Tools in Classroom-Based Formative Assessment

Yuhua Zhou

School of Foreign Language, Zhejiang Yuexiu University, Shaoxing, China
Email: 2656275290@qq.com

Abstract

Formative assessment is an essential component of effective teaching and learning, the core of classroom teaching, and a key skill for teachers. But how can assessment accurately reflect learning effectiveness in class? What tools are available for classroom-based assessment? How to use assessment tools to assess the classroom? This paper firstly introduces the terms of classroom assessment and classroom formative assessment and the two types of classroom formative assessment: planned formative assessment and contingent formative assessment. The focus of this paper is on describing the tools commonly used in classroom formative assessment and elaborating on the use of assessment tools in both planned formative assessment and contingent formative assessment with examples.

Subject Areas

Educational Technology

Keywords

Classroom-Based Assessment, Planned Formative Assessment, Contingent Formative Assessment

1. Introduction

In teaching, we are constantly evaluating students' performance in the classroom. Some of the abilities we want to assess in our students may not be measurable on standardized tests, but can be obtained through classroom assessments. Researchers point out that classroom assessment is more authentic and meaningful, and teachers and students can obtain first-hand assessment results to improve teaching and learning [1] [2]. Therefore, classroom assessment is considered one of the best methods to connect teaching, learning, and testing. In

terms of research, Jin Yan [3] conducted a comprehensive review of research on foreign language classroom assessment, and found that from 2007 to 2018, a total of 79 foreign language classroom assessment papers were published in major domestic and foreign language journals, including 34 domestic papers and 45 foreign papers. The content covers the promotion of learning effectiveness, teachers' role, validity verification, assessment processes and other aspects of classroom assessment. It can be seen that research on classroom assessment is still in its early stages in the field of foreign language education.

2. Classroom-Based Assessment (CBA)

Classroom-based assessment (CBA) refers to the activity of evaluating students' classroom learning outcomes during classroom teaching and learning, which can include formal and informal tests and various instructional activities that help teachers assess students' classroom learning outcomes. According to the purpose of assessment, CBA can be divided into two kinds: formative assessment and summative assessment. Peter [4] contrasts the differences between the two shown in the following (Table 1).

If the purpose of the assessment is summative, what we need is a summary of the student's overall performance in a period of time (e.g. in a semester). Formative assessment, on the other hand, implies change, growth and development in students' learning process. Thus, summative assessment occurs at the end of instruction, when the teacher wants to know who the best learner in the class is or who will obtain a scholarship, etc. When the purpose of assessment is formative, our only concern is that it gives us enough information about teaching and student learning so that we can decide what we need to do next to improve learning and teaching. As for the feedback, formative assessment can provide frequent and detailed feedback as the instruction takes place, while feedback from summative assessment tends to be infrequent and general for it only happens after the instruction.

Because of the functional differences between summative and formative assessment, the former is called "assessment of learning" while the latter is called "assessment for learning". It is also difficult to separate assessment from learning itself, and we see expressions like "assessment as learning" to emphasize the

Table 1. Formative vs summative assessment [4] (p. 8).

	Formative assessment	Summative assessment
Primary Purpose	Adjusting instruction	Assigning grades, accountability
Proximity to instruction	During	After
Feedback	frequent, detailed	infrequent, general
Impact/Stakes	High	Low
Function	Assessment for learning	Assessment of learning

inseparability of assessment and learning. In other words, we need to integrate assessment into teaching and learning as a way to assist and improve learning, making assessment an integral part of the teaching and learning process.

Besides the difference between formative and summative assessment, there is another misconception that needs to be clarified: A formative assessment is different from interim assessment. Formative assessment usually occurs during the teaching and learning process, and it usually includes formative intention and formative practices with the purpose to guide and adjust teaching and learning based on the assessment. An interim assessment is a periodic assignment used to evaluate students' learning progress. These assessments, usually every few weeks, determine whether students are on the right path through checking students' understanding. In other words, formative assessment guides learning, summative assessment certifies learning and interim assessment guides and tracks learning.

3. Classroom-Based Formative Assessment

In 1998, Black & William [5] published an article entitled *Assessment and Classroom Learning* that had a major impact in the UK and around the world. One of the main conclusions was that Formative assessment in the classroom makes a big difference to student learning.

3.1. What Is Classroom-Based Formative Assessment?

Black & William [6] explained "formative assessment" as the following: Practice in a classroom is formative to the extent that evidence about student achievement is elicited, interpreted, and used by teachers, learners, or their peers, to make decisions about the next steps in instruction that are likely to be better, or better founded, than the decisions they would have taken in the absence of the evidence that was elicited. That is to say, if an assessment is a classroom-based formative assessment, both teachers and learners will elicit and interpret the evidence about student achievement which will help in making decisions in next instruction. Peter [4] didn't hold the same view but pointed out that assessment practices must have the following elements (Figure 1): clarification of goals, elicitation of evidence, interpreting the evidence, providing feedback, and student/ teacher take-up and action. These elements are sequential and interactive which form a spiral cycle that brings students' understanding and learning closer to the goal through each complete cycle.

3.2. Two Types of Classroom-Based Formative Assessment

Cowie & Bell [7] proposed two approaches to formative assessment in the classroom through classroom observation: planned formative assessment and interactive formative assessment. Based on their observations, Cowie and Bell draw up the following chart (Figure 2) to illustrate the two types of formative assessment and their correlation in practice.
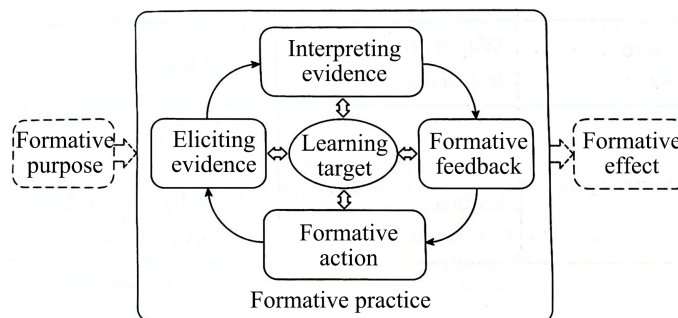
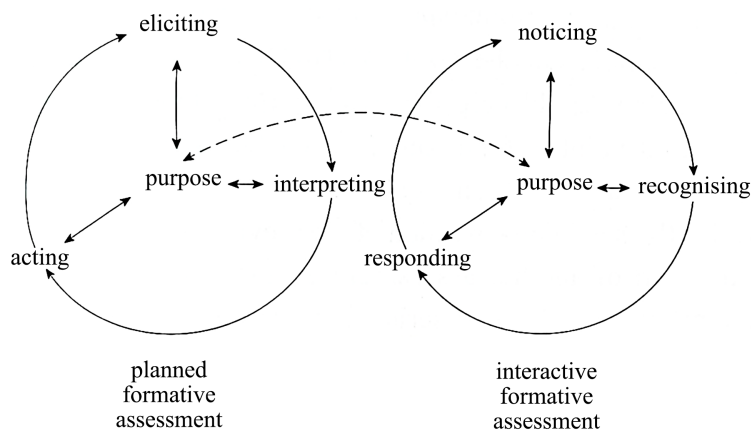**Figure 1.** Formative assessment spiral cycle.

Figure 2. Planned and interactive assessment practices [7].

For planned formative assessment, teachers will have a clear but generalized purpose or objective before the lesson, e.g. teachers deliberately choose assessment tools to collect information for assessing students' understanding or performance of the target task, interpreting the results in class or after the lesson, providing feedback, and taking improvement measures. For example, questionnaires prior to the start of instruction can help teachers assess the current level of students (also known as Learning situation analysis), which can help teachers prepare for more targeted instruction. Similarly, quizzes and some tests embedded in the curriculum can help teachers to monitor the progress of their classes and adjust their teaching accordingly.

In practice, many assessments in teaching occur when teachers are unprepared and unplanned. These assessments are often based on classroom interactions or teacher observations of student performance on tasks. Interactive formative assessment is often the result of the teacher noticing an unexpected or incorrect understanding or performance. This incorrect understanding or performance helps the teacher to recognize that it is a priority that needs attention. Teachers may continue to ask another student the same question to see if the understanding or performance is universal. If it is confirmed that such understanding or performance is a common problem, the teacher will respond with further explanation, reteaching or even making a change of the practice activities for the whole class.

Meanwhile, many researchers believed that it will be difficult to distinguish planned assessment and interactive assessment apart. Instead, some scholars [8] [9] [10] suggested to use a continuum with more types of classroom-based assessments to provide a more precise description.

4. Choosing and Designing Classroom-Based Assessment Tools

4.1. Classroom-Based Assessment Steps

When teachers make a lesson plan, they usually need to specify the teaching objectives and then state the teaching steps through which teachers will help students to achieve the teaching objectives. Then after completing the instruction, what they need to make sure is that whether they have achieved the teaching objectives or not, and how much have they achieved? To measure the outcomes of instruction, teachers can use classroom assessment to find out how well the instructional objectives have been achieved in class or after class. In terms of teaching steps, teaching assessment (Table 2) should be a part of the teaching plan.

4.2. Assessment Tools

The purpose of instructional assessment is primarily to obtain evidence of student learning. In order to obtain evidence of student learning, we can choose from existing assessment tools or design our own.

Theoretically, all tools that can elicit evidence of student learning can be used for formative assessment. But it is true that there are assessment tools that can provide more information about student learning, such as questionnaires. So what are assessment tools? An assessment tool is a tool that we use to elicit evidence of student learning. For example, during classroom explanations, we look around the room to see if there are any confused expressions from the students. This "looking for confused faces" is an assessment tool. Another example is the end-of-unit test which is often used to see how well students have mastered the new sentence structures, vocabulary, and language skills they have learned. In this case, a formal unit test is an assessment tool.

Table 2. Classroom assessment steps.

1	Understand the overall target of learning and the specific goals that a lesson is intended to help students achieve
2	Plan or decide on the spot which tool to use to assess the current level of student learning
3	Interpret the results obtained through the measurement tool and make judgement about the following teaching and learning
4	Provide feedback to learners on what they need to do to close the gap between their current level and the established level
5	Provide opportunities and tasks for learners to close the gap

In general, assessment tools used in teaching can be categorized into two types: in planned and contingent assessments. That is, some formative assessments can be planned before the lesson, while others come from natural observations of the classroom, so assessment tools used are different accordingly.

4.2.1. Tools Used in Planned Formative Assessment

Planned assessments are those that are planned before the lesson, including what is to be assessed, how it is to be assessed, and how feedback is to be given based on the results of the assessment. Thus, planned formative assessment will take longer than single instruction (e.g., small group discussion) and can be categorized in terms of form into short, medium and long cycles [11]. No matter which cycle is used in class, in order to fulfill the purpose of formative assessment, planned assessment must include all the elements of formative assessment: elicitation of evidence, interpretation of evidence, provision of feedback, and student/teacher action.

1) Tools in short cycle

Short cycle formative assessments normally complete a full assessment process in the classroom, which can take a few minutes or several tens of minutes. The following (Table 3) is a teaching plan for assessing a learning activity "giving advice".

The assessment activities of this sample are completed within the classroom and are short-cycle classroom assessments where the main assessment tools used are observations and rubrics. Students' learning tasks are elicited by classroom activities in which the teacher, students and peers are the assessors. The teacher gives the information gained through observation back to the students being observed and tells them what they need to do to use the suggested model correctly. At the same time, active participation between the learners and their peers helps students to help them get the correct form of expression and improved with rubrics. In this process, once an error is detected, the learner will receive suggestions from either the teacher or their peers to help them achieve accurate expression. In other words, the assessment is not a test, but a classroom activity to find out how well the students have achieved the instructional objectives, which is formative assessment.

Table 3. Sample of planned formative assessment (short cycle).

Learning goal	Success criteria	Learning activities	Assessment tool
Be able to use vocabulary and sentence structures related with "giving advice"	Be able to "give advice" by using the four models correctly: I think you should do… I think you shouldn't… Why don't you…? How about doing…? I would suggest/recommend doing… I would not suggest/recommend doing…	Role Play: The Student Council is preparing for a series of orientation programs at the beginning of the school year. Two members of the student council learnt about this and discussed how to prepare for the orientation programme.	1) Observe students' performance to see if there are any problems when using the suggested models. 2) Use rubrics for feedback.

2) In medium cycle

For better results, a classroom activity can also be turned into a group project programme that can be completed over a longer period of time, such as a month or more. For example, students can discuss the difficulties they encounter in maintaining friendships, analyse their causes and propose solutions. Students can discuss the problems they encountered in class, go for information or start a survey among their classmates during class, and finally analyse the causes and propose solutions.

This assessment process includes both in-class and out-of-class discussions, including reading, writing, reflecting and decision-making. Because time in class is limited, the teacher focuses on words, structures, and skills which students learn at the beginning of the class. After completing group projects, students need to find their own reading materials. Through discussion, analysis and writing, they will be exposed to a wide range of vocabulary and fresh expressions, as well as being prone to making mistakes. To ensure that formative assessment is carried out systematically, teachers need to use a number of worksheets at different stages of the project, such as project schedules, weekly checklists, and so on. These forms can guide students back to the goals of language learning, pushing the boundaries of learning beyond the classroom and into the realm of independent learning.

In addition to group projects, many heuristic tools can be used for formative assessment in the medium cycle. For example, quizzes can be administered at the end of a week, or when a module is finished to check on the achievement of teaching objectives.

3) In long cycle

In many cases, formative assessment cycles can take a long time to complete, depending on the assessed task and teachers' control over the whole assessment process, for example speech contests and debate competitions. These competitions are designed for ranking purposes and can also be used for teaching and learning. Besides, student research projects and portfolios that show students' linguistic progress are often used in long cycle formative assessment. A portfolio is a collection of student work that demonstrates a student's level of learning over a specific period of time, and is usually categorized into: presentation portfolios and progress portfolios. A display portfolio collects the best work, while a progress portfolio collects all of a person's work to show details of the learner's growth over time (e.g., weekly compositions).

4.2.2. Tools Used in Contingent Assessment

Contingent assessment is something that can be done randomly in the classroom. In fact, there are significantly more contingent assessments than planned assessments within the classroom [12]. Language classrooms often have opportunities that provide students with opportunities to practice language, e.g., presentations, demonstrations, etc. Contingent assessment can take different forms depending on students' performance, which is largely determined by the teacher's assessment focus.

The contingent nature of these classroom-based formative assessments means that teachers assess immediately in the classroom and make decisions on the spot. When teachers ask a question and get an answer, they are mostly satisfied with deterministic feedback such as "Yes", "This is incorrect", or choosing another student for a second attempt. But such simple answers are not enough to make students aware of the problem and even prevent them from continuing their learning. So the principle of contingent assessment should be: if the teacher finds something noteworthy, then do something about it. The problem for contingent assessment is that without the conscious and systematic use of planned formative assessment within the classroom, it is not easy to develop a complete cycle of assessment.

5. Conclusion

Classroom-based formative assessment is to use the formative function of assessment for the purpose of teaching and learning with no fixed mode. Planned assessments are widely used in classrooms and contingent assessments are often found there as well. Planned assessment tools are usually quick and reliable, but if assessment measures are not comprehensive, an incomplete picture of what students are accomplishing will be produced. Contingent assessment tools allow students to present freely while the teacher observes and gathers information, but the problem is the lack of clarity and comprehensiveness of assessment criteria and the variety of assessment measures. It is only by making full use of the characteristics of different assessment tools that information on student learning can be better collected, thus better facilitating teaching and learning.

Conflicts of Interest

The author declares no conflicts of interest.

References

[1] Llosa, L. (2007) Validating a Standards-Based Classroom Assessment of English Proficiency: A Multitrait-Multimethod Approach. *Language Testing*, **24**, 489-515. https://doi.org/10.1177/0265532207080770

[2] Popham, J. (2003) Trouble with Testing: Why Standard-Based Assessment Doesn't Measure Up. *American School Board Journal*, **190**, 14-17.

[3] Jin, Y. and Sun, H. (2020) Classroom-Based Foreign Language Assessment (2007-2018): Looking Back and Moving Forward. *Journal of Northeast Normal University Philosophy and Social Sciences*, **307**, 166-173.

[4] Peter, G. (2021) Classroom-based Formative Assessment. Foreign Language Teaching and Research Press, Beijing.

[5] Black, P. and William, D. (1998) Inside the Black Box: Raising Standards Through Classroom Assessment. *Phi Delta Kappan*, **80**, 139-148.

[6] Black, P. & William, D. (2009). Developing the Theory of Formative Assessment. *Educational Assessment, Evaluation and Accountability*, **21**, 5-31. https://doi.org/10.1007/s11092-008-9068-5

[7] Cowie, B. and Bell, B. (1999) A Model of Formative Assessment in Science Education. *Assessment in Education: Principles, Policy & Practice*, **6**, 101-116. https://doi.org/10.1080/09695949993026

[8] Shavelson, R. J., Young, D.B., Ayala, C.C., *et al.* (2008) On the Impact of Curriculum-Embedded Formative Assessment on Learning: A Collaboration between Curriculum and Assessment Developers. *Applied Measurement in Education*, **21**, 295-314. https://doi.org/10.1080/08957340802347647

[9] Bailey, A.L. and Heritage, M. (Eds.) (2008) Formative Assessment for Literacy, Grades K-6: Building Reading and Academic Language Skills across the Curriculum. Corwin, Thousand Oaks, CA.

[10] Davison, C. (2008) Assessment for Learning: Building Inquiry-Oriented Assessment Communities. *Proceedings of* 42nd *Annual TESOL Convention and Exhibit*, New York, NY, 2 -5 April 2008.

[11] William, D. (2010) An Integrative Summary of the Research Literature and Implications for a New Theory of Formative Assessment. In Andrade, H.L. and Cizek, G.J., Eds., *Handbook of Formative Assessment*, Routledge, New York, NY, 18-40.

[12] Gu, P.Y. and Yu, G. (2018) Researching Formative Assessment in the Classroom: Examples form FAR-Funded Projects. *English Language Learning* (*Teacher Edition*), **10**, 39-44.