moral and reflective teaching. Figure 1 depicts the Integration of Loving Pedagogy, Positive Psychology, and Critical AI Literacy.

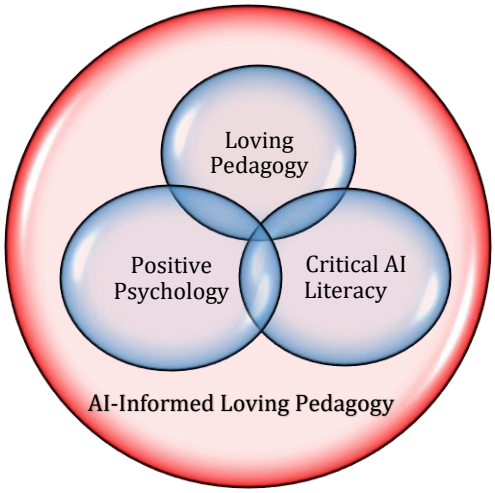

Figure 1 Conceptual Model of AI-Informed Loving Pedagogy

Figure 1 illustrates how the three frameworks overlap. Loving Pedagogy forms the emotional base, Positive Psychology supports personal and interpersonal growth, and Critical AI Literacy introduces ethical reflection. At their intersection lies AI-informed Loving Pedagogy, representing a balanced, humane approach to digital education.

The framework positions love as the bridge between emotional and ethical awareness. In this sense, technology is not treated as an enemy of humanity but as a medium that can reflect human values when used thoughtfully. Teachers and learners who approach AI with empathy and critical care can transform mechanical interactions into meaningful learning experiences.

Figure 2 presents the expanded model of **AI-informed Loving Pedagogy**, visualized as a series of concentric circles.

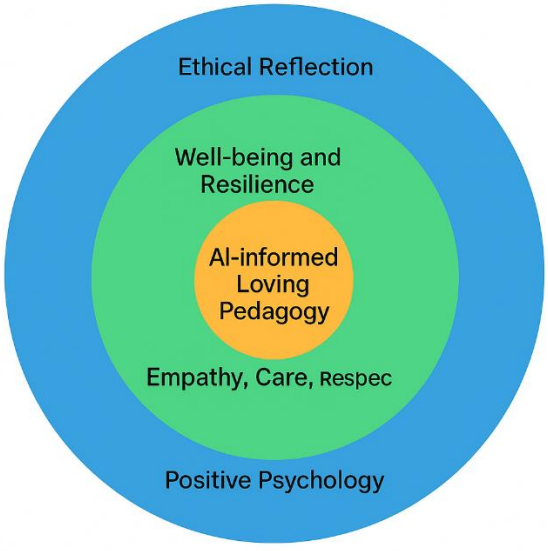

Figure 2 Expanded Model of AI-Informed Loving Pedagogy

As shown in Figure 2, the innermost circle represents *AI-informed Loving Pedagogy,* which is the point where emotion, well-being, and ethical awareness meet in actual classroom practice. The middle layer illustrates *Positive Psychology*, highlighting well-being, growth, and resilience as the emotional resources that sustain teachers and learners in AI-mediated learning. The outermost ring reflects *Critical AI Literacy*, which surrounds and protects the inner

layers by promoting ethical reflection and conscious use of technology. The model suggests that genuine human connection begins at the emotional core and extends outward through personal well-being toward wider social and ethical responsibility. It underscores that love and empathy can flourish within technological systems when guided by critical awareness and purposeful care.

RESEARCH METHOD

Research Design

This study followed a qualitative design aimed at understanding how teachers and learners make sense of love, empathy, and ethics in AI-assisted English learning. Specifically, the study adopted a qualitative phenomenological research design, focusing on participants' lived experiences and subjective interpretations of empathy, care, and ethical tensions in AI-mediated EFL classrooms. A qualitative approach was chosen because it allows participants' feelings, reflections, and lived experiences to be explored in depth rather than reduced to numbers. Through open conversations and reflective writing, the study sought to capture how people experience the emotional and ethical sides of teaching and learning with technology.

Participants and Context

This study took place in Shiraz, Iran, a city well known for its educational diversity and growing interest in digital learning. The setting included both language institutes and online classes where AI tools such as ChatGPT, Grammarly, and automated writing assistants were used regularly for teaching and practice.

A total of 35 participants took part in the study: 15 EFL teachers and 20 learners. The teachers came from different backgrounds, including public universities, private academies, and online teaching platforms. They had between 3 and 18 years of experience and used AI tools for feedback, lesson planning, and online communication. Most held degrees in TESOL, applied linguistics, or educational technology.

The learners were between 19 and 32 years old, representing undergraduate and graduate students as well as adult language learners. They were selected to ensure a mix of proficiency levels and AI familiarity. All participants had at least one year of experience using AI tools for language learning, such as grammar correction, essay support, or pronunciation feedback.

Recruitment was done through professional networks, academic mailing lists, and social media pages related to EFL education in Shiraz. The invitation letter briefly explained that the study focused on "AI and emotional experience in language learning." Participation was voluntary, and everyone signed a consent form after reading an information sheet describing the study's goals, procedures, and confidentiality rules. Table 1 shows participants' demographic characteristics, degree, specialization, and the AI tool used by them.

Across both participant groups, the most frequently used AI tools included ChatGPT, Grammarly, QuillBot, and AI-based writing assistants, which were employed for feedback, writing support, and classroom communication.

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

Variable	Category	Number (n)	Percentage (%)
Participant Role	Teachers	15	43
	Learners	20	57
Gender	Female	23	66
	Male	12	34
Age Range	19–25 years	9	26
	26–35 years	16	46
	36 years and above	10	28
Years of Teaching Experience (Teachers only)	3–5 years	6	40
	6–10 years	4	27
	11–15 years	3	20
	16 years or more	2	13
Educational Background (Teachers)	TESOL	6	40
	Applied Linguistics	5	33
	Educational Technology	4	27
Learner Academic Level	Undergraduate	11	55
	Graduate	6	30
	Adult/Professional Learners	3	15
Institution Type	University	10	29
	Private Academy	12	34
	Online Platform	13	37

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 explored how teachers and learners used AI tools and how these affected their sense of empathy, care, and connection. Each session lasted between 40 and 60 minutes and was conducted in Persian or English, depending on participant preference. Interviews took place online through Zoom or Google Meet and were recorded with consent.

The reflective journals invited participants to write about moments when AI changed the emotional tone of teaching or learning. For example, learners described how they felt about AI-generated feedback, while teachers reflected on how they tried to make digital interactions feel more personal. Journals were collected over four weeks, providing a continuous picture of emotional and ethical experiences.

Using two sources of data helped increase credibility and gave a fuller view of how love and empathy appeared in both teaching and learning sides of AI-based classrooms.

Procedure

The research process unfolded gradually over a period of around four months in Shiraz, Iran. It was designed to ensure that participants were fully informed, comfortable, and engaged throughout every stage. The procedure followed a systematic and ethically guided plan consisting of recruitment, orientation, data collection, and validation.

Recruitment began with an invitation shared across several professional networks, including TESOL teacher associations, local university mailing lists, and Telegram and Instagram pages related to English teaching in Shiraz. The message briefly introduced the purpose of the study as *"exploring the emotional and ethical experiences of teachers and learners using AI in language classrooms."*

Interested individuals contacted the researcher by email or direct message. Each person received an information sheet explaining the research goals, data collection methods, participant rights, and confidentiality procedures. A consent form followed, confirming their voluntary participation and right to withdraw at any point without penalty. The consent also covered audio recording and anonymized use of quotes in publications.

Participants were chosen through purposeful sampling, with two inclusion criteria: 1) Active use of at least one AI-based tool (such as ChatGPT, Grammarly, or QuillBot) in teaching or learning; and 2) A demonstrated interest in emotional or ethical aspects of digital education.

Fifteen teachers and twenty learners met these criteria and were selected to represent diverse experiences and contexts, including public universities, private academies, and online platforms.

After the selection process, an online orientation meeting was held via Zoom. During this session, the researcher introduced the aims of the study and explained what "AI-informed Loving Pedagogy" meant in simple, practical terms. Participants were also briefed about the two main instruments (semi-structured interviews and reflective journals) and the kind of reflections expected in each.

Teachers and learners were given examples of guiding questions, such as:

- *"How do you feel when AI gives feedback instead of a person?"*
- *"When do you think empathy appears or disappears in digital learning?"*
- *"How do you respond when AI feedback feels cold or unfair?"*

Data collection occurred in two stages. In the first Stage (i.e., Semi-Structured Interviews), each teacher and learner took part in one in-depth interview lasting between 45 and 60 minutes. The conversations were conducted in Persian or English, depending on participant comfort. The interviews followed an open-ended format, allowing participants to freely express their feelings, stories, and reflections about AI in their teaching or learning. Questions focused on emotional presence, empathy, ethical awareness, and adaptation to technology. For instance, teachers were asked how AI changed their relationship with students, while learners discussed how AI feedback influenced their sense of motivation and belonging interviews were recorded (with consent) and later transcribed verbatim. The researcher kept field notes to capture nonverbal cues, tone, and emotional context.

In the second Stage (i.e., Reflective Journals), after the interviews, participants were invited to maintain short reflective journals over a four-week period. Each week, they wrote about key experiences involving AI use, such as emotional reactions, moral doubts, or moments of human connection in digital communication. The prompts encouraged reflection on both positive and negative feelings. For example:

- *"Describe a time when AI made your learning or teaching feel more personal."*
- *"Describe a situation when AI use created confusion or emotional distance."*

Participants were free to write in English or Persian, and they could send their entries weekly through email or private message.

The journal phase allowed emotions and reflections to develop over time rather than in a single interview moment. Together, interviews and journals provided a rich, multilayered dataset for understanding how love and empathy appeared in real AI-mediated classrooms.

All interview recordings and journals were securely stored in password-protected folders. Each participant was assigned a pseudonym (e.g., T1–T15 for teachers, L1–L20 for learners). The researcher also maintained a reflexive diary to document personal observations, emotional responses, and emerging interpretations throughout data collection. This diary served to maintain transparency and reduce bias by helping the researcher stay conscious of personal assumptions about AI and human connection.

To enhance trustworthiness, several strategies were used:

1. Member checking: After transcription, participants were given short summaries of their interviews and asked to review or correct any statements they felt were misinterpreted. This ensured that the findings reflected their real views.
2. Peer debriefing: A colleague familiar with qualitative methods reviewed part of the coding and theme development to check for consistency and confirm that themes truly emerged from the data rather than researcher expectation.
3. Triangulation: Combining data from both interviews and journals strengthened reliability, allowing cross-verification of participants' emotional and ethical experiences.
4. Audit trail: All analytic steps, from raw codes to theme formation, were documented in a research log, allowing full traceability of decisions.

Data Analysis

The analysis was carried out using thematic analysis (Braun & Clarke, 2006). The coding process was conducted manually rather than through qualitative analysis software. Interview transcripts and reflective journals were organized using spreadsheet-based tables, allowing for systematic comparison across participants and data sources.

Initial open coding generated approximately 180 codes capturing emotional expressions, ethical reflections, and pedagogical practices related to AI use. These codes were then reviewed and grouped into broader categories based on semantic similarity and conceptual relevance. Through iterative comparison, peer debriefing, and alignment with the AI-informed Loving Pedagogy framework, the categories were refined into three overarching themes. The process began with open coding, where recurring words, feelings, and ideas were identified across interviews and journals. These codes were then grouped into broader categories that reflected emotional authenticity, ethical reflection, and creative adaptation. After several rounds of refinement and peer feedback, three main themes emerged: Emotional Authenticity in Digital Interaction, Ethical Tensions and Affective Fatigue, and Reimagining Love through Technology.

To ensure trustworthiness, member checking and peer debriefing were used. Participants reviewed summaries of their quotes to confirm accuracy, and a peer researcher reviewed coding consistency. These steps enhanced the reliability and transparency of the analysis.

Ethical Considerations

Ethical approval for the study was obtained from the relevant institutional review board. Participants were informed about the research purpose, 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.

RESULTS AND DISCUSSION

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) Emotional Authenticity in Digital Interaction, 2) Ethical Tensions and Affective Fatigue, and 3) Reimagining Love through Technology. Each theme encompassed two or more subthemes reflecting the affective, ethical, and pedagogical dimensions of teachers' experiences, as depicted in Figure 3.

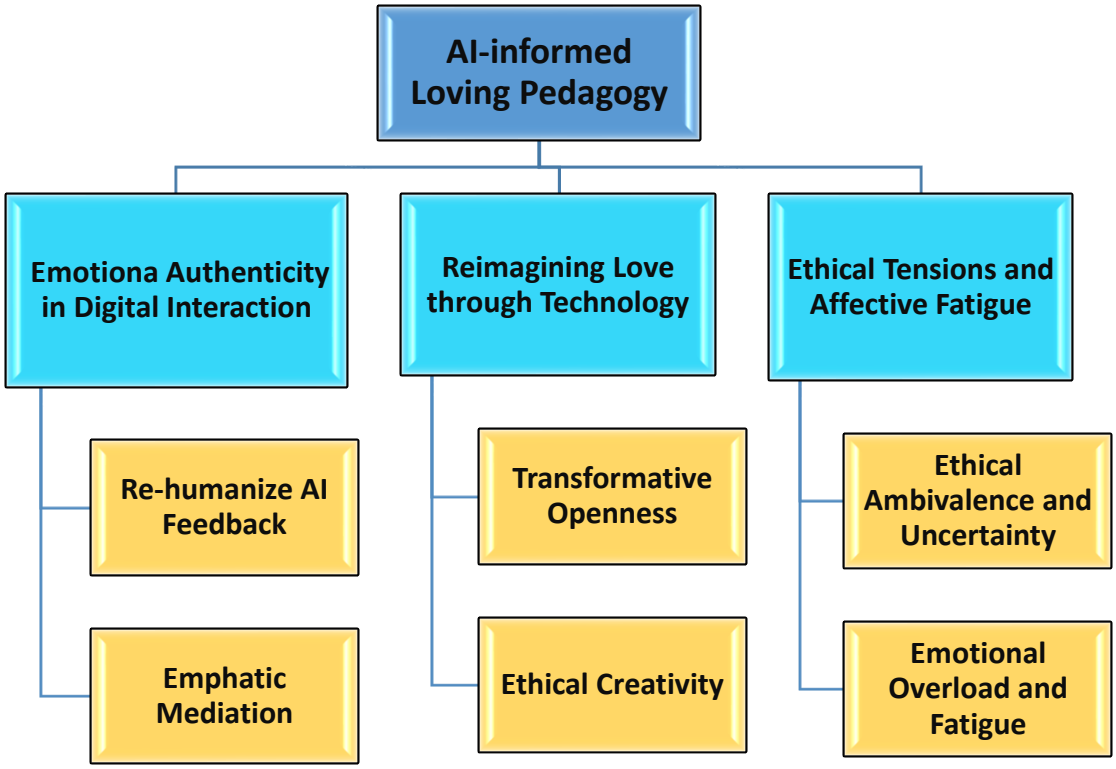

Figure 3. Thematic Map of Emergent Themes and Subthemes

Emerged Themes and Subthemes

Theme 1: Emotional Authenticity in Digital Interaction

This theme reflects teachers' efforts to preserve human connection and emotional depth while integrating AI tools into their pedagogical routines. Many participants emphasized the need to *re-humanize feedback* to counterbalance the perceived coldness of algorithmic responses.

> *"When ChatGPT gives a correction, I always add a line in my own words: something warm, something human,"* (T3, Interview).
>
> *"I realized that empathy doesn't disappear online; it just needs new language,"* (T8, Reflective Journal).

Subtheme: Re-humanizing AI Feedback

Teachers often described editing or personalizing AI-generated feedback before sending it to students. As one teacher explained,

> *"When I use ChatGPT to give suggestions, I rewrite a few lines in my own tone. I want students to feel that I'm still there, not just a program."* (T4, Interview)

"I act as a bridge between what the machine says and what the student feels," (T5, Interview).

Learners, too, noticed the difference when feedback included a personal note or comment. One student wrote in her journal,

> *"When my teacher adds her own message after the AI correction, it feels more real. I can feel she's paying attention, not just using a tool."* (L9, Journal)

The subtheme of Re-humanizing Feedback highlights how teachers infused compassion into AI-mediated communication. Meanwhile, Empathic Mediation describes teachers' emotional labor in translating automated outputs into personally meaningful feedback for students. One participant noted:

Subtheme: Empathic Mediation

Both teachers and learners saw empathy as something that must be actively translated through digital channels. Teachers called this process "adding a human layer" to AI interaction. One learner summarized this dynamic:

> *"AI corrects my mistakes, but my teacher helps me understand how to feel confident again."* (L3, Interview)

Through these actions, emotional authenticity became a conscious practice rather than an automatic one. Teachers and students together learned to use empathy as a bridge between human feeling and machine logic. Together, these subthemes illustrate that emotional authenticity in digital interaction is not spontaneous but a deliberate, reflective act of care.

Theme 2: Ethical Tensions and Affective Fatigue

The second theme captures participants' internal conflict between excitement about AI's potential and unease about its implications. Teachers described *Ethical Ambivalence* as a simultaneous sense of fascination and moral discomfort with machine involvement in teaching.

> *"I feel proud that my students use AI responsibly, but also guilty because I'm not sure where the human line ends,"* (T6, Interview).

Alongside this tension, many reported Emotional Overload from the rapid pace of technological change and the expectation to remain competent with new tools.

> *"Every month there's a new AI feature; keeping up is exhausting,"* (T11, Journal).

These subthemes collectively reveal that the emotional cost of AI adoption lies not only in cognitive adjustment but also in the strain of ethical reflection. Teachers' affective fatigue stemmed from their deep sense of moral responsibility to humanize technology, showing that love and ethics are inseparable dimensions of pedagogical care.

Subtheme: Moral Ambivalence and Uncertainty

Many teachers expressed a sense of duality: appreciating AI's efficiency while questioning its moral boundaries.

> *"Sometimes I feel proud that my class is advanced with AI, but other times I wonder if I'm losing my personal touch."* (T7, Interview)

Learners echoed similar mixed feelings. While some valued instant feedback, others questioned whether learning from AI felt authentic.

> *"It's fast, but it's not always fair. I feel more comfortable when my teacher explains what the AI says."* (L5, Journal)

Subtheme: Emotional Overload and Fatigue

Both groups reported emotional exhaustion from the constant adaptation required to keep up with evolving AI tools. Teachers described the pressure to master new systems, while learners felt overwhelmed by conflicting advice from human and machine sources.

> *"Every few weeks there's a new update or a new app. It's hard to keep the emotional energy to stay creative."* (T10, Interview)

> *"AI helps with my writing, but sometimes I don't know which feedback to trust. It's confusing and tiring."* (L2, Journal)

This emotional fatigue revealed how deeply participants cared about doing things ethically and humanely. Their exhaustion was not from laziness but from moral effort. The need to stay conscious, kind, and responsible in a system that demanded constant adjustment.

Theme 3: Reimagining Love through Technology

The final theme illustrates how teachers began to reinterpret love as a dynamic and creative force guiding their use of AI.

> *"AI pushed me to rethink love, not as soft emotion, but as courage to try new ways of caring,"* (T1, Interview).

Subtheme: Transformative Openness

Several participants described how working with AI encouraged them to explore new emotional and pedagogical possibilities.

> *"AI made me rethink what care means. It's not about rejecting the tool but learning how to use it with intention."* (T12, Interview)

Learners also felt that AI inspired new forms of confidence and curiosity when used empathetically.

> *"Sometimes AI helps me say things I couldn't say before. It gives me courage, but my teacher gives me direction."* (L10, Interview)

Subtheme: Ethical Creativity

Rather than viewing AI as emotionless, participants saw it as a canvas for ethical and creative teaching. They designed prompts, lessons, or tasks that encouraged reflection and empathy.

> *"I ask students to use ChatGPT to write about emotions and then discuss what feels human in the response. It starts great conversations." (T6, Journal)*

Through these interactions, love was reimagined as *intentional action* as the ability to care and create meaning even within digital mediation. Participants described AI as a mirror that reflected their emotional values, making them more aware of how to teach and learn with compassion.

> *"I create prompts that sound human. I want students to feel a person behind the machine," (L9, Journal).*

These insights demonstrate that rather than displacing affection, AI prompted teachers to engage in a more reflective, deliberate form of love, one rooted in moral intention and relational design. Across all themes, the findings reveal a gradual transformation in teachers' emotional and ethical engagement. They continuously negotiate the boundaries between automation and affection, developing new ways to express empathy and responsibility. Love remains the unifying force that sustains humane teaching amid technological mediation. Across all three themes, teachers and learners showed that emotional connection is not lost in AI-rich environments; it simply changes form. Authenticity, empathy, and ethics remained at

the center of their actions. While AI provided efficiency, it was the participants' awareness and deliberate choices that kept education humane.

In essence, AI-informed Loving Pedagogy emerged not as a rejection of technology but as a rebalancing of it. Love became both the motivation and the method for using AI responsibly, which is an act of moral and emotional resilience in an increasingly automated world.

Discussion

This study explored how EFL teachers and learners in Shiraz experienced empathy, care, and moral reflection while integrating AI tools into their classroom practices. Using the framework of AI-informed Loving Pedagogy, the discussion connects the findings to the three guiding theories (Loving Pedagogy, Positive Psychology, and Critical AI Literacy) and interprets how love and ethics are reshaped in AI-mediated learning.

The first theme, *Emotional Authenticity in Digital Interaction*, revealed that teachers and learners consciously worked to preserve warmth and sincerity in technology-driven communication. Participants felt that AI-based feedback was useful but emotionally distant, and they often tried to reintroduce human tone and empathy into these interactions.

This finding supports Loving Pedagogy (Loreman, 2011; Wang, Derakhshan, & Pan, 2022), which views care and respect as essential elements of teaching. In this study, love appeared not as a sentimental concept but as a professional effort to make feedback personal and relational. Teachers' habit of "humanizing AI responses" aligns with Dewaele and Li's (2020) argument that emotional attunement sustains motivation and trust in language classrooms.

From the learners' side, the same pattern emerged: they perceived care when teachers took time to personalize AI-generated messages. These moments reminded students that their learning still mattered to a real person. Such emotional mediation echoes Derakhshan and Pawlak's (2025) view that teacher empathy enhances learner well-being and engagement.

In short, the first theme shows that love in digital teaching is not lost as it becomes intentional. Teachers and learners alike learned to express emotional authenticity through small, deliberate acts of connection, transforming technological mediation into an opportunity for empathy.

The second theme, *Ethical Tensions and Affective Fatigue*, captured the moral and emotional strain that came with balancing innovation and humanity. Teachers described feeling proud to use AI effectively yet uneasy about its ethical limits. Learners also questioned how much they should depend on machine feedback.

These reflections demonstrate what CAILL emphasizes: awareness that technology carries moral consequences and power dynamics (Velander, Otero, & Milrad, 2024). Participants' anxiety about "where the human line ends" mirrors Klemettilä's (2025) argument that AI literacy is not only technical but also ethical, which it requires people to think about fairness, bias, and autonomy.

Emotionally, this theme also reflects Positive Psychology's recognition that discomfort can coexist with growth. Wong's (2019) *Positive Psychology 2.0* framework highlights that both positive and negative emotions play vital roles in transformation. Teachers' fatigue and frustration were not signs of failure but evidence of emotional labor. This is what Derakhshan et al. (2022) describe as the moral energy teachers invest in caring under complex conditions.

Together, these insights suggest that sustainable digital teaching requires not only technical competence but also emotional endurance and ethical awareness. Love, in this sense,

becomes a form of resilience that helps teachers and learners remain human in fast-changing environments.

The third theme, *Reimagining Love through Technology*, showed that participants were not only adapting to AI but also redefining what it means to teach and learn with love. Many described using AI creatively to encourage empathy, critical thinking, and reflection as what can be called ethical creativity.

Teachers used AI prompts to explore emotional topics or to help learners discuss the human side of digital learning. This aligns with the notion that love in education can inspire innovation rather than resist it (Derakhshan & Pawlak, 2025; Mercer & Gregersen, 2023). AI thus became a space where care could be expressed differently through curiosity, dialogue, and moral design.

This finding also extends Positive Psychology's concept of flourishing. When teachers and learners used AI intentionally and reflectively, they felt more empowered and connected. As one teacher shared, "AI made me rethink what care means; it's about using the tool with awareness." Such statements demonstrate that emotional growth and ethical reflection can coexist with technological progress.

At the same time, the integration of Critical AI Literacy ensured that this openness remained thoughtful. Participants learned to question AI's authority, making emotional care and ethical reflection two sides of the same coin. Love was thus reimagined not as a fragile feeling but as an ethical practice that guided decisions about when and how to use technology.

Across all three themes, the findings converge on one central idea: human connection can thrive in AI-enhanced classrooms when guided by empathy, reflection, and ethical intention. Teachers and learners in this study demonstrated that AI-informed Loving Pedagogy is not about rejecting technology but about using it responsibly and emotionally intelligently. This resonates with Kelley and Wenzel's (2025) argument that sustainable digital education depends on collaboration between technical competence and moral reflection. It also supports Yan et al. (2023, 2024), who note that most AI research overlooks the emotional dimension of teaching. By integrating Loving Pedagogy, Positive Psychology, and Critical AI Literacy, this study offers a model where emotion, well-being, and ethics are intertwined.

In this framework, love functions as a moral compass as a principle that helps educators and learners decide when automation is helpful and when human intervention is necessary. Positive emotions sustain resilience, while critical awareness ensures that empathy remains ethically grounded.

Ultimately, this study suggests that sustainable AI pedagogy must prioritize emotional intelligence alongside technical skills. True innovation occurs not when machines replace people, but when technology becomes a tool for extending care, connection, and human dignity.

Limitations and Future Research Directions

Like all qualitative inquiries, this study carries several limitations that should be acknowledged when interpreting the findings. First, the research was conducted with a relatively small sample of EFL teachers and learners in Shiraz, which limits the generalizability of results to other regions or educational systems. Although participants represented a range of ages, genders, and institutional contexts, the focus on one city may not capture the broader cultural and institutional variations that shape experiences of AI integration.

Second, the data relied primarily on self-reported interviews and reflective journals. While these tools offered rich emotional and ethical insights, they are also subject to personal interpretation and recall bias. Participants might have emphasized positive or idealized experiences, especially when discussing moral and emotional topics such as love and empathy. Future research could address this by combining self-reports with classroom observations or

interactional analyses to examine how empathy and ethical awareness manifest in real-time teaching and learning.

A third limitation relates to the rapid pace of technological change. Since AI tools evolve quickly, the emotional and ethical dynamics identified in this study may shift as systems become more adaptive or humanlike. Replicating the study over time, or with new AI platforms, would provide insight into how the meanings of love and empathy continue to change alongside technology.

Finally, the study's qualitative design did not aim to measure the quantitative effects of AI use on motivation, emotional well-being, or learning outcomes. Future research could adopt mixed-method approaches, combining thematic analysis with surveys or experimental designs to explore how AI-informed Loving Pedagogy influences both affective and academic variables.

Despite these limitations, the findings offer valuable groundwork for understanding how emotional and ethical dimensions can guide human–AI collaboration in education. Continued exploration in this area can deepen the theoretical and practical contributions of AI-informed Loving Pedagogy to future EFL and digital learning contexts.

CONCLUSION

This study explored how EFL teachers and learners in Shiraz experienced love, empathy, and ethical reflection while integrating AI tools into language education. Guided by the framework of AI-informed Loving Pedagogy, the research revealed how emotional connection and moral awareness can be sustained (and even strengthened) in technology-supported learning environments.

Through thematic analysis of interviews and reflective journals, three major themes emerged: Emotional Authenticity in Digital Interaction, Ethical Tensions and Affective Fatigue, and Reimagining Love through Technology. These findings show that AI does not necessarily diminish human connection; rather, it invites educators and learners to redefine it. Participants demonstrated that emotional warmth and ethical care could still exist within AI-rich classrooms when both groups acted intentionally and reflectively.

Teachers and learners worked together to "re-humanize" AI-generated feedback, add empathy to digital communication, and use technology as a platform for ethical and creative engagement. While many felt emotional strain and moral uncertainty, their reflections also revealed resilience and critical awareness. In essence, love and empathy became practical strategies for balancing human values with technological innovation.

The study extends the concept of Loving Pedagogy by showing how it can adapt to digital and AI-assisted environments. It connects emotional care with the moral awareness emphasized in Critical AI Literacy, forming a bridge between humanistic and technological perspectives. By incorporating Positive Psychology, the research also highlights that emotional well-being and resilience are key to sustaining loving relationships in digital classrooms.

Together, these insights form the theoretical basis of the AI-informed Loving Pedagogy model, which unites emotional, ethical, and technological dimensions into a coherent framework. This model suggests that the future of education depends not only on intelligent systems but also on emotionally intelligent people who use those systems with compassion and conscience.

For educators, the findings highlight the importance of intentional empathy in AI-supported teaching. Teachers can design learning experiences that combine efficiency with warmth, for example, by personalizing AI-generated feedback, using reflective discussions to interpret automated outputs, and encouraging students to question the emotional and ethical aspects of technology use (Isaee & Barjesteh, 2023).

Teacher education programs should include training on critical AI literacy and emotional communication, helping future educators to balance technical knowledge with human sensitivity. In addition, schools and universities can promote well-being by creating professional spaces where teachers can share the emotional challenges of working with AI and support one another in finding humane solutions.

For learners, the study emphasizes the value of reflection and dialogue. By talking about how AI influences their emotions and learning processes, students can develop both digital awareness and emotional resilience, which are skills essential for lifelong learning in a rapidly evolving world.

Future studies could expand this work by including larger and more diverse samples across regions or educational levels. Comparative research might explore how cultural contexts influence emotional and ethical engagement with AI in language learning. Further inquiry into student–AI–teacher interaction patterns could also help clarify how empathy is built or lost in real-time communication.

Moreover, mixed-method studies could combine qualitative insights with quantitative measures of well-being, motivation, or ethical decision-making to provide a fuller understanding of how AI-informed Loving Pedagogy operates in practice. Exploring classroom interventions where teachers deliberately integrate love-based reflection into AI-assisted tasks would also enrich the field.

At its core, this research reaffirms that education (no matter how technologically advanced), remains a human endeavor. AI can process text and assist learning, but it cannot replace the emotional intelligence, empathy, and ethical care that teachers and learners bring into the classroom. In the words of one participant, "AI helps me learn faster, but it's my teacher's kindness that makes me believe in myself."

Ultimately, the heart of teaching lies not in data or algorithms but in human connection. AI-informed Loving Pedagogy offers a way forward, an approach that welcomes innovation while keeping love at the center of learning.

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