Perspectives on Using Web-based Formative Assessment in the Remote Teaching Environment

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ABSTRACT

The assessment of students' language ability is an essential component of language teaching and learning. In recent years, educational technology tools have provided teachers with additional resources to monitor and assess learners' progress in in-person classrooms. However, when instructors are teaching remotely, the assessment of learners is one of the most challenging aspects of their work. In this perspectives paper, I intend to address this concern about assessment by exploring the efficacies of integrating a web-based formative assessment into remote learning environments and discussing learners' perspectives about this assessment approach. I conclude by arguing that a web-based formative assessment tool can be effective in assessing learners in remote learning environments as it offers immediate and real-time feedback, flexibility, and meaningful interaction.

Keywords: educational technology tool, formative assessment, learners' beliefs, remote teaching

Introduction

The integration of technology into language classrooms appeals to many teachers as a potential solution to the unprecedented challenges the COVID-19 has brought. Online instructional tools to support teaching are critical at present, especially when teachers are 'forced' to transition from face-to-face to remote teaching (Adams, 2020). In my experience of working as a test preparation

instructor for almost a decade, I always enjoyed integrating effective technology into classroom activities. This incorporation of technology was not a 'forceful' one; it was done primarily to enhance learners' learning experiences. However, the circumstance is different at present as instructors are 'forced' to teach remotely. In this remote teaching and learning context, one of the major challenges instructors face while teaching standardized test preparation courses is the assessment of learners. In this paper, I aim to address this concern about assessment and investigate how teacher-led web-based formative assessment can be embedded into remote learning environments and how learners perceive such methods of assessment.

The assessment of learners' language ability is an integral part of the language learning and teaching process. Assessment is often referred to as a bridge between teaching and learning (Wiliam, 2010). During the language education process, teachers need to be able to understand the gap between what students are able to do and what "they need to be able to do or understand in order to fulfill a task successfully" (Green, 2014, p. 9). By observing and comparing a learner's performance, teachers can identify this gap and tailor future lessons to address the gap. Regular assessment of learners who are preparing to sit a standardized English language proficiency test such as IELTS, TOEFL, or CELPIP is crucial because teachers who are able to assess learners' performance can prevent students from wasting time and money. Similarly, learners who get feedback about their performance from their teacher get better insight into how to plan their future learning goals.

Learners' progress can be monitored and assessed in many different ways. Formative assessment is used to assess learners' ongoing progress throughout a class or course in order to focus on their learning goals and to identify learning gaps. The fundamental of formative assessment is "the delivery (by the teacher) and internalization (by the student) of the appropriate feedback on performance" (Brown, 2004, p. 6). This type of assessment enables both teachers and learners to modify teaching and learning while they are in progress to achieve targeted learning goals. Formative assessment enhances learning outcomes by generating feedback information that benefits learners. Formative assessment information can be gathered from classroom observation, class discussions, portfolios, homework, group or pair work with peer feedback, student self-assessment, and other sources (Cizek, 2010). On the other hand, summative assessment is generally used to measure learners' learning or knowledge at the end of a unit or a course. Final exams or graded tests, general proficiency exams, and standardized tests are examples of summative assessment. While formative assessment guides the way to future progress, summative assessment reflects how well the learner has achieved the learning goals. Language instructors can incorporate both formative and summative assessments to better understand

student learning and to ensure that appropriate instructional strategies are implemented during the class or throughout the course.

Theoretical Framework

Formative assessment is not fundamentally connected with any specific theory of learning and instruction. However, existing conceptualizations of formative assessment seem to fit primarily into cognitivist and social constructivist teaching and learning theories. Cognitivism focuses on the role of practice with feedback to help an individual learner to learn at an appropriate level (Ertmer & Newby, 2013). Cognitivist teaching approaches aim to help learners integrate new information into current knowledge. Some cognitive behaviors such as noticing and understanding play a crucial role in the learning process. Educators who are cognizant of the importance of selecting the assessment task provide opportunities for learners to notice the target language or structure to stimulate explicit and implicit learning processes (Theodoropulos, 2015).

According to constructivists, learners construct "their own knowledge by testing ideas and approaches based on their prior knowledge and experience" (Jordan, 2004, p. 65). Constructivism highlights the importance of learners' personal contribution to learning (Richards & Schmidt, 2010). According to constructivists, knowledge is actively built, and learners remain active during the learning process and construct knowledge and meaning from their experiences; they apply current understandings and build knowledge based on their prior and emerging knowledge (Phillips, 1995). Similarly, from a social constructivist perspective, learners construct knowledge through the cognitive process in a social and cultural context and develop skills that are crucial to monitor their own learning. The existing conceptualization of social constructivism is primarily based on the sociocultural theory, which has been extensively applied to models of formative assessment (Trumbull & Lash, 2013). Learners are seen to build "knowledge and understanding in a domain over time, not only as individuals but in an interactive social context" (Trumbull & Lash, 2013, p. 5). In this interactive social context, teachers, parents, or peers with better knowledge or understanding collaborate with learners and create a community of learners.

Effectiveness of Web-based Formative Assessment Tool

In recent years, the evolution of diverse technological tools for teaching and learning has provided additional resources for teachers to use in the classroom to make learning more interactive and fun. Web-based formative assessment is one of the popular tech tools in language education. Many researchers have

studied the effectiveness of this tool in face-to-face classroom settings. However, there is a dearth of research on this tool's efficacies in the remote learning environment. Based on my own experience of using Classkick, a web-based formative assessment tool, I plan to analyze the effectiveness of this tool for assessment in remote learning environments.

A web-based formative assessment tool is an online platform that allows teachers to create engaging assignments in web media. Web-based formative assessment is one of the many tech tools that can be effective in assessing learners in the remote learning environment as it offers immediate and real-time feedback, flexibility, and meaningful interaction.

Immediate and Real-time Feedback

Feedback is a vital component of formative assessment; it plays a significant role in the learning process as it guides learners on what to do next. Immediate formative feedback can assist learners in applying strategies that can be useful to address gaps in their learning. Using web-based formative assessment tools, teachers can observe students' progress and give formative feedback in real-time. When students start working on their tasks on *Classkick*, teachers can see where the students are in the assignment and what they are doing in real-time. During online synchronous classes, teachers can easily monitor learners' activity in real-time, including the time spent on any particular activity or question. By recording these behaviors of learners, teachers get better insights into the areas that need to be addressed in future lessons.

Multimodality and Flexibility

On web-based FA tools like Classkick, teachers design assignments or tasks and present them as a slide-style canvas. Each assignment consists of a series of individual slides that may be ordered in any sequence. Each canvas can have prompts that may be a text, a picture, an audio file, a drawing, a video link, or a combination of these formats. The 'audio insert' feature makes the listening activities accessible to students as they get both the questions and the audio file on the same slide. Likewise, teachers can create manipulatives to include in the reading lessons to engage students in activities such as 're-order paragraphs' or 'match headings' to the paragraphs. Most importantly, a web-based formative assessment platform makes it easy to create multiple-choice, fill-in-the-blanks, and short-answer questions to engage students during the listening and reading lessons. Moreover, teachers can create a collection of stickers with comments that are frequently used to provide feedback; this feature eliminates the need to type the same written feedback repeatedly. Also, these features fit appropriately

in standardized test preparation courses because most of these tests have similar types of questions in some of the sections of the test.

Similarly, students have various options to choose how they want to respond to the task; they can type the response, click the best options from the given list, write or draw the answer on the canvas using the pen tool, or record their response using the audio recording tool and attach the audio file to the respective canvas. Also, they can do the work at their own pace on their own device. Because students can access *Classkick* using a class code provided by their teacher, they are not required to create an account on this platform.

Meaningful Interaction

Web-based formative assessment tools such as *Classkick* can provide opportunities for students to interact meaningfully with their teachers and peers. This interaction builds engaging remote learning environments, which fosters collaborative learning that encourages learners to "develop, share and compare understandings and experiences" (Gikandi et al., 2011, p. 2343). For example, on *Classkick,* learners can either anonymously request assistance from their peers or privately raise a 'virtual hand' to request help by just clicking on a button. Students can also add comments to their peers' work and provide feedback to them. Hence, web-based formative assessment tools provide opportunities for a collective understanding of learning goals. This platform can be effective in doing online collaborative brainstorming of ideas which will ultimately help in essay writing tasks that candidates are required to write in the language proficiency test they plan to sit.

Hence, web-based formative assessment tools can be easily integrated into online standardized test preparation courses. They enable teachers to make teaching listening, reading, writing, and speaking more interactive and fun.

Learners' Beliefs about Web-based Formative Assessment

Beliefs have been defined in many different ways. However, there is a general consensus that they are "propositions individuals consider to be true and which are often tacit, have a strong evaluative and affective component, [and] provide a basis for action" (Borg, 2011, p. 370). Second or foreign language learners of all ages have beliefs about language learning, and their beliefs may have an impact on their performance during the learning process.

The recent focus shift on learners and their contributions to learning a second or foreign language has drawn scholarly attention towards learner beliefs.

Learner beliefs are essential concepts in every discipline which deal with learners' behavior and learning (Kalaja & Barcelos, 2003). All language learners have some preconceived beliefs about language learning, and these beliefs can indicate what do learners expect and what strategies they will implement in their language learning (Kalaja & Barcelos, 2003). A literature review shows that empirical studies that investigate the nature of learner beliefs are remarkably fewer.

Language teachers' beliefs has received significant scholarly attention, and many researchers have conducted studies on this topic. However, there is a dearth of research on learner beliefs in relation to their engagement on web-based formative assessment tools. Since learner beliefs have a meaningful impact on second or foreign language learning processes and learning outcomes, a focus shift on this research topic will give better insights into learners' perceptions about the integration of technology into the language classroom, especially for assessment purposes. Due to the dearth of specific study/research on learner beliefs of web-based formative assessment in the remote learning environment, I plan to analyze the existing literature on learners' beliefs, online teaching and learning, computer-assisted language learning (CALL), and formative assessment.

In their study that investigated language learners' beliefs about CALL, Sydorenko et al. (2017) conclude that learners' beliefs were "more positive when they had more exposure to technology in their class" (p. 196). This study suggests that learners develop more positive attitudes towards CALL when they have more exposure to effective and different types of CALL. Additionally, the study offers three implications for language teaching: (1) CALL design should be motivating for learners, (2) learners should be made aware of the effectiveness of CALL, and (3) use of technology should be encouraged both inside and outside of class. Sydorenko et al. (2017) maintain that these steps can promote more positive beliefs about CALL. This study supports the claim that the integration of technology into the language classroom, both face-to-face and online, enhances language learners' learning experiences.

Vogt et al. (2020) conducted a study to investigate learners' experiences of assessment. This study included 1788 learners of English in Cyprus, Germany, Greece, and Hungary. The study reports that learners viewed online formative assessment "to be supportive of their learning" (p. 410). Similarly, Ogange et al. (2018) investigated learners' perceptions of the efficacies of various formative assessment tools used in the remote learning environment. This study's findings suggest that learners have positive attitudes towards the use of true/false questions, gap filling and matching exercises, and multiple-choice questions in the assessment. The learners also perceived the use of e-portfolio and peer-assessment as effective tools of formative assessment in remote learning settings.

McCallum and Milner's (2020) study reports on the implementation of online formative assessment in a face-to-face university first-year class. This study concludes that online formative assessment encouraged students to learn more and advance their knowledge of course content. Students in this study reflected that the formative assessment encouraged regular study and that they were able to monitor their progress by focusing on the feedback provided. They also appreciated the flexibility of the assessment platform as it "could be completed at a time to suit them, which fitted with their workloads and other commitments" (p. 10). Students also highlighted that the formative assessment allowed them to assess their progress and evaluate learning themselves by identifying learning gaps or the areas of improvement. However, students had negative comments regarding the assessment tools' lack of ability to identify correct "input for textual and numerical questions" (p. 11) as the system was unable to recognize different input formats. Although this study focuses on face-to-face classroom context, the tool used is a webbased platform. Therefore, the learner beliefs reported in this study can be considered a valuable source in analyzing learners' perception of online formative assessment tools in remote learning environments as well.

Pedagogical Implications

Formative assessment plays a crucial role in both the traditional and remote teaching and learning environment as it can facilitate student learning. Rolfe and McPherson (1995) suggest that educators should focus on three specific areas while designing and implementing any formative assessment: (1) using a method to inform learners about the gaps in their learning; (2) familiarizing learners with the anticipations of summative assessments; and (3) providing feedback that guides the course of action towards their learning goals. Effectively implemented formative assessment enables teachers not only to decide whether learners have learned something but also to investigate learners' thinking process to understand why any learning gaps exist (Trumbull & Lash, 2013).

Incorporation of web-based formative assessment into remote learning language class presents three major benefits to students: (1) it offers flexibility to students to take the assessment at their convenience, (2) it allows students to do the assessment repeatedly until they become confined about their performance, and (3) it provides students with immediate feedback necessary to assess their learning and work on the areas that require improvements to attain their learning goals (Wang, Wang, Wang & Huang, 2006; Zakrzewski & Bull, 1998, as cited in Ogange et al., 2018, p. 29). However, it is important for teachers to understand that learners may have different perceptions regarding the efficacies of the tools used in the assessment process; therefore, understanding

learner beliefs of the FA tool used can significantly improve the effectiveness of the tool used.

Students taking online standardized test preparation courses will eventually sit the actual test, and therefore it is important for teachers to make these learners familiar with the final summative assessment. In this context, web-based formative assessment tools can offer a systematic structure for effective learning and its assessment by offering a platform for teachers to monitor students' learning and to provide regular formative feedback on learners' performance. Since almost all the popular standardized tests can be done on computers, it is practical for teachers to use web-based teaching and learning tools as it will familiarize learners with the test day expectations.

Conclusion

Research shows that the effectiveness of formative assessment will not be improved appreciably just by replacing paper-based assessment with a web-based tool. Also, there can be significant differences between teachers' and learners' perceptions of assessment practices, and so a critical analysis of learners' beliefs will enable teachers to effectively design and implement formative assessment tools in an online learning environment. Understanding learners' perception of different methods of formative assessment used in remote learning settings is crucial in enabling instructors to integrate tools that learners perceive positively. For example, teachers can take advantage of learners' positive attitudes towards certain types of questions (e.g., multiple-choice, true/false) used or certain approaches (e.g., peer feedback) implemented during the assessment process. Overall, the use of formative assessment in the remote learning environment can considerably influence learning outcomes. Therefore, in order to avoid any potential negative impact on learning outcomes, teachers should be cognizant of learners' beliefs towards web-based formative assessment before embedding it into online learning settings.

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