Abstract
Assessment is now understood to be a key issue in influencing what and how students learn and, through the feedback they receive, their understanding and future learning.

The Formative Assessment in Science Teaching (FAST) project is an FDTL funded collaboration between the Open University and Sheffield Hallam University. The aims of the project are:
- to investigate the impact of existing formative assessment practices on student learning behaviour
- to develop, implement and evaluate new approaches to providing students with timely and useful feedback.

The theoretical foundation of the FAST project is that there are 11 conditions under which assessment best supports student learning (Gibbs and Simpson, 2004). Derived from a comprehensive literature review of theories and case studies of assessment, these 11 conditions form the conceptual framework for the project, and for the evaluation tools developed by the project team.

This paper seeks to evaluate the usefulness of the principal evaluation tool used in the FAST project: the Assessment Experience Questionnaire (AEQ). The AEQ has been used extensively in the FAST project, and increasingly in other institutions, and is designed as a diagnostic tool for lecturers to assess the extent to which students experience the 11 conditions in assessment. The AEQ uses six scales of six items, each addressing at least one of the conditions:

1. Time demands and distribution of effort
2. Assignments and learning
3. Quantity and timing of feedback
4. Quality of feedback
5. Student use of feedback
6. The examination

Drawing on interviews with students and lecturers, and questionnaire findings over three years, this paper discusses the practical application, and limitations, of the AEQ as an evaluation tool. Using comparisons with other tools developed by the FAST project, it also seeks to address the methodological issues raised by the AEQ, and suggests ways in which the AEQ, in conjunction with other methods, can be used as a means of better understanding assessment practices.

This paper will in particular address the following questions:
- Is the AEQ technically valid, and does it yield good data?
- Does it form a basis for constructing a dialogue of improvement for the lecturer?
**Introduction**

**The importance of assessment**

Assessment has been an increasing focus of higher education policy and practice in the U.K. since the early 1990s (Heywood, 2000), and has been associated in the media with concern over the quality of teaching and perceptions of falling standards (Gibbs and Simpson, 2004, p. 3). It has also become associated with meeting goals for performance and accountability set by government, and, in the age of the increasing commoditisation of higher education, by students and parents (Linkon, 2005, p. 28). Assessment, however, is fundamentally about student learning, and student perceptions of assessment have been found to determine both the process of learning (Sambell et al, 1997, p. 357), and their approach to learning (Struyven et al, 2005, p.329). Finally, it is increasingly seen not simply as a means of accreditation of student work, but also as a means of monitoring and guiding students’ progress. This supports Dochy et al’s claim (1999, p. 332) that “the view that the assessment of students’ achievements is solely something which happens at the end of a process of learning is no longer tenable”. It is in accordance with the stance that assessment is a ‘tool for learning’ (Ibid,p. 332) that the theoretical and practical foundations of the FAST project have been placed.

**The FAST project**

The Formative Assessment in Science Teaching (FAST) project is a three year collaboration, begun in October 2002 and funded by the Fund for the Development of Teaching and Learning, between the Open University (OU) and Sheffield Hallam University (SHU). The aims of the project are:

- To investigate the impact of existing formative assessment practices on student learning behaviour
- To develop, implement and evaluate new approaches to providing students with timely and useful feedback.

The FAST project has involved a total of seven undergraduate science courses at the OU and six undergraduate science courses at SHU. In addition, FAST has supported a further 15 small-scale development projects at both undergraduate and postgraduate levels in a number of science departments at other UK universities.

**Theoretical background**

The theoretical foundation of the FAST project is that there are 11 conditions under which assessment best supports student learning (Gibbs and Simpson, 2004b). Derived from a comprehensive literature review of theories and case studies of assessment, the conditions highlight the role of assessment in influencing what and how students learn, and the part that feedback to students plays in supporting their learning. The findings of the review suggest that this is best supported when the following conditions are met:

1. Sufficient assessed tasks are provided for students to capture sufficient study time
2. These tasks are engaged with by students, orienting them to allocate appropriate amounts of time and effort to the most important aspects of the course
3. Tackling the assessed task engages students to productive learning activity of an appropriate kind
4. Assessment communicates clear and high expectations
5. Sufficient feedback is provided, both often enough and in enough detail
6. The feedback focuses on students’ performance, on their learning and on action under the students’ control, rather than on the students themselves and on their characteristics
7. The feedback is timely in that it is received by students while it still matters to them and in time for them to pay attention to further learning or receive further assistance
8. Feedback is appropriate to the purpose of the assignment and to its criteria for success
9. Feedback is appropriate, in relation to students’ understanding of what they are supposed to be doing
10. Feedback is received and attended to
11. Feedback is acted upon by the student (Gibbs and Simpson, 2004a, p. 172)

It is these 11 conditions which form the basis of the evaluation tools developed for the project.

**Evaluating teaching and learning**

Evaluating practice is not new to Higher Education. Institutions have long sought to gauge the quality of their teaching and the service they provide through the use of student ratings such as the Course Experience Questionnaire (CEQ) (Ramsden, 1991). In an age, as stated earlier, of increasing accountability and commoditisation of HE, the use of such evaluation tools has become widely used as a means of assuring quality and of assessing individual and institutional performance (Lyon & Hendry, 2002, Tricker et al, 2005). Increasing emphasis has also been placed on the use of student ratings to find out more about their learning experience, as in Biggs’ Study Process Questionnaire (SPQ) (Zeegers, 2002). In this context, therefore, the “evaluation of student learning should be concerned with learning behaviour as opposed to teaching behaviour” (Nicholls and Gardner, 2002, p. 11).

Although there are many varied ways of evaluating teaching practice or student learning, ranging from interviews and focus groups to questionnaires, in reality student experience on courses is often assessed only by formal questionnaires (Tricker et al, p.186). This is particularly the case in distance education institutions, such as the Open University, where opportunities for more informal evaluation of student experience, such as informal meetings or chats, are rare. Even in face to face institutions, however, formal evaluation of student experience tends to be achieved through the use of quantitative rather than qualitative tools (*Ibid* p. 186). Although there have been some concerns expressed about the reliability of student ratings (Felton et al, 2004), particularly when used in personnel decisions, and, in the case of the SPQ, the number of approaches to study represented in the questionnaire (Zeegers, 2002, p. 74), reviews of the use of evaluation questionnaires have found them to be “reasonably valid and reliable, and relatively free from bias” (Kwan, 1999, p. 182). However, while one of the main purposes of such questionnaires is to provide diagnostic feedback to staff about the effectiveness of their teaching (Marsh, 1987), there is “little evidence that using such instruments in isolation has any effect on improving teaching performance” (Ballantyne et al, 2000, p. 222).

**The FAST project tools**

As stated earlier, the aim of the FAST project is not to just to evaluate the effect of assessment practices on student learning, but also to develop, implement and evaluate new approaches to assessment. As a result, change in teaching practice, and therefore in student learning, is at the heart of what the FAST project is seeking to achieve. Evaluating change is therefore fundamental, and a number of tools, both qualitative and quantitative, have been developed to enable University teachers to evaluate the current experience of assessment by students, and also to identify changes to assessment practices and evaluate their effect. Among those used most frequently in the project are:

**Coding of feedback to students** (Brown and Glover, in press)
A qualitative coding system which focuses on the function of feedback given to students by teachers, and, through the use of interviews, finds out which feedback students find to be most useful.

**Sheffield Hallam University Questionnaire (SHUQ)** (Glover, 2004)
A questionnaire designed to explore the way students perceive the existence and value of a wide range of feedback, including oral and written and group and individual feedback.

**Assessment Experience Questionnaire (AEQ)**
The principal evaluation tool of the FAST project, the AEQ (see Appendix 1) was initially developed as a prototype (Gibbs and Simpson, 2004), based on the 11 conditions and incorporating information from open-ended interviews with students, but has been used extensively in all the courses involved in
the FAST project at the OU and SHU\textsuperscript{1}. A total of 3250 students have been surveyed in both institutions from 2002-2005, with an average response rate over the 3 years of 45%. In addition, the AEQ has been used in a number of the development projects supported by the FAST project, and increasingly in other institutions.

The AEQ is designed as a diagnostic tool for lecturers to assess the extent to which students experience the 11 conditions in assessment, and has, during the course of the project, been increasingly used to evaluate the impact of any changes made to assessment practices. The AEQ uses six scales of six items, from strongly agree to strongly disagree, with a not applicable category, each addressing at least one of the 11 conditions noted above:

1. Time demands and distribution of effort
2. Assignments and learning
3. Quantity and timing of feedback
4. Quality of feedback
5. Student use of feedback
6. The examination

The responses for each item are averaged out and given a score. These items have been split into two groups: those for which high ratings (students agreeing with the statement) are perceived to be good, and those for which low ratings (students disagreeing with the statement) are perceived to be good. The questionnaire also contains an open-ended question relating to general assessment issues, enabling students to add qualitative comments.

\textbf{Aims of the paper}

The aim of the paper is to discuss the practical application, and limitations, of the AEQ as an evaluation tool. In particular, it seeks to address the issues of validity and reliability, and also whether its use has an effect on teaching performance. This paper will therefore in particular focus on the following questions:

- Is the AEQ technically valid, and does it yield good data?
- Does it form a basis for constructing a dialogue of improvement for the lecturer?

Using comparisons with other tools developed by the FAST project, it also seeks to address the methodological issues raised by the AEQ, and suggests ways in which the AEQ, in conjunction with other methods, can be used as a means of better understanding assessment practices.

\textbf{Method}

For the purpose of this evaluation a wide range of views was sought from lecturers who have been directly involved with the FAST project and who have used the AEQ as part of the evaluation of assessment on their course or module. A total of 18 lecturers were approached to take part in qualitative semi-structured interviews (see Appendix 2) of whom 8, labelled A to H, agreed to participate: 3 from the OU, 2 from SHU, and 3 from the development projects. The interviews were, with the exception of face-to-face interviews with 2 of the OU lecturers, conducted by telephone, and varied in length between 20 minutes and an hour. The interviews were audio-taped, and a full transcription made.

The interview focussed on how lecturers have used the AEQ and other evaluation tools developed for the project, any changes made to assessment practices and the effect that it has had on their teaching and on student learning, and, finally, the limitations of the AEQ and the project as a whole. In-depth analysis of the responses by one of the authors led to the identification of the main themes emerging from the interviews.

\textsuperscript{1} A revised version of the AEQ is currently being piloted by its principal author. As yet, however, no results have been released.
The paper also draws on questionnaire findings from the FAST project and qualitative follow-up interviews with students and lecturers.

**Findings**

**Using the AEQ for diagnosis**

There was a considerable degree of consensus amongst lecturers on the assessment issues which the AEQ had raised. Perhaps first amongst these was what the questionnaire findings revealed of student perceptions and understanding of assessment and feedback:

- What I’ve used it for was to test the overall perceptions of the module’s assessment profile for the project module (Lecturer F).
- I found them useful because they highlighted the students’ views of assessment, how they work and things like that (Lecturer B).

In some cases it was clear that students and lecturer perceptions of what constituted feedback varied considerably. A particular example was a course where online assessment provided instant feedback to students when an error had been made. What was revealed from the students’ responses, and supported by evidence from student interviews, was the extent to which students did not necessarily understand what was meant by the term feedback when it was mentioned in the AEQ:

- With the student understanding of the word feedback, I was completely bowled over. … And it revealed itself by students saying things like things like, ‘what’s this about feedback; I haven’t had any feedback yet’, which is ridiculous when we’re giving feedback instantaneously (Lecturer C).

The AEQ has also been used as a means of comparing the assessment practices on one course with other courses, and identifying where possible problems might lie:

- I suppose really I used that information as a diagnostic, looking for potential areas of development and evaluating them by module and in particular in [this] module (Lecturer D).
- [I looked] at the AEQ across the range of courses and spent some time comparing how the two physics courses compared to the average course or looked at how on a particular question it ranked, particularly when it was the best or worst of courses (Lecturer B).

Amongst the issues raised was that of the timeliness of feedback:

- I suppose, to be honest, across the courses at [this University] we got the same sort of issues cropping up anyway, so we got the quantity and timing of feedback, the students were flagging that up. So for [this] module I basically concentrated on that aspect to try to change things and improve things in that area (Lecturer D).

In general, however, the AEQ did not necessarily identify any issues of which the lecturers were not already aware. Instead it was seen as confirming what lecturers already knew, either anecdotally or through the use of other evaluation tools such as module feedback forms or student interviews:

- I think it was useful in terms of confirming what we already knew in that we knew we had a problem in getting work back, which was confirmed by the questionnaires (Lecturer E).
- I guess the main idea was that we thought that we had devised a pretty good assessment scheme for that particular course, …, and we were hoping to confirm that or deny it, or find out if there were any gaps… Gratifyingly, we’ve, certainly for the course that I teach, found that there aren’t any substantial problems that the students perceived in terms of the assessment regime (Lecturer G).

**Making changes to assessment practice**

Although the AEQ often highlighted an issue of which the lecturers were already aware, the findings of the AEQ, in conjunction with other evaluation methods, did often lead to a change in assessment practice, or at least a recognition of the need for change, at the course or module level:
So we did try to introduce some changes… Well, first of all, the first coursework for the module, we tried to get it back within a couple of weeks, which we did actually do. And the other thing we was we introduced peer assessment for the lab books (Lecturer E).

So, with [this course], the focus was on enhancing the students notes that accompany the returned assignments, and flagging to students the skills that were being developed there and those are things that are likely to feed forward from one piece of work to another more so than content which has moved on (Lecturer A).

What it did show was that students tend to operate in such a mode that when they are nearing the end of the deadline that they start working very hard at it. Some of them just can’t complete it and find it difficult to submit anything very credible at that stage. So that came out and we did recognise that that’s something we needed to work more on (Lecturer F).

What was striking from the interviews was that lecturers felt that the AEQ, amongst other tools, highlighted more general assessment issues beyond those on the specific course that they were teaching, and that this in turn had had an effect on how they approached assessment on other courses or modules they were involved in:

I can’t say that in [this course] I’ve made any changes to the assessment practice as a result of the AEQ… I’ve made some subtle changes, but not large changes on that course, but I am thinking more about how I can alter things on other courses (Lecturer G).

I think, well I mean this last academic year, one of the lab classes I run, they do an experiment and then they have to do an oral presentation on it, a PowerPoint presentation, and certainly partly inspired by the FAST project, I did it as a two stage process (Lecturer H).

I guess they have made me aware of the benefits of having assignments that are linked so that you can actually feed forward. So I have that in mind to try and apply that for the coming year (Lecturer B).

Similarly, interviewees felt that the project itself, although not necessarily directly the AEQ, had started to have an effect on wider assessment practices within their department or faculty.

There is suddenly an amazing effect coming from all this. Now it kind of relates back to the whole thing to do with the role of assessment in teaching and to do with the use of electronic assessment. Basically it’s looking extremely likely that our new level one science course coming out in 2007 and the [other] new level 1 course which is coming out at the same time will both be using questions of the sort that [this course] uses (Lecturer C).

In terms of chairing the production of [this course], I think it’s going to have a major impact. It’s already had a major impact on the thinking of the course team there. Other members of the course team are aware of outcomes from the FAST project, so they’re much more receptive to thinking about different ways of undertaking assessment, so the whole idea of getting feedback on students’ performance quicker and helping them to see what they’ve achieved and where they might move forward (Lecturer A).

As a result, the change to assessment practice at least partially inspired by the AEQ was not restricted to course level, but was felt to have had an impact on other courses or module taught by the lecturers interviewed, and, perhaps more significantly, on assessment practices at departmental level.

**Evaluating change**

At the OU and SHU the annual administration of the AEQ has given lecturers 3 years of data related to assessment on their particular courses. In theory, this has allowed them to assess the impact of changes to assessment practice over the course of the project on how students engage with feedback. In reality, however, evaluation of changes made to the assessment practices has been difficult to gauge.

Diagnostically, I mean certainly the AEQ alerted us to the problem and yet, evaluation, it’s helpful in evaluating. If you take the project to mean the whole developmental project, then yes, we’ve used it
in evaluation. It’s been of more limited use in evaluating any changes that have taken place (Lecturer C).

Lecturers interviewed felt that while large changes were more obvious, it was very difficult to make any firm conclusions based on small changes to the AEQ results. The main issue identified by lecturers in the study was the issue that even where change was indicated, the number of variables, involved was so great as to make any comparison between one year’s results and the next almost impossible.

I have a concern that it is very difficult to make any judgments about change. There were some places where there was an indication that things may have moved in the direction that we intended. However, there are so many compounding variables that drawing firm conclusions is very difficult (Lecturer A).

I suppose the difficulty with them is getting anything quantitative out of them. I suppose having them over the two years and getting data for the two years, one would really have liked to have been able to say, oh well, we got 2.7 this year and we got something else the following year, and been able to draw some sort of message from that. But I think there is so much statistical uncertainty with all those things, it simply wasn’t possible (Lecturer B).

In the development projects the issue was a different one. They were often inspired to join the FAST project because of an on-going interest or concern with assessment issues. As a result, changes to the assessment practices may have occurred already. Consequently, although the lecturers on these projects used the AEQ as a means of investigating further the attitude of students towards assessment, or confirming or denying their own perceptions, it was not possible to assign any changes to the AEQ or the project in general:

The big change was from the previous tutorial problem system to this class test system, so unfortunately we were too late getting involved to do that. The changes we’ve made to this class test system are fairly superficial really, so a lot of what we have is anecdotal really (Lecturer H).

Changing perceptions of role
Lecturers were asked about the effect of the project, and the tools used, on their role as lecturers. Not all lecturers felt that their teaching practice and role as teachers had changed greatly. They tended to identify themselves as lecturers who were perhaps more open to change, and whose careers had developed over the course of the project, and to some extent independent of the project.

Definitely, we have a better understanding of feedback issues. Whether that has actually improved my practice I really don’t know. My practice is always constantly being improved anyway, more as a result of who I am rather than just as a result of the project itself. But it did actually allow us to see one or two things (Lecturer F).

I suppose it’s changed over time, but how much of that is due to the project and how much of that is due to much more experience of teaching is difficult to say (Lecturer E).

At the same time, there was an indication that they did feel that the emphasis on assessment had made them re-think their role in relation to assessment and feedback:

What’s most useful for me for this questionnaire is actually the questions that I’ve asked that then made me think a bit more about designing assessments, and feedback, how feedback is given. Just reading those questions made me think a bit more about the feedback I was giving to students, how to make sure they do something useful with it. So it’s more useful (Lecturer H).

Lecturer C speaks of the “amazing effect” that the project has had on her own role as a lecturer:

But it was quite amazing then when, because that predates the 11 conditions, when all this stuff that we were already incorporating into the course came up and there it was in black and white, it was quite amazing really. And yes, it’s not really altered where I come from, how I am, how I believe, but it’s kind of given it a, it all makes sense, it all adds together, it’s all part and parcel of the same thing really (Lecturer C).
Limitations of the AEQ

The interviews revealed a number of limitations associated with using the AEQ. The difficulty in identifying small differences between results, either in comparisons between courses or at the start and end of a change to assessment practice, was, as indicated earlier, seen as a frustration by some lecturers:

After the first confirmatory from the AEQ that our assessment regime was pretty good, and the actual difference between the AEQ responses between the two courses, carefully constructed and traditional, the AEQ did not pull out any significant differences in the students’ attitudes, their reported experience between the two. That’s where I was naïve, to believe I could obtain some kind of distinction between the two. The AEQ isn’t perhaps very good at that type of thing (Lecturer G).

More generally, some lecturers mentioned the ambiguity of Likert scale and the scoring system used in the AEQ in determining whether a particular item in the questionnaire was inherently good or bad:

I personally have a problem with assigning numbers to questions that are quite subjective, and it has to do with the issues related to the differences between strongly agree and agree, that they’re equal, and I don’t think that they are (Lecturer C).

I guess there is another thing about the questions I was always a bit wary of, and that the fact that in some cases behaviour was regarded as good or bad whereas I was never convinced that you always say something was good or bad… I guess there were some measures where everything was locked together to give a total score, and therefore some things were scored one way and some things were scored another way. Where there is that level of ambiguity it does make a bit of a nonsense of the total score (Lecturer B).

Other issues related to the way students completed the questionnaires. There was some suggestion of an apparent contrast between what lecturers were hearing anecdotally and what was being reported in the questionnaire: This was particularly the case at SHU, where, unlike at the OU, lecturers had the opportunity to receive informal feedback on the courses from students:

And again, what we were seeing on the questionnaires didn’t really seem to tally with the verbal feedback we were getting from the session… When you actually explained why you were doing the peer assessment, .., most people seemed to appreciate that and see the benefit of it, and yet, when it came to the questionnaires, there was quite a lot of comments about we don’t like peer assessment (Lecturer E).

One reason for this is that the timing of feedback, particularly in relation to their progress on assessment on other modules, might have negatively influenced students’ responses. Also the sheer number of questionnaires administered at the end of the year, including end of course questionnaires and the AEQ, is also possibly a reason why some students were indicating responses to questions which were not applicable to that particular module:

I can probably see the benefits of these questionnaires. What I have less faith in is being able to pull quantitative data from them, primarily because, most of the time, students don’t know what module they’re studying. You can get someone who’s a bit disgruntled with the whole course or has had some bad feedback from another course, which feeds through into their answers (Lecturer E).

Students tended to get confused between modules. There’d be a section on the examination and they’d be filling that in for a continuously assessed module and answering the questions on the examination when it’s not really relevant (Lecturer D).

Linked to this issue was an apparent confusion between the two categories of ‘neither agree nor disagree’ and ‘not applicable’, with some students ticking one category when it was not clear that this is what they intended. In the OU and the development projects, this confusion between courses was less of an issue. The small scale of the development projects meant that students were only being

2 Observations from first set of tutor interviews.
surveyed on one course. At the OU a strict quota exists to prevent students being over-surveyed, and so, despite the large numbers of students sent questionnaires, there was no real evidence of confusion between courses.

Discussion

The limited nature of this evaluation of the AEQ makes it difficult to come to any firm conclusions about the practical application and limitations of the AEQ that are applicable beyond the scope of this paper. However, the themes emerging from this study do have some relevance to wider issues related to the evaluation of learning and teaching, and may therefore be of practical use to those contemplating a similar approach to that take in the FAST project. This discussion section will address these wider issues in relation to the two questions underlying this study:

- Is the AEQ technically valid, and does it yield good data?
- Does it form a basis for constructing a dialogue of improvement for the lecturer?

Validity here is defined as something which “measures or describes what it is supposed to measure or describe” (Brennan and Williams, 2004, p. 30). In general, as indicated above, evaluation questionnaires have been found to be reasonably valid (Kwan, 1999; Ballantyne et al, 2000), and in many respects this reflects the findings of the study, particularly in relation to more general indications of assessment practice and perceptions of assessment held by students. Where there is less certainty is in relation to the fine grained analysis required to indicate change, due to the ambiguity that some lecturers detected in some of the questions and in the scale and scoring system used. This, however, is not necessarily an issue restricted to the AEQ and advice on using similar questionnaires warns of the dangers of treating student data as statistically valid. As Brennan and Williams (2004, p. 33) state, “when interpreting the evidence of student feedback, some scepticism is called for”. Consequently, issues of student bias, such as a questionnaire’s tendency to invite only criticism (Tricker et al, 2005, p. 186), the timing of the questionnaire, and, in some cases, questionnaire overload, have to borne in mind when considering the reliability as well as the validity of the data. Again, this is not an issue of relevance only to the AEQ, but to all questionnaires. The AEQ, as with other similar evaluation tools, cannot be expected to provide all the information required. What is important therefore is that the AEQ is used as one amongst a variety of other instruments, both qualitative and quantitative (Brennan and Williams, 2004, p. 17):

The project tools have made us more aware. There’s definitely a place for these things, but I think you’ve got to put them into context and I think you’ve also got to use them alongside other tools as well. I think that module specific questionnaires and speaking to the students, and a lot of different things (Lecturer D).

If you have expectations that are a little beyond its power, or beyond the power of any instrument, then I think you’re going to be disappointed, but if you keep in the right frame of mind, then it will help you somehow, perhaps not a huge amount, but it gives you that little extra bit of confidence in what you’re doing or maybe that you think you’re not doing something very well, and it’s confirmed, so I think those kind of things are good (Lecturer G).

Despite what could be seen as the limitations of the AEQ, there is evidence within this study that it has played at least a part in constructing a dialogue of improvement for the lecturer. Although those taking part did not identify the AEQ as the sole factor in determining a change in practice or role, they did acknowledge its place, as one of the elements of the FAST project, in leading to a positive change in practice, either at course or module level, or, indeed, at departmental level. Thus, while the use of the AEQ by these lecturers within the context of the FAST project has not in itself disproved Ballantyne et al’s (2000, p. 222) assertion that such instruments do not in isolation have any effect on improving teaching performance, it is nonetheless appropriate, given the need for a triangulated approach to evaluation, that it is recognised as a factor in improving teaching performance and therefore student learning.
**Conclusion**

The AEQ has been shown to be a valuable instrument, when used alongside other tools, for assisting in the diagnosis and evaluation of the conditions of assessment experienced by students, and their perceptions of that assessment. It has also led to what lecturers involved in this study perceive to be an improvement in their understanding of assessment issues, and, crucially, a change in their assessment practices. It has, however, to be carefully used, its limitations acknowledged, and the data it produces treated with some degree of caution. This does not necessarily undermine the value of the AEQ, but rather suggests that its use should be seen as one of many contributory factors in our understanding of assessment and how it relates to teaching and learning:

I think they’re useful as long as one knows the context in which one wants to use them. By the time the project started I was clear on what I wanted to know. But you have to be very clear about how you want to use it. If you think it’s just going to a panacea, then you’re probably just wasting your time (Lecturer F).
References


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Appendix 1

Assessment Experience Questionnaire (AEQ)

Please answer every item quickly by giving your immediate response. Circle the appropriate code number to show your response to assessment.

1 Amount and distribution of study effort

I do the same amount of study each week, regardless of whether an assignment is due or not. 

5 4 3 2 1

I can be quite selective about what I study and learn and still do well. 

5 4 3 2 1

I only study things that are going to be covered in the assignments. 

5 4 3 2 1

I have to study regularly if I want to do well on the course. 

1 2 3 4 5

On this course, it is possible to do quite well without studying much. 

5 4 3 2 1

In weeks when the assignments are due I put in many more hours. 

5 4 3 2 1

2 Assignments and learning

Tackling the assignments really makes me think. 

1 2 3 4 5

I learn more from doing the assignments than from studying the course material. 

1 2 3 4 5

In completing the assignments you can get away with not understanding and still get high marks. 

5 4 3 2 1

The assignments give very clear instructions about what you are expected to do. 

1 2 3 4 5

When I tackle an assignment it is not at all clear what would count as a successful answer. 

5 4 3 2 1

The assignments are not very challenging. 

5 4 3 2 1

3 Quantity and timing of feedback

On this course I get plenty of feedback on how I am doing. 

1 2 3 4 5

The feedback comes back very quickly. 

1 2 3 4 5

There is hardly any feedback on my assignments when I get them back. 

5 4 3 2 1

When I get things wrong or misunderstand them I don’t receive much guidance in what to do about it. 

5 4 3 2 1

I would learn more if I received more feedback. 

5 4 3 2 1

Whatever feedback I get comes too late to be useful. 

5 4 3 2 1
### 4 Quality of feedback

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<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<th>5</th>
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<tbody>
<tr>
<td>The feedback mainly tells me how well I am doing in relation to others.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>The feedback helps me to understand things better.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>The feedback shows me how to do better next time.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Once I have read the feedback I understand why I got the mark I did.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I don’t understand some of the feedback.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>I can seldom see from the feedback what I need to do to improve.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

### 5 What you do with the feedback

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>I read the feedback carefully and try to understand what the feedback</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>is saying.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I use the feedback to go back over what I have done in the assignment.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>The feedback does not help me with any subsequent assignments.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>The feedback prompts me to go back over material covered earlier in</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>the course.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I do not use the feedback for revising.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>I tend to only read the marks.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

### 6 The examination and learning (only to be completed if there is an exam)

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparing for the exam was mainly a matter of memorising.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Doing the exam brought things together for me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I learnt new things while preparing for the exam.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I understand things better as a result of the exam.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I’ll probably forget most of it after the exam.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>In the exam you can get away with not understanding and still get good</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>marks.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Comments you would like to make about the way the assessment affected your learning on the course.
Appendix 2

FAST project tools evaluation interview

- How have you used the tools (AEQ, SHUQ, coding feedback) developed for the FAST project? How useful have these tools been?
  - In diagnosis
  - In evaluation
- What changes have you made to assessment practice as a result of involvement in the project?
- How has your understanding of issues related to assessment changed as a result of the project?
  - What has been the role of the project tools in this?
- How have you changed as a teacher?
  - Your practice
  - Perceptions of your role
  - What has been the role of the project tools in this?
- How has student learning changed as a result of the project?
  - What has been the role of the project tools in this?
- What changes would you suggest to the project tools?
- Has your attitude to quantitative tools changed as a result of the project?