Examining Subject Teachers' Feedback on Written Work

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Abstract

Feedback is widely seen as crucial for both encouraging and consolidating learning. Little research has been undertaken to investigate Subject teachers' actual use of feedback in the classroom. Its complexity and its entwined relationship with teaching, learning and assessment suggest the notion that such feedback should be explored further.

This study examines the feedback practices of two teachers of each of the following subjects: Mathematics, Physics and Chemistry. It was conducted in an engineering college in Hyderabad, India, where the researcher was teaching English. The samples that were used were the written assignments submitted by students. A total of 306 feedback comments were analyzed.

Results showed that about 30% of the feedback consisted of ticks or crosses. The remaining 28% of feedback was in the form of questions, 26% was in the form of statements and 16% was in the form of imperatives. It was found that feedback in the form of imperatives were more influential on revisions. The assignments in which crosses were marked were acted upon to a large extent and corrections were made. Wherever feasible oral face-to-face feedback should be given as this will enable students to become self-evaluative. Students must not be allowed to fall back on the rationalization that only English teachers are judges of grammar and style. Especially for engineering students errors in grammar and mechanics can be seen by employers as symptomatic of a less than professional level of education. Therefore it is suggested that teacher training courses for subject teachers include training on feedback techniques.

Introduction

In most subject teachers' feedback, knowledge of the subject matter and pedagogical content are mitigating factors. These are critical factors in teaching. For many students the quality of the feedback they receive on their assignments is a measure of the quality of teaching by the lecturer.

The greatest complaint by students is that they simply do not get enough feedback or that the feedback that they do receive comes too late for their learning. Sadler (1998) argues that the appropriateness of feedback depends on its ability to be understood by the student and its capacity to encourage effective approaches to learning. The quality of feedback is therefore

determined by the quantity of comments that have a positive influence on the students' work that are received within an effective turn-around time.

There are several ways of teaching and learning. These ways can be seen from a teacher's perspective, as well as a learner's perspective. Samuelowicz and Bain (1992) suggest that there are five levels of teaching, going from a "surface" approach to a "deeper" approach. These levels are described as: imparting knowledge; transmitting knowledge; facilitating understanding; changing students' conceptions and finally; supporting student learning. Good teaching involves finding out from students where they experience difficulties in learning the subject matter, what outcomes they have not achieved and what aspects of teaching can be changed to ensure high quality learning.

Need for Feedback

Feedback is widely seen as crucial for both encouraging and consolidating learning. Summative feedback designed to evaluate writing as a product has generally been replaced by formative feedback that enables students' future writing and the developing of the writing process. The importance of feedback emerged with the development of learner centered approaches to writing instruction in North American L1 composition classes during the 1970's. The "process approach" gave greater attention to teacher-student interactions and encouraged teachers to support writers through multiple drafts by providing feedback. The form feedback took extended beyond the teachers marginal or end notes to include oral interaction involving the teacher and the students.

Despite disagreement on other points surrounding correction there is a fair amount of agreement among researchers on two counts 1) that accuracy in writing matters to academic and professional audiences and 2) that students themselves claim to need and value feedback from their teachers. Several studies have been conducted on the feedback practices of teachers of English as a second language (Bitchener, et al. 2005), Chandler (2003), Choudron (1984) and Ferris (2003). But few studies have examined the feedback given to students by Subject teachers.

Definition of Feedback

Widely differing definitions of the term feedback exist. Ramaprasad's (1983) definition is used extensively in education literature. "Feedback is information about the gap between the actual level and the reference level of a system parameter, which is used to alter the gap in some way" (p. 4). In education this means the learner has to "possess a concept of the standard (or goal or reference level) being aimed for, compare the actual (or current) level of performance with the standard and engage in appropriate action which leads to closure of the gap" (Sadler, 1989, cited in Clarke, 2000a, p.3). Therefore, feedback should involve imparting a judgment of a student's strategies and skills, or his/her attainment and giving information about the judgment.

In contrast to Ramaprasad (1983) and Sadler (1989), Askew and Lodge (2000) adopt a broader definition of feedback to include "all dialogue to support learning in both formal and informal situations" (p. 1). By definition this would therefore include instruction as well. Carlson (1979) argues feedback is "authoritative information students receive that will reinforce or modify responses to instruction and guide them more efficiently in attaining the goals of the course" (cited in Ovando, 1992, p.4). Clarke (2000b) notes that the definitions advocated by Ramaprasad, Sadler and Carlson emphasize control lying entirely with the teacher.

Principles of Good Feedback

Nicol and Macfarlane-Dick (2006) list seven principles of good feedback practice:

- 1. It clarifies what good performance is (goals, criteria, expected standards);
- 2. It facilitates the development of self-assessment in learning;
- 3. It provides high quality information to students about their learning;
- 4. It encourages teacher and peer dialogue around learning;
- 5. It encourages positive motivational beliefs and self-esteem;
- 6. It provides opportunities to close the gap between current and desired performance;
- 7. It provides information to teachers that can be used to help shape teaching.

However, the quality of feedback given by teachers is certainly questionable. MacDonald (1991) saying that the use of feedback to improve understanding was not realized in practice stated that teachers' feedback "often lacks thought or depth; students often misunderstand their teachers' feedback... and many students do not attend to teachers' feedback to begin with!" (MacDonald, 1991, p.1).

The giving of grades and marks as a form of feedback and the extent to which these should be supported by written comments remains a controversial area in the literature. Information fed back to the student was feedback only when it was used to close the gap. Grades, specifically, do not fulfill this role as they provide limited information, distracting students from deriving any learning value from the feedback. They are inefficient for teaching students. On the other hand test scores alone are of limited value as they focus only on the product and not on the learning process.

Timing of Feedback

The timing of feedback is critical. Feedback needs to be given as soon as possible after the event (Freeman & Lewis, 1998). If feedback is delayed it is less likely that the student will find it useful or will act upon it. On the other hand giving feedback too early before the students

have an opportunity to work on the problem can be counterproductive. Anthony (1996) argues "low achieving students, in particular, were often interrupted with a prompt or an answer, rather than guidance, when they hesitated or responded incorrectly" (p.44). Feedback given too early impinges on the learning opportunities for students.

Literature Review

Sadler (1989) suggests it is easier for a teacher to comment on effort and degree of expertise than concepts mastered and facts learnt. The Learn Project (Weeden & Winter, 1999) examined feedback from the student's perspective and concluded that much feedback was either unfocused or of little use in improving learning. There was a wide range of forms of feedback, some of which were not understood by students. But what was clear was that focused and specific comments on how to improve work were welcomed by all students.

Hattie (2001a) suggests it is only seconds of descriptive feedback for an average student. And more is not necessarily better! Wiliam (1999) comments on the learning of a group of 64 year-four students on reasoning tasks. Half of the students were given a scaffolded response when they got stuck by being given only as much help as they needed to make progress. The other half was given a complete solution as soon as they got stuck, and then given a new problem to work on. Those given the scaffolded response learnt more, and retained their learning longer than those given full solutions. When given the complete solutions, students had the opportunity for learning taken away from them. "As well as saving time, therefore, developing skills of 'minimal intervention' promote better learning" (Ibid. p. 9).

Similarly in her study titled "Promoting Learner Autonomy in Writing - An experiment with Indirect Feedback," Sirigiri. M.B (2008) examined the writing of students from pre-test to post-test, across drafts and across essays to determine what kinds of errors students commit the most. To do this, an experiment was conducted involving essays written by 30 intermediate students of a fresher course in engineering. It was found that after administering Indirect Feedback on students' essays there was always a decrease in the number of errors and this decrease in the number of errors always gave rise to increased communicative effectiveness of the essays. A questionnaire surveying student views on the feedback given was also analyzed which indicated that students felt that Indirect Feedback has always helped them reduce errors and made them more autonomous learners.

In a study titled 'Physics teachers' responses on student solutions when using motion tasks' (2011) Parvanehnezhadshirazian Zahra studies feedback practices of eleven upper secondary school physics teachers in the state of Victoria, Australia. The study involved investigating and describing teachers' thinking, intentions or beliefs when they interpreted and provided feedback on hypothetical students written solutions to the linear motion tasks. A major finding of this study is that teachers' interpretations and feedback on student solutions could be categorized in terms of the extent to which they attended to Student Thinking and Disciplinary

Thinking. The discursive practice of the teachers indicated that the nature of their feedback to student difficulties were more strongly associated with the nature of teachers' beliefs about teaching and learning motion, than with their level of propositional knowledge, or their teaching experience.

An examination of the literature has resulted in much theoretical description of feedback practices, though little research has been undertaken to investigate content teachers' actual use of feedback in the classroom. Its complexity and its entwined relationship with teaching, learning and assessment suggests the notion of subject teachers' feedback should be explored further. Several studies have been conducted on the feedback practices of teachers of English as a second language (Bitchener et al. 2005). But few studies have examined the feedback given to students by Subject teachers.

Research Method

This study examined the feedback practices of two teachers of each of the following subjects Mathematics, Physics and Chemistry. This study was conducted in an engineering college in Hyderabad where the researcher was teaching English. One class of thirty students was chosen for conducting this study. The samples that were used were the written assignments that were submitted by students. A total of 306 feedback comments on 90 assignments were analyzed.

The research questions that this study sought to answer are:

- 1. What forms does feedback given by subject teachers take?
- 2. What are the reasons for giving feedback?

This paper investigates the feedback given by subject teachers on students' assignments and examines the influence of feedback on their revisions. The writing of assignments is not taken very seriously by students in the context of engineering education in this university. But students are compelled to do well because assignments carry 20% of the marks assigned for formative assessment. In this study the feedback given by 6 subject teachers was analyzed. Students wrote one revised draft after feedback was administered. The resulting changes were analyzed based on the degree to which the students utilized each teacher's feedback in the revision.

Findings

Although the key concepts of formative assessment such as constant feedback, modifying the instruction, and information about students' progress do not vary among different disciplines or levels, the methods or strategies may differ. Results showed that about 30% (91 comments) of the feedback consisted of ticks or marks. Of the remaining, 28% (85 comments) of feedback was

in the form of questions, 26% (80 comments) were in the form of statements and 16% (50 comments) were in the form of imperatives.

It was found that feedback in the form of imperatives were more influential on revisions. The assignments in which crosses were marked were acted upon to a large extent and corrections were made.

Teachers distinguished between oral and written feedback, stating that the vast majority of their feedback to students was written. The teachers who felt that an important component of their oral feedback to students involved asking questions did it after the written work was corrected. They posed open-ended questions to the class as a whole. Most Mathematics teachers used the question "How did you arrive at this?" The issue of whether questions are feedback is debated in research. Questions can be a vital feedback tool as they can be used to test understanding and to develop thinking. Responding in the form of a question when it is appropriate both continues the dialogue between the teacher and the students and forces them to think more deeply about the matter. However, they can be used to best effect with advanced learners. This implies that indirect feedback did not always seem to be worked on. Teachers needed to be careful in providing more direct feedback in their subjects.

The Chemistry teachers said that sometimes students come up with correct answers especially to questions involving calculations - without properly understanding the underlying physical concepts. As a case in point, one teacher noted that students may be able to correctly solve gas- law and other types of problems but have misconceptions about the molecular-scale processes addressed in those calculations. In cases like that they felt that all that the teacher could do was to mark a tick. 'Needs to be more accurate in quantitative experiments' or some comment like this could be written.

All the teachers supported Askew and Lodge's (2000) broad definition of feedback, which is "all dialogue to support learning in both formal and informal situations" (p.1). Two teachers indicated feedback was synonymous with praise.

Written feedback mostly consisted of comments like 'Excellent work, Well done, Good and neat' But these responses often appeared so automated that teachers were unable to tell how many times they were repeating a certain response.

Very few teachers replied that they gave descriptive feedback. One Physics teacher said that she often wrote comments like 'make changes to this diagram' or 'diagram not proportionate'. There was evidence to show that this feedback was worked on by the student in his revision.

The main reason given by the teachers for the small number of examples of this type of feedback was that they were always conscious of the time and had to complete a lot of correction and evaluation along with their teaching. All the teachers felt that a lack of time Language in India www.languageinindia.com ISSN 1930-2940 13:5 May 2013 Meenakshi Barad Sirigiri, M.A., PGCTE, M.Phil., Ph.D. Examining Subject Teachers' Feedback on Written Work

hindered their ability to have quality interactions for a sustained period of time with individual students. Consequently, the written feedback provided few constructive suggestions about ways in which students might improve their work and oral feedback could only be addressed to the class as a whole.

In analyzing the reasons for giving feedback, all teachers suggested that feedback should be positive and constructive. They felt that it was not only mandatory for them as teachers but it also served several other purposes. All the teachers agreed that feedback enabled them to point out errors, focus on improvement, motivate students, rectify misconceptions and ignite thinking. Besides it helped them in improving their teaching practices as it told them what should be focused on.

Discussion

It was clear that not all teachers had a common definition of feedback. On the one end was feedback which consisted of only ticks or crosses. And on the other was nothing briefer than global comments. Unless students have accurate information about the assessment they will not have a fair chance of completing the assignments. Information about criteria and standards used in all the subjects should be provided. Illustrations of how students are expected to demonstrate their achievements can also be given. Information about the assignment should include a frame of reference regarding standards of satisfactory performance. Examples of student work can be used to illustrate the different levels of performance and have students discuss the criteria in class.

In large classes there is a reliance on written comments unlike smaller classes where there is more scope for oral feedback or one-to-one conferencing. Grades alone give students no indication on how they can improve. They would like to understand why they have received a particular grade and not one higher. Students want comments on their assignments to be improvement focused and based on objective criteria. Global comments such as "very good" or "poor" do not help in improvement and neither do comments to the entire class about an error committed by a few students.

Furthermore, the assessment arrangements should be altered to assist students who cannot complete assignments due to illness, English language difficulties or any other disability.

In addition, there may be occasions when circumstances outside of the students control result in them being unable to meet the assessment requirements. In such cases a brief extension of time in submitting the required work can be given.

This research proposes that giving quality feedback is a highly developed skill requiring a focused and deliberate approach. It also suggests that students at this level received very little specific, descriptive feedback. Teachers need to take time to write comments, point out omissions, and explain their thinking when reviewing student work. Though Language in India www.languageinindia.com ISSN 1930-2940 13:5 May 2013 Meenakshi Barad Sirigiri, M.A., PGCTE, M.Phil., Ph.D. Examining Subject Teachers' Feedback on Written Work

students' presentation of the process that led them to the answer or reasoning errors can be picked out and corrected, students can still be awarded partial credit for correct analysis or reasoning even if their final answer turns out wrong. It is this presentation of the steps leading to the final answer that illustrates whether the student has truly understood the concept. As in Math education, it is really important for teachers to see how their students approach the problems and at what level students are when solving the problems. Knowing this makes it possible for teachers to help their students overcome conceptual difficulties and, in turn, improve learning.

Teachers must balance making clear suggestions with being polite. It is suggested that effective feedback should be more descriptive rather than evaluative. Wherever feasible oral face-to-face feedback should be given as this will enable students to become self-evaluative.

Conclusion

Our disciplines do not exist in isolation from one another and so subject teachers expecting their students to be able to compose standard written English on any topic, Mathematics, Physics or Chemistry is entirely within their purview as teachers. It is very important to make sure that students are not allowed to fall back on the rationalization that only English teachers are judges of grammar and style. Especially for engineering students errors in grammar and mechanics can be seen by employers as symptomatic of a less than professional level of education. If subject teachers do however mark down a paper for failure to follow the prescribed format, poor grammar and rampant spelling errors this would simply reinforce a standard that should be common to all academic work.

Therefore it is suggested that teacher training courses for subject teachers include training on feedback techniques. However, to conclude, although competence, intelligence and enthusiasm are certainly necessary conditions that make an effective teacher, they aren't sufficient. The subject has to excite and challenge a teacher and a lot lies in his or her ability to inspire that passion in the students.

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