Conceptions of Assessment and Feedback Project

Introduction

Assessment and feedback are at the heart of promoting student learning in schools (Ministry of Education, 1993; 1994; Carr, McGee, Jones, McKinley, Bell, Barr, & Simpson, 2003). While teachers, teacher educators, politicians, and policy makers may be aware of the multiple purposes of assessment and feedback typically espoused in textbooks, whether students are aware of these purposes and what aspects they prioritise needs more investigation.

Finding out what students think are the purposes of assessment and feedback is important because what they believe will influence the way they behave, study, and learn, and ultimately their academic outcomes (Elen & Lowyck, 1999; Vermetten, Vermunt, & Lodewijk, 2002; Könings, Brand-Gruwel, & van Merriënboer, 2005). As Pajares (1992) said, what students believe could be the “single most important construct in educational research” (Pajares, 1992, p. 329). Given the central role that assessment and feedback have in the education process, we need to develop a greater understanding of students’ conceptions of the purpose of assessment and feedback and examine the effect that these conceptions have on academic performance.

This project aimed to investigate ways of identifying secondary school students’ and teachers’ conceptions of assessment and feedback. It outlines the modification of one inventory (Students’ Conceptions of Assessment) and the development of two new inventories (Conceptions of Feedback and Conceptions of Learning). We also outline the design of a series of classroom activities that teachers can use to identify students’ conceptions of specific assessment and feedback practices. Finally, this project documents the development of teachers as researchers, highlighting some of the benefits and some of the difficulties.

Research aims and questions

The key research aims were to:

- develop ways of identifying students’ and teachers’ conceptions of assessment and feedback
- develop models which teachers can use to enhance the assessment and feedback process in secondary schools
- develop research-based evidence for effective assessment and feedback processes which will raise teaching and learning outcomes
- support teachers to become researchers of their own assessment and feedback practices.

The research questions were:

1. What are students’ and teachers’ conceptions of assessment and feedback?
2. What impact do conceptions of assessment and feedback have on student learning outcomes?
3. What classroom activities can teachers use to identify students’ conceptions of specific assessment and feedback practices?
4. How easy is it to become a teacher researcher and what factors contribute to the success of programmes like the TLRI?
Research design and methodology

The research project took a mixed-method approach which included a variety of data gathering methods. These included: focus groups, semistructured interviews, questionnaires, written project notes, anonymous evaluations, brainstorming and teachers’ selected resources such as post boxes, concept diamonds, questionnaires, feedback sheets, and assessments.

The teachers were encouraged to design their own tools to obtain a baseline measure of their students’ conceptions about a particular aspect of assessment or feedback. They were then encouraged to create a classroom activity around a particular assessment or feedback aspect that they wanted to study and change and to measure the success of that activity.

The project team met approximately four times a year to discuss and share the teachers different action plan ideas, their progress, and provide support. Each teacher was also mentored by a researcher.

Summary of research findings

The questionnaire development

Three questionnaires were developed or modified, based on our student focus group data: students’ conceptions of assessment; conceptions of feedback; and conceptions of learning. Students (N=250) from the schools involved in this TLRI study completed the questionnaires. The preliminary factors identified within each questionnaire are given in Table 1. In addition, these students provided standardised measures of curriculum-based learning in either reading or mathematics. When analysed, these data will show the relationship between conceptions of assessment feedback and learning and student learning outcomes. However, a larger sample was needed to provide a more robust analysis of the factor structure, and grants from the University of Auckland Faculty of Education and School of Teaching, Learning and Development have allowed a follow-up study of more than 800 in a nationwide survey of secondary students on all three instruments. The data from this survey have yet to be analysed.

<table>
<thead>
<tr>
<th>Questionnaire</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students’ conceptions of assessment</td>
<td>Assessment is useful to students. Assessment is useful for teachers.</td>
</tr>
<tr>
<td></td>
<td>Assessment has a public use. Assessment is fun. Assessment is irrelevant.</td>
</tr>
<tr>
<td>Conceptions of learning</td>
<td>Learning is knowledge gain. Learning is using information. Learning is understanding. Learning is personal and community growth. Learning is an ongoing continuous process. Learning requires effort. Learning as developing knowledge objects.</td>
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| Table 1 Student conceptions questionnaire and their preliminary factor structures |

Action research

The teachers in this project all developed classroom activities that they could use to identify students’ conceptions of specific assessment and feedback practices.

In some cases, the teachers’ findings from the initial data collection led them to design classroom activities to address common misunderstandings. For example, the teacher who worked on close reading found that her students had poor understanding of some of the key close reading terms, so she designed a series of activities to improve their close reading skills and measured the effectiveness of these activities on completion of the unit. By the end of the intervention all the students had shown an improvement of their close reading skills.

All of the activities were successful to some degree, although teachers had difficulties because of poor class attendance and lack of comparable pre and posttest data. Detailed summaries of each teachers’ study can be found in the Appendix of the full report.

Becoming a teacher–researcher

Throughout the course of this two-year project, we documented how the teachers felt about becoming teacher–researchers. A summary of the things the teachers found beneficial and inhibitory are given in Table 2.

Limitations of the project

The findings of this project are limited by the sample size. The questionnaires and the teachers’ classroom activities would need to be trialled on a larger number of students before the findings can be generalised. In particular, each activity has only been trialled in one classroom. To determine the effectiveness of each activity, further classroom trials are required. The questionnaires have recently been administered to a larger, nationally representative sample, but the data from the survey are yet to be analysed.

Building capacity and capability

The questionnaire development

It is assumed that the production of robust measures of students’ conceptions of assessment, feedback, and learning together with New Zealand norms, plus an understanding of how those conceptions relate to practices and outcomes, will have benefit for New Zealand teachers. The Teachers’ Conceptions of Assessment inventory (Brown, CoA-IIIA) is already available for use from Dr Brown’s website, and
it is anticipated that the student instrument will be released in the same way once the nationally representative survey is completed. It is expected that once we understand how conceptions relate to outcomes, it will be possible to experiment with innovations in professional development.

Teacher action research
Research has shown that students seem to learn more when they know that teachers understand their perceptions (Bishop, Berryman, Tiakiwai, & Richardson, 2003). Certainly the development of tools to tap student conceptions about assessment and feedback, and the teachers’ engagement in a wide range of activities within the project have provided these teachers with deeper insights into students’ perceptions of assessment and feedback.

The collaboration between teacher–and university–researchers on developing instructional activities to identify students’ different conceptions of assessment led to improved communication between the teachers and students—they served to open up communication pathways.

Becoming a teacher-researcher
As Black et al., (2003) noted in regard to the teachers they worked with who were implementing a range of formative assessment strategies and practices, each followed “different trajectories of change—so that not only their starting points, but also the routes they travelled were different” (p. 83). This was the case in this project. Teachers’ engagement in small-scale research projects, grounded in their personal interests and needs, enabled them to gain insights into not only their students’ conceptions but also their own conceptions and how these played out in practice. These insights provided the impetus for self-reported changes to practices in a number of instances.

Conclusions
This two-year TLRI study has enabled teachers and researchers to gain a greater insight into students’ conceptions of assessment and feedback. In particular, we have developed three questionnaires that can be used by other teachers to find out what students think is the purpose of assessment, feedback, and learning. We have also developed classroom activities that teachers can use to identify students’ beliefs about different types of assessment and feedback practices. Finally, we have documented the process by which teachers became researchers. We found that while the teachers feel their practice has improved as a result of this study, conducting research was not easy and could not be done without the full support of schools and mentoring from experienced researchers.

Project publications and outputs


References


The full reports of all TLRI projects are published on the TLRI website (www.tlri.org.nz).

Lead authors and researchers

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