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PLANNING LESSONS FOR CRITICAL THINKING: A WAY TO IMPROVE LEARNING OUTCOMES IN THE ENGLISH AS A FOREIGN LANGUAGE CLASSROOM

PLANIFICAR LECCIONES PARA EL DESARROLLO DEL PENSAMIENTO CRÍTICO: UNA MANERA DE MEJORAR LOS RESULTADOS EN EL AULA DEL APRENDIZAJE DEL INGLÉS COMO LENGUA EXTRANJERA

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ABSTRACT

Encouraging critical thinking (CT) in the EFL classroom is something that every professional in the educational field should be responsible for. The aim of this paper was to make an analysis of different studies on the topic. The methodology used was based on a descriptive study through the analysis of several primary sources such as research papers on the topic that have been published in scientific journals, books, records of organizations, among others. These sources lead to the identification of important elements in a lesson plan for critical thinking: elements of thought, intellectual standards and intellectual traits. Writing good learning objectives is just as important as selecting effective activities and determining ideal assessments to facilitate that teachers and students perceive what is to be achieved in the class and how. Aligning the tenets of critical thinking when planning a lesson promotes real learning in our students through the achievement of effective learning outcomes. In conclusion, critical thinking skills need to be developed on a daily basis rather than as a part of isolated lessons that uncommonly take place.

Keywords:
Critical thinking, Bloom´s Taxonomy, Intellectual Traits, CT strategies, Assessment

RESUMEN

El estimular el pensamiento crítico (CT) en el aula de enseñanza del inglés como lengua extranjera, es responsabilidad de todo educador. El objetivo de este documento académico es realizar un análisis de diferentes estudios del tópico. La metodología usada se ha basado en un estudio descriptivo de análisis de algunas fuentes de información primarias como: investigaciones acerca del tópico que han sido publicadas en revistas científicas, libros, registros de organizaciones, entre otros. Estas fuentes guían a la identificación de elementos importantes para un plan de clase con enfoque al pensamiento crítico: elementos del pensamiento, estándares intelectuales y rasgos intelectuales. El escribir buenos objetivos de aprendizaje, es tan importante como es el escoger actividades efectivas y determinar la evaluación ideal para que educadores y estudiantes puedan percibir qué será alcanzado en la clase y cómo. Al alinear los principios de pensamiento crítico, estaremos incentivando en nuestros estudiantes aprendizaje real a través de la consecución efectiva de logros de aprendizaje. En conclusión, las destrezas de pensamiento crítico necesitan ser desarrolladas a diario, más que dentro de una lección aislada que no se realiza regularmente.

Palabras claves:
Pensamiento Crítico, Taxonomía de Bloom, Rasgos intelectuales, Estrategias para pensamiento Crítico, Evaluación

INTRODUCTION

One of the biggest challenges that teachers have is to work with students that are not critical thinkers. Whether teaching content or a new language, teachers generally encounter situations where such processes are not as meaningful as they should, due to the lack of the stimulus to think or act critically, as expressed by Fiallos (2017). This situation characterizes lessons in primary schools, high schools and universities. Students struggle when they do research, ask questions and make decisions autonomously. Learners are used to receiving information from the teacher considering it as the absolute truth. Their role in the classroom is reduced to being information receivers, which is not acceptable.

Active involvement leads students to produce high quality thinking and enables them to assess their knowledge as well. Undoubtedly, competent students in a global society are proficient communicators, creators, critical thinkers, and collaborators: the Four Cs (Roekel, 2011, p.7). In this regard, Spahiu and Spahiu (2013) stated the relevance of the role of the teacher to achieve satisfactory results in the teaching and learning process. In other words, teachers are required to reflect on how to foster critical thinking in their classroom because of the fact that critical thinking skills, just as any other skills, are to be developed or modified in the classroom.

In various teaching scenarios the analysis, synthesis or evaluation of information on the part of students is minimum. Moreover, educators are required to place value on opportunities to generate environments where learners participate in activities which promote higher order thinking. Another key to remember is the necessity to consider the teachers' own critical thinking skills. Choy and Oo (2012) corroborate that teachers are not critically reflective. In fact, teachers are more focused on how they are assessed by their students and superiors, which undoubtedly affects teaching.

The information taken into account for this literature review was previously analyzed in terms of relevance, date of publication and impact. This study exposes the elements for a lesson plan to develop critical thinking, starting by establishing the importance of writing a well-structured objective that is essential to reveal what is expected to be achieved with the students at the end of the lesson. Broadbear (2012) has documented the necessity to contemplate elements such as Bloom's taxonomy, intellectual traits, intellectual standards and CT strategies to write a proper objective for a critical thinking lesson.

Aside from a well-structured lesson plan, assessment is an essential element that aims to foster an effective teaching-learning process. This literature review promotes the improvement of learning outcomes by making the relationship between critical thinking and real assessment noticeable. Moreover, there is evidence that suggests that if critical thinking skills, the capability of analyzing, synthetizing and evaluating information are considered, real learning occurs. Likewise, it is important to remember that real learning involves raising vital questions, formulating problems, gathering and assessing information, adopting a point of view and communicating effectively, among other implications found in critical thinking assessment (Paul & Elder, 2016, p.3).

LITERATURE REVIEW

In this section, the principal concepts of critical thinking which have propelled to the forefront in investigations on how to improve learning process and students´ learning outcomes are examined as a combination of well written objectives, standards, strategies and assessment that provide the proper groundwork to plan lessons on. This paper conveys information from different authors who recognize the relevance of planning a lesson for critical thinking.

Critical thinking

There are multiple concepts and interpretations regarding the topic. However, remarkably numerous authors highlight the correlation between higher order thinking skills such as analysis, evaluation and critical thinking. Undeniably, a critical thinker is a person who raises questions and solves problems; gathers and assesses important information from the immediate context to improve processes and reaches higher levels of thinking. In this regard, Elder (2007), as cited in Vdovina and Cardozo (2013) stated:

> Critical thinking is a self-guided, self-disciplined thinking which attempts to reason at the highest level of quality in a fair-minded way. People, who think critically, consistently attempt to live rationally, reasonably and emphatically. They are aware of the inherently flawed nature of human thinking when left unchecked (p. 55-56).

Similarly, McPeck (2016) describes critical thinking as a quality of human beings which involves the skills and abilities that are necessary for engaging learners in activities. These activities are always done in relation to subject areas, they never happen in isolation. Consequently, it is vital that teachers include techniques and strategies that help learners develop higher order thinking and critical thinking which are seen as a form of problem solving (Chinedu, Kamin, & Olabiyi, 2015).

The cognitive level normally developed in Ecuadorian teaching scenarios is ineffective. In fact, high levels of comprehension are not emphasized in the learning process. Learners are involved in activities that require memorizing information or answering questions of lower-level thinking. Findings evidence that this matter seems to be a worldwide problem (Freahat & Smadi, 2014 p. 1806). Bloom (1956), cited by the same authors, asserts that teachers focus more on making students remember, understand and apply. These skills keep learners in the fundamental stages of critical thinking. Students, on the other hand, need to go through processes that require analyzing, synthesizing and evaluating. These cognitive skills or strategies are the core elements to designing a lesson plan if critical thinking is the aim of the learning process. Halpern (2007) as cited in Kadel (2014) surmises:

> Critical thinking is the use of those cognitive skills or strategies that increase the probability of a desirable outcome. It is used to describe thinking that is purposeful, reasoned and goal-directed – the kind of thinking involved in solving problems, formulating inferences, calculating likelihood, and making decisions, when the thinker is using skills that are thoughtful and effective for the particular context and type of thinking task (p. 58).

Based on this definition, the role of the teacher in a lesson for critical thinking is of a facilitator, which consists of leading students to the discovery of knowledge. Therefore, the tasks are meaningful and elicit active participation from the learners. Moreover, it has been proved that higher order thinking skills need to be developed on the foundations of solid lower order thinking skills. An individual reaches the levels of evaluation and creation, once the cognitive processes of knowledge, comprehension and application have been successfully expanded (Kadel, 2014).

Lesson planning for critical thinking

Establishing the differences between a traditional lesson and a critical thinking lesson is essential. Students have the teacher´s guidance all the time and follow instructions in a traditional lesson. Expressing ideas, thoughts or feelings has not been an option for students (Spahiu & Spahiu, 2013). A lesson plan with a critical thinking focus expects students to make judgments about what they learn, based on either internal or external criteria (Lord & Baviskar, 2007). Lesson plans for critical thinking are typified by a wide variety of topics, areas of study and activities which include creative thinking, well-reasoned responses and the argumentation of all the ideas presented during interaction (Lara, 2007).

One of the responsibilities teachers have in educational institutions is lesson planning. Duncan and Met (2010) manifested that lesson planning helps to ensure that classroom instruction aligns with the curriculum goals and objectives. For this reason, the teacher´s awareness of the general and specific objectives of the curriculum is mandatory to select the techniques and strategies for critical thinking. For these reasons, a lesson plan for critical thinking is required to contemplate various components that are systematically combined to drive learners from lower level thinking to a higher level thinking (Hughes, 2014). These elements are Bloom´s taxonomy, intellectual standards, intellectual traits, critical thinking techniques and strategies as well as a good assessment to measure the learning outcomes.

Bloom's taxonomy

Critical thinking is closely linked to higher order thinking. Therefore, levels of cognition are to be distinguished. Munzenmaier and Rubin (2013) state that the aim of Bejamin Bloom´s taxonomy was to find a common language that experts in education could use to write and measure educational objectives. This taxonomy organizes educational goals into a hierarchy whose four principles show emphasis on the cognitive process along with psychological, behavioral and procedural processes. The principles that guide the development of this model contemplate categories which entail student behaviors, logical relationships, understanding of psychological processes and the description of value judgments (p.3).

According to Krathwohl (2002) these categories have a connection to the multi-level model which shows the classification of thinking in six cognitive levels of complexity ordered from concrete to abstract levels. In this respect, Forehand (2005) manifested that in the model, the lower order thinking levels include: knowledge, comprehension and application. Higher order thinking involves analysis, synthesis and evaluation. This taxonomy is an enormous contribution to education because it guides teachers in lesson planning. In other words, teachers who aim at reaching the highest level of thinking from the students should include techniques that make learners solve problems, use creativity and evaluate processes.

On this subject, Munzenmaier and Rubin (2013) illustrate the three domains of Bloom´s taxonomy and give a brief overview of the cognitive domain which is knowledge-based; affective domain which is based on attitude and the psychomotor domain that is physical skills-based. These domains are essential when educators design their lessons where it is required to contemplate criteria such as contents, the affective and psychomotor fields to get a holistic educational approach.

Table 1. Three domains of Bloom´s taxonomy

Domain	Overview	Abilities
Cognitive	Content and intellectual knowledge: What do I want learners to know?	Conceptualization Comprehension Application Evaluation Synthesis
Affective	Emotional knowledge: What do I want learners to think or care about?	Receiving Responding Valuing Organizing Characterizing
Psychomotor	Physical/mechanical knowledge: What action(s) do I want learners to be able to perform?	Perception Simulation Conformation Production Mastery

Source: based on Munzenmaier and Rubin (2013, p. 5)

A lesson with a critical thinking objective

Once the topic has been chosen, the next step to plan a lesson for critical thinking is to write the learning objective. This component is of paramount importance because it communicates what the teacher expects from learners. Additionally, objectives must be specific, outcome-based and measurable. Heinich, Molenda, Russell and Smaldino (2001), as cited in TEAL Staff (2010, p. 3) consider the ABCD as a proper model to write objectives. This model aligns well to the characteristics of a plan for critical thinking, as well as to Bloom´s taxonomy. An ABCD objective has 4 different components: Audience, Behavior, Condition, and Degree.

According to Vdovina and Cardozo (2013), the ABCD Model provides a good framework, since it contains indispensable elements to design a lesson. A good number of teachers consider that cognition is the only area they have to develop; nevertheless, there are other areas such as emotions and attitudes in learning that are to be emphasized. The parts of an ABCD objective are:

- Audience that describes who the user of the instruction is.
- Behavior that is observed and measured, which is the knowledge or skill demonstrated in any of the domains of learning: interpersonal, affective, cognitive or psychomotor.
- Condition that refers to the tools used in the completion of the proposed task.
- Degree that sets the standard for acceptable performance, which can be related to quality, time and accuracy, among others.

An example is provided to illustrate the elements:

Table 2. Example of the elements found in the objective

Objective: Learners will identify the major muscles of the thigh with 100% accuracy when provided with a diagram	
Audience	Learners
Behavior	will identify the major muscles of the thigh
Condition	when provided with a diagram
Degree or Quality	100% accuracy

Source: adapted from Ferguson (1998 p. 88)

Additionally, Van Melle & Pinchin (2008) indicated that a learning objective is a statement that describes what the learner is able to do upon the completion of a learning experience. Therefore, writing an effective objective is essential. Likewise, Ferguson (1998) mentioned that “objectives are statements of desired, observable, teachable, learnable behaviours that are evidence of learning” (p.87). These objective characteristics contribute to the design of better lesson plans, selection of materials and good assessments to measure learning outcomes.

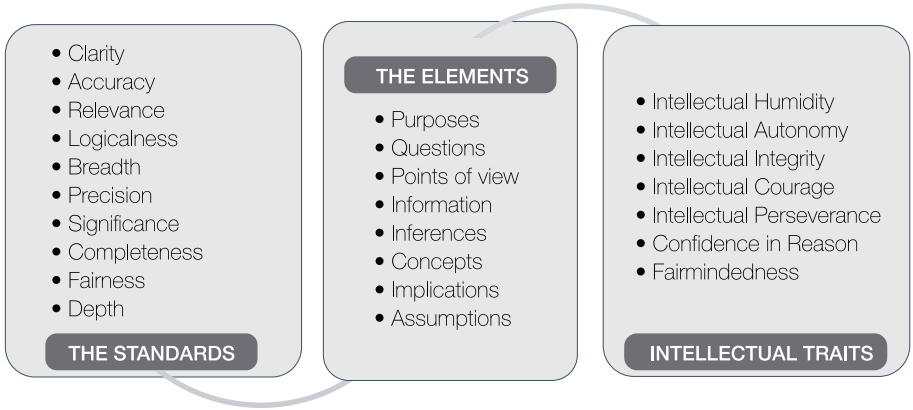
Subsequently, the objective is properly written and shared with the students. Thus, they know what it is expected from them. A learning objective for a lesson based on higher order thinking skills is characterized by analysis, synthesis and evaluation of information according to Bloom's taxonomy, the classification of levels of behavior in learning (Yang, 2009). This classification guides teachers through the designing of tasks, for instance: discussing theoretical situations, predicting and drawing conclusions based on information given, assessing value and ideas, as well as making choices to justify answers.

The components of thinking: intellectual standards and traits

In connection with this point, Scriven and Paul (1987), as cited in Xu (2011, p. 136), provided the most relevant characteristics of critical thinking and intellectual standards. They described critical thinking as the intellectual process of actively conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by observation, experience, reflection, reasoning, or communication, as a guide to belief and action.

As stated by Paul, Scriven and Michael (1987), the elements of thought have a close relationship with the intellectual standards. In fact, the standards must be applied to the elements of thought while the development of intellectual traits are learned, as it is illustrated in figure 1. Within the elements of thought we have purpose, questions, points of view, information, inferences, concepts, implications and assumptions. Learners who use critical thinking while completing their assignments demonstrate that they understand the purpose of it and are able to find what the issue or problem in a given situation is. Once the problem is found, critical thinkers appreciate the depth and the breadth of the problem and show to be fair-minded about it. These types of learners can identify relevant points of view and show empathy either providing information that opposes or information that supports those points of view.

Figure 1. Standards, Elements of reasoning and Intellectual Traits



Source: developed by the author based on Paul and Elder (2006, p. 21)

In this respect, Snyder and Snyder (2008) noted that "merely having knowledge or information is not enough. To be effective in the workplace (and in their personal lives), students must be able to solve problems to make effective decisions; they must be able to think critically" (p. 90). Solving a problem is the onset of critical thinking skills. In this regard, Boettcher (2010) acknowledged the idea of the development of thinking through reasoning practice for the learner similar to solving problems or puzzles.

Human beings are involved in activities related to family or friends, education or personal reflection. Intellectual standards are necessary for cultivating the intellect and living a rational life. Therefore, teachers are responsible for cultivating the intellect in students with the development of activities and tasks that provoke higher order thinking in learners through the art of asking questions (Paul & Elder, 2013).

Intellectual Standards

Regarding intellectual standards, Michael (2012) postulates that critical thinking involves not only analyzing and identifying arguments; but discovering and overcoming prejudices and biases, developing reasons and arguments in favor of what is believed, considering objections and making rational choices. Similarly, Paul and Elder (2010) contemplate at least nine essential intellectual standards which are essential to promote reasoning in everyday situations. In order to interpret how intellectual standards are involved in critical thinking, varied questions are formulated to guide students in the solution of problems, as demonstrated in table 3:

Table 3. questions that lead to problem solving

Questions	Intellectual Standards
Could you elaborate further?	Clarity
How could you check on that?	Accuracy
Could you be more specific?	Precision
How does that relate to the problem?	Relevance
What factors make this a difficult problem?	Depth
Do we need to look at this from another perspective?	Breadth
Does all this make sense together?	Logic
Is this the most important thing to consider?	Significance
Do I have any interest in this matter? Is it possible that I am biased?	Fairness

Source: Based on Paul and Elder (2006, p. 14)

In addition to that, Vincent and Rudinow (1990) support that individuals who are critical thinkers do not have the right to embarrass or humiliate others or to impose their ideas. Instead, critical thinking aims to provide people with practices that contribute to the society and education with the improvement of knowledge. Moreover, critical thinkers autonomously apply intellectual standards to their elements of reasoning to develop intellectual traits (Bailin, Case, & Daniels, 1999).

Intellectual traits

Generally, intellectual performance is associated to the improvement of abilities; however, intellectual works are closely linked to dispositions of the individual, which are stable traits that guide people´s performance (Perkins, Tishman, Ritchhart, Donis & Andrade, 2000). This is replicated by Holyoak and Morrison (2005) in their review that showed that effective teaching demands judgement and decision making from fair-minded people. These standpoints assuredly recognize the relevance of the qualities of mind and character that a critical thinker posseses.

In this regard, intellectual traits or the traits of mind and character are important features that allow proper decision making; therefore, they develop ethical performance. Those ethical performers, who are considered critical thinkers, adequately evaluate ideas and beliefs to cultivate a fair mind. Conjointly, they are disciplined and self-directed and effective communicators. All these characteristics are part of the model of critical thinking which involves elements that are interdependent (Paul & Elder, 2013). In other words, the application of the standards of thinking to the elements of thinking results in the development of important intellectual traits that are shown in table 4.

Table 4. Intellectual traits and their purposes

Intellectual Trait	Purpose
Intellectual integrity	to hold oneself to the same standards of behavior to which others are held
Intellectual fairmindedness	to have an unbiased point of view
Intellectual courage	to questions beliefs in face of new information or evidence
Confidence in reasoning	to rely on critical thinking and trust results
Intellectual perseverance	to continue to struggle with confusion, frustration or uncertainty to gain understanding
Intellectual humility	to know the limits of one´s knowledge
Intellectual autonomy	to think independently through questions and problems
Intellectual empathy	to consider others´ points of view

Source: based on Paul and Elder (2006, p. 15)

Techniques and strategies to Critical thinking

Devising techniques and strategies to develop critical thinking involves varied aspects; for instance: participation, interaction, reflection, deep analysis and questioning of the information studied (Brookfield, 2015). Those aspects contribute to foster critical thinking as a result of the involvement of students in the learning process, which encourages them to take responsibility for their active engagement in the activities developed during the lesson.

The main technique that strengthens critical thinking is Socratic questioning (Hong & Jacob, 2012). Likewise, Paul and Elder (2006) indicate that it is unimaginable that someone who is a critical thinker can lack the disposition to ask questions in depth. Moreover, the authors state that the theory behind Socratic questioning is relevant if it provokes in learners the desire to ask questions systematically and deeply. In summary, Socratic questioning is a discussion in which a person inquires in a disciplined way; while a leader manages the discussion where all the people who are involved in the conversation participate. Thought is stimulated by questioning, as long as that process causes the analysis and quality of information (Elder & Paul, 1998). The main characteristic of the Socratic questioning technique is guiding students through the discovery of knowledge (Delic & Becirovic, 2016).

Another technique that applies Socratic questioning is the debate, which is an activity where learners ask questions that go beyond the explicit information. Aspects such as clarity, accuracy, precision, relevance, depth, breadth, logic, significance and fairness are inquired. According to Tawil (2016), "debating fosters open-mindedness, inquisitiveness, analyticity, systematicity and confidence of reasoning" (p. 25). This technique leads learners to reach an increased level of positive perception and self-efficacy.

Using techniques and strategies that effectively move learners towards critical thinking is a responsibility of all educators. A common problem in the classroom is the approach used by the teacher. Lessons are characterized by the lecture format. A considerable part of the reasoning, questioning and thinking are done by the instructor, instead of being done by the learners. Consequently, the lecture format is not an effective method, provided that critical thinking is to be developed in the classroom. Duron, Limbach and Waugh (2006) indicate that active learning makes the course worthwhile for both: teachers and students. In an active learning environment, learners think critically because they are the ones who process the information in the way they prefer. They are capable of reflecting on their own learning and comparing their understanding with what their classmates are achieving.

The aforementioned techniques refer to what is explained in Bloom´s taxonomy, which classifies activities according to their level of difficulty and categorizes the cognitive processes in humans (Bloom, 1956). For instance, remembering, understanding and applying belong to low level thinking skills and consequently these processes require less thinking (Freahat & Smadi, 2014). On the other hand, analyzing, evaluating and creating demand high levels of thinking. This taxonomy substantiates the outbreak of the theory of critical thinking. To make a relevant contribution to students, teachers have the responsibility to give learners plenty of opportunities to engage in higher order thinking. These higher order thinking processes instigate critical thinking (Duron, Limbach, & Waugh, 2006).

Assessment in a CT lesson plan

Every thinking process is made of the elements that constructed it. Paul and Gerald (1991) define the elements of thought as building blocks of thinking that shape reasoning. According to the authors, human beings reason to achieve something or satisfy a desire. Therefore, when there is a cognitive process a question or a problem is solved. For this reason, not only one skill is evaluated while critical thinking is assessed; but a number of skills resulting from the articulation of all the elements of thought. These elements allow learners to distinguish types of information, identify evidence and speculations, recognize main concepts, see relationships between situations and topics and find implications and consequences.

Decisions on how to assess learning are suggested to be made before the selection of strategies and techniques for critical thinking. In the same way, what evidences meet the expected learning objective are also to be identified (Edmonds, Hull, Janik, & Rylance, 2005). Depending on the objective, formative or summative assessments are selected. In fact, assessment tools and assessment criteria are determined once the other elements of a lesson plan for critical thinking have been incorporated. In fact, Beaumont (2010) emphasizes the importance of the involvement of students in the decision of what assessment techniques are to be used. Furthermore, assignments and tasks meet four criteria: meaningfulness and attempt to be related to solid and important concepts; proper use of cognitive skills; intellectual standards and questions that are reasoned judgmentally and supported with evidence of what has been done, as the result of the learning process.

Similarly, Weimer (2013) strengthens the position that when teachers assess learning outcomes associated with critical thinking, it is necessary to highlight the critical thinking principles. This means that assessing critical thinkers involves awareness of different processes. Furthermore, critical thinking skills relate to other vital student learning outcomes: metacognition, collaboration, and creativity; in other words, it further promotes higher order thinking skills (Kadel, 2014).

CONCLUSION

Fostering Critical thinking in a classroom is possible when the lesson plan entails essential elements such as: Bloom´s taxonomy, intellectual standards, intellectual traits, critical thinking techniques and strategies, as well as a good assessment to measure the learning outcomes. In the same sense, writing effective learning objectives is of paramount importance within this design. Shirkhani and Fahim (2011) conclude that teachers achieve learning objectives through the realization of tasks and the usage of suitable assessment practices that are interconnected. In fact, Ferguson (1998) notes that educators who develop skill in formulating adequate learning objectives experience satisfaction with learning situations and the obtained learning outcomes.

The enhancement of critical thinking in an EFL classroom is the predominant purpose for language teachers. This improvement is feasible when there is involvement of learners in research and the application of knowledge. One important consideration is that learners are the discoverers of information, rather than passive receptors (Snyder & Snyder, 2008, p. 97). The achievement of critical thinking skills is possible when teachers acknowledge all the elements involved in the process and incorporate them in a lesson plan on a daily basis. A formative process not only includes cognitive processes but affective and psychomotor domains. Therefore, effective assessment results in a more challenging practice, however, more fruitful. Provided that all these considerations are made, the EFL teaching-learning process is strengthened, and consequently meaningful to learners.

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