

Formative Feedback



Feedback is identified as an important means which leads to learning gains, which can help learners improve and accelerate learning (Sadler, 1989). According to Lepper & Chabay (1985), feedback is a crucial factor in motivating learning. This has been one of the most popular research topics in teaching (for historical review see Cohen, 1985; Mory, 2004). Recent studies tend to approach feedback as a form of formative assessment which focuses on continuous support to learners through the process of instruction. Instead of taking feedback as messages to be transmitted and interpreted by learners alone, formative feedback has the advantages of changing learner's conception of learning, enhancing learner responsiveness, and helping them become independent learners.

What is Formative feedback?

Formative feedback is generated by teachers as strategies to engage learners to constantly reflect on how they can approach, orient, and evaluate learning, which leads to successful learning outcomes. It is usually conducted regularly in the classrooms by various forms, including written and spoken forms. Learning through frequent responses can be motivational, informative and corrective (Buczynski, 2009).

The Development of Formative Feedback

Formative feedback is often regarded as a form of formative assessment. Assessment may either be summative or formative. The former aims at measurable outcomes of achievement, whereas the latter supports the enhancement of outcomes by offering feedback.

Formative assessment serves as a scaffolding tool that supports learning improvements. Today, education places high value on formative assessment.

According to Coffey, formative assessment has the following characteristics.

- **Learning Progressions:** Learning progressions are referring to the design of the course overviews in each course. The course overview which presents the teaching schedule, a “big picture”, of the course enables learners to set their learning goals. Hence, learners are able to follow the learning progression in their leaning processes.
- **Learning Goals and Criteria for Success:** It is the responsibility of the teachers to inform the learning goals clearly to learners so as to assist learners’ achievement in the intended learning outcomes. With the aid of the learner-friendly language which is suitable the language proficiency of the learners, the completion of the learning goals is facilitated.
- **Descriptive Feedback:** Descriptive feedback is referring to the inclusion of discussion in the teaching. Learners can be provided some constructive advices and feedback to improve their learning. The feedback given has to be specific and understandable for learners.
- **Self and Peer Assessment:** Self and peer assessment is referring to help learners develop their responsibility to evaluate their learning. The assessment should be conducted informally in the classrooms. By providing opportunities and modeling the reflection process, learners can be taught the methods of taking self- and peer- assessment.
- **Collaboration:** Collaboration is regarded as the collaborative learning culture in the classrooms. Teachers are responsible to cultivate partnership among learners in the learning process, so that learners can benefit from peer learning. Trust and respect should also be cultivated in the classrooms, so that learners are able to make evaluations on peers’ performances in a carefree environment.



Rationale of Formative Feedback

In support of promoting formative feedback, the literature points out the negative effect of feedback on learning as a summative form of assessment, with its critical nature and controlling feature, and the forms of feedback that impedes learning such as providing grades or overall scores indicating the student's standing relative to peers and coupling such normative feedback with low levels of specificity (Williams, 1997). The review by Shute (2007) suggested the fact that negative effects for feedbacks are not caused by the formative kind. He summarized the positive formative feedback results that can help learners to overcome many inhibiting situations of learning, such as signaling a gap between a current level of performance and some desired level of performance or goal that is useful to reduce uncertainty, reducing the cognitive load of struggling learners in achieving high goals, and correction of task strategies, procedural errors, or misconceptions.

The rationale of implementing formative feedback in the classrooms is to enhance students' knowledge, skills and understanding towards certain areas of content and general skills (Shute, 2007). There are two main types of formative feedback in the classrooms, which are directive and facilitative (Black and William, 1998). Directive feedback is used to inform students specifically regarding their mistakes and improvements in learning. For facilitative feedback, it is used to guide students in their own revision and conceptualization (Shute, 2007). Formative feedback is also recognized as corrective feedback. An effective formative feedback should be able to provide information which are used to correct learners' inappropriate learning strategies, errors and misconceptions (Mason & Bruning, 2001).

Principles and characteristics

As effective formative feedback should be able to narrow the gap between the actual learning performance and the desired learning performance among learners, Juwah, Macfarlane-Dick, Matthew, Nicol, et al (2004) mention there are 7 principles of an effective formative feedback:

- 1. Assists the development of learners' self-assessment in learning:** Teachers are able to achieve this principle by providing formal and structured opportunities for learners to conduct self-assessments. The self-assessment should be able to assist learners in identifying the criteria of works and making judgments on their works. According to Boud (1986), some examples of conducting self-assessment are suggested:
 - asking learners to comments on their works
 - teachers identify learners' strengths and weakness

- requiring learners to compile a portfolio of their works
- setting achievement milestones for learners and asking learners to make reflections on their learning progression
- conducting peer feedback in the classrooms.

- 2. Promotes teachers and peer learning:** It is about conducting a conversation-like evaluation on learners' works. Both teachers and peers are able and encouraged to conduct an evaluation in this form. By having a dialogue regarding learners' learning, learners not only passively receive the feedback from teachers, but are able to engage in the evaluation as a discussion. According to Freeman and Lewis (1998), teachers have the responsibility to trigger a response and an on-going conversation regarding the learning performance with learners. In terms of teacher-students conversation, students can benefit from immediate response from teachers to difficulties. In terms of peer conversation, it is effective in the evaluation due to the language used by peers in the conversation are more understandable. Furthermore, the advices given from peers are more motivational and acceptable, comparing with receiving advices from teachers.
- 3. Clarifies the criteria of a good performance:** In order to receive good performances from learners, teachers are required to clarify the criteria of the assessments. For instance, teachers should provide a precise and concise written document of criteria sheet. Providing exemplars with comments for learners' references, conducting discussion and reflection regarding the marking criteria, providing learners opportunities to attempt the marking experience, so that learners are able to understand the marking criteria of good performance.
- 4. Narrows the gap between actual and desired learning performances:** It is about the follow-up actions for teachers after providing feedback to learners. There is a research showing that the feedback given to learners will become ineffective if the learners do not take actions to improve their learning. In this case, teachers are encouraged to allow resubmission of the assignments, model some ways to improve the learning difficulties and explain explicitly the kinds of actions which are needed to improve learners' learning performances.
- 5. Delivers specific information to learners:** This is referring to the consideration of the quantity, content and the manifestation of formative feedback in the classrooms. In terms of the quantity of the feedback, the amount of the feedback should be under-control. Too much feedback given to learners will cause difficulties for learners to digest the comments. For the content of formative feedback, the comments given by teachers should have presented the directions for learners to improve their learning, instead of the

judgmental comments. Thus, the feedback provided can be constructive and effective. In terms of the manifestation of formative feedback, teachers have to design the ways to inform learners regarding the assessment requirements so that learners can close the gap between their learning performances and the desired performances. For various types of learners, different strategies can be adopted, and that a feedback sheet can be used to inform learners the requirements of the assessments, if necessary.

- 6. Provides positive learning culture:** Cultivating a positive learning culture means to cultivate a motivational belief and self-esteem in the classrooms. It has been studied that the motivational belief and learners' self-esteem will bring significant or negative impact on learners' learning (Black and William, 1998). The positive culture in the classrooms is able to enhance the effectiveness of teachers' feedback on learners' learning performances. Teachers can arouse learners' learning interests by praising effort or rewarding scheme.
- 7. Provides valuable information for teachers to reconstruct their instructions:** The formative feedback provided to learners not only can reflect learners' learning performances, but also can reflect teachers' teaching performances. According to Yorke (2003), formative assessment is an instrument for teachers to understand the learning progress of learners. Meanwhile, teachers should follow the data collected from the formative assessment and improve the pedagogy. Learners' understanding to the teaching subject, to certain extent, is a reflection of the effectiveness of teachers' teaching.

Educational Benefits

- 1. Identifying the difference:** With the aid of the implementation of formative feedback, the difference between the actual learning performance of learners and the desired learning performance can be effectively identified. Through raising questions in class regularly, asking learners to make responses to the teaching topic, teachers are able to assess learners' understanding to the subject. For the low achieving learners, teachers can tailor the pedagogy so as to assist the learners to fulfill the assessment requirements.
- 2. Increasing the motivation of learning:** According to Locke and Latham (1990), for low achieving learners, uncertainty to the teaching topic is formed and reflected by formative feedback. While uncertainty is formed in learners' learning, more effort is required to deal the uncertainty and improve learners' learning. In other words, uncertainty is an attribution of hard work. Adopting formative feedback enables learners to discover their uncertainty in learning and design some learning strategies to reduce it.

- 3. Alleviating learners' learning burden:** It is because learning is a process of problem solving (Murray, Oliver and Human, 1998). In the year-long learning process, learners are required to overcome and resolve several times of problems. For learners, high cognitive load is required to resolve the problem of learning (Shute, 2007). Formative feedback can alleviate the learning burden to benefit learners' learning, by utilizing formative feedback, learners are being given advice and instructions to resolve the problem or a task (Moreno, 2004).

Exemplars of Formative Assessment

Writing drafts before the final submission

According to Juwah, C., Macfarlane-dick, D., Matthew, B., Nicol, D., Ross, D. & Smith, B. (2004), submitting drafts enables learners to benefit from the formative feedback. Learners can take actions to improve their learning after receiving the comments from teachers. In a Quantity Surveying course, teacher offered opportunities for learners to submit and receive feedback on the draft pieces at any time during the learning process. By giving learners timely advice, learners can learn from the comments. Comparing with the final grade given to learners in the final submission, the grade is unable to encourage learners to improve their learning; it is just simply a mark without any meaning to learners. However, by submitting a draft before the final submission, learners were encouraged to improve. They found the need of improvement through providing feedback on learners' draft pieces.

Regarding the feedback provided to learners, it is not just a comment with the word "Okay", but something more specific and meaningful. A face-to-face discussion will be launched for learners to ask questions for example "you state here.....how did you come to that". Utilizing such formative feedback in the classrooms enables learners to learn to accept critics and develop their works. For teachers, such formative feedback may help generate an interesting discussion topic with students and allow teachers to understand students' abilities more.

In my courses, I often used formative feedback exercises to conclude an old topic. What I am doing is to give a short test to my students. For example after I completed the topic on curriculum conceptions, I suspected that students would get confused about the concepts as they are quite abstract though they are very distinct. I then design a short test to support their understanding and further extend their ability of applying and evaluating the usefulness of the approach, by moving them up from the factual level to the application level and then the analytic level. First, I ask students to write out the names of each of the conceptions, by the pictures printed on the page. Second, I ask students to write out the conception(s) that they

themselves prefer or the conception(s) that can represent their own view. Finally, I ask if the various conceptions are usually adopted by the society, and currently which conceptions are predominant in our current society nowadays. The sample of this can be obtained from [here](#).

Employing criteria sheet to give feedback to students

This example is extracted from **the work of** Juwah, C., Macfarlane-dick, D., Matthew, B., Nicol, D., Ross, D. & Smith, B. (2004)

In an Accounting course, the teacher tried to conduct formative feedback with the criteria sheet. In this course, students were required to participate in an online discussion forum. The statements commented or expressed in the forum were counted in assessing students' learning performances. In this case, the teacher designed a criteria sheet which was correspond to the assessment criteria. In the criteria sheet, grades was given to students such as grade 6 is the top grade, grade 5 is a very good grade etc. The teacher marked each comment in the forum with the criteria sheet and some tailored feedbacks were given when appropriate. After that, the feedback and the grade were sent to students' email with the agreed understanding that the grade given was provisional subject to double marking and external verification.

In the form of this formative feedback, students can receive quick and detailed feedback. Students' skills of self-assessment were encouraged. For teachers, this method is efficient and speeds up the process of marking.

Deirdra's case

In western country, formative feedback has been practiced in the classrooms to enhance learners' learning. According to Buczynski (2009), the teacher, Deirdra Grode, who had faced problems with students' low scores in examinations and projects, employed formative assessment to improve students' learning. Before practicing formative assessment in the classroom, Deirdra discovered some students were unable to follow teacher's instruction and reached to the next teaching topic. For low achieving students, they had some hardships in mastering the previous topic. This phenomenon led to the result of failing in examinations and projects during students' learning processes. Teachers' instruction had also ineffectively delivered to students.

In order to improve this situation, Deirdra practiced formative assessment in her class. By formative assessing students' learning performances, Deirdra collected data regarding students' learning strengths and weaknesses. She was able to take actions to help students improve their mastery in the teaching topic, basing on the data reflected. For instance, she

re-taught the teaching topic to the low achieving students as a small class or individual tutorial. She also modified her teaching language in the classroom so that all students could find ease to understand her instruction. Besides, she was eager to utilize formative assessment to discover the leg behind students. The result of formative assessment was treated as a second place. The main function of practicing formative assessment in the classroom was to identify students' learning problems and take action to improve it.

In the case of Deirdra, she had effectively practiced formative assessment and maximized its positive impact in teaching. Deirdra's practice had successfully fulfilled the principles of implementing formative feedback which are mentioned above. She was able to narrow the gap between students' actual learning and the desired learning through utilizing formative feedback in her teaching. She did not only conduct the formative assessment, but also took follow-up actions to improve students' learning problems. Deirdra' practice had made a successful example of formative feedback in enhancing learners' learning.

Wong's case

Modeling the success of formative feedback in western country, some teachers in Hong Kong had also tried to practice formative assessment in Hong Kong classrooms. For instance, Sue Wong, who was a pre-service teacher, tried to implement formative assessment in Hong Kong classrooms. According to Carless (2005), Wong utilized formative assessment in teaching students who are in primary 6 the skill of categorization. Wong's formative assessment was implemented in the form of a mini-project. Students were required to present their observations about the animal and categorized them in the related groups. During the process of the project, Wong had given students a sheet of assessment criteria which stated the assessment items and areas of the project. Apart from informing students the assessment areas, the teacher distributed a checklist of students' learning performances for students' references. Wong had noted down some strengths and weaknesses of students' learning on the checklist. Students were able to follow the comments that the teacher given and make corrections.

In the case of Wong's teaching, she had successfully modeled two principles of implementing formative feedback in classrooms. First, she informed the assessment criteria to the students, which students were assisted to have good performances in their learning. As students had been informed the desired learning performances, the gap between students' actual performances and the desired one could be closed. Second, the teacher had built in opportunities for students to conduct self- and peer-learning. As the checklist distributed

contained teacher's general comments on students' performances, students with the checklist were able to learn the strengths and beware the weaknesses of their peers. Learning motivation is aroused by requiring students to refer the checklist and gain improvements in their learning.

Current Education Reform as Catalyst

In the education reform in 2000 in Hong Kong, teacher's role is redefined as to:

- Appreciate students' effort and provide a supportive learning environment
- Encourage students to explore and ask questions
- Initiates discussion for students to express themselves and provide feedback
- Listen to students' feedback and response with patience
- Show respect, concern and appreciation in front of students
- Employ open-ended questions to stimulate students' thinking
- Provide appropriate guidance and instructions according to individual needs
- Cultivate students' good value by setting a role model
- Provide multidimensional instruction
- Adopt interactive teaching method instead of the traditional mechanical drill
- Assess students' performance from various aspects, not solely rely on students' written test performance

(Curriculum Development Council, 2001, p. 68-69)

The awareness of including formative feedback in learning has been aroused recently. According to the role specified for teachers, we should allow more space, time and effort, in appreciating individual learners' performance, learning needs and interests, instead of spoon feeding them, we have to continuously seeking feedback from them and also giving feedback to support them during the process of learning. This ultimately will help increase their motivation of learning, and support them to become self responsible, eager to learn, and therefore engaged in learning.

That is the reason why the Curriculum Development Council (2001) advises teachers to trust that all students can learn, and asks teachers reduce the amount of direct transmission of

knowledge, and provide opportunities for children to engage in activities that are initiated by themselves (p. 21). Formative feedback certainly is an important tool that is recommended in the advocacy of the new curriculum in school nowadays, as it can be utilized to support learner-oriented learning. By giving formative feedback, learners can “read more, see more, and think more about the meaning of what they read and see, reduce rote-learning, ask why things are as they are, and reflect on their answers; find better ways of studying and doing things, and find ways of making things better, pay more attention, and pay attention to more” (p. 113-114)

Formative Feedback in Higher Education

In higher education, attention on feedback is not as great as it is reflected in the school literature. Until recent years, evaluation report of higher education indicates that effectiveness of feedback was one of the least satisfactory aspects of students’ university experience (see Carless & Yang, 2012; HEFCE, 2010; Radloff, 2010). Carless (2006) summarised the problems on feedback reflected by students in higher education, which is inadequate in helpfulness, timeliness, consistency, specificity and clarity. The situation has been further evaluated by Carless & Yang (2012) in a recent article, in which they suggested that university students may seek timely and helpful dialogue about their progress, yet the university experience cannot reproduce the sustained support of the secondary school because of the structural limitation of mass higher education. By reviewing the literature of feedback Carless & Yang also echoes the form of formative feedback which is called “dialogic approaches to feedback” (see also Nicol 2010; Price, Handley, and Millar 2011). They pointed out the cognitive dimension as well as social affective dimension which provide some principles to guide teachers to make feedback effective: (a) to develop cue-consciousness about the signals of tutors’ discourse and learn to obtain optimal results and (b) to build up a trusting atmosphere to enable student uptake and to promote positive learning disposition. Their ideas are framed within higher expectation on university students to become a self-regulated learner, which is consistent to what Nicol & Macfarlane-Dick (2006) posited, and which should be the direction to move for higher education teachers.

The key role of formative feedback addressed in both the school and higher education literature refers teaching to the psychology of learners, and feedback can only be effective when student’s goal orientation meets with teacher’s. It is also crucial if learners can engage with the feedback input by teachers to actively interpret, construct and internalize by themselves while teacher can offer effective feedback in a learning environment that is structured to make the learning process explicit, through meta-cognitive training, self-monitoring and by providing opportunities to practice self-regulation or self-regulated

learning⁴ (Nocol & Macfarlane-Dick, 2006). Thus, it is a challenging matter to teachers as they are fitting to diverse learners whose motivation of study is not the same. However, research studies inform us formative feedback is the form that can influence learners' goal orientation, such as shifting one's focus on performance to an emphasis on learning (Hoska, 1993).

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