

# Artificial Intelligence in Initial Language Teacher Education: Strengthening the Teaching Profession through ChatGPT in Huíla, Angola

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## Abstract

The rapid development of generative artificial intelligence (AI) has created new opportunities and challenges for English Language Teaching and Learning (ELT/L) and Initial Language Teacher Education (ILTE). Although ChatGPT is increasingly integrated into teacher education worldwide, little is known about its use in low-resource African contexts such as Huíla, Angola. This study investigated the perceived effectiveness of ChatGPT in supporting ELT/L outcomes in ILTE, the challenges associated with its use, and strategies for its sustainable and ethical integration into English language teacher education. An exploratory-descriptive mixed-methods design was adopted. Data were collected through structured questionnaires administered to 28 participants (9 teacher trainers and 19 trainee teachers) from the three public secondary teacher training institutions in Huíla Province. Quantitative data were analysed using SPSS Statistics version 31 through descriptive statistics, reliability analysis, cross-tabulations, chi-square tests, Fisher's exact test, and the Mann-Whitney U test, while responses to open-ended questions were coded inductively and analysed thematically. The findings indicate that ChatGPT was perceived as moderately to highly effective in supporting learner autonomy, feedback on teaching practice, language proficiency, lesson planning, collaborative learning, and resource development (overall  $M = 3.99/5$ ; Cronbach's  $\alpha = .958$ ). However, participants also identified ethical concerns, resistance to change, limited AI literacy, inadequate preparedness, unequal internet access, and affordability constraints. The study concludes that ChatGPT may strengthen English language teacher education when integrated through structured AI literacy, pedagogically guided practice, ethical governance, and contextually responsive implementation. It contributes context-specific evidence from an underrepre-

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sented African and Lusophone context and offers practical recommendations for responsible AI integration.

## Keywords

Artificial Intelligence, ChatGPT, English Language Teaching, Initial Language Teacher Education, AI Literacy, Angola

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## 1. Introduction

Artificial intelligence (AI), particularly generative AI tools such as ChatGPT, is increasingly transforming education, with important implications for English Language Teaching and Learning (ELT/L) and Initial Language Teacher Education (ILTE). ChatGPT can assist teacher trainers and trainee teachers with lesson planning, materials development, assessment, feedback, language practice, and reflective professional learning, making it a potentially valuable pedagogical resource in language teacher education (Butler & Jiang, 2025; Huang et al., 2025; Kılıçkaya & Kic-Drgas, 2025; Kohnke et al., 2023). At the same time, concerns have been raised regarding academic integrity, over-reliance, inaccurate information, cultural bias, and the possible erosion of teacher agency and critical thinking.

Although research on ChatGPT in language teacher education is expanding, it has been conducted predominantly in Asia, Europe, and North America. Consequently, little is known about its use in low-resource African and Lusophone contexts such as Angola, where English teacher education continues to face challenges related to digital infrastructure, internet connectivity, access to teaching resources, and teacher preparation (Cacumba, 2020; Major, 2023). These contextual realities suggest that findings from better-resourced settings cannot simply be transferred to Angolan ILTE without empirical investigation. This concern is consistent with the African Union's call for contextually relevant digital transformation and UNESCO's emphasis on ethical, human-centred, and pedagogically appropriate uses of AI in education (African Union, 2022, 2024; UNESCO, 2021, 2023, 2024).

The need for such investigation became evident following a classroom incident in Huíla, where a trainee teacher relied extensively on ChatGPT to complete assessed work, raising concerns about academic integrity, authentic learning, and professional competence. While this example illustrates the potential risks of uncritical AI use, it also highlights the need to understand how ChatGPT can be integrated responsibly into teacher education.

Therefore, the present study investigates the role of ChatGPT in Initial Language Teacher Education in Huíla, Angola. Specifically, it examines its perceived effectiveness in supporting ELT/L, identifies the principal challenges associated with its use, and proposes strategies for its sustainable, ethical, and pedagogically sound integration. By providing empirical evidence from an underrepresented Af-

rican and Lusophone context, the study contributes to the growing international literature on AI in language teacher education and offers practical implications for teacher educators, curriculum developers, institutional leaders, and policy-makers seeking to strengthen English language teacher preparation through responsible AI integration.

The paper is organised into five parts: the literature review, methodology, findings, discussion, conclusion, and recommendations.

## 2. Literature Review

This section reviews research on artificial intelligence, ChatGPT, and English Language Teaching, with particular attention to Initial Language Teacher Education (ILTE). It brings together global studies, African policy perspectives, and Angolan ELT concerns in order to examine ChatGPT's pedagogical affordances, theoretical relevance, ethical challenges, and conditions for sustainable integration.

### 2.1. Artificial Intelligence and English Language Teaching

Recent ELT research increasingly presents ChatGPT as a useful support tool for lesson planning, instructional scaffolding, formative assessment, feedback, materials development, and reflective practice (Edmett et al., 2024; Kohnke et al., 2023; Meniado, 2023). In language classrooms, it can generate customised texts, model dialogues, grammar explanations, writing prompts, reading tasks, assessment items, and examples of classroom language. These affordances may be particularly relevant for mixed-ability classes, where teachers need to adapt input, tasks, and feedback to different learner levels.

However, the literature also cautions against uncritical adoption. Although ChatGPT can produce fluent and convincing responses, its outputs may be inaccurate, culturally inappropriate, biased, or pedagogically weak (Hariri, 2024; Ho, 2024; Hong, 2023; Kohnke et al., 2023). In ELT, this is significant because effective language teaching requires more than grammatically correct examples; it also requires attention to learner needs, communicative purpose, classroom interaction, cultural relevance, and assessment validity. Therefore, ChatGPT should be understood as a pedagogical support tool rather than an independent teaching authority. Its value in ILTE depends on teacher mediation, contextual adaptation, AI literacy, peer collaboration, and assessment practices that protect academic integrity.

### 2.2. ChatGPT in Initial Language Teacher Education

Initial Language Teacher Education is a decisive stage in which future teachers develop professional knowledge, classroom skills, pedagogical beliefs, values, and teacher identity (Borg, 2003, 2015). For this reason, ChatGPT integration in ILTE should be approached not merely as technological innovation, but as part of trainee teachers' professional formation. Recent studies suggest that trainee language teachers use ChatGPT for lesson planning, academic writing, brainstorming, materials development, language support, and reflective practice. Across dif-

ferent contexts, trainee teachers tend to value ChatGPT because it saves time, supports creativity, and provides immediate pedagogical assistance, although many still use it through simple prompts and limited critical engagement (Korucu-Kış & Bakla, 2026; Soviyah et al., 2025; Sukmadana & Halim, 2026).

The TPACK framework provides a useful lens for understanding this issue. Built on Shulman's (1987) pedagogical content knowledge and extended by Mishra and Koehler (2006) through the addition of technological knowledge, TPACK argues that effective technology integration depends on the interaction of content knowledge, pedagogical knowledge, and technological knowledge. In ELT, this means that trainee teachers must connect knowledge of language systems, teaching methods, assessment, classroom management, and digital tools. From this perspective, ChatGPT should not be treated as a stand-alone technological resource, but as a pedagogically mediated tool aligned with language learning objectives. Studies show that GenAI can support lesson planning, practicum reflection, classroom implementation, and AI literacy development when embedded in guided teacher education activities (Huang et al., 2025; Kılıçkaya & Kic-Drgas, 2025). Thus, trainee teachers need to move beyond basic use of ChatGPT towards becoming critical teacher-designers who can evaluate, adapt, justify, and contextualise AI-supported pedagogical decisions (Butler & Jiang, 2025).

### 2.3. Sociocultural Perspectives on ChatGPT as a Mediating Tool

Sociocultural theory provides a useful theoretical basis for understanding ChatGPT as a mediating tool in teacher learning. Vygotsky (1978) argues that learning is socially mediated through interaction with people, language, and cultural tools. From this perspective, ChatGPT may support trainee teachers by providing explanations, examples, model texts, feedback, teaching ideas, and classroom tasks. It may also help trainees work within their Zone of Proximal Development when its use is guided by teacher trainers, peers, supervisors, or practicum mentors.

Nevertheless, mediation should not be confused with replacement. ChatGPT becomes pedagogically meaningful only when trainee teachers critically evaluate, adapt, and discuss its outputs. This view is supported by studies showing that GenAI is more useful when embedded in lesson study, practicum reflection, and collaborative evaluation rather than used as an isolated answer-generating tool (Kılıçkaya & Kic-Drgas, 2025; Korucu-Kış & Bakla, 2026). Graciano's (2025) Angolan study on Task-Based Language Teaching also strengthens this argument. Although not focused on AI, the study showed that learner-centred, collaborative, and mediated classroom activity improved speaking performance, reduced anxiety, and increased confidence. Similarly, ChatGPT may support ILTE in Huila when used in peer discussion, microteaching, practicum reflection, supervised lesson planning, and trainer-supported materials adaptation rather than as a shortcut for completing assignments.

## 2.4. Teacher Cognition and Professional Identity in AI-Supported Teacher Education

Teacher cognition refers to what teachers “think, know, believe, and do in relation to teaching” (Borg, 2015: p. 384). In ILTE, trainee teachers are still developing beliefs about language learning, classroom management, lesson planning, assessment, and the role of the teacher. ChatGPT may influence this process positively by exposing trainees to different lesson ideas, teaching strategies, grammar explanations, and classroom techniques. Such support may broaden pedagogical thinking and increase confidence among novice teachers.

However, AI-supported teacher education also raises concerns about cognitive offloading. If trainee teachers rely on ChatGPT to produce lesson plans, reflective journals, or academic tasks without understanding the underlying pedagogical decisions, task completion may occur without professional learning (Ho, 2024; Mediado, 2023). This risk is closely linked to teacher identity. Tümen Akyıldız (2026) suggests that AI-supported EFL teaching may shift teachers’ roles from knowledge providers to pedagogical mediators. In Huíla, this shift should be approached carefully. ChatGPT should strengthen trainee teachers’ professional identity by helping them become reflective, resourceful, adaptive, and ethically responsible practitioners, not passive users of AI-generated content.

The literature increasingly suggests that AI literacy should become a core competence in teacher education (Hariri, 2024). AI literacy includes not only technical use, but also prompt design, critical evaluation, ethical awareness, data privacy, bias recognition, pedagogical adaptation, and transparent acknowledgement of AI use. UNESCO’s AI Competency Framework for Teachers identifies five key dimensions of teacher AI competence: human-centred mindset, ethics of AI, AI foundations and applications, AI pedagogy, and AI for professional learning (UNESCO, 2024). Similarly, Huang et al. (2025) identify technical proficiency, critical evaluation, communication proficiency, creative application, and ethical competence as central dimensions of GenAI literacy.

For trainee English teachers in Huíla, AI literacy should be directly linked to ELT practice. It should include the ability to write clear prompts, evaluate AI-generated lesson plans, check grammar explanations, recognise cultural bias, adapt materials to local learners, protect privacy, and acknowledge AI use honestly. Instead of asking ChatGPT simply to “write a lesson plan”, trainees should learn to specify learner level, lesson objectives, language focus, teaching approach, resources, duration, and assessment goals. They should then evaluate whether the output is interactive, culturally appropriate, pedagogically sound, and aligned with communicative ELT principles. In this sense, AI literacy is an extension of professional judgement and a necessary competence for responsible language teaching in the AI era.

## 2.5. UNESCO and African Union Perspectives on Responsible AI in Education

UNESCO and the African Union provide important policy guidance for respon-

sible AI integration in education. UNESCO's Guidance for Generative AI in Education and Research warns that GenAI tools have developed faster than many institutional policies and national regulations (UNESCO, 2023). UNESCO therefore calls for a human-centred approach in which AI supports human agency, inclusion, equity, linguistic diversity, cultural diversity, and teacher professionalism. Its Recommendation on the Ethics of Artificial Intelligence further stresses human rights, fairness, transparency, accountability, privacy, and human dignity (UNESCO, 2021).

The African Union offers a complimentary continental perspective. Its Digital Education Strategy and Implementation Plan emphasise infrastructure, digital content, teacher digital literacy, student digital skills, data systems, research, innovation, and sustainable financing (African Union, 2022). The Continental Artificial Intelligence Strategy further argues that AI in Africa should be ethical, inclusive, development-oriented, and grounded in African contexts (African Union, 2024). These frameworks are highly relevant to Angola because they show that ChatGPT integration in Huíla cannot depend on individual enthusiasm or informal use. Rather, it requires institutional planning, teacher preparation, ethical guidelines, digital infrastructure, and alignment with African educational priorities.

## 2.6. Challenges of ChatGPT Use in Initial Language Teacher Education

Although ChatGPT has considerable potential to support ILTE, the literature identifies several challenges. First, AI-generated content may be inaccurate, incomplete, or pedagogically unsuitable. In ELT, this may include weak grammar explanations, unnatural examples, inappropriate vocabulary, unsuitable classroom activities, or lesson plans that do not reflect communicative principles. This is particularly important for trainee teachers, who are still developing the expertise needed to evaluate teaching materials (Butler & Jiang, 2025; Korucu-Kış & Bakla, 2026; Sukmadana & Halim, 2026).

Second, ChatGPT may reproduce cultural and linguistic bias because many GenAI systems reflect dominant languages, cultural assumptions, and educational traditions. In ELT, this may appear in reading texts, dialogues, names, classroom scenarios, or assumptions about learners' access to resources. Major (2023) argues that AI integration in Angolan ELT must be culturally relevant, ethically guided, and connected to local classroom needs. Similarly, the African Union (2024) stresses African values, contextual relevance, inclusion, and human dignity. These concerns are especially relevant in Huíla, where AI-generated materials must reflect Angolan learners' experiences, curriculum requirements, and available classroom resources.

Third, over-reliance on ChatGPT may weaken lesson planning, academic writing, creativity, classroom decision-making, and reflective practice. Butler and Jiang (2025) and Korucu-Kış and Bakla (2026) show that trainee teachers may use ChatGPT superficially unless guided to question, revise, justify, and contextualise outputs. Fourth, ChatGPT raises concerns about academic integrity and assess-

ment validity because it can be misused to complete assignments, lesson plans, reflective journals, tests, or academic writing tasks without genuine learning. Finally, digital inequality and institutional readiness remain serious concerns in low-resource contexts. Unequal access to internet, devices, and digital support may cause ChatGPT to benefit some trainees while excluding others. Therefore, ChatGPT integration in ILTE requires AI literacy training, ethical supervision, assessment redesign, institutional regulation, teacher trainer preparation, infrastructure, and local adaptation.

## 2.7. Strategies for Sustainable and Ethical Integration of ChatGPT in ILTE

Sustainable ChatGPT integration in ILTE requires more than access to technology. It should be guided by AI literacy, ethical regulation, pedagogical mediation, local adaptation, assessment redesign, and institutional support. The TPACK framework is useful here because it shows that effective technology use depends on the interaction of content knowledge, pedagogical knowledge, and technological knowledge (Mishra & Koehler, 2006; Shulman, 1987). In ELT, this means that ChatGPT should be used not merely as a digital tool, but as a pedagogically mediated resource aligned with language content, learner needs, communicative objectives, assessment, and Angolan classroom realities.

A first strategy is explicit AI literacy development for both teacher trainers and trainee teachers. This should include prompt design, critical evaluation of AI outputs, ethical use, data privacy, bias recognition, transparent acknowledgement of AI assistance, and pedagogical adaptation. Huang et al. (2025) show that structured GenAI training can improve trainee language teachers' technical, critical, communicative, creative, and ethical competence. This aligns with UNESCO's (2024) AI competency framework, which emphasises AI foundations, ethics, AI pedagogy, professional learning, and a human-centred mindset.

A second strategy is the supervised use of ChatGPT as a pedagogical co-design tool. Research shows that ChatGPT can support lesson planning, materials development, practicum preparation, feedback, and reflection when embedded in guided teacher education activities (Kılıçkaya & Kic-Drgas, 2025; Korucu-Kış & Bakla, 2026; Sukmadana & Halim, 2026). In practice, trainee teachers should be guided by teacher trainers to compare AI-generated lesson plans with ELT principles, revise activities for mixed-ability classes, check linguistic and cultural appropriateness, and adapt materials to local classroom conditions. This turns ChatGPT use into TPACK-based professional learning rather than a shortcut for completing assignments.

A third strategy is assessment redesign. Since GenAI may increase plagiarism, over-reliance, and superficial task completion, ILTE programmes should include process-oriented and performance-based assessment, such as oral defence of lesson plans, microteaching, in-class writing, teaching demonstrations, reflective portfolios, peer feedback, staged lesson planning, and AI-use declarations (Soviyah

et al., 2025; UNESCO, 2023). These practices allow teacher trainers to assess trainee teachers' reasoning, classroom language, reflection, and ability to justify pedagogical decisions.

Finally, sustainable integration requires institutional policy, ethical governance, infrastructure, and teacher trainer development (African Union, 2024; Major, 2023; UNESCO, 2023). These frameworks recommend clear rules on privacy, authorship, assessment, transparency, cybersecurity, digital literacy, pedagogical appropriateness, and local relevance. In low-resource contexts such as Huíla, ChatGPT should therefore be introduced as a supervised professional learning tool that strengthens teacher agency, ELT pedagogy, ethical awareness, TPACK development, and local relevance, rather than as an autonomous substitute for human judgement.

## 2.8. Conceptual Synthesis and Research Gap

Taken together, the literature suggests that ChatGPT integration in ILTE depends on five interacting conditions: AI literacy, pedagogical mediation, ethical governance, local adaptation, and infrastructure. Sociocultural theory explains why ChatGPT should be understood as a mediating tool rather than a replacement for human interaction. TPACK clarifies that effective AI use requires the integration of English language content, pedagogy, and technology. UNESCO and African Union frameworks further show that AI integration must be ethical, inclusive, human-centred, contextually relevant, and institutionally supported.

Despite the growing literature on ChatGPT in language teacher education, most empirical studies have been conducted in Asia, Europe, North America, or other relatively well-resourced contexts. Comparatively little is known about how teacher trainers and trainee teachers perceive ChatGPT in low-resource African and Lusophone settings, particularly within public secondary ILTE institutions. Furthermore, few studies have examined ChatGPT through the combined lenses of ELT pedagogy, TPACK, sociocultural mediation, UNESCO's AI competency framework, and African Union policy. The present study addresses this gap by investigating the perceived effectiveness, challenges, and optimisation strategies associated with ChatGPT use in Initial Language Teacher Education in Huíla, Angola.

## 3. Research Design and Methodology

This section outlines the research context, design, participants, sampling procedures, research instrument, data collection and analysis procedures, and ethical considerations adopted to investigate the perceived effectiveness, challenges, and optimisation strategies associated with ChatGPT use in English Language Teaching and Learning (ELT/L) within Initial Language Teacher Education (ILTE) in Huíla, Angola.

### 3.1. Background and Context

Secondary teacher training in Huíla is delivered through three public secondary

teacher training institutions operating under the Angolan government. Despite continuing reforms in teacher education, trainee teachers still experience challenges related to academic literacy, digital competence, and access to pedagogical resources (Cacumba, 2020; Major, 2023; Graciano, 2025). Consequently, ChatGPT represents a potentially valuable but largely unexplored resource for strengthening ELT/L in this context.

### 3.2. Research Design

This study adopted an exploratory-descriptive mixed-methods design with a quantitatively driven orientation and an embedded qualitative component. The design was exploratory because ChatGPT use in ILTE remains under-researched in low-resource African contexts and descriptive because it sought to describe teacher trainers' and trainee teachers' perceptions through structured questionnaire data (Creswell, 2009, 2012; Dörnyei, 2007). Quantitative data constituted the principal source of evidence, while open-ended responses provided contextual explanations for the statistical findings.

### 3.3. Participants and Sampling

The target population comprised 178 participants (16 teacher trainers and 162 trainee teachers) from the three public secondary teacher training institutions in Huíla Province. A total of 28 participants completed the questionnaire, including 9 teacher trainers and 19 trainee teachers, representing a response rate of 15.7% of the accessible population. The sample included 5 trainers and 14 trainees from Escola de Magistério n.º 135 (Lubango), 1 trainer from Escola de Magistério n.º 1251 (Humpata), and 3 trainers and 5 trainees from Escola de Magistério n.º 1842 (Caluquembe).

A purposive sample of respondents was employed because the study required information-rich participants directly involved in English language teacher education (Campbell et al., 2020; Creswell, 2009; Palinkas et al., 2015). Although the study covered all three public secondary ILTE institutions, it should not be regarded as a statistical census but as a context-bound purposive sample.

Participants with and without prior ChatGPT experience were included because the study examined perceptions of ChatGPT's potential role in ILTE rather than only direct user experience. Combining both groups was considered appropriate because institutional adoption requires understanding the views of both current and prospective users. Nevertheless, prior experience may have influenced responses and is acknowledged as a study limitation.

### 3.4. Research Instrument

Data were collected using two parallel questionnaires: one for teacher trainers (18 items) and another for trainee teachers (17 items). The additional trainer item concerned years of teaching experience. Both instruments measured the same core constructs: demographic information and prior ChatGPT use, perceived ef-

fectiveness, challenges, preparedness, support needs, ethical concerns, and strategies for sustainable integration. Questionnaires were used because they allow researchers to collect structured data from groups of participants in a form that can be readily coded, processed, and analysed (Dörnyei, 2007; Dörnyei & Dewaele, 2023).

The questionnaires comprised closed-ended, multiple-response, five-point Likert-scale, and open-ended items. Likert items used the anchors 1 = Very ineffective/Strongly disagree to 5 = Very effective/Strongly agree, depending on the construct measured. The instruments were developed for this study but informed by previous research on ChatGPT in language teacher education (Huang et al., 2025; Kohnke et al., 2023; Korucu-Kış & Bakla, 2026; Lee & Zhai, 2024; UNESCO, 2024). The complete questionnaires are provided in Appendices A and B to facilitate transparency and replication.

### 3.5. Validity and Reliability

Content and face validity were established through expert review by two experienced ELT teacher trainers, followed by a pilot study that resulted in minor revisions to item wording and organisation (Creswell, 2009; Dörnyei, 2007; Taherdoost, 2016). Internal consistency was assessed for the six-item perceived effectiveness scale using Cronbach's alpha. The scale produced an overall mean score of 3.99/5 and demonstrated excellent reliability ( $\alpha = 0.958$ ), indicating that the items measured a coherent construct.

### 3.6. Data Collection Procedures

The questionnaire was developed and piloted between September and October 2024, and data were collected in January 2025 using Google Forms. Teacher trainers received the questionnaire directly via WhatsApp, while trainee teachers accessed it through official institutional WhatsApp groups managed by their trainers. Participation was voluntary and anonymous.

### 3.7. Data Analysis

Quantitative data were analysed using SPSS Statistics version 31. Descriptive statistics (frequencies, percentages, means, and standard deviations) summarised participants' perceptions in relation to the three research questions. Cross-tabulations, chi-square tests, Fisher's exact test, and the Mann-Whitney U test were conducted where appropriate to compare teacher trainers and trainee teachers.

Open-ended responses were manually coded by the researcher using an inductive approach before being entered into SPSS for frequency analysis. For example, for the open-ended question, "What strategies would you recommend for integrating ChatGPT into your training programme?", the following codes were developed from the participants' responses: TT = teacher training; ST = student training; WS = workshops, AI literacy, or formal orientation; IA = internet access;

DR = devices, computers, smartphones, or infrastructure; LR = language laboratory or school resources; GU = guided or supervised use; One response could receive multiple codes when it contained more than one idea. For example, a recommendation advocating teacher training and internet access was coded under both categories. The coded themes were subsequently used to complement and explain the quantitative findings.

### 3.8. Ethical Considerations

The study adhered to established principles of educational research ethics (Cacumba, 2014; Creswell, 2009; Dörnyei, 2007; Privitera & Ahlgrim-Dezell, 2019). Participants received information about the purpose of the study and voluntarily provided informed consent by completing the questionnaire. Anonymity, confidentiality, and non-maleficence were maintained throughout the study. No identifying information was collected, responses were securely stored, and participation had no academic or professional consequences.

### 3.9. Scope of the Study

The findings are context-specific and reflect the perceptions of teacher trainers and trainee teachers in the three public secondary ILTE institutions in Huíla Province. Consequently, they are intended to provide analytical rather than statistical generalisation and to inform future research and policy on the responsible integration of generative AI in comparable African ELT contexts.

## 4. Findings

This section presents the findings from the questionnaires completed by teacher trainers and trainee teachers. The results are organised according to the three research questions guiding the study.

### 4.1. Participants Profile

The study included 28 participants, comprising 9 teacher trainers (32.1%) and 19 trainee teachers (67.9%) from the three public secondary teacher training institutions in Huíla Province. Among the teacher trainers, most were aged 36 - 45 years (57.1%), 85.7% were male, 83.3% held a Bachelor's degree in English Language Teaching, and 42.9% reported more than ten years of teaching experience. Teacher trainers were distributed across the three institutions as shown in **Table 1**.

**Table 1.** Participating teacher trainers by institution.

| Institution                                                 | n        | %            |
|-------------------------------------------------------------|----------|--------------|
| Escola de Magistério n.º 135 “Comandante Liberdade”—Lubango | 6        | 66.7         |
| Escola de Magistério n.º 1251 “Ndjambelwa Kateine”—Humpata  | 1        | 11.1         |
| Escola de Magistério n.º 1842 “Abel Pedro”—Caluquembe       | 2        | 22.2         |
| <b>Total</b>                                                | <b>9</b> | <b>100.0</b> |

Most trainee teachers were aged 20 - 24 years (63.2%), 63.2% were male, and 73.7% were enrolled at Escola de Magistério n.º 135 “Comandante Liberdade” (**Table 2**).

**Table 2.** Participating trainee teachers by institution.

| Institution                                                 | n         | %            |
|-------------------------------------------------------------|-----------|--------------|
| Escola de Magistério n.º 135 “Comandante Liberdade”—Lubango | 14        | 73.7         |
| Escola de Magistério n.º 1251 “Ndjambelwa Kateine”—Humpata  | 0         | 0.0          |
| Escola de Magistério n.º 1842 “Abel Pedro”—Caluquembe       | 5         | 26.3         |
| <b>Total</b>                                                | <b>19</b> | <b>100.0</b> |

Previous use of ChatGPT was reported by 85.7% of teacher trainers and 73.7% of trainee teachers. Overall, 26.3% of trainee teachers reported no prior experience with ChatGPT.

#### 4.2. Perceived Effectiveness of ChatGPT in ELT/L

Research Question 1: How effective is ChatGPT in enhancing ELT/L outcomes in ILTE?

Participants rated ChatGPT positively across the six areas investigated (**Table 3**). The highest mean score was recorded for learner autonomy and self-directed learning ( $M = 4.43$ ,  $SD = 1.43$ ), followed by feedback on teaching practice ( $M = 4.39$ ,  $SD = 0.96$ ). Positive ratings were also reported for language proficiency development ( $M = 3.93$ ,  $SD = 1.39$ ), lesson planning ( $M = 3.86$ ,  $SD = 1.30$ ), collaborative learning ( $M = 3.82$ ,  $SD = 1.28$ ), and resource development ( $M = 3.54$ ,  $SD = 1.40$ ).

The six-item effectiveness scale produced an overall mean score of 3.99 and demonstrated excellent internal consistency (Cronbach’s  $\alpha = 0.958$ ).

**Table 3.** Perceived effectiveness of ChatGPT in supporting ELT/L.

| Area                                        | Mean | SD   | Very Effective + Highly Effective |
|---------------------------------------------|------|------|-----------------------------------|
| Learner autonomy and self-directed learning | 4.43 | 1.43 | 85.7%                             |
| Feedback on teaching practice               | 4.39 | 0.96 | 82.2%                             |
| Language proficiency development            | 3.93 | 1.39 | 71.4%                             |
| Lesson planning                             | 3.86 | 1.30 | 67.9%                             |
| Collaborative learning                      | 3.82 | 1.28 | 67.9%                             |
| Resource development                        | 3.54 | 1.40 | 50.0%                             |

#### 4.3. Challenges of ChatGPT Use in ILTE

Research Question 2: What challenges are associated with ChatGPT use in ILTE in Huíla, Angola?

The most frequently reported challenges were resistance to change among educators (78.6%) and ethical concerns, including plagiarism and data privacy (78.6%). Other commonly reported challenges included limited digital literacy

(60.7%), limited internet access (57.1%), and the high cost of technology (53.6%).

Regarding preparedness to train others in ChatGPT use, 28.6% of participants reported being not prepared, 39.3% slightly prepared, 21.4% moderately prepared, 7.1% very prepared, and 3.6% completely prepared.

A Mann-Whitney U test indicated no statistically significant difference between teacher trainers and trainee teachers regarding preparedness ( $U = 80.50$ ,  $Z = -0.258$ ,  $p = 0.796$ ).

#### 4.4. Strategies for Optimising ChatGPT in ILTE

Research Question 3: What strategies can optimise the use of ChatGPT in ILTE?

Participants strongly supported examples of classroom activities using ChatGPT (100.0%), followed by practical training on lesson planning and materials development (92.9%), and workshops or seminars on AI in ELT (92.9%). Other frequently selected strategies included ethical guidance (71.4%), institutional policies (57.1%), training in verifying AI-generated information (42.9%), and peer collaboration (25.0%).

When asked whether AI could replace human teachers, 67.9% responded No, whereas 32.1% responded Yes.

The most frequently reported ethical concern was cheating or misuse (64.3%), followed by responsible AI use (39.3%) and informed consent (39.3%). Participants also referred to teacher supervision and the verification of AI-generated information using reliable sources. Chi-square analyses indicated that teacher trainers were significantly more likely than trainee teachers to emphasise local and cultural adaptation ( $\chi^2 = 7.368$ ,  $p = 0.007$ ), privacy and data protection ( $\chi^2 = 5.241$ ,  $p = 0.022$ ), and reduced critical thinking ( $\chi^2 = 9.614$ ,  $p = 0.002$ ). No statistically significant group differences were found for the remaining variables.

### 5. Discussion of the Findings

This section discusses the findings of the study in relation to the research objectives, the reviewed literature, and the wider policy perspectives of UNESCO and the African Union. The discussion is organised around the three research questions: the perceived effectiveness of ChatGPT in supporting English Language Teaching and Learning (ELT/L) within Initial Language Teacher Education (ILTE); the challenges associated with its use; and the strategies required for sustainable, ethical, and pedagogically sound integration in Huíla, Angola. The central argument developed in this discussion is that ChatGPT can contribute to strengthening ILTE when it is used as a supervised pedagogical assistant, but its educational value depends on AI literacy, human judgement, ethical governance, and local adaptation.

#### 5.1. ChatGPT's Perceived Effectiveness in Supporting ELT/L Outcomes in ILTE

The first objective of the study was to examine the perceived effectiveness of

ChatGPT in enhancing ELT/L outcomes within ILTE in Huíla, Angola. Overall, participants rated ChatGPT positively, with an overall perceived effectiveness mean of 3.99 out of 5. This indicates that ChatGPT was generally perceived as moderately to highly effective. The highest-rated areas were learner autonomy and self-directed learning ( $M = 4.43$ ,  $SD = 1.43$ ), feedback on teaching practice ( $M = 4.39$ ,  $SD = 0.96$ ), and language proficiency development ( $M = 3.93$ ,  $SD = 1.39$ ). These results are broadly consistent with recent studies which suggest that generative AI can support lesson planning, writing development, feedback, resource development, language practice, and professional learning among trainee language teachers (Butler & Jiang, 2025; Huang et al., 2025; Kılıçkaya & Kic-Drgas, 2025; Korucu-Kış & Bakla, 2026).

A particularly important finding is that learner autonomy and self-directed learning received the highest mean score. This suggests that participants viewed ChatGPT as a tool that may enable trainee teachers to take greater responsibility for their own learning. In ELT, this is an important outcome because language development requires repeated practice, exposure, feedback, and self-regulation beyond formal classroom contact hours. In a context such as Huíla, where access to updated ELT resources may be limited, ChatGPT may provide immediate explanations, examples, model texts, vocabulary support, grammar clarification, and writing assistance. This finding is consistent with UNESCO's position that AI can expand learning opportunities when used in ways that are inclusive, ethical, and human-centred (UNESCO, 2021, 2023).

However, this finding should be interpreted cautiously. Learner autonomy should not be confused with unsupervised dependence on technology. As Huang et al. (2025) argue, effective GenAI use requires technical proficiency, critical evaluation, creative application, and ethical competence. Similarly, UNESCO's AI Competency Framework for Teachers emphasises that teachers require not only operational knowledge of AI, but also ethical, pedagogical, and human-centred competence (UNESCO, 2024). Thus, ChatGPT may support autonomy only when language teachers are able to question, verify, adapt, and justify AI-generated outputs. In this sense, autonomy must be supported by AI literacy and pedagogical judgement.

The high rating for feedback on teaching practice is also significant. Feedback is central to ILTE because trainee teachers are learning to connect theoretical knowledge with practical classroom decision-making. ChatGPT may support this process by helping trainees review lesson plans, identify possible classroom problems, generate alternative explanations, and reflect on teaching procedures. This aligns with Korucu-Kış and Bakla's (2026) finding that trainee EFL teachers used ChatGPT during practicum to address lesson planning and classroom concerns. It also resonates with Kılıçkaya and Kic-Drgas's (2025) study, which showed that GenAI can support practicum-based lesson study when it is embedded in cycles of planning, implementation, observation, and reflection.

Nevertheless, AI-generated feedback should not replace feedback from teacher trainers, host teachers, supervisors, mentors, or peers. From a sociocultural per-

spective, learning is mediated through interaction, dialogue, scaffolding, and guided participation (Vygotsky, 1978). This position is reinforced by Graciano's (2025) Angolan study on task-based language teaching, which demonstrated that language learning was strengthened through interaction, collaboration, and supported classroom practice. Graciano (2025: p. 474) notes that TBLT creates "low-anxiety, learner-centred environments" that encourage interaction and confidence-building. By implication, ChatGPT may be useful in ILTE when it prepares trainees for richer human dialogue, but not when it replaces collaborative professional learning.

The results also show that participants valued ChatGPT for language proficiency development. This is particularly relevant in EFL teacher education because trainee English teachers often need continuous support in grammar, vocabulary, pronunciation, spelling, academic writing, and fluency. The open-ended responses confirmed this pattern, as participants associated ChatGPT with grammar correction, vocabulary support, pronunciation guidance, proofreading, and general language development. This finding is consistent with Butler and Jiang (2025), who found that trainee language teachers often recognised ChatGPT's value for academic writing and language accuracy. In the Angolan context, where English is learned as a foreign language and opportunities for authentic English interaction may be limited, ChatGPT may provide additional language exposure and practice opportunities.

At the same time, the comparatively lower rating for resource development ( $M = 3.54$ ,  $SD = 1.40$ ) deserves careful consideration. Although participants rated ChatGPT positively in this area, it received the lowest mean score among the six effectiveness items. This may suggest that participants saw ChatGPT as useful for generating initial ideas, but were less confident in its ability to produce complete, classroom-ready teaching materials. This finding is consistent with the reviewed literature, which indicates that AI-generated materials often require revision, contextualisation, and pedagogical adaptation (Kılıçkaya & Kic-Drgas, 2025; Sukmadana & Halim, 2026). In ELT, materials need to match learners' proficiency levels, curriculum aims, cultural backgrounds, available resources, and communicative needs. Therefore, ChatGPT may be valuable as a materials co-design assistant, but it cannot replace the teacher's role as evaluator, adapter, and decision-maker.

Taken together, the findings for Research Question 1 suggest that ChatGPT has meaningful perceived potential in ILTE in Huíla. However, this potential is conditional rather than automatic. The results support the view that ChatGPT can strengthen teacher education when it is used to support autonomy, feedback, language development, lesson planning, and reflective practice. Yet, the findings also confirm the literature's caution that AI must be mediated by human judgement, pedagogical reasoning, and context-sensitive adaptation. In other words, ChatGPT may support professional learning, but it should not become a substitute for it.

## 5.2. Challenges of Using ChatGPT in ILTE

The second objective of the study was to identify the challenges associated with integrating ChatGPT into ILTE in Huíla. The most frequently reported challenges were resistance to change among educators (78.6%), ethical concerns (78.6%), lack of digital literacy (60.7%), limited internet access (57.1%), and the high cost of technology (53.6%). These findings are consistent with the reviewed literature and confirm that AI integration is not merely a technical issue; it is also pedagogical, ethical, institutional, and socio-economic.

The high level of resistance to change among educators is noteworthy. A possible explanation is that ChatGPT may be perceived by some educators as a threat to teacher authority, assessment validity, or traditional pedagogical roles. Teacher cognition theory provides a useful lens for interpreting this finding. Borg (2015: p. 384) defines teacher cognition as what teachers “think, know, believe, and do in relation to teaching”. These beliefs influence how teachers respond to innovation. If teacher educators associate ChatGPT mainly with plagiarism, superficial learning, or loss of professional control, resistance is likely. Conversely, if they understand it as a supervised tool for planning, feedback, adaptation, and reflection, they may be more willing to integrate it.

This finding also connects strongly with the literature on professional identity in AI-supported EFL teaching. Tümen Akyıldız (2026) suggests that AI may shift teachers’ roles from knowledge providers to pedagogical mediators. This shift is particularly important in ILTE because trainee teachers are still developing their professional identities. In Huíla, therefore, professional development should not only train teachers to use ChatGPT technically; it should also help teacher educators and trainees understand how AI changes the role of the English teacher. The teacher’s role should not be diminished, but redefined as that of a critical mediator, ethical guide, materials evaluator, and facilitator of learning.

Ethical concerns were also prominent in the findings. Participants identified risks such as plagiarism, cheating, misuse, data privacy, and irresponsible use. These concerns are strongly aligned with UNESCO’s warning that generative AI tools have developed faster than many education systems’ policies and regulations (UNESCO, 2023). UNESCO’s Recommendation on the Ethics of Artificial Intelligence also emphasises that AI should be guided by human rights, transparency, fairness, accountability, privacy, and respect for human dignity (UNESCO, 2021). The findings from Huíla therefore reflect a global issue: ChatGPT may support learning, but without clear ethical guidance it may also undermine academic integrity and professional training.

This issue is especially serious in ILTE. When trainee teachers use ChatGPT to complete assignments, reflective journals, lesson plans, or tests without understanding or engagement, the problem is not only academic dishonesty. It also affects the formation of professional competence. Trainees who depend on AI-generated answers may fail to develop independent lesson planning skills, academic writing ability, reflective thinking, and pedagogical reasoning. This concern ech-

oes [Butler and Jiang's \(2025\)](#) finding that trainee language teachers may recognise ChatGPT's usefulness as students but still struggle to use it as teacher-designers. Thus, the risk is not simply that trainees use ChatGPT, but that they use it without critical, ethical, or pedagogical control.

Another important finding is that both teacher trainers and trainee teachers reported low preparedness to train others in the use of ChatGPT. The Mann-Whitney U test showed no significant difference between the two groups, suggesting that limited readiness is a shared challenge. This finding is consistent with UNESCO's AI Competency Framework for Teachers, which states that many teachers lack clear guidance and training for AI use in education ([UNESCO, 2024](#): p. 24). It also supports [Huang et al.'s \(2025\)](#) argument that GenAI literacy should be explicitly taught rather than assumed. In practical terms, this means that teacher educators in Huíla cannot be expected to guide AI integration unless they themselves receive structured professional development.

From an African policy perspective, this finding is particularly important. The African Union's Digital Education Strategy and Implementation Plan emphasises teacher digital literacy, certification, infrastructure, digital content, and institutional capacity as key foundations for digital education transformation ([African Union, 2022](#)). Similarly, the Continental Artificial Intelligence Strategy stresses the need for AI capacity building, ethical governance, contextual relevance, and African agency ([African Union, 2024](#)). The present findings provide empirical support for these priorities. Without systematic capacity building, AI integration in Angolan ILTE may remain informal, uneven, and pedagogically weak.

The challenges of limited internet access and high cost of technology further highlight the importance of equity. [UNESCO \(2024\)](#) warns that AI is reshaping education unequally, as some learners and teachers have access to advanced AI tools while others remain digitally excluded. This concern is highly relevant to Huíla, Angola. If ChatGPT becomes part of teacher education without addressing connectivity, device access, and digital support, it may benefit more privileged trainees while excluding others. In this respect, AI integration may reproduce the same inequalities it claims to reduce.

Overall, the findings for Research Question 2 show that the barriers to ChatGPT integration are multidimensional. They include resistance to change, ethical uncertainty, limited AI literacy, weak institutional readiness, digital inequality, and affordability constraints. These findings confirm the central conclusion of the literature review: ChatGPT should not be introduced casually or informally into ILTE. Rather, it requires training, policy, supervision, assessment redesign, and infrastructure. In Huíla, these challenges should be seen not only as obstacles, but also as opportunities to develop a more critical, ethical, and context-sensitive model of AI-supported teacher education.

### 5.3. Strategies for Optimising ChatGPT Use in ILTE

The third objective of the study was to identify strategies for optimising ChatGPT

use in ILTE. Participants strongly supported classroom-based examples (100.0%), practical training and workshops (92.9%), ethical guidance (71.4%), and institutional policies (57.1%). These findings are highly consistent with the reviewed literature and with UNESCO and African Union policy frameworks. They suggest that participants do not favour uncontrolled AI adoption; rather, they support a guided, practical, and ethically regulated model.

The strongest recommendation was for examples of classroom activities and teaching tasks supported by ChatGPT. All respondents selected this option. This finding is significant because it shows that participants need concrete pedagogical models, not only theoretical discussions about AI. In ILTE, trainee teachers need to see how ChatGPT can support grammar lessons, vocabulary teaching, reading tasks, writing prompts, speaking practice, pronunciation activities, assessment design, and reflective teaching. This aligns with Kılıçkaya and Kic-Drgas (2025), who found that GenAI can support lesson planning and practicum-based reflection when used within a structured lesson study framework. It also aligns with Korucu-Kış and Bakla (2026), who showed that ChatGPT use during practicum becomes more valuable when trainees engage in deeper questioning and reflective evaluation.

A useful implication is that ChatGPT should be integrated into task-based and reflective teacher education activities. For example, trainee teachers could generate a lesson plan with ChatGPT and then compare it with ELT principles, curriculum objectives, learner needs, and local classroom realities. They could also use ChatGPT to draft role-plays, problem-solving tasks, or communicative activities, and then revise these outputs through peer feedback and trainer supervision. This connection is supported by Graciano's (2025) Angolan TBLT study, in which role-plays, group discussions, problem-solving, and creative tasks improved learners' speaking performance and confidence. Graciano (2025: p. 475) argues that in TBLT "the teacher's role shifts to that of a facilitator". In AI-supported ILTE, a similar principle applies: ChatGPT may generate possible tasks, but teacher educators and trainees must facilitate, evaluate, and adapt them.

The strong support for practical training in lesson planning and materials development also reflects a core need in teacher education. Lesson planning is a central professional competence, yet it is often challenging for novice teachers. ChatGPT can suggest learning objectives, procedures, interaction patterns, anticipated problems, teaching stages, and assessment tasks. However, as Sukmadana & Halim (2026) and Kılıçkaya and Kic-Drgas (2025) indicate, AI-generated plans may be generic, repetitive, culturally distant, or insufficiently aligned with learners' needs. Therefore, training should not focus only on how to generate materials; it should focus equally on how to evaluate, improve, and contextualise them.

The recommendation for workshops and seminars further supports the need for institutional capacity building. UNESCO (2024) argues that teachers need competence in AI foundations, ethics, AI pedagogy, and AI-supported professional learning. Workshops in Huíla could therefore focus on prompt design, AI

output evaluation, plagiarism prevention, data privacy, cultural adaptation, lesson planning, and AI-supported assessment. Such training should involve both trainee teachers and teacher educators, since the findings show limited preparedness across both groups.

Ethical guidance and institutional policies were also strongly supported. This finding is important because it suggests that participants recognise the need for professional rules and boundaries. [UNESCO \(2023\)](#) recommends that educational institutions should assess the ethical and pedagogical appropriateness of generative AI tools before adopting them. Similarly, the African Union's Continental Artificial Intelligence Strategy highlights ethics, inclusion, risk management, human rights, and contextual relevance as central principles for AI development in Africa ([African Union, 2024](#)). For ILTE in Huíla, institutional guidelines should clarify acceptable and unacceptable uses of ChatGPT, rules for acknowledging AI assistance, assessment procedures, data protection, and consequences for misuse.

The finding that most participants rejected the idea that AI could replace human teachers is also important. This supports the human-centred approach advocated by UNESCO and the African Union. In ELT, teaching involves more than producing correct language forms or lesson materials. It involves classroom interaction, emotional support, cultural sensitivity, feedback, motivation, ethical responsibility, and professional judgement. ChatGPT may generate examples, but it cannot fully understand learners' histories, classroom relationships, institutional constraints, or Angolan educational realities. Therefore, the findings support a human-AI collaborative model in which ChatGPT supports teachers, but teachers remain responsible for pedagogical decisions.

The group comparisons add further depth to this discussion. Teacher trainers were significantly more likely than trainee teachers to emphasise local and cultural relevance, privacy and data protection, and reduced critical thinking. This may reflect trainers' greater awareness of institutional responsibility and pedagogical risk. The concern with local relevance is particularly important in an African context. [The African Union \(2024\)](#) stresses that AI in Africa should be grounded in African values, cultural realities, and development priorities. In ELT, this means that ChatGPT-generated materials should not reproduce foreign assumptions uncritically. Dialogues, reading texts, classroom examples, and communicative tasks should be adapted to Angolan learners' experiences, local topics, available resources, and curriculum expectations.

The trainers' stronger concern about reduced critical thinking is also consistent with UNESCO's warnings about the possible weakening of human agency in AI-supported education ([UNESCO, 2023, 2024](#)). In ILTE, critical thinking is not optional; it is central to teacher training. Trainee teachers must learn to analyse learner needs, justify methodological choices, design appropriate tasks, evaluate resources, and reflect on learning outcomes. For this reason, after Teaching Practice sessions trainee teachers have feedback with the host teacher (host institution) and supervisor (trainer) in which the strong points and points to improve are dis-

cussed and the trainee should be able to account for his/her methodological choices and acknowledge areas for improvements. If ChatGPT encourages copying and pasting, it may weaken professional learning. If, however, it is used to stimulate comparison, questioning, revision, and justification, it may strengthen pedagogical reasoning. If ChatGPT encourages copying and pasting, it may weaken professional learning. If, however, it is used to stimulate comparison, questioning, revision, and justification, it may strengthen pedagogical reasoning.

Taken together, the findings for Research Question 3 suggest that sustainable ChatGPT integration in Huíla requires a structured model based on practical training, ethical guidance, institutional policy, local adaptation, and human supervision. This finding strongly supports the conclusions of the literature review. ChatGPT should not replace teacher educators, practicum supervisors, peer collaboration, or classroom experience. Instead, it should support these elements by helping trainees generate, evaluate, adapt, and reflect on ELT practices.

When the three objectives are considered together, a coherent pattern emerges. The first objective showed that participants perceived ChatGPT as effective in supporting learner autonomy, feedback, language proficiency, lesson planning, collaboration, and resource development. This finding supports the global ILTE literature, which presents generative AI as a promising tool for trainee language teacher education (Butler & Jiang, 2025; Huang et al., 2025; Kılıçkaya & Kic-Drgas, 2025).

The second objective showed that this potential is limited by serious challenges, including resistance to change, ethical concerns, limited AI literacy, weak preparedness, limited internet access, and cost. These findings reinforce UNESCO's argument that AI integration requires ethical governance, teacher competence, transparency, and protection of human agency (UNESCO, 2021, 2023, 2024). They also support the African Union's emphasis on digital infrastructure, teacher development, African contextual relevance, and inclusive digital transformation (African Union, 2022, 2024; Major, 2023).

The third objective showed that participants preferred a structured model of integration based on classroom examples, practical training, workshops, ethical guidance, institutional policies, local adaptation, and human oversight. This finding may be considered one of the most important contributions of the study. It shows that participants did not simply call for more access to ChatGPT; rather, they called for pedagogically guided access. This distinction is important because it moves the debate from technological adoption to continuous professional development.

In this respect, the study contributes to the literature in three ways. Firstly, it adds evidence from an underrepresented African and Lusophone context. Secondly, it shows that trainee teachers and trainers in Huíla recognise both the affordances and risks of ChatGPT. Thirdly, it suggests that responsible AI integration in ILTE requires a balance between innovation and regulation, autonomy and supervision, efficiency and reflection, and global technology and local relevance.

#### 5.4. Implications for ELT and Initial Language Teacher Education in Huíla

The findings have important implications for ELT and ILTE in Huíla. Firstly, ChatGPT should be integrated into English teacher education as a tool for guided professional learning. It can support lesson planning, materials development, academic writing, microteaching, feedback, and practicum reflection. However, these uses should be linked to clear learning outcomes and supervised by teacher educators.

Secondly, AI literacy should become a core component of ILTE. Trainee teachers need to learn not only how to use ChatGPT, but also how to evaluate it. This includes prompt design, checking factual accuracy, identifying bias, adapting materials, acknowledging AI use, protecting privacy, and understanding ethical risks. This implication is directly aligned with UNESCO's AI competency framework for teachers (UNESCO, 2024).

Thirdly, assessment practices need to be redesigned. Since ChatGPT can generate written assignments and lesson plans, institutions should include process-based and performance-based assessment methods. These may include oral defence of lesson plans, in-class writing, Teaching Practice (TP), reflective portfolios, peer feedback, AI-use declarations, and microteaching tasks. Such approaches can help ensure that assessment captures trainees' thinking processes, not only their final written products.

Fourthly, teacher educators require professional development. The finding that both trainers and trainees reported limited preparedness suggests that trainers also need structured AI training. If teacher educators are expected to guide trainees in responsible AI use, they must first develop their own AI literacy, ethical awareness, and pedagogical strategies.

Finally, institutional policies are necessary. Teacher education institutions in Huíla should develop clear guidelines on acceptable and unacceptable uses of ChatGPT. These guidelines should promote innovation while protecting academic integrity, learner privacy, teacher agency, and professional learning. Such policies should also encourage local adaptation so that ChatGPT-supported materials reflect Angolan curricula, classroom realities, and learner experiences.

Overall, the discussion indicates that ChatGPT has meaningful potential to support Initial Language Teacher Education in Huíla, Angola, particularly in learner autonomy, feedback, language proficiency development, lesson planning, and reflective practice. These findings are consistent with global research on generative AI in language teacher education and with UNESCO's view that AI may support educational innovation when guided by human-centred principles. However, the study also shows that ChatGPT integration is constrained by ethical concerns, resistance to change, limited readiness, digital inequality, cost, and infrastructural limitations.

The main contribution of this study lies in its balanced and context-sensitive perspective. It neither rejects ChatGPT as a threat nor celebrates it as a solution. Rather, it positions ChatGPT as a supervised pedagogical assistant whose value

depends on teacher agency, AI literacy, ethical governance, local adaptation, and institutional support. In line with UNESCO and African Union perspectives, ChatGPT should be used to strengthen, not weaken, the teaching profession. For ILTE in Huíla, this means preparing future English language teachers to become critical, ethical, reflective, and contextually responsive users of AI.

### 5.5. Directions for Future Research

In light of the findings of this study, at least three directions for future research include:

#### 1) Longitudinal studies on ChatGPT use during teacher training and practicum

Future research should follow trainee English language teachers over a semester or academic year to examine how ChatGPT affects lesson planning, AI literacy, reflective practice, language proficiency, and classroom decision-making over time.

#### 2) Classroom-based studies on actual ChatGPT use in ELT

Future studies should move beyond perceptions and analyse real teaching practices, including AI-supported lesson plans, microteaching, practicum observations, teaching portfolios, and classroom materials, to determine whether ChatGPT improves ELT pedagogy in practice.

#### 3) Research on ethical assessment and institutional policy for AI in ILTE

Further research should investigate how teacher education institutions in Angola can redesign assessment, prevent plagiarism, protect learner data, and develop clear guidelines for responsible ChatGPT use in Initial Language Teacher Education.

Open-ended responses complemented these findings. The most frequently coded themes were low-cost pedagogical support (96.4%), generation of teaching materials (92.9%), language support (89.3%), time efficiency (75.0%), professional development (71.4%), resource adaptation (64.3%), and research support (53.6%).

### Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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## Appendix 1: Questionnaire for Teacher Trainers

**Title: Artificial Intelligence in Initial Language Teacher Education: Strengthening the Teaching Profession through ChatGPT in Huíla, Angola**

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Dear trainer,

This questionnaire aims to gather your views on the potential of ChatGPT to support **Artificial Intelligence in Initial Language Teacher Education: Strengthening the Teaching Profession through ChatGPT in Huíla, Angola**. Your responses will help identify the perceived effectiveness, challenges, and strategies for integrating ChatGPT into English teacher training programmes.

Participation is voluntary. You may stop answering the questionnaire at any time. No personal identifying information will be collected. Your responses will remain confidential and will be used solely for academic research purposes. By completing this questionnaire, you confirm that you have understood the purpose of the study and agree to participate voluntarily.

If you have not used ChatGPT before, please answer the perception-based questions according to your current knowledge, expectations, or what you have heard about the tool.

Yours faithfully,

**Joaquim Chipalanga Graciano**

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### SECTION 1: DEMOGRAPHIC INFORMATION AND PRIOR CHATGPT USE

**1. What is your age group? Please tick (✓) one option.**

- a) 8 - 25
- b) 26 - 35
- c) 36 - 45
- d) 46+

**2. What is your gender? Please tick (✓) one option.**

- a) Male
- b) Female
- c) Prefer not to say.

**3. What is your highest level of education? Please tick (✓) one option.**

- a) Bachelor's degree
- b) Master's degree
- c) PhD
- d) Other: \_\_\_\_\_

**4. At which secondary teacher training institution do you currently work? Please tick (✓) one option.**

- a) Escola de Magistério n.º 135 “Comandante Liberdade”—Lubango
- b) Escola de Magistério n.º 1251 “Ndjambelwa Kateine”—Humpata
- c) Escola de Magistério n.º 1842 “Abel Pedro”—Caluquembe

**5. How many years of experience do you have in teacher training? Please**

**tick (✓) one option.**

- a) Less than 2 years
- b) 2 - 5 years
- c) 6 - 10 years
- d) More than 10 years

**6. Have you used ChatGPT or similar AI tools before? Please tick (✓) one option.**

- a) Yes
- b) No

## **SECTION 2: PERCEIVED EFFECTIVENESS OF CHATGPT IN ILTE**

**7. How effective do you think ChatGPT could be in supporting the following areas of Initial Language Teacher Education? Please circle one number for each item.**

Scale:

1 = Not effective    2 = Slightly effective    3 = Moderately effective    4 = Very effective    5 = Highly effective

| Area                                                                                         | 1 | 2 | 3 | 4 | 5 |
|----------------------------------------------------------------------------------------------|---|---|---|---|---|
| a. Lesson planning                                                                           | 1 | 2 | 3 | 4 | 5 |
| b. Resource development and materials design                                                 | 1 | 2 | 3 | 4 | 5 |
| c. Language proficiency development, such as grammar, vocabulary, pronunciation, and writing | 1 | 2 | 3 | 4 | 5 |
| d. Providing feedback on trainees' teaching practice                                         | 1 | 2 | 3 | 4 | 5 |
| e. Enhancing learner autonomy and self-directed learning                                     | 1 | 2 | 3 | 4 | 5 |
| f. Facilitating collaborative learning among trainee teachers                                | 1 | 2 | 3 | 4 | 5 |

**8. In your opinion, how could ChatGPT improve the quality of ELT/L in Huíla, Angola?**

You may refer to lesson planning, language proficiency, teaching materials, feedback, assessment, learner autonomy, classroom practice, or teacher professional development.

**9. What specific skills or knowledge do you think ChatGPT could help trainee teachers develop? Please tick (✓) all that apply.**

- a) Pedagogical skills
- b) Language proficiency
- c) Digital literacy
- d) Critical thinking
- e) Academic writing
- f) Reflective practice
- g) Materials development
- h) Other: \_\_\_\_\_

**10. How likely are you to recommend the use of ChatGPT to your trainees? Please circle one number.**

1 = Very unlikely    2 = Unlikely    3 = Neutral    4 = Likely    5 = Very likely

1    2    3    4    5

### SECTION 3: CHALLENGES OF USING CHATGPT IN ILTE

**11. What challenges do you foresee in integrating ChatGPT into Initial Language Teacher Education in Huíla, Angola? Please tick (✓) all that apply.**

- a) Limited internet access
- b) Lack of digital literacy among trainers and/or trainee teachers
- c) High cost of technology
- d) Resistance to change among educators
- e) Ethical concerns, such as plagiarism and data privacy
- f) Inaccurate or unreliable AI-generated information
- g) Over-reliance on AI-generated content
- h) Lack of institutional policies or guidelines
- i) Limited access to digital devices

Other: \_\_\_\_\_

**12. How prepared do you feel to train others on using ChatGPT in ILTE? Please circle one number.**

Scale:

1 = Not prepared    2 = Slightly prepared    3 = Moderately prepared    4 = Very prepared    5 = Completely prepared

1    2    3    4    5

### SECTION 4: SUPPORT NEEDS AND STRATEGIES FOR ETHICAL INTEGRATION

**13. What training or support would you personally need to integrate ChatGPT effectively into ILTE? Please tick (✓) all that apply.**

- a) Workshops or seminars on artificial intelligence and ChatGPT
- b) Access to reliable internet connectivity and appropriate digital devices
- c) Guidance on the ethical use of artificial intelligence in education
- d) Peer support and collaborative learning opportunities
- e) Practical training on using ChatGPT for lesson planning and materials development
- f) Training on how to verify, evaluate, and reference AI-generated information
- g) Examples of classroom activities and teaching tasks supported by ChatGPT
- h) Institutional policies or guidelines on the use of artificial intelligence in teacher education
- i) Continuous technical support and follow-up assistance
- j) Other: \_\_\_\_\_

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**14. What institutional strategies would you recommend for integrating ChatGPT into Initial Language Teacher Education in Huíla, Angola?**

You may refer to teacher training, assessment, ethics, infrastructure, policy, classroom use, or local adaptation of materials.

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**15. To what extent do you agree with the following statement: “ChatGPT could replace human trainers in Initial Language Teacher Education.” Please circle one number.**

1 = Strongly disagree    2 = Disagree    3 = Not sure    4 = Agree    5 = Strongly agree

**1    2    3    4    5**

**16. Please briefly explain your answer to TT15.**

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**17. What ethical concerns do you have about using ChatGPT in education?**

You may refer to plagiarism, cheating, data privacy, bias, misinformation, over-reliance, or learner protection.

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**SECTION 5: ADDITIONAL COMMENTS**

**18. Do you have any additional comments or suggestions regarding the use of ChatGPT in your training programme?**

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Thank you for your valuable input.

## Appendix 2: Questionnaire for Trainees

**Title: Artificial Intelligence in Initial Language Teacher Education: Strengthening the Teaching Profession through ChatGPT in Huíla, Angola**

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Dear trainee,

This questionnaire aims to gather your views on the potential of ChatGPT to support **Artificial Intelligence in Initial Language Teacher Education: Strengthening the Teaching Profession through ChatGPT in Huíla, Angola**. Your responses will help identify the perceived effectiveness, challenges, and strategies for integrating ChatGPT into English teacher training programmes.

Participation is voluntary. You may stop answering the questionnaire at any time. No personal identifying information will be collected. Your responses will remain confidential and will be used solely for academic research purposes. By completing this questionnaire, you confirm that you have understood the purpose of the study and agree to participate voluntarily.

If you have not used ChatGPT before, please answer the perception-based questions according to your current knowledge, expectations, or what you have heard about the tool.

Yours faithfully,

**Joaquim Chipalanga Graciano**

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### SECTION 1: DEMOGRAPHIC INFORMATION AND PRIOR CHATGPT USE

**1. What is your age group? Please tick (✓) one option.**

- a) 15 - 19
- b) 20 - 24
- c) 25 - 29
- d) 30+

**2. What is your gender? Please tick (✓) one option.**

- a) Male
- b) Female
- c) Prefer not to say

**3. At which secondary teacher training institution do you currently study?**

**Please tick (✓) one option.**

- a) Escola de Magistério n.º 135 “Comandante Liberdade”—Lubango
- b) Escola de Magistério n.º 1251 “Ndjambelwa Kateine”—Humpata
- c) Escola de Magistério n.º 1842 “Abel Pedro”—Caluquembe

**4. What is your current grade? Please tick (✓) one option.**

- a) Grade 10
- b) Grade 11
- c) Grade 12
- d) Grade 13

**5. Have you used ChatGPT or similar AI tools before? Please tick (✓) one option.**

a) Yes

b) No

**SECTION 2: PERCEIVED EFFECTIVENESS OF CHATGPT IN ILTE**

**6. How effective do you think ChatGPT could be in supporting the following areas of your training as a future English teacher? Please circle one number for each item.**

Scale: 1 = Not effective    2 = Slightly effective    3 = Moderately effective    4 = Very effective    5 = Highly effective

| Area                                                                                         | 1 | 2 | 3 | 4 | 5 |
|----------------------------------------------------------------------------------------------|---|---|---|---|---|
| a. Lesson planning                                                                           | 1 | 2 | 3 | 4 | 5 |
| b. Resource development and materials design                                                 | 1 | 2 | 3 | 4 | 5 |
| c. Language proficiency development, such as grammar, vocabulary, pronunciation, and writing | 1 | 2 | 3 | 4 | 5 |
| d. Receiving feedback on teaching practice                                                   | 1 | 2 | 3 | 4 | 5 |
| e. Enhancing learner autonomy and self-directed learning                                     | 1 | 2 | 3 | 4 | 5 |
| f. Facilitating collaborative learning with peers                                            | 1 | 2 | 3 | 4 | 5 |

**7. In your opinion, how could ChatGPT improve your preparation as an English language teacher?**

You may refer to lesson planning, language proficiency, teaching materials, feedback, assessment, learner autonomy, classroom practice, or practicum preparation.

**8. What specific skills or knowledge do you think ChatGPT could help you develop? Please tick (✓) all that apply.**

a) Pedagogical skills

b) Language proficiency

c) Digital literacy

d) Critical thinking

e) Academic writing

f) Reflective practice

g) Materials development

h) Other: \_\_\_\_\_

**9. How likely are you to use ChatGPT in your teaching practice after completing your training? Please circle one number.**

1 = Very unlikely    2 = Unlikely    3 = Neutral    4 = Likely    5 = Very likely

1    2    3    4    5

**SECTION 3: CHALLENGES OF USING CHATGPT IN ILTE**

**10. What challenges do you foresee in using ChatGPT as part of your train-**

ing? Please tick (✓) all that apply.

- a) Limited internet access
- b) Lack of digital literacy
- c) High cost of technology
- d) Resistance to change among educators
- e) Ethical concerns, such as plagiarism and data privacy
- f) Inaccurate or unreliable AI-generated information
- g) Over-reliance on AI-generated content
- h) Lack of institutional policies or guidelines
- i) Limited access to digital devices
- j) Other: \_\_\_\_\_

**11. How prepared do you feel to use ChatGPT in your training? Please circle one number.**

Scale:

- 1 = Not prepared
  - 2 = Slightly prepared
  - 3 = Moderately prepared
  - 4 = Very prepared
  - 5 = Completely prepared
- 1    2    3    4    5**

#### **SECTION 4: SUPPORT NEEDS AND STRATEGIES FOR ETHICAL INTEGRATION**

**12. What training or support would you personally need in order to use ChatGPT effectively in your teacher training programme? Please tick (✓) all that apply.**

- a) Workshops or seminars on artificial intelligence and ChatGPT
- b) Access to reliable internet connectivity and appropriate digital devices
- c) Guidance on the ethical use of artificial intelligence in education
- d) Peer support and collaborative learning opportunities
- e) Practical training on using ChatGPT for lesson planning and materials development
- f) Training on how to verify, evaluate, and reference AI-generated information
- g) Examples of classroom activities and teaching tasks supported by ChatGPT
- h) Institutional policies or guidelines on the use of artificial intelligence in teacher education
- i) Continuous technical support and follow-up assistance
- j) Other: \_\_\_\_\_

**13. What institutional strategies would you recommend for integrating ChatGPT into your teacher training programme?**

You may refer to teacher training, assessment, ethics, infrastructure, policy, classroom use, or local adaptation of materials.

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14. To what extent do you agree with the following statement: “ChatGPT could replace human trainers in Initial Language Teacher Education.” Please circle one number.

1 = Strongly disagree    2 = Disagree    3 = Not sure    4 = Agree    5 = Strongly agree

1    2    3    4    5

15. Please briefly explain your answer.

16. What ethical concerns do you have about using ChatGPT in education?

You may refer to plagiarism, cheating, data privacy, bias, misinformation, over-reliance, or learner protection.

#### SECTION 5: ADDITIONAL COMMENTS

17. Do you have any additional comments or suggestions regarding the use of ChatGPT in your training programme?

Thank you for your valuable input.

#### Questionnaire Development Notes

The above questionnaires were developed for the present study but were informed by previous research on ChatGPT and GenAI in language teacher education. In particular, items on perceived effectiveness, lesson planning, feedback, and practicum support were informed by studies on trainee teachers’ use of ChatGPT in lesson planning and practicum contexts (Korucu-Kış & Bakla, 2026; Lee & Zhai, 2024). Items related to AI literacy, prompt design, critical evaluation, creative application, and ethical competence were informed by GenAI literacy research and UNESCO’s AI competency framework for teachers (Huang et al., 2025; UNESCO, 2024). Items on ethical concerns, academic integrity, accuracy, and over-reliance were informed by studies and reviews highlighting both the affordances and risks of ChatGPT in language teaching and teacher education (Kohnke et al., 2023; Pettersson et al., 2024).