

EVALUATING AND ADAPTING AI-GENERATED MATERIALS IN ENGLISH LANGUAGE TEACHING: PEDAGOGICAL AND LINGUISTIC CONSIDERATIONS**Tamta Mshvidobadze**

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Abstract.

This paper focuses on the usage of the Evaluation and Adaptation Framework in learner-centered classrooms. Implementing AI in the classrooms and in the learning and teaching process necessitates significant changes to the teaching approach in modern language departments. Educators have to consider the Evaluation and Adaptation Framework to evaluate and adapt AI-generated content and materials to the requirements of the students during the learning process. Evaluating and adapting materials to students' needs, culture, and interests, considering many steps from the framework indicated below, may be a challenge for educators. The purpose of this research was to identify whether educators evaluate AI-generated materials and adapt the materials after the evaluation, and whether several steps are taken into consideration while evaluating and adapting the materials. To achieve desired learning results, the educators need to take into consideration all framework steps indicated in the frameworks and teaching approaches to evaluate and adapt effective materials and enhance the learning and teaching processes. The questionnaire was used to collect data from educators abroad from different universities and teachers from four universities in Georgia. The study found that teachers needed to change the materials, and when resources are created with Evaluation and Adaptation Frameworks in mind, the learning process is successful.

Keywords: ELT materials, evaluation, adaptation, frameworks, pedagogy, linguistics.

Introduction

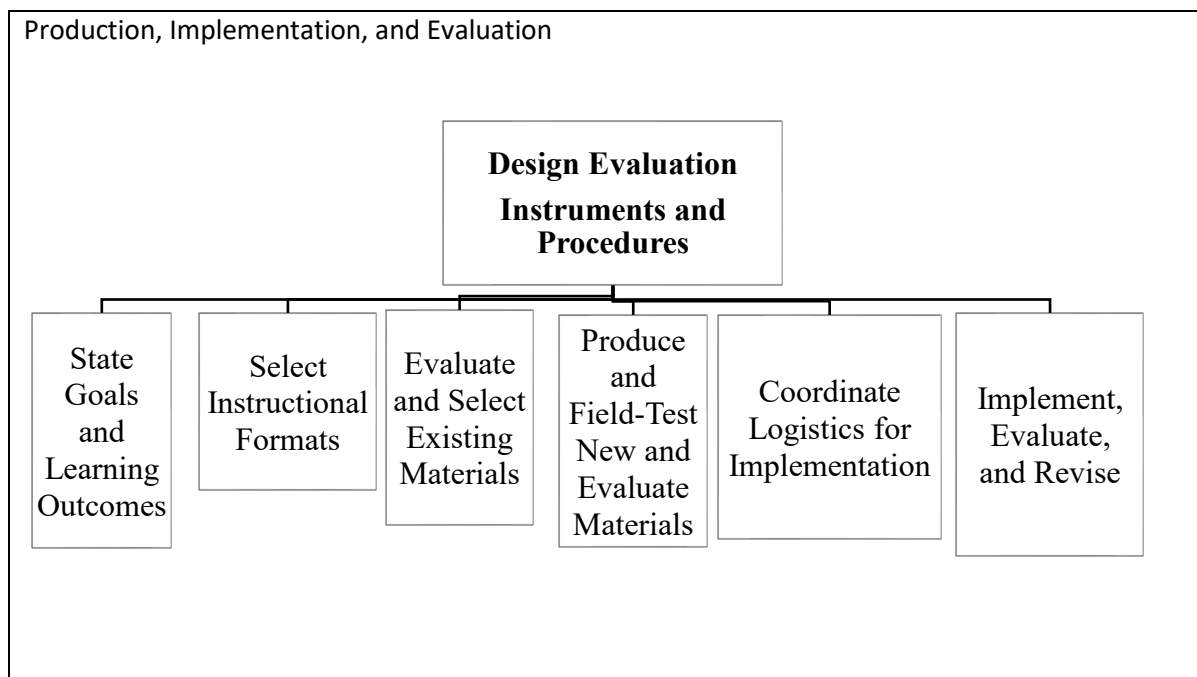
In educational institutions, AI is used not only in educational systems but also in classrooms in order to create effective materials. However, AI-generated materials are not always successfully used due to many issues. The pedagogical materials designed by AI are not adjusted to the particular learners' interests and different learning preferences. The materials should be a mediator between the learners and curriculum, influencing the learning process and having a huge impact on learners' achievement (Valverde, Bianchi, Wolfe, Schmidt & Houang, 2002).

The materials created by AI focus on broad context or pedagogical intentions and cultures rather than focusing on one particular class or particular students' learning needs and preferences. If the AI-designed materials are evaluated critically and adapted by the educator, the learners' needs are more closely linked to the materials, it puts focus on individuals and their learning preferences. The linguistic challenge of materials is not too complex or too easy for the students if the materials are evaluated and adapted. Evaluating and adapting materials might be a positive factor to enhance the learning performance (Holzinger, Kickmeier-Rust, & Albert, 2008; Salehi & Khadivar, 2015).

According to Ellis (1997), evaluation can be "predictive" and "retrospective". Predictive evaluation is done before using the materials in the classroom, while retrospective evaluation is post-evaluation,

which leads to reflection. It should be noted that both evaluation types are significant in the learning and teaching process. Diamond (2008) mentions that the evaluation process includes three major steps: learning outcomes should be set and linked to every lesson and task in the lesson; instruction and teaching methods should be clear, and be in alignment with the outcomes; all materials should be evaluated accordingly, tested, and then implemented (See Figure 1.1.).

Figure 1.1. Evaluation Process



Source: (Diamond, 2008, p. 42)

It should be noted that AI-designed materials should be evaluated critically not only from a pedagogical perspective but also from a linguistic perspective. The language should be accurate and adjusted to the level of the students. Consequently, grading the linguistic complexity is important while adapting the materials.

In order to make the materials more successful and engaging, the materials should be evaluated and adapted as one huge process, aligning it to the learners' interests, context, language, or pedagogical objectives (Nation, 2009).

McGrath (2002) mentions that there are only three ways to adapt materials: extemporization, extension, and exploitation. Extemporization is related to the spontaneous adaptation of the materials done by the teacher. The extension is giving more examples while clarifying the language to make it clearer for the learners. Exploitation is designing creative tasks that are different from textbook tasks. However, it should be noted that there are a lot of steps to consider while evaluating and adapting the materials (See Table 1.1.).

Table 1.1. Framework of ELT Materials Evaluation and Adaptation

Domain	Area	Focus
Evaluation of ELT materials	Pedagogical Soundness	Learning Objectives
		Skill Integration
		Methodological Alignment
	Linguistic Accuracy	Grammar Accuracy
		Vocabulary Accuracy
		Pragmatics
	Level Appropriateness	CEFR Alignment
		Cognitive Load
	Task Design & Engagement	Authenticity
		Interaction
		Motivation
	Inclusivity & Cultural Sensitivity	Representation
		Bias Check
	Assessment Quality	Criteria Alignment
Feedback		
Usability	Scaffolded content	
	Clarity of Instructions	
AI-Specific Considerations	Transparency	
	Hallucination Check	
	Consistency	
Adaptation of ELT materials	Rationale	Purpose/aim
		Needs Analysis Alignment
	Linguistic Modification	Simplification / Elaboration
		Vocabulary Adjustment
		Accuracy Maintenance [grammar, spelling, etc.]
	Task Adaptation	Task Type Change
		Interaction Pattern
		Scaffolding
	Cultural & Contextual Relevance	Localization
		Inclusivity
	Cognitive & Level Adjustment	Difficulty Calibration
		Skill Balance
	Assessment Alignment	Objective Alignment
		Evaluation tools
Practicality & Usability	Time Management	
	Clarity of Instructions	
	Resource Availability	
Ethical Considerations	Source Acknowledgment	
	Copyright compliance	

Source: Developed by the researcher

The framework is divided into two major parts: evaluation and adaptation, as these domains are tightly connected. After evaluation, there is a space for adaptation. It should be noted that while adapting, each step needs a relevant reason and a further step plan; otherwise, the adaptation is not complete. Evaluation is a useful tool for educators as they assess the materials relevantly, especially nowadays in the digital era, where AI-generated materials are used everywhere in any field. Evaluation plays a key role before using the materials in the classroom. Tomlinson (2003, p. 15) defined evaluation as “a procedure that involves measuring the value (or potential value) of a set of learning materials”. Littlejohn (1998) claimed that materials evaluation makes the content of materials clear, and educators decide if the materials need any adaptation or not.

Evaluation Framework (See Table 1.1) consists of eight major categories, focusing on: pedagogical soundness, linguistic accuracy, level appropriateness, task design and engagement, inclusivity and cultural sensitivity, assessment quality, usability, and AI-specific considerations.

Pedagogical soundness is vital as it emphasizes learning objectives. Therefore, educators should check the learning objectives first, and while evaluating the materials, the learning objectives should be in alignment with the materials. Moreover, pedagogical soundness includes skill integration as well, and methodological focus. The materials should be in alignment with the teaching methods and approaches. *Linguistic accuracy* is also important while evaluating the materials. AI-generated materials for teaching and learning can be inaccurate, and educators should check grammar and vocabulary accuracy so that inaccurate language is not used in the classroom or educational process. Moreover, some language chunks should be checked for pragmatics so that these chunks are used appropriately in the context.

Level appropriateness plays a key role in evaluating the materials. The materials should be adjusted to the level of students, and AI-generated content is usually not adjusted to the specific class level but generic level. Consequently, the learners' level and the CEFR can be aligned with the AI-generated content while evaluating and adapting the materials. This sub-category includes cognitive load; the content should not be over-challenging or too easy for the learners.

Task design and engagement are under one of the categories, while evaluation is used to assess the task type and its authenticity. This subcategory includes interaction, which, if changed, makes the task more S-centred rather than T-fronted. And consequently, the relevant task influences the motivation of all learners involved in the learning process.

Inclusivity and cultural sensitivity are significant while evaluating the materials, as it checks if the content is biased and if the materials have face validity for various cultures. AI-generated materials are usually designed for generic cultures, not considering any specific culture and its sensitivity.

Assessment quality is one of the categories when evaluating the materials. The AI-generated materials should be in alignment with the assessment criteria and feedback (formative and summative).

While evaluating the content, *usability* is vital as it focuses on scaffolded content, starting with easy, and moving to more complex usage of language. Moreover, it also gives opportunities for staged and differentiated instructions.

AI-specific considerations are important as AI-generated materials should be transparent, and plagiarism should be avoided. Also, AI-generated content can have inaccuracies called "hallucinations of AI", the content should be checked before using the materials.

After evaluating the materials, educators need to adapt the materials to make them more effective so that the learning and teaching process is more successful. Adaptation of ELT materials includes eight categories: rationale, linguistic modification, task adaptation, cultural and contextual relevance, cognitive and level adjustment, assessment alignment, practicality and usability, and ethical considerations.

While adapting the materials, the first step is to determine the *rationale* behind the adaptation. The educators need to decide what the aim is and align the materials with the students' needs according to the needs analysis.

Linguistic modification is vital while adapting the materials, as most materials either need simplification or elaboration. Moreover, the vocabulary items should be graded according to the level, and language accuracy should be checked.

Task adaptation includes task type change according to the students' needs and preferences, and scaffolding the task from easy to more complex usage of language. It should be noted that the interaction pattern should be varied to make the task more S-centred.

Adapting the materials is important as the materials should be more *culturally and contextually relevant* and adjusted. This leads to more localized materials, consequently focusing on inclusivity.

Cognitive and level adjustment are vital during adaptation; the educators control the difficulty of the task and skill balance. The materials should not be overloaded with skills-focused content so that the learners are not overwhelmed.

In the learning and teaching process, *assessment alignment* matters as it includes evaluating tools and objectives. The assessment should be aligned with the objectives of the course, and each material should be linked to these objectives and the evaluation tools mentioned in the curriculum or syllabus.

Adapting the materials helps with *practicality and usability*. While adapting the materials, time is more managed. Adapted materials have more relevant time anticipation. The educators also adapt the instructions, which makes the instructions clear and more varied. This step of the adaptation helps the parties involved in education to access the resources easily.

AI-generated materials can be used in the classroom after adaptation; however, *ethical issues* should be taken into consideration. The users should acknowledge the sources and provide the copyright.

AI-generated materials can be used in the classroom, but the above-mentioned steps related to evaluation and adaptation should be taken into account.

Methods

The research method includes:

- Literature review and analysis of the topics provided in the research.
- The questionnaire was filled out by teachers abroad from different universities and teachers from four universities in Georgia
- The questionnaire consists of a Likert Scale format in most questions; however, this questionnaire has a qualitative component, with some open-ended questions as well

Results and Discussion

The questionnaire was designed in order to collect information and check if AI-designed materials are evaluated and adapted before applying them in the classroom. The questionnaire was piloted with 15 English language teachers. The teachers completed it twice, with a 5-minute break in between. Since their responses were identical, the researcher did not calculate Cronbach's Alpha, and the test was considered reliable. In order to ensure content validity, teachers were asked to provide feedback on the questions, and three questions were altered based on their feedback. The questions were made clearer. The questionnaire was sent via Google Forms to various teachers through email and social media groups. The participants did not provide their names or emails to maintain anonymity. Data were collected after 5 weeks, with a total of 67 participants responding to 11 questions. The questions included demographic data (nationality, gender, age, teaching experience, location) and information related to materials evaluation and adaptations.

The questionnaire aimed to examine whether AI-designed materials are evaluated and adapted before applying the materials in the classroom; whether parts of the evaluation and adaptation framework are used or not. Demographic data (questions 1-5) revealed interesting insights about the 67 participants, 62 female and 5 male, aged between 27 and 53. A majority (43 participants) were from Georgia, while others were from different countries. 75% of participants have more than 10 years of English language teaching, with a minimum of 2 years of experience.

Question 6: 67.1 % of participants wrote that they use AI while designing and adapting materials, focusing on skills and systems. 30.7 % of participants stated that they do not use AI. 2.2 % of participants were not sure what to answer, and some of them marked the option called 'other'.

Question 7: 55.3% of participants mentioned that they evaluate materials before adapting. While others mentioned that they do not evaluate or were not sure, and marked the answer 'other'.

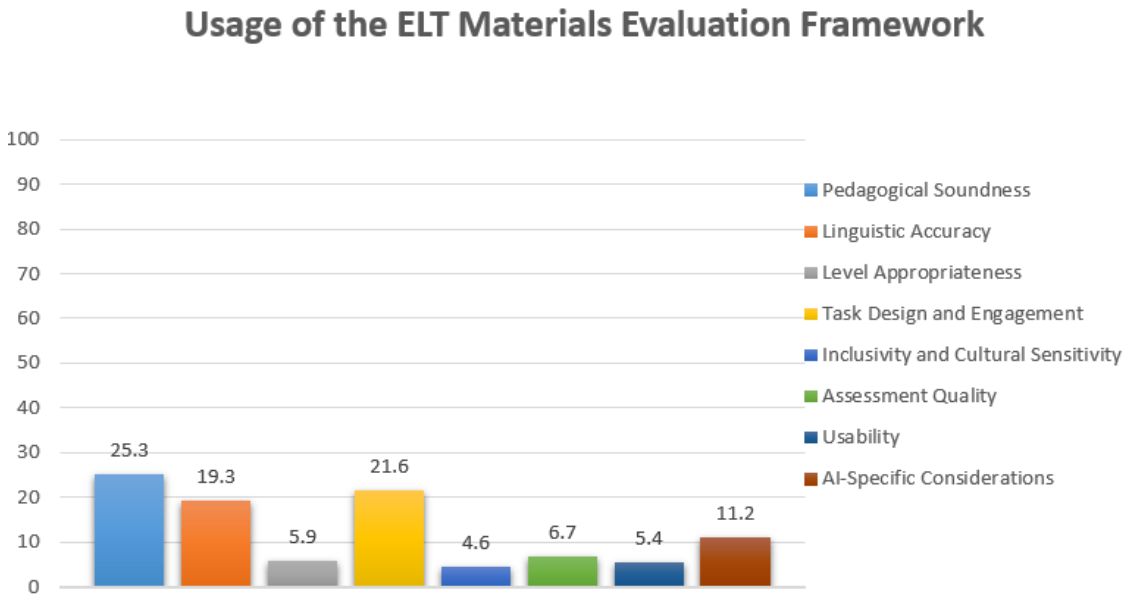
Question 8: 85.4% of participants mentioned that they adapt, or add materials to the coursebook materials, for example, photos, questions. While the remaining 14.6% of participants said they follow the coursebook.

Question 9: 26.7% of participants mentioned that they adapt AI-generated materials. While the remaining participants said they either do not use AI or do not adapt the materials designed by AI.

Question 10: The 10th question was related to the evaluation steps taken by them and which sub-step they are using. The participants mentioned that they used some steps while evaluating materials: 25.3% chose Pedagogical Soundness, 19.3% - Linguistic Accuracy, 5.9%- Level Appropriateness, 21.6%-

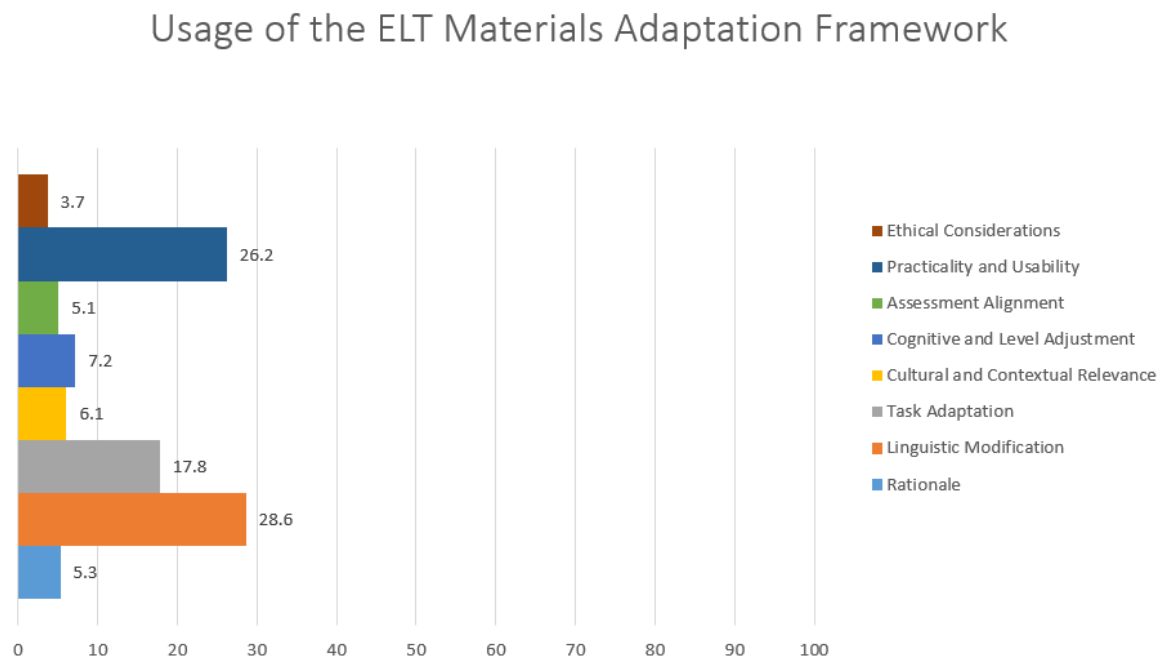
Task Design and Engagement, 4.6% -Inclusivity and Cultural Sensitivity, 6.7 % -Assessment Quality, 5.4%-Usability, 11.2%- AI-Specific Considerations (See Figure 1.2).

Figure 1.2. Usage of the ELT Materials Evaluation Framework



Question 11: The last question was connected to the adaptation steps taken by the educators, and which sub-step the teachers are using. The participants mentioned the following steps while adapting materials: 5.3% chose Rationale, 28.6% - Linguistic Modification, 17.8%- Task Adaptation, 6.1% - Cultural and Contextual Relevance, 7.2% -Cognitive and Level Adjustment, 5.1%-Assessment Alignment, 26.2%- Practicality and Usability, and 3.7% Ethical Considerations (See Figure 1.3.).

Figure 1.3. Usage of the ELT Materials Adaptation Framework



Conclusion

In conclusion, AI-generated materials provide an opportunity to enhance English language teaching as it might provide relevant ideas. However, the effectiveness of any materials, and especially AI-generated materials, depends on careful evaluation and adaptation. The above-mentioned frameworks can help with these vital processes in order to make materials more effective and S-centred. This also leads to tailored materials for each group and individual's needs, which helps the learning process. The study showed that the participants evaluate and adapt AI-generated materials but not all the educators. It can be claimed that if the educators are retrained in how to evaluate and adapt materials using these frameworks, it might make the teaching and learning process more effective, and it will enhance the learning process.

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