Authenticity of Formative Assessment Tasks Reported in Research

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The current interest in formative assessment practices has led to a permanent innovation of formative assessment tasks. Although the process of rigorously designing and applying assessment tasks is crucial for the success of the formative assessment process, not much attention has been paid to the quality of tasks used within formative assessment practices. One way to judge the quality of assessment tasks is to analyze their authenticity features: realism, complexity, challenge, collaboration, reflection, and diversity. This article uses a narrative review method, retrieving articles from three scientific databases to analyze if tasks reported in formative assessment research practices are authentic. Also, it aims to describe, based on the tasks revised, the best practices to approach each of the authenticity criteria. Furthermore, this paper discusses how the structure of the tasks used (objective or subjective) influences authenticity features. Results indicate that in general, tasks need to be more complex, collaborative, reflective and diversified.

Keywords: formative assessment, authentic assessment, objective assessment, subjective assessment

INTRODUCTION

Formative assessment is a type of evaluation framed within the context of student-centered learning, used to monitor and reinforce the consecution of learning objectives during the course of instruction, without the purpose of assigning grades (Al-Hattami, 2020; Cosi et al. 2020; Leenknecht et al. 2020; McCallum & Milner, 2021; Weleschuk et al. 2019).

Consequently, formative assessment is a deliberate method that comprises a set of steps that are continuously applied throughout the teaching-learning process: First, learning goals should be established in simple and understandable language, and must have proper success criteria to determine how students progress toward the learning goals. Second, students should engage in diverse, properly designed learning events or activities that reinforce comprehension of knowledge and practice of skills associated with learning goals. Third, teachers must review evidence from activities to determine students' progress toward goal achievement and give students feedback on their performance. Lastly, teachers should estipulate and initiate appropriate instructional accommodations that may not be the same for all students (Antoniou & James, 2014; Leenknecht et al. 2020).

Within these steps, the research community has put special attention to the design of assessment activities. This interest emerges from the need to diversify evaluation activities that meet the demands of different learning environments (online, distance, blended, face-to-face), and the growing popularity of

formative assessment practices among diverse disciplines (Bälter et al. 2013; Buldu & Buldu, 2010; Chen & Chen, 2009; Costa et al. 2010; Faber et al. 2017; Faber & Visscher, 2018; Hacker et al. 2009).

When designing or implementing a formative assessment process, special emphasis should be put on the authenticity of the tasks used, for it determines the quality of the task; different literature reviews claim that low effect sizes regarding formative assessment effectiveness, are due in part to inappropriate or poorly designed evaluation activities (Dunn & Mulvenon, 2009; Lane et al. 2019; Lee et al. 2020).

In general terms, authenticity refers to assessments that are realistic and contextualized (Appiah & van Tonder, 2018; Conrad & Openo, 2018; Villarroel et al. 2018). Nevertheless, authenticity represents much more than just activities that simulate real-life contexts. It refers to activities that have the potential to actively engage students in their learning by making connections and forging relationships between prior knowledge and skills, allowing multiple pathways and perspectives for solutions, and providing highly engaging learning opportunities that help foster students' higher-order thinking skills. In a broader sense, authentic formative assessment refers to aspects like realism, complexity, challenge, collaboration, reflection, and diversity (Baartman et al. 2007; Conrad & Openo, 2018; Gedye, 2010; Gikandi et al. 2011; Mohamed & Lebar, 2017; Ogange et al. 2018; Villarroel et al. 2018; Westhuizen, 2014).

Another factor that is related to the quality of assessment tasks and may affect their authenticity is the structure of the activity: objective or subjective. Objective or closed-ended tasks have structures that allow only one possible correct answer (multiple-choice, true-false, order, match, or fill-in-the-blank activities), while subjective or open-ended tasks allow different possible correct answers (essays, discussions, cases, projects, portfolios, etc.). Research reports that most online activities designed and used by teachers have an objective structure, that when designed poorly, makes it harder for students to engage in high-order thinking skills (Abosalem, 2016; Chiheb et al. 2011; Villarroel & Bruna, 2019). As a consequence, students do not have the chance to demonstrate other capacities, which affects achieving more complex learning objectives and the transfer of learning goals to real-life situations (Boitshwarelo et al. 2007).

Although many reviews have been written within the context of formative assessment practices regarding topics about the effectiveness of formative assessment, teachers' motivations, instruction practices, formative feedback, metacognitive enhancement, and classroom techniques, among others; reviews that analyze the presence of authenticity features in formative assessment tasks are scarce (Dunn & Mulvenon, 2009; Febriani & Irsyad Abdullah, 2018; Kapsalis et al. 2019; Lane et al. 2019; Lee et al. 2020).

Therefore, the present literature review aims to analyze if formative assessment tasks reported in empirical research papers meet the main criteria of authenticity: realism, complexity, challenge, collaboration, reflection, and diversity; and how those criteria are met within tasks that have objective or subjective structures. The questions that guide this review are: Are formative assessment tasks reported in research authentic? And, what are good examples of appropriate objective and subjective formative assessment tasks for each of the authenticity criteria?

LITERATURE REVIEW

Authenticity

Authenticity refers to a set of characteristics regarding the content, methodology, and structure of a determined task. To be authentic, tasks should be designed according to six criteria: realism, complexity, challenge, collaboration, reflection, and diversity (Baartman et al. 2007; Conrad & Openo, 2018; Gedye, 2010; Gibbs & Simpson, 2005; Gikandi et al., 2011; Herrington et al. 2004; Ogange et al. 2018; Ko & Rossen, 2017; Villarroel et al. 2018; Westhuizen, 2016).

Realism

Realism can be manifested in two ways: A task framed in a real context, or a task that when solved is similar to what is faced in real life. In the first case, the realistic context can be present in tasks by introducing case analyses, problem-solving, and short or extensive essay questions. The second case can be achieved by creating realism through performance-based tasks, where students produce work or

demonstrate skills needed in real-life contexts. According to Villarroel et al. (2018), when students solve real-life problems, they engage emotionally and cognitively. To determine if the context of a task is realistic, the information about the situation or problem described should match as closely as possible real-life experiences and professional practices (Herrington et al., 2004).

Complexity

Complexity refers to the time it takes students to solve an assessment activity and the type of actions it takes for students to solve it. For complexity to be present, tasks should be completed over longer periods, meaning that tasks are not a series of short disconnected questions or tests that are solved in five to ten minutes; instead, they can be considered proper learning activities that allow students to demonstrate their knowledge and skills. For this to be possible, complexity can be manifested in tasks that involve the creation of real products or innovations, or through a set of shorter related tasks that have different purposes, and together help students exercise a skill or improve their understanding of a particular topic. An example of a complex formative task is a portfolio. Portfolios can be developed and improved over a long period and involve the process of creating a product that collects the works and reflections of students. Portfolios are used to show students' growth and development during the learning process (Erdost & Cinar, 2015). Also, the creation of graphical organizers, charts, tables, or drawings are examples of complex activities, for they exhort students to create products of their own to demonstrate knowledge.

Challenge

Challenge relates to the cognitive effort students have to make to solve an activity. It implies that students should go beyond the textual reproduction of fragmented content and move toward understanding. To achieve this, students must be able to establish relations between new and previous knowledge, link theoretical concepts with everyday experience, derive conclusions, practice skills, develop critical thinking, analyze situations, and relate the task content to several disciplines or subject areas. Together, these features allow knowledge transfer (Anderson et al. 2001).

Collaboration

Collaboration is an interactive process that engages two or more students who work together to achieve outcomes more effectively and efficiently. Collaborative learning, when given importance, will lead to more success and can enhance critical thinking through discussion. Collaborative learning activities can elicit conceptual understanding by allowing students to explain, elaborate, and reorganize their knowledge. Although not all tasks should be solved collaboratively, it is desirable that during the learning process students engage in some collaborative work (Villarroel et al., 2018).

Reflection

Reflection entails the process of thinking about an experience, a problem, a strategy, or a particular content. In the educational context, reflection seeks to get students to recognize the relevance of new learning experiences and to discover the relationship between classroom theories and real-world practice (Rourke & Coleman, 2011). It should lead students to gain awareness about their achievements, misconceptions, information gaps, and strategies used, enabling them to make choices about their learning process. It is through reflection that metacognition is achieved and students gain conscience of their performance to track and evaluate their learning.

Diversity

Diversity refers to the different range of options in which a problem, task, or inquiry can be approached. Particularly, it refers to the different ways in which a student is asked to demonstrate a skill or knowledge. Diversity can be achieved by providing students with tasks that have different strategies, structures, types of questions, products, materials, goals, components, senses, approaches, etc., and considers a variety of levels of expertise to assess students with different learning rhythms. Therefore, diversity reflects not only

more variety but emphasizes the need to provide diverse opportunities, alternatives, and answering schemas that could be a better fit for students with particular learning needs.

Structure of Assessment Tasks

Assessment activities can be classified into two groups: objective assessment activities and subjective assessment activities.

Objective Assessment Activities

These activities are characterized by having a closed structure with only one correct answer as possible, allowing an automatic and immediate correction of the student's answers when programmed in online environments. Activities such as multiple-choice, true-false, complete the answer, ordering, and matching or association tasks belong to this group. In online environments, objective activities are usually more frequently used than subjective activities due to several advantages: they allow teachers to assess many students in a short time, provide teachers with opportunities to gauge student understanding quickly and efficiently, provide automatic correction and feedback, and the possibility to access them through learning management systems, applications or online programs, in a massive and diversified way (Abosalem, 2016; Appiah & van Tonder, 2018).

Subjective Assessment Activities

These activities are characterized by allowing different responses as acceptable, and their automatic correction can be difficult because they depend on the judgment of an evaluator. These can include discussion forums, activities with multimedia tools, electronic portfolios, gamified activities, simulations, case studies, and research activities, among others (Farrell & Rushby, 2016).

METHOD

The literature search for the review involved selecting suitable sources of data, and formulating search and inclusion/exclusion criteria to identify potential publications:

- Databases included: ScienceDirect, Scopus, and Eric.
- Search criteria: "formative assessment" OR "formative learning" OR "assessment for learning".
- Inclusion criteria: a) articles that included either "assessment for learning" or "formative assessment" in the title or abstract, b) articles that reported empirical research either with qualitative or quantitative methods, c) articles published between 2018 and 2021, and d) articles that used tasks or interventions in a formative assessment context.
- Exclusion criteria: Articles that did not have extended and precise information about the formative task used. These articles were excluded because it was not possible to analyze if the authenticity features were present.
- Ten articles were selected from the inclusion and exclusion criteria, five with objective structures and five with subjective structures.
- Once relevant articles were identified, each article was evaluated by extracting the following information (Appendix1): name, author, publication date, the structure of the assessment used (objective/subjective), and the presence/absence of authenticity criteria (realism, complexity, challenge, collaboration, reflection, and diversity).
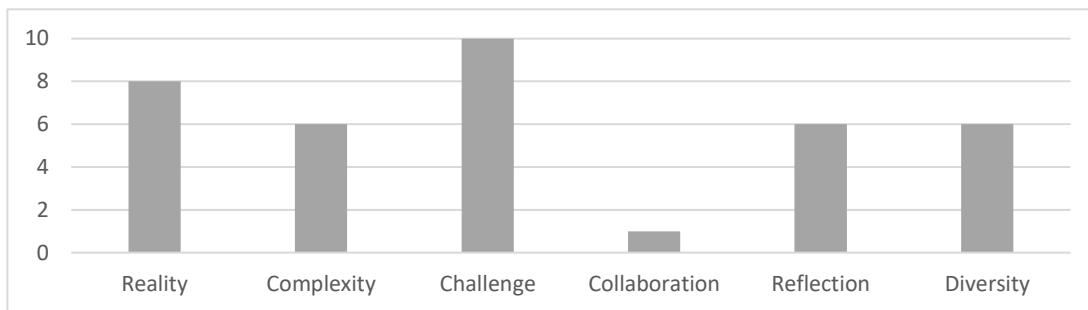
RESULTS

Are Formative Assessment Tasks Reported in Research Authentic?

In general terms, only one of the ten tasks reported in the reviewed articles met all the criteria for authenticity (Figure 1). This means that authenticity is not being reflected in the design of formative

assessment tasks reported in research papers (Dunn & Mulvenon, 2009; Lane et al., 2019; Lee et al. 2020). Nevertheless, it is important to mention that the criteria "challenge" was present in all the tasks revised (challenge refers to the capacity of the task to enhance cognitive engagement), while the criteria "collaboration" was only present in one of the ten tasks revised. The omission of collaborative assessment tasks reflects that educational contexts continue to prioritize individual assessment processes over collaborative schemes that could enrich students' learning processes.
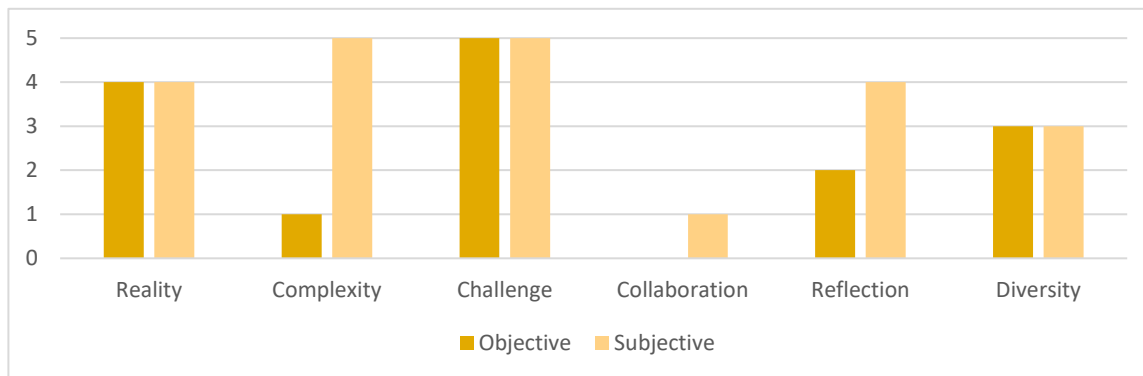
FIGURE 1
AUTHENTICITY CRITERIA PRESENT AMONG THE TASKS REVISED

The influence of Subjective and Objective testing on Authenticity

Since the literature has constantly mentioned the fact that objective and subjective testing have different potentials regarding cognitive engagement (Abosalem, 2016; Chiheb et al. 2011; Villarroel & Bruna, 2019), a separate analysis of authenticity was made regarding the structure of the tasks revised (Figure 2). Overall, it was noticed that tasks that have subjective structures are more complex, collaborative, and reflective, and in general, meet more authenticity criteria than objective tasks. For its part, although objective tasks do not outperform subjective tasks in any criteria, they do share the same frequency concerning realism, challenge, and diversity.

FIGURE 2
COMPARISON OF AUTHENTICITY CRITERIA IN SUBJECTIVE AND OBJECTIVE TASKS

What Are Good Examples of Appropriate Objective and Subjective Assessment Tasks for Each of the Authenticity Criteria?

Because authenticity refers to six different features: realism, complexity, challenge, collaboration, reflection, and diversity, each one of them will be addressed in a different section to show how researchers approach each feature.

Realism

As briefly described previously, realism refers to tasks that are either framed in real-life contexts or tasks that, when solved, simulate what is faced in real-life. In the present review, all subjective tasks and one objective task approached reality by developing particular skills needed for real-life contexts. For example, Mohamadi (2018), trained students in writing skills by making them compose different essays that students registered in a portfolio during a semester. For its part, Broadbent et al. (2021), exhorted students to write a 900-word introduction to a lab report on a cognitive psychology topic for a cognitive psychology class. Tapingkae et al. (2020), trained students' behaviours related to cyberbullying, digital drama, digital relationships, and online communication by asking them to make decisions in simulated situations they could encounter in real life. Also, RR et al. (2020), used a series of questions to ponder and approach students to authentic technological practice while also being exposed to the implications of technology in society. Lastly, Zhu et al. (2020) used objective simulation activities to develop skills related to the prediction of factors that influenced the Earth's future climate: CO_2, albedo, ocean temperature, volcanic activities, and human-produced greenhouse gases.

In contrast, all the other objective tasks approached realism by involving students in activities that are framed in real-life contexts. For example, in a pathophysiology class, Fernández Ros et al. (2021) presented clinical cases to students in seven different scenarios to reach specific diagnoses by answering multiple-choice questions. In the same way, Hughes et al. (2020) used questions based on video clips of case studies and policy documents as materials for multiple-choice assessment activities. Similarly, Lailaturrahmi et al. (2020), used multiple-choice analytical questions about Systemic Lupus Erythematosus, Drug Hypersensitivity Reaction, Tuberculosis, and Oral Candidiasis in a pharmacotherapy class.

Complexity

Having in mind that complexity refers to the structure of a task and the time it takes students to solve a particular activity, it was observed that most of the subjective tasks reviewed had two main features: they used activities that required students to develop or practice a skill, and it took students more than one hour of class to complete them. Some examples of these tasks are: writing essays, writing laboratory reports, answering formative questions that lead to discussions, creating portfolios, or making decisions in simulated scenarios (Broadbent et al., 2021; Mohamadi, 2018; RR et al., 2020; Tapingkae et al., 2020). Others, although took a shorter time, still aimed at making students build upon their knowledge. Bulunuz (2019), made primary students draw and label the biological processes explained during class (for example, drawing the process of the life cycle) at the end of each science session.

As opposed to developing skills, most objective tasks revised aimed at evaluating students' knowledge of a particular topic in a short period by using exam structures. Therefore, only one of the objective tasks revised achieved complexity. Zhu et al. (2020) designed a wide range of diversified simulation activities covering different topics and dilemmas and made follow-up questions for students to answer with short answers and reflection questions. Altogether these tasks allowed students to relate the simulation with other contexts and reflect to gain a deeper understanding of the topic. Tasks were connected in a methodological way that guided students to gain knowledge and practice skills.

Challenge

Challenge is reflected in a task when it exhorts students to go beyond the textual reproduction of fragmented content engaging them in high-order cognitive skills. When a task involves challenge, it means that the task is moving beyond factual knowledge recall and requires students to relate information that may be conceptual and practical at the same time. Both subjective and objective tasks were able to meet the challenge criterion. As an example, Zhu et al., (2020), engaged students cognitively by using tasks where students made claims, explanations, rated cases of uncertainty, and explained attributes by using precise arguments. For its part, Mohamadi, (2018) claimed that through essay writing and constant feedback, students acknowledged their gaps, related previous information with new information, and improved their writing skills (Mohamadi, 2018). In this sense, Broadbent et al. (2021), also stated that through writing reports students developed skills to write opening statements, research backgrounds of the current

experiments, link past research and current research, and make hypotheses; all skills that move beyond remembering. Tapingkae et al. (2020), explain that in their formative task students were asked to use prior knowledge from previous missions to make decisions on future missions, meaning that students learned from experience and cause-and-effect situations observed in previous missions. Differently, RR et al., (2020), guided students with planned questions to achieve different competencies in students: reflection, transference, socialization, resilience, and flexibility. As well, Bulunuz (2019), with his annotated students' drawings of processes or phenomena learned in class, made students recall information, integrate it, and translate what they understood into the drawings (for example, a diagram that represented the cycle of water or pollination of plants). Differently, Pishchukhina & Allen (2021) used objective questions to test critical thinking and problem solving, while Hughes et al., (2020) tested comprehension skills, capacity to identify cause and effect, and understanding of key vocabulary.

Collaboration

Collaboration refers to an interactive process that engages two or more participants who work together to achieve outcomes more effectively and efficiently. Although collaboration seems to be a topic constantly mentioned in learning and proven to provide many benefits to students in the learning process, only one of the papers reviewed had clear collaboration activities. For example, in the writing tasks proposed by Mohamadi (2018), students had to upload their essays online so other classmates could read them and give feedback. Also, students could accept or reject changes given by their classmates and could engage in discussions to share ideas and review changes. None of the other formative tasks revised used collaboration strategies among students, neither with subjective nor objective structures.

Reflection

Reflection is related to the capacity of the tasks to lead students to think about their learning, misconceptions, information gaps, strategies used, and coherence of the content learned.

Mohamadi (2018) engaged students in reflection by making them write reflective evaluations of their growth and by providing electronic facilities for students to reflect upon other students' performance. Zhu et al. (2020), used questions about real-life phenomena to make students argue, discuss, and reflect upon the simulation experience. For his part, Tapingkae et al. (2020), explained that in their formative task students had to learn to analyze generalizations about men and women and to think critically about gender stereotypes as well as their roles in their own lives. RR et al. (2020), guided students with planned questions to reflect upon reality and the impact of technology. As well, Bulunuz (2019), with its annotated students' drawings made sure that students reflected upon their learnings, understanding, preconceptions, misconceptions, etc. Lastly, Pishchukhina & Allen, (2021) approached reflection in their formative tasks through automated feedback. They concluded in their study that feedback facilitated the development of reflection and self-assessment in learning in large cohorts.

Diversity

Tasks should vary in the way students are asked to perform or demonstrate knowledge or understanding. In this sense, tasks should require that students access a variety of levels of expertise, view problems from multiple perspectives, and solve tasks with different strategies. It is desirable that tasks have different structures, materials, goals and schemas.

There are many ways to achieve diversity in an assessment task, for example, Broadbent et al. (2021), provided students with different sources of information for the laboratory reports: statistics, research papers, graphics, interactive models, data, etc. Additionally, students had to analyze, read, write, and build arguments, all different kinds of skills. Zhu et al. (2020), used different objective tasks: multiple-choice, constructed response, short videos, 5-point Likert scale, inquiry, simulation, data collection, calculations, and reflection questions in an organized sequence that had multiple purposes.

For its part, Mohamadi (2018), diversified its essay writing task by including collaboration among students and implementing a broad feedback scheme that involved students in discussions about writing. Tapingkae et al. (2020), displayed texts, pictures, animations, stories, cartoons, examples, and questions

that led to decision-making. Hughes et al. (2020) used questions based on video clips of case studies and policy documents as materials to answer multiple choice questions, jumbled sentence questions, filling in the blanks and matching questions. Lastly, Pishchukhina & Allen, (2021) designed a 20 questions quiz including multiple-choice questions, match questions, fill-in-the-blank questions and open-response questions.

DISCUSSION

In first place, it should be remembered that formative assessment tasks are the means by which formative assessment is achieved. It is through the use of tasks that teachers gain information about students' progress and students gain knowledge about their achievement of learning objectives. Formative tasks constitute the raw material to provide feedback for students which in turn allows metacognitive processes to be developed. Therefore, the design, selection, and use of suitable formative assessment tasks are fundamental aspects to achieve a successful formative assessment practice.

Particularly, it was observed that concerning realism, all subjective tasks were centered on developing or training particular skills that simulated actions needed in real-life contexts, while most objective tasks (all except one), framed activities in real-life contexts but did not train practical skills needed for real-life. Assessment could benefit from hybrid objective/subjective structures where both real-life contexts and skills can help improve students' performance. Also, having in mind that most online assessments use objective structures, designers should focus on providing tasks that develop real-life skills through simulation activities, short videos, and gamified tasks. The work done by Zhu et al. is an excellent example of how to include both types of realism through objective structures.

Regarding complexity, it was observed that because subjective tasks have open-ended structures, it was easier for researchers to design assessments that went beyond testing schemas and emulated proper learning activities. Subjective structures allowed students to develop skills or build knowledge over a period that exceeded the class hour and provided opportunities for students to create their own products, involving a more complete set of skills. On the other hand, objective tasks demonstrated greater difficulty in providing experiences that were not evaluative and their execution time was shorter in relation to subjective tasks. A way to improve the design of complex tasks is to include follow-up questions, reflections, rating scales, videos, discussion, automated simulations, collaboration, etc., as a complement to the objective tasks given to students (multiple-choice, matching, fill-in-the-blank, true-false questions). This way, objective activities can go beyond testing schemes and simulate proper activities.

As was mentioned in the first part of the discussion, challenge was the only authenticity criterion met by all the tasks revised. It is possible to achieve challenge in both subjective and objective activities through very different means. Nevertheless, subjective tasks cover a wider and more varied range of cognitive processes that include both lower and higher thinking skills (Anderson et al., 2001). For example, most subjective tasks involved processes like understanding, applying, analyzing, evaluating and creating. On the contrary, objective tasks, due to their limited structure, usually included processes like understanding and analyzing, but failed to move towards applying, creating and evaluating.

For task designers, it is important to keep in mind that questions should tap into different cognitive skills. For example, a multiple-choice question can be used to develop analytic thinking based on a short text, while a matching exercise can help students relate information to other contexts, and a simulation activity can help practice a skill. Also, objective structures can be combined with simple verification questions that induce students to reflect and enhance metacognitive thinking (Fernández Ros et al. 2021; Hughes et al. 2020; Lailaturrahmi et al. 2020). Lastly, a deeper review could be useful to analyze the cognitive engagement depth achieved by each of the structures. In this review, all the tasks demonstrated some kind of cognitive engagement that went beyond memorizing, so they were classified as challenging, but an analysis of the type of cognitive processes that each task tapped on was not considered and could make a big difference.

In relation to collaboration, both structures showed a limited capacity for this criterion. Collaboration needs to be more visualized when designing both subjective and object formative tasks. This observation

is essential because collaboration has been demonstrated to enhance the effectiveness of online learning (Swan et al. 2006), improve learner performance regarding higher-order thinking activities (Ku et al. 2013), and ensure engagement in learning experiences (Brindley et al. 2009). To include successful collaborative tasks, a balance between individual work, in which students are held responsible for their learning, and teamwork, in which students reach their goals if the other students also reach theirs, must be obtained (Swan et al. 2006).

Regarding reflection, it was observed that subjective tasks usually include activities that aim at generating reflection in students through questions, interaction, and teachers' or classmates' feedback. This kind of interaction helps students discuss their progress and acknowledge their misconceptions, information gaps, strengths, coherence, and achievements, among others. Particularly, activities that encourage students to create long-term products, provide a constant process of reflection where students experience improvement as they build on the tasks. On the other hand, objective tasks usually forget to include feedback questions that go beyond correct and wrong answers and lack different sources of feedback; as a result, the reflection process remains at a basic level. Reflection can be easily tapped both with subjective and objective testing using proper formative feedback that guides students along the task and points not only to mistakes and successes but on how to improve and overcome difficult problems. Short answer questions are also a good way to approach reflection in objective tasks, or Likert scale questions where students have to rate their process, level of difficulty of the task, and pertinence, among others. Also, when there is no time for particular questions or class discussions, collaboration among students is an excellent source for reflection.

Finally, attention should be paid to designing more diverse formative assessment tasks. This criterion is very important because when tasks have diversified assessment schemas, they become more inclusive for all students. In this review, there is an evident need to diversify both subjective and objective assessments to provide more opportunities for students with different learning needs. When having this criterion in mind, designers should remember that is not only important to offer a wide range of diversified options to perform a task, but to offer different levels of difficulty that could help both, more advanced students gain more specialized concepts or skills, and students with special educational needs to meet the basic contents and skills to cover a particular topic.

CONCLUSIONS

The results of this review showed that most of the tasks revised did not meet all the authenticity criteria described in the literature. This lack of authenticity in formative assessment may influence the efficiency of formative assessment practices, and particularly within research purposes, it may be the cause of poor effect size values. Hence, it is necessary to design tasks based on formative frameworks that assure the presence of authenticity criteria, to improve the quality of the tasks used.

Regarding the dichotomy between subjective and objective tasks, it is important to acknowledge that subjective tasks offer a more varied spectrum of options that favor authenticity. As the literature has reported, objective tasks have a bigger challenge in engaging students cognitively (Abosalem, 2016), this also seems to be the case for authenticity: it is harder to create more complex, collaborative, challenging and reflective objective tasks in formative assessment contexts. Nevertheless, it is possible to create optimal authentic objective tasks that meet all authenticity criteria, if these are designed taking into account all the authenticity criteria mentioned.

Lastly, designers should not lose sight of "diversity" when designing assessment tasks. Diversity gives students with special educational needs the opportunity to approach learning goals from different perspectives and difficulty levels.

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APPENDIX

TABLE 1
AUTHENTICITY CRITERIA AND STRUCTURE OF THE TASKS REVISED

Article name, author(s) and publishing date	Structure		Authenticity					
	Objective	Subjective	Realism	Complexity	Challenge	Collaboration	Reflection	Diversity
The effect of automated feedback on revision behavior and learning gains in formative assessment of scientific argument writing (Zhu et al. 2020)	X		X	X	X		X	X
Comparative effect of online summative and formative assessment on EFL student writing ability (Mohamadi, 2018)		X	X	X	X	X	X	X
Effects of a formative assessment-based contextual gaming approach on students' digital citizenship behaviours, learning motivations, and perceptions (Tapingkae et al. 2020)		X	X	X	X		X	X
How does self-regulated learning influence formative assessment and summative grade? Comparing online and blended learners (Broadbent et al. 2021)		X		X	X			
Web-based formative assessment through clinical cases: role in pathophysiology teaching (Fernández Ros et al. 2021)	X		X		X			

Student engagement using multiple-attempt ' Weekly Participation Task ' quizzes with undergraduate nursing students (Hughes et al. 2020)	X	X		X		X
Supporting learning in large classes: Online formative assessment and automated feedback (Pishchukhina & Allen, 2021)	X			X	X	X
Google Forms as a useful tool for online formative assessment of a pharmacotherapy course in Indonesia (Lailaturrahmi et al. 2020)	X	X		X		
Development of formative assessment tool for a primary, technology classroom (RR et al. 2020)		X	X	X	X	X	X
Introduction and assessment of a formative assessment strategy applied in middle school science classes: Annotated student drawings (Bulunuz, 2019)		X		X	X	X	