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Formative assessments as pedagogic tools

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Abstract
This article aims at presenting a state of the art status of formative assessment as a pedagogic tool. To this end, a brief developmental account of different modes of assessment over the last decades will be presented first. Then, formative assessment will be discussed in its constructivist guise. The present literature on assessment suggests that assessment for learning (formative assessment) not only represents an assessment tool but it also serves as a pedagogic tool to enhance learning and thinking. It has also gone to lengths to affect the design of classroom tasks and activities. Attempts have been made to delineate the underlying principles of formative assessment which can be used to picture the formation process of learners' knowledge and development. Subsequently, alternative assessment techniques of which the present article will give an account have been suggested by scholars to operationalize these principles.

Keywords: Formative assessment; constructivism, pedagogic tool; alternative assessment

Introduction

As the metaphor by Mitchell and Vandal (2001) puts it, the shifting tide of interest has long been drifting the field of language pedagogy along a "major river". Not only do we have been shifting trends and approaches over the course of time, but we have also been adding more and more sophistication into our theory and practice. The traditional approaches to language pedagogy were mostly intuitive fabrications of what language and teaching and learning a language might have been. The acts of teaching and learning in those contexts were based on a set of prescribed classroom activities which were to bring about learning. As the river pushed forth over the course of time, new schools of thought, other fields of study and innovative interdisciplinary fields contributed to language pedagogy. As a result of these contributions, the art of language teaching has grown more sophisticated both in terms of theoretical conceptions that inform teaching acts and pragmatic tools that have been added to the teacher's toolbox.

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On the other hand, some techniques and procedures, that traditionally had no direct application in day-to-day classroom practice, gained more and more prominence and found their way into classroom environments. One of these components that has smoothly crept into the immediate classroom context is assessment. As the analogy implies, this migration has taken place over time. The concept and function of assessment in current language pedagogy is way different from what it might have meant for traditional teaching methodology. This transition has made assessment a working teaching technique. The transition could be assumed to have taken place over three developmental phases which may be outlined as product-oriented assessment, process-based assessment and assessment in constructivist perspective.

PRODUCT-ORIENTED ASSESSMENT

As Brown (1989, p.224) puts it, "product-oriented approaches are those which focus on the goals and instructional objectives of a program with the purpose of determining whether they have been achieved". In this sense, the focus of assessment is on "measureable behavioral subjects" whereby the success or failure of learning and pedagogical objectives is determined based on students' performance on an end-of-the-course assessment session. This is the function that has been attributed to summative assessment which is thought of as a means of assessing a certain level of proficiency. Consequently, the efficiency of a course of teaching and learning practice is judged in terms of students' achievement of a certain level of proficiency. This implies that summative product-oriented assessment mainly attempts to assess the students' degree of achievement of predetermined set-in-stone curricular objectives. This type of assessment has but a descriptive function; to portray what it is that students know.

PROCESS-BASED ASSESSMENT

The advent of nativist approach along with the associate cognitive psychology shifted the attention from description of observable performance to the underlying mental processes of language learning. Brown (2007, p.12) suggests that "the generative linguist and cognitive psychologist were … far more interested in a more ultimate question, why: what underlying factors- innate, psychological, social, or environmental- caused a particular behavior in a human being?". Then the concept of formative assessment which were to delve into the formation process of the learner came into vogue. Alternative assessment procedures were suggested to deal with learning in actual reality and address learning in its immediate context (see Ghoorchaei et al, 2010).

Chastain (1988, p.378) asserts that "the primary purpose of evaluation [assessment] in the classroom is to judge the achievements of both students and the teacher". He stresses that this type of assessment is "an aspect of learning" but he still contends that it is "the final step in the sequence toward mastery of content and accomplishment of objectives" (p.338). Brown (1989, p.292) also suggests that formative assessment is part of the ongoing process of the development of a course of study, which intends to "gather information that will be used to improve the program".

While the scholars in this era had begun to recognize the value of formative assessment, they failed to grasp it wholeheartedly as part and parcel of day-to-day teaching and learning activities. For example, Chastain (1988, p.379) contends that there are certain weaknesses in this type of assessment because, after all, the evaluative judgments are "highly subjective, may be based on short-term learning, and if given daily, may be confusing and burdensome to record in the record book". Formative assessment was then predominantly thought of as a short quiz with a few items administered to students, which the students themselves with the aid of their peers were to score. This was supposed to give the learners opportunities to evaluate their own progress.

ASSESSMENT IN CONSTRUCTIVIST PERSPECTIVE

The constructivist paradigm succeeded to the throne of language pedagogy in the latter part of the twentieth century. Constructivism is a multi-dimensional paradigm which integrates linguistic, psycholinguistic and socio-cultural theories of language acquisition. Social constructivism is primarily built upon vygotskian theories of social interaction. According to Brown (2007, p.12), It "emphasizes the importance of social interaction and cooperative learning in constructing both cognitive and emotional images of reality".

Under this paradigm shift, the concept of formative assessment managed to adopt a constructivist framework. Accordingly, assessment reform movement took shape to draw the "attention on improving student learning and on two principles that helped to operationalize it, namely, assessment for learning and formative assessment" (Noonan & Duncan, 2005). Consistent with the constructivist classrooms that yearn for enhancing discursive interaction and dialogue within the classroom context, assessment procedures have also come to adapt discursive and dialogic techniques. Mantero (2002) asserts that assessment which is consistent with socio- cultural theories of language acquisition draws on two operational techniques: instructional conversations and authentic assessment. Either technique purports to render assessment as part of the process of learning and classroom discourse. Mantero believes that this type of formative assessment is

consistent with socio-cultural theories and Vygotsky's concept of zone of proximal development (ZPD) since it is not based on "a priori" grammar which students are expected to have mastered, rather, it addresses the dynamic nature of language learning and learners' emergent grammar, the grammar that will develop as a result of students' engagement in meaningful interaction and discursive dialogues. In this regard, formative assessment has come to set the stage for "more self-expression, creation of meaning and negotiation during communication".

DISCUSSION

Black and William (1998, p.10) defined formative assessment as "all those activities undertaken by teachers and/or by their students, which provide information to be used as feedback to modify the teaching and learning activities in which they are engaged". Formative assessment is thus a pedagogic tool which is used collaboratively by both teachers and learners to enhance learning, adjust teaching and learning activities, provide feedback on the efficiency of teaching and learning acts and direct future path. Dunn and Mulvenon (2009) assert that research has incontrovertibly revealed that "the use of formative assessment facilitates improvement in instructional practices, identifies 'gaps' in the curriculum and contributes to increased student performance." Another definition has been provided by the council of chief state officers (CCSSO, 2008) which define formative assessment as: … a process used by teachers and students during instruction that provides feedback to adjust ongoing teaching and learning to improve students' achievement of instructional outcomes.

The definition clearly emphasizes the collaborative nature of this type of assessment in which both the teacher and learners are involved and which is compatible with current learner-centered approaches. CCSSO (2008) has delineated five key attributes of effective formative assessment which is supposed to foster learning:

- Learning progressions: learning progressions should clearly articulate the sub-goals of the ultimate learning goal.
- Learning goals and criteria for success: learning goals and criteria for success should be clearly identified and communicated to students.
- Descriptive feedback: students should be provided evidence-based feedback that is linked to the intended instructional outcomes and criteria for success.
- Self and peer assessment: self and peer are important for providing students with an opportunity to think meta-cognitively about the learning.

- Collaboration: a classroom culture in which teachers and students are partners in learning should be established.

Assessment reform group (ARG) is also one of the chief proponents of assessment reform movement, which originated in 1989 by a group of voluntary researchers. Though, they were first preoccupied with "the introduction of national testing and assessment" in the UK, they shifted their attention to "the use of assessment to advance learning as well as to summarize and report it".

Assessment reform group (2002) outlined 10 principles of formative assessment (assessment for learning) based on exhaustive review of empirical research. The principles have been provided as operational techniques to "guide classroom practice". In this regard, the assessment that intends to enhance learning:

- Is part of effective planning
- Focuses on how students learn
- Is central to classroom practice
- Is a key professional skill
- Is sensitive and constructive
- Fosters motivation
- Promotes understanding of goals and criteria
- Helps learners know how to improve
- Develops the capacity for self-assessment
- Recognizes all educational achievement

This type of assessment not only is used as a pedagogic tool in teaching and learning acts but it also affects the design of classroom tasks and activities. Schafer and Moody (2004) contend that classroom activities should be created that provide students with opportunities to demonstrate the depth of their understandings and that also provide teachers with a rich source of diagnostic information to help them understand each student's strengths and weaknesses with respect to attaining proficiency.

Boston (2002) also emphasizes the interrelatedness of assessment and teaching and learning acts. Boston asserts that "teachers need to consider how their classroom activities and assignments support learning aims and allow students to communicate what they know, then use this information to improve teaching and learning."

OPERATIONALIZING FORMATIVE ASSESSMENT

Assessment reform movement has led to the emergence of novel assessment procedures that are used to operationalize principles of formative assessment in the post-method classrooms. From among the alternative assessment techniques, self and peer assessment and portfolio assessment have gained especial importance (Ghoorchaei et al, 2010; Noonan & Duncan, 2005; Rea- Dickens, 2000). There are also some other assessment techniques proposed as components of formative assessment including student-designed tests, learner-centered assessment, projects and presentations, which are used to shift the attention from assessing the outcome to evaluating the process of learning and learners' development.

1. PEER AND SELF ASSESSMENT

An important component of formative assessment is feedback that may be used by both the teacher and learners to modify and adapt teaching techniques and to understand strengths and weaknesses and direct future attention, respectively. Boston (2002) asserts that it is generally the teacher who provides this type of feedback; however, students can also be regarded as generators of feedback through self-assessment. This type of feedback is consistent with Vygotskian concept of zone of proximal development since it notifies students of their current language knowledge and the desired level of proficiency; hence, it informs them of the existing gap. McDonald and Boud (2003) contend that students can be taught strategies to evaluate their own works and "to make choices how to respond to the presented material (e.g. evaluate their work and make use of assessment activities) at their developmentally appropriate pace".

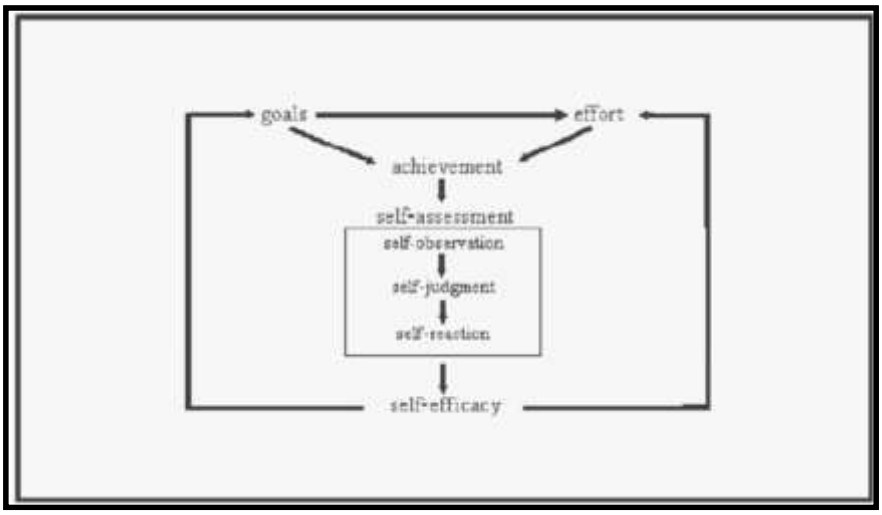
Peer-assessment has a more collaborative focus in which "students work together on collaborative projects or learning activities" (Noonan & Duncan, 2005) while they are supposed to make decisions on the value and accuracy of their peers' works6. Noonan and Duncan (2005) suggest that teachers' use of peer- and self-assessment may have four specific purposes which may ultimately enhance learning. Peer- and self-assessment may be used to:

1. Increases student involvement in learning processes (e.g. students assume teaching responsibilities)
2. Increases social interactions and trust in others
3. Facilitates individual feedback
4. Focuses students on the process rather than the product

The purposes delineated above are consistent with socio-cultural and constructivist theories to which post- method classrooms are supposed to conform.

Noonan and Duncan (2005) conducted a survey study in western Canada and investigated the school teachers' use of peer- and self-assessment. They found that English language teachers used these assessment techniques more often than did teachers of other subject areas (49% of the English teachers used peer- and self-assessment). The researchers conclude that peer- and self-assessment procedures "are indeed to empower students to make decisions (e.g. construct knowledge) that contributes to the individual language experience." Ross (2006) suggests a model as to how self-assessment may contribute to self-efficacy:

Figure 1 The Effect of Self-Assessment Processes on Learners' Self-Efficacy



Based on this model, autonomous self-regulating learners begin with close observation of their performance based on their own subjective rubrics. They continue with judging their performance based on their understanding of general and specific learning goals. In the third phase, they react to their judgments, which indicates what degree of fulfillment they have attained. The successful outcomes of the preceding phases are quite likely to lead to the feelings of self-efficacy. Ross (2006) believes that "self-assessment contributes to self-efficacy beliefs", which may encourage the learners to take positive attitudes towards their successful performance on the same tasks in future.

2. PORTFOLIO ASSESSMENT

As a type of formative assessment, portfolio assessment also purports to foster learning and learners' autonomy. A portfolio is a sample of student's work including writings, audio and video

tapes, diaries, etc. Rea-Dickens (2000, p.390) affirms that portfolios may include a variety of students' work samples like "writing, drawings, notes, audio or video recordings, extracts from projects, and performance on specific tests." They may also involve the "data on different aspects of development, achievement, interest and motivation".

Portfolio assessment is primarily concerned with learning rather than assessment for the sake of assigning grades (see Ghoorchaei et al, 2010). The content of portfolio, usually called evidence or artifact, is actually the best samples of students' works as ascertained by the students themselves. Research on portfolio assessment has been promising in affirming its efficiency as a pedagogic tool (e.g. Ghoorchaei et al, 2010; Yurdabakan and Erdogan, 2009; Wang and Liao, 2008; Chen, 2006). However, portfolio assessment seems to work best in teaching writing skills but may not be so useful in other language skills. Yurdabakan and Erdogan (2009) studied the effect of portfolio assessment on the improvement of reading, listening and writing skills on a group of Turkish high school EFL students. They found that portfolio project significantly improved students' learning of writing skills but not reading and listening skills.

Ghoorchaei et al (2010) investigated the impact of portfolio assessment on Iranian EFL learners' development of writing skills. They used classroom portfolio model in which "the portfolios are assigned primarily for learning rather than assessment purposes." They reported that the use of portfolios significantly improved the experimental group's writing skills comparing with a control group who received traditional instruction and assessment. In addition to effectuating learning processes, portfolio assessment also takes care of students attitudinal and affective reactions. In their study, Ghoorchaei et al (2010) investigated the learners' attitudes towards portfolio assessment. They reported that students generally advocated the positive impact of portfolio on their progress. Their findings also suggested that portfolio project had fostered learners' motivation to continue with their reading and writing.

Wang and Liao (2008) also reported that students in their portfolio group rejoiced greater satisfaction than those in the control group. Though, the research on portfolio has been inconclusive to prove the positive effects of portfolio use on the development of all language skills in EFL learners (Yurdabakan & Erdogan, 2009; Ghoorchaei et al, 2010), portfolio assessment is still regarded as an effective operational model of assessment for learning (Chen, 2006). Portfolio assessment actively engages students in the process of "collection, selection and reflection" which ultimately enhances learners' meta- awareness, autonomy and self-regulation skills.

CONCLUSION

Assessment procedures have gone to lengths to get aligned with dominant instructional approaches over the course of time. Current constructivist orthodoxy has also exerted its influence on assessment procedures and transformed the assessment to serve and foster learning processes, enhance learners' awareness of their strengths and weaknesses, provide descriptive feedback, modify teaching and learning acts and address affective considerations in language learning. In this regard, assessment for learning (formative assessment) has come to be the integral part of teaching and learning activities in day to day classroom practice. Formative assessment should ideally take care of both cognitive and affective factors. For example, Rea-Dickens (2000, p.393) indicates that "motivation is as relevant to assessment processes as it is to learning". Ross (2006) suggests a model of formative assessment that cultivates self-efficacy which may ultimately result in building up self-confidence to successfully carry out future tasks.

There have been attempts to delineate the underlying principles of formative assessment (e.g. ARG, 2002; Rea-dickens, 2000; CCSSO, 2008). Accordingly, alternative assessment procedures have been proposed to operationalize those principles. However, it still remains for EFL contexts to fully grasp these new assessment techniques (Rea-Dickens, 2000). Research on the efficiency of alternative assessment techniques in EFL contexts has been promising for promoting some language skills, particularly writing skills, but not all of them (e.g. Ghoorchaei et al, 2010; Yurdabakan & Erdogan, 2009). However, it is common knowledge that the use of alternative assessment techniques effectively serves teaching and learning acts (Dunn & Mulvenon, 2009; Ghoorchaei et al, 2010). The implication for EFL classrooms is the requirement to adapt alternative assessment procedures as the ongoing day-to-day processes of evaluation and adaptation consistent with current pedagogical orthodoxy.

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