BENEFITS AND CHALLENGES OF FEEDBACK IN FORMATIVE ASSESSMENT OF DISTANCE LEARNERS

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ABSTRACT

Over time, formative assessment seems to be preferred to summative assessment. The reasoning behind this new trend is that assessment should not be primarily a means of grading students' learning, but a means of enhancing learning. The benefit of formative assessment is the possibility of feedback, which enables students to keep abreast of their strengths and weaknesses, thereby facilitating and enhancing their learning. This study aimed to determine the benefits and challenges students and teachers experience in the feedback process. To achieve this aim, four research questions were raised. The descriptive survey method was adopted. Five students and two teachers were interviewed to obtain data; four-point forced-choice Likert-type questionnaires were used for data collection. The questionnaires were validated by experts, and the Cronbach alpha method of internal consistency reliability yielded .89 and .82 for the students' and teachers' questionnaires respectively. Data from a randomly selected sample of 148 students and 23 teachers was collected by well-briefed research assistants. Data collected was analysed using mean, standard deviation and mean per cent. Findings are that students perceive "knowing the content to be learned", "guidance to improve performance" and "being encouraged to learn" as benefits of feedback, while teachers perceive "planning instructional strategy", "help sustain student interest" and "understanding of students' learning progress" as benefits of feedback. Students considered "being anxious about open scrutiny" and "difficulty interpreting feedback" as challenges, while teachers considered "time-consuming" and "maintaining objectivity in scoring" as challenges of feedback. The researcher recommends that in view of the benefits of feedback, it should be an integral part of formative assessment.

Keywords: Formative assessment, on-line assessment, feedback, learning

INTRODUCTION

Learning institutions are established so that students may learn. However, there is a need to determine whether or not students have in fact learned, hence the introduction of assessment as an integral part of the school system. Due to the importance attached to learning assessment, one might almost think that the purpose of school is to assess learning. This is not the case, however, as assessment is only an indispensable tool to determine whether or not the school has attained its goal of making students learn, or to what extent this has been attained. The phenomenon of assessment has developed over the years and has led to an

emphasis on formative evaluation as opposed to summative assessment. Advancements in communications technology have given further credence to the importance of formative assessment. Baroudi (2007) considered that formative assessment consisted of activities used by the teacher to determine students' levels of knowledge and understanding, for the purpose of providing the students with feedback and planning future instructions. The feedback and future instructions may be concerned with remediation or the provision of further learning opportunities.

William (2005) identifies the components of formative assessment as: questioning, feedback, sharing criteria with learners, and student peer- and self-assessment. Barondi (2007) includes subsequent instruction, while Burns (2005) emphasises that questions asked in formative assessment should be for the purpose of planning future instructions. William (2005) says formative assessment should be for uncovering misconceptions, thereby enhancing better understanding; Sullivan and Clarke (1991) opine that it should cater for students' mixed abilities. Good formative assessment questions should display these features: require more than remembering a fact or reproducing a skill: students can learn by answering the questions; teachers learn about students from the responses to the questions; and there may be several answers (Sullivan & Liburn 2004).

Dweck (2000) concludes that positive feedback is a crucial aspect of formative assessment. Care should be taken to limit feedback to the task being performed, and referring to the learner's own traits should be avoided. Teachers should involve their students in developing criteria for task assessesment and should be involved in comparing responses made by their students; this should form the basis of the performance criteria used by teachers to assess the work (Clarke 1996). Black, Harrison, Lee, Marshall and William (2003) comment that peer-assessment is a necessary training ground for effective self-assessment, and King (2002) reports that it results in improved performance. Baroudi (2007) says that the formative assessment process should not end with feedback, but that such feedback should form the basis for further instruction to enhance learning. Black and Harrison (2001) declare that formative assessment is a way into more fundamental changes in teaching and learning. The changes in questioning have led to more thoughtful dialogues, and changes in feedback on homework have moved on from a mere grading activity. As such changes have developed, they highlight more clearly the purpose of serving the learning process.

The Online Formative Assessment

Traditionally learning has been measured quantitatively, basically through written communications, objectives and contents. According to Brown, Bull and Pendlebury (1997) there is now a shift in the paradigm of assessment "from written exemptions to coursework", "from tutor-led assessment to student-led assessment", "from implicit criteria to explicit criteria", "from competition to collaboration", "from product assessment to process assessment", "from objectives to outcomes" and "from content to competences". Based on emerging trends in distance education, it is assumed these trends are making the scenario change when technology is used in education (Badia 2002). The shifting paradigm in distance education assessment, as reported by Mateo and Sangra (2007) – from tool to certify, to tool to promote

learning, from academic disciplines to professional competencies, from uniformity of techniques to diversity of techniques and from final assessment to continuous assessment.

Russell (1999) states that there is a need to develop solutions to increase not only the quality of online learning, but also its social perception; that the quality of learning should be assessed not only in terms of student learning achievements or success but also in terms of effectiveness of the teaching action and satisfaction with the assessment process. For this reason one of the most pertinent concerns of distance education institutions is to develop a formative assessment system. Assessment must help to identify and apply improvements through permanent feedback (Mateo & Sangra 2007).

Higher education is being transformed by the intensive introduction of ICT (Sangria & Gonzalez-Simmered 2004). In the same way, the emergence of online distance education and e-learning has forced a rethink of teaching and learning models. This transformation is particularly noticeable when talking about assessment in online environments (Morgan & O'Reilly 1999), and needs a new set of procedures and actions to be adapted to the new technical and learning content that is emerging. There is a clear trend of engaging online distance education students in sufficient assessment experiences. These experiences should be based on openness and flexibility in line with the learning activities. There should also be alternative ways of assessment, which students should be able to access by choice and in a flexible way, taking into account individual student perceptions (Morgan & O'Reilly 1999).

Online formative assessment is anchored in the continuous monitoring and regulation of learner participation in the course of a learning programme, with the aim of supporting the learning process. Formative assessment has a central role in the evolving learning process (Otsuka, Vieira da Rocha & Beder 2007). formative assessment has both informative and regulatory characteristics as it forms the teacher's pedagogic actions and allows him/her to regulate his/her own actions, as well as guiding the learner to become aware of his/her difficulties and possibly to recognise and correct his/her own errors (Hadji 1997). Online courses based on collaborative learning and formative assessment have revealed that the formative assessment approach is even more relevant in distance education, as it contributes to the learner's behaviour and perceptions, as well as to problem identification and effective guidance during the learning process (Macdonald 2003; Thorpe 1998).

This continuous monitoring of the students' participation in online formative assessment can reduce online distance learning problems, such as students feeling isolated, lack of motivation and high drop-out rates (Galusha 1997). Perrenoud (1998) and Hadji (1997) conclude from their studies that an effective formative process should enhance tasks that should stimulate behaviours to be observed; make it possible to observe these behaviours; make it possible to communicate the results of analysis; and remediate the difficulties analysed. Otsuka (2007) proposes a support model divided into two phases: (i) support the planning of learning activities which aim to stimulate the desired behaviours (ii) support the monitoring of participation in these activities, where the tasks of observation, communication and remediation take place.

Feedback in formative assessment

Assessment should first be designed to support worthwhile learning, leaving concerns about reliability for later (Gibbs & Simpson 2005). The attitude of students toward assessment is centred on what counts, at least what they think counts, and their energy should be channelled in that direction. Students are strategic in their use of time, and carefully avoid or pay little attention to content on which they believe they are unlikely to be assessed. The way students study is influenced by the perceived demands of the assessment system in place (MacFarlane 1992).

Black and William (1998) comprehensively review formative assessment and emphasise the extraordinarily large and consistently positive effects that feedback has on learning compared with other aspects of teaching. Maclellen (2001) surveyed 130 students and 80 lecturers at the University of Strathdyde on their perceptions of assessment. Of the four questions on feedback, teachers reported that it frequently helps students to understand, frequently helps learning and prompts discussion with a tutor. While 70% of the students reported that feedback helped them to understand, they disagreed with the teachers that it prompted discussion. However there may be a problem with the quantity of quality feedback, in that it is not actively helpful to students. Some students threw away the feedback if they disliked the grade they receive, while others seemed concerned only with the final result (Watjas 1998).

When marks are associated with feedback, a student is likely to perceive the mark as indicating his/her personal ability or worth as a person. A poor grade may damage a student's self-efficacy or sense of ability to achieve. Yorke (2011) extensively describes the positive and negative ways in which formative assessment can affect students' retention and emphasises its role in "academic integration". However, feedback is more likely to be perceived as a comment on what has been learned. In the absence of marks, it has been reported that students read feedback much more carefully and use it to guide their learning (Black & William 1998).

Feedback has to be quite specific to be helpful. Wootton (2002) writes quite passionately about the negative impact of assessment on "at-risk" students, and asks whether the system exists "to encourage learning or to measure failure". Gibson and Simpson (2002) suggest that maintaining motivation is the most important and influential issue for new students in their first assignment in a course: if a student looking for encouragement only receives corrections of errors, this may not support learning in the most effective way. Carless (2002) emphasises the need to provide feedback in multiple stages in order to re-orient student effort in appropriate ways. Orsmond, Merry and Reiling (2002) write that feedback model answers especially are exemplars that help to establish students' learning.

Higgins, Hartley and Skelton (2001) emphasise the need to guide against failures of communication in feedback. They give the example of a case where a tutor's entire feedback consisted of "a satisfactory effort", where a more critical analysis and key issues would have helped. The student may be left frustrated, as there are no suggestions of how he/she can advance from "satisfactory" to "very satisfactory".

Dochy, Segers and Sluijsmans (1999) require assignments to be self-assessed, without marks involved, reporting that overt self-assessment has been shown to increase performance and increase students' control of their learning strategies. Cooper (2000) proposes using two-stage assignments, with feedback at the first stage intended to enable the student to improve the quality of work for a second-stage submission, which is then graded. He reports that such a system can improve the performance of almost all students, particularly some of the weaker students. Taras (2001) reports that providing a grade only after self-assessment and tutor feedback has been completed, helps to increase students' achievements.

PROBLEM OF STUDY

The support for formative assessment over summative assessment has brought with it the emphasis that assessment should be used as a tool for enhancing learning. the widespread acceptance of distance learning as a viable alternative to contact institutions, and the development of information technology, have buttressed the place of formative evaluation in learning enhancement. Evidence in literature has shown the indispensible role of feedback if formative evaluation is to be an effective tool for learning facilitation and enhancement. Therefore a need arises to provide empirical evidence of the benefits and challenges faced by students and teachers in the teaching and learning scenario. The questions to be answered are: how do students and teachers benefit from feedback? What are the challenges they experience in the process of feedback? Such questions are intended to increase understanding of how feedback works and provide recommendations for more productive practice in order to further enhance and facilitate students' learning.

RESEARCH QUESTIONS

1. What are the perceived benefits of feedback for learning enhancement by students?
2. What are the perceived challenges of feedback to learning enhancement by students?
3. What are the perceived benefits of feedback for learning enhancement by teachers?
4. What are the perceived challenges of feedback to learning enhancement by teachers?

METHOD OF STUDY

The descriptive survey research design was adopted for this study in order to get the perception of a large number of people and to make it generalisable to an even larger number of people. The population of this study is 367 students and 46 lecturers in the National Teachers' Institute, Benin City, Nigeria, a distance-learning institution for the training and retraining of teachers. A sample of 148 students, accounting for 40% of the student population, and 23 lecturers, accounting for 50% of the lecturers, was selected using the simple random sampling technique. The data collection instrument was based on information obtained from group-interviewing five of the students for 45 minutes and two of the lecturers for 60 minutes. Two questionnaires, the "Students' Feedback Perception Questionnaire" and the

"Teachers' Feedback Perception Questionnaire", were each constructed as forced-choice Likert-type questionnaires with the options Strongly Agree, Agree, Disagree and Strongly Agree. The questionnaires had 18 items each, with three items in the demographic section and 15 items in the opinionated section. The instruments' content validity was determined using expert judgement by three test construction experts at the University of Benin, Nigeria. The three experts certified the instruments valid. The instruments' reliability was determined by the Cronbach alpha method of internal consistence reliability; when administering the instruments to 20 students and 10 teachers, reliability coefficients of .89 and .82 were obtained. Data was collected with the help of research assistants and analysed using mean, standard deviation and mean percentage.

RESULTS

Research question 1

What are the perceived benefits of feedback for learning enhancement by students?

Table 1: Perceived benefits of feedback for learning enhancement by students

Sn	**Benefits of feedback for learning enhancement**	**Mean**	**Standard Deviation**	**Mean %**	**Rank**
1	Interaction with peers	2.89	0.71	72.25	8th
2	Opportunity to discuss difficult concepts	2.09	1.03	52.25	10th
3	Opportunity to ask why a question was marked wrong	2.93	0.71	73.25	7th
4	Guidance to improve performance	3.35	0.71	83.75	2nd
5	Being encouraged to learn	3.19	0.64	79.75	3rd
6	Knowing what content is to be learned	3.46	0.59	86.50	1st
7	Knowing assessment criteria	3.01	0.65	75.25	5th
8	Knowing how to take constructive criticism	2.42	1.38	60.50	9th
9	Transparency of assessment	2.97	0.72	74.25	6th
10	Making learning interesting	3.12	0.51	78.00	4th

Number of students = 148

Table 1 shows that the three greatest benefits of feedback as perceived by students are: "knowing the content to be learned", "guidance to improve performance" and "being encouraged to learn", with mean percentages of 86.50%, 83.75% and 79.75% respectively. Other benefits perceived by the students are: "making learning interesting", "knowing assessment criteria", "transparency in assessment" and "opportunity to ask why a question was marked wrong", with mean percentages of 78.00%, 75.25%, 74.25% and 73.25% respectively. The three benefits perceived to be of least value are: "interaction with peers", "knowing how to take constructive criticism" and "opportunity to discuss difficult concepts", with mean percentages of 72.25%, 60.50% and 52.25% respectively.

Research question 2

What are the perceived challenges of feedback to learning enhancement by students?

Table 2: Perceived challenges of feedback to learning enhancement by students

Sn	Variable	Mean	Standard Deviation	Mean %	Rank
1	Difficulty interpreting feedback	2.74	0.99	68.50	2nd
2	Being anxious about open scrutiny	2.76	0.98	69.00	1st
3	Time-consuming	2.47	1.26	61.75	3rd
4	Difficulty of self-assessment	1.73	1.60	43.25	5th
5	Having to explain reasons for answers	2.00	0.95	50.00	4th

Number of students =148

Table 2 shows that of five perceived challenges of feedback to learning by students, the two experienced the most are: “being anxious about open scrutiny” and “difficulty interpreting feedback”, with mean percentages of 69.00% and 68.50% respectively. Students also perceived feedback as time-consuming (a mean percentage of 61.75%). However, they considered “having to explain reasons for answers” and “difficulty of self-assessment” as the smallest challenges of feedback, with mean percentages of 50.00% and 43.25% respectively.

Research question 3

What are the perceived benefits of feedback for learning enhancement by teachers?

Table 3: Perceived benefits of feedback for learning enhancement by teachers

Sn	Variable	Mean	Standard Deviation	Mean %	Rank
1	Learn about students’ concepts	2.39	1.67	59.75	6th
2	Understand students’ learning progress	3.57	0.51	89.25	3rd
3	Better communication with students	3.43	0.73	85.75	4th
4	Quality assurance in assessment	2.30	1.61	57.50	7th
5	Planning instructional strategy	3.83	0.89	95.75	1st
6	Help in sustaining student interest	3.78	0.74	94.50	2nd
7	Easier to explain assessment criteria	2.13	1.60	53.25	8th
8	Make teaching interesting	2.78	0.95	69.50	5th

Number of teachers = 23

Table 3 shows that the three benefits of feedback perceived as the greatest by teachers are: “planning instructional strategy”, “help sustaining student interest” and “understand students’ learning progress”, with mean percentages of 95.75%, 94.50% and 89.25% respectively. Other benefits perceived by teachers are: “better communication with students” and “making teaching interesting”, with mean percentages of 85.75%, 69.50% respectively. The three benefits perceived as least valuable by teachers are: “learn about students’ concepts”, “quality assurance in

assessment" and "easier to explain assessment criteria", with mean percentages of 59.75%, 57.50% and 53.25% respectively.

Research question 4

What are the perceived challenges of feedback to learning enhancement by teachers?

Table 4: Perceived challenges of feedback to learning enhancement by teachers

Sn	Variable	Mean	Standard Deviation	Mean %	Rank
1	Maintaining objectivity in scoring	3.78	0.74	94.50	2nd
2	Time-consuming	3.91	0.73	98.75	1st
3	Poor presentation of concerns by students	2.00	1.45	50.00	7th
4	Confrontation from students with low marks	2.17	0.58	54.25	6th
5	Being less in control	2.22	1.48	55.50	5th
6	Generating a large number of questions	2.39	1.59	59.75	4th
7	Ensuring good levels of item difficulty	2.83	0.94	70.75	3rd

Number of teachers = 23

Table 4 shows that the two greatest challenges of feedback for learning enhancement as perceived by teachers are: "time-consuming" and "maintaining objectivity in scoring", with mean percentages of 98.75% and 94.50% respectively. Teachers also perceived "ensuring good levels of item difficulty", "generating a large number of questions" and "being less in control" as significant, with mean percentages of 70.75%, 59.75% and 55.50% respectively. "Confrontation from students with low marks" and "poor presentation of concerns by students" were perceived as the least significant challenges of feedback for learning enhancement, with mean percentages of 54.25% and 50.00% respectively.

DISCUSSION OF FINDINGS

The study showed that the benefits students get from feedback in formative assessment include knowing what the content to be learned is. This is in agreement with the findings of Black and Harrison (2001) and Black and William (1999), Carless (2002) and Merry and Reiling (2002). Students also benefit from receiving guidance to improve their performance. This is in agreement with the findings of Macdonald (2003) and Thorpe (1998). Students also showed that they benefit from feedback as it encourages them to learn. Gibbs and Simpson (2002) and Russell (1999) are in agreement with this. This study shows that students find the greatest challenge of feedback in their learning enhancement is the anxiety they feel due to open scrutiny of their responses to questions. This is in agreement with the findings of Black and Harrison (2001) and Mateo and Sangra (2007). Students also perceived difficulty in interpreting feedback as a challenge. This agrees with Gibbs and Simpson (2005) and Carless (2002).

The study further showed the benefits of feedback to teachers as helping to sustain students' interest, planning instructional strategy and understanding students' learning progress. These are in agreement with the findings of Baroudi (2007), who reports that feedback helps in preparing for further instruction, and Otsuka (2007), who concludes that it helps teachers plan future instruction and modify instructional strategy. Gibbs and Simpson (2002) conclude that feedback helps ensure that students are motivated and interested in learning. The study concludes that teachers experience challenges in feedback for learning enhancement, in that it is time-consuming and demands strict objectivity in scoring. This is in agreement with the findings of Hadji (1997) and Mateo and Sangra (2007), who concluded that feedback keeps teachers more objective in scoring, knowing that they have to justify the marks awarded to the learners, while agreeing that feedback is a tedious and time-consuming process.

CONCLUSIONS AND RECOMMENDATIONS

The study revealed that the students perceive "knowing the content that is to be learned", "guidance to improve performance" and "being encouraged to learn" as the greatest benefits of feedback for students' learning enhancement. The challenges students have with feedback enhancing their learning are "open scrutiny" and "difficulty in interpreting feedback". The teachers consider "planning of instructional strategy", "help to sustain students' interest" and "understanding of students' learning progress" as benefits of feedback in learning enhancement. The challenges they perceive in feedback in learning enhancement are "time-consuming" and "maintaining objectivity in scoring".

The researcher recommends that in designing instructional programmes, the place of feedback in formative assessment should be visible. There should be strategies to ensure that timely and adequate feedback is communicated to students, students should be given opportunities to respond to this feedback, and the feedback should be the basis of planning future instructions.

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