



THE IMPORTANCE OF NEEDS ANALYSIS IN AI-SUPPORTED EFL EDUCATION

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Abstract

This article discusses the importance of needs analysis in AI-supported EFL education. It argues that the integration of artificial intelligence into English language teaching should begin with identifying the real needs of teachers and learners. Based on recent studies, the article shows that EFL teachers and pre-service teachers generally have positive attitudes toward AI, but they still need practical training, ethical guidance, and stronger digital competence. Needs analysis helps institutions design relevant curricula, choose appropriate AI tools, and avoid superficial innovation.

Keywords: Needs analysis, EFL teaching, artificial intelligence, teacher readiness, curriculum design, AI tools, language education.

Introduction

Needs analysis is one of the most important stages in language education because it helps teachers, curriculum designers, and institutions make decisions based on real educational needs rather than assumptions. In English as a Foreign Language (EFL) teaching, learners and teachers often work in different contexts, with different goals, levels of digital literacy, institutional expectations, and professional challenges. For this reason, a language course cannot be effective if it is planned only around a textbook, a general syllabus, or a fashionable teaching method. It should begin with a careful study of what learners need to achieve, what they already know, what they lack, and what kind of support teachers need in order to organize effective instruction.

Needs analysis has traditionally been connected with English for Specific Purposes (ESP), where the main task is to identify learners' target needs and

learning needs. Hutchinson and Waters (1987) explain that target needs include what learners need to do in a target situation, while learning needs refer to what they need in order to learn effectively. This distinction is still highly relevant today, especially in the context of artificial intelligence (AI) in EFL education. AI tools are now used for lesson planning, material creation, writing support, feedback, translation, assessment, and personalized learning. However, their use does not automatically improve teaching. AI can be useful only when teachers understand why they use it, how it fits the learning objectives, and what risks it may create.

The two studies by Pokrivcakova (2023) and Stevkovska (2025) show why needs analysis is necessary before integrating AI into EFL teaching and teacher training. Pokrivcakova (2023) found that pre-service EFL teachers generally had positive expectations about AI, but many of them lacked sufficient knowledge of its basic principles and limitations. Stevkovska (2025), in turn, showed that practicing EFL teachers saw AI tools as useful for preparing teaching materials, but they were also concerned about academic integrity, data privacy, students' dependence on technology, and the possible reduction of creativity. These findings suggest that AI integration should not begin with the question "Which tool should we use?" but with a more serious question: "What do teachers and learners actually need in this context?"

Needs Analysis as a Foundation for Course Design

Needs analysis provides a foundation for systematic course design. Brown (1995) argues that curriculum development should be based on collected information about learners, objectives, materials, teaching procedures, and evaluation. In other words, a good curriculum is not built randomly. It is created through a process of gathering, interpreting, and applying information. This is especially important in EFL contexts, where learners may study English for academic purposes, professional communication, exams, travel, digital communication, or general development. Without needs analysis, a course may become too broad, too abstract, or disconnected from real communicative situations.

Long (2005) also emphasizes that needs analysis should be connected to real-world language use. This means that teachers should investigate the actual tasks learners need to perform in English. For example, university students may need to read academic articles, write summaries, prepare presentations, participate in

discussions, or use English-language digital resources. Future teachers may need to design lesson plans, explain grammar, give feedback, manage classroom interaction, and evaluate students' work. If these needs are not studied, the course may focus on content that looks useful in theory but does not help learners in practice.

In AI-supported EFL education, the same principle applies. Teachers and students do not need AI in general; they need specific forms of support. A teacher may need AI for creating differentiated reading tasks, adapting texts to different proficiency levels, preparing vocabulary exercises, generating discussion questions, or checking the clarity of instructions. Students may need AI for practicing writing, improving pronunciation, receiving feedback, or developing learning autonomy. However, these needs must be identified before AI tools are included in the curriculum. Otherwise, AI becomes a decorative addition rather than a meaningful pedagogical instrument.

Needs Analysis and Teacher Readiness

One of the strongest arguments for needs analysis is connected with teacher readiness. Pokrivcakova (2023) shows that many pre-service EFL teachers had a positive attitude toward AI, but their knowledge was not strong enough. This is an important finding because a positive attitude alone is not sufficient for effective classroom use. Teachers may be interested in AI, but still lack the ability to evaluate AI-generated content, recognize errors, protect students' data, or design pedagogically sound AI-based tasks.

This is where needs analysis becomes practical. It helps teacher educators identify the exact gaps in teachers' knowledge and skills. For example, a needs analysis may show that future teachers need training in prompt writing, AI-assisted lesson planning, critical evaluation of AI responses, ethical use of student data, or ways to prevent plagiarism. It may also reveal that teachers are not against AI, but they need clear examples of how AI can support traditional teaching rather than replace it.

Stevkovska (2025) also points to the importance of professional development. Her study indicates that some teachers use AI tools for preparing materials, but many remain cautious because of ethical and pedagogical concerns. These concerns should not be ignored. They are part of teachers' real needs. If institutions introduce AI without addressing teachers' doubts, the result may be

resistance, superficial use, or misuse. A well-planned needs analysis allows institutions to understand teachers' concerns before designing training programs. As a result, professional development becomes more focused and more useful.

Needs Analysis and Ethical Use of AI

The ethical dimension of AI is another reason why needs analysis is important. AI tools can produce texts, correct grammar, generate lesson materials, translate, summarize, and even simulate communication. These functions are useful, but they also create problems. Students may become overdependent on AI. They may submit AI-generated work as their own. Teachers may use AI-generated materials without checking accuracy or cultural appropriateness. Sensitive student data may also be entered into platforms without proper understanding of privacy risks. Stevkovska (2025) highlights academic integrity and data privacy as major concerns for teachers. This shows that AI-related needs are not only technical. They are also ethical. Teachers need to know not only how to use AI tools, but also when not to use them. They need clear institutional rules, examples of acceptable AI use, and strategies for teaching students responsible digital behavior.

Needs analysis can help identify the ethical issues that are most relevant in a particular educational setting. In one context, the main concern may be plagiarism. In another, it may be unequal access to technology. In another, it may be teachers' lack of confidence in checking AI-generated content. These problems require different solutions. A general AI policy copied from another institution may not work. Needs analysis helps create local, context-sensitive guidelines.

Needs Analysis and Learner-Centered Teaching

Needs analysis is also important because it supports learner-centered teaching. Hutchinson and Waters (1987) argue that learning needs are as important as target needs. This means that teachers should not focus only on final outcomes. They should also consider learners' motivation, background knowledge, learning strategies, difficulties, and preferences. In EFL classrooms, learners may have different levels of English, different access to technology, and different levels of confidence in using digital tools.

AI can support learner-centered teaching by helping teachers personalize materials and feedback. For example, AI can help simplify a text for weaker



learners, create extra practice for students who need revision, or generate more challenging tasks for advanced learners. Pokrivcakova (2023) notes that AI-powered tools can contribute to personalization and more accessible education. However, personalization should not be automatic. It should be guided by pedagogical aims and based on real learner needs.

A needs analysis can show which learners need additional support and in what form. Some students may need vocabulary development. Others may need speaking practice, writing feedback, grammar revision, or academic reading skills. AI can then be used as a tool to respond to these needs. In this sense, needs analysis prevents technology from controlling the learning process. Instead, pedagogy remains the main guide, and technology serves the learning goals.

Needs Analysis as Protection Against Superficial Innovation

Educational institutions often introduce new technologies because they want to appear modern. However, innovation without needs analysis can become superficial. A school or university may announce AI integration, but teachers may not know how to use the tools. Students may use AI only for copying answers. The curriculum may mention AI, but not explain its role in learning. In such cases, technology does not improve education; it only creates confusion.

Brown (1995) stresses the importance of systematic planning in curriculum development. This idea is especially relevant now, because AI tools are developing quickly and institutions may feel pressure to respond immediately. However, fast adoption is not the same as meaningful adoption. Needs analysis slows the process down in a productive way. It forces institutions to ask basic but necessary questions: What problem are we trying to solve? Who needs training? Which skills are missing? What risks should be prevented? How will success be measured?

Long (2005) also reminds us that needs analysis should be based on evidence. This is important because assumptions about teachers and learners are often inaccurate. Administrators may assume that young teachers are naturally good at AI. Teachers may assume that students know how to use AI responsibly. Students may assume that AI answers are always correct. Needs analysis helps test these assumptions and replace them with real data.

Practical Implications

The practical value of needs analysis in AI-supported EFL education can be seen in several areas. First, it helps design teacher training programs. Instead of offering general workshops about AI, institutions can organize training based on actual teacher needs: lesson planning, assessment, feedback, ethics, classroom activities, or student guidance.

Second, needs analysis helps curriculum designers decide where AI should be included. AI may be useful in methodology courses, academic writing, ESP, assessment, materials development, and teaching practicum. However, it should be integrated with clear outcomes. For example, pre-service teachers may learn how to create AI-supported lesson materials and then critically evaluate them.

Third, needs analysis helps teachers choose suitable tools. Not every AI tool is appropriate for every class. Some tools may be useful for writing practice, while others are better for vocabulary, speaking, pronunciation, or visual material design. The choice should depend on learners' goals, age, proficiency level, access to technology, and institutional rules.

Finally, needs analysis helps evaluate the results of AI integration. After AI tools are introduced, institutions should check whether they actually improve teaching and learning. Do teachers save time? Do students become more independent? Does feedback improve? Are ethical problems reduced? These questions connect needs analysis with ongoing evaluation.

Conclusion

Needs analysis is important because it makes EFL education more realistic, focused, and responsible. It helps teachers and institutions understand what learners need, what teachers are ready for, and what kind of support is required. In the context of AI-supported EFL education, its role becomes even more significant. AI tools can support teaching, personalize learning, and reduce workload, but they can also create ethical, pedagogical, and practical problems if they are introduced without preparation.

The studies by Pokrivcakova (2023) and Stevkovska (2025) clearly show that teachers and future teachers are not simply rejecting AI. Many of them see its potential. At the same time, they need more knowledge, practical training, ethical guidance, and institutional support. Therefore, needs analysis should be the first

step before AI is integrated into EFL curricula. It helps move from blind adoption to meaningful use. In language education, this difference matters.

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