Structured abstract

CONTEXT
Benefits of collecting student feedback on courses, programs, learning experiences, and their perceptions of teaching quality, are well documented in literature. In the higher education system, this feedback is generally collected via student evaluation surveys. During the past few years, the Faculty of Engineering and Surveying (FoES), one of five faculties at USQ, has identified problems of small response rates, possible bias, general questions over data validity, relevance and wording of survey questions, and systems problems such as timeliness of official reports. Due to these problems, the data may not be reliable and the views of those who respond may not be representative of the overall student cohort. It is therefore risky to base management decisions on student satisfaction, teaching quality, and course quality on these data. Clearly, a more robust and reliable method of gathering feedback from students was needed that would provide more confidence in the data. For various reasons it was considered that structured student focus groups might provide such a vehicle.

PURPOSE OR GOAL
The focus of this paper is on the research question: Is it possible to collect valid, reliable data from external/distance students on their learning experiences in Faculty programs through the use of structured student focus groups?

APPROACH
Since low response rates to student surveys is an issue, and students need alternative opportunities to have input into courses and program review, design and delivery, it was agreed that the earlier year residential schools provide an ideal opportunity for the conduct of student focus groups and other input from student stakeholders in the quality cycle of program improvement. This allowed us to gather reliable information to augment and supplement the feedback data received from the official online student evaluation.

ACTUAL OR ANTICIPATED OUTCOMES
The process was trialled in late 2011 in two first year practice courses that were undertaken by all students in the faculty. The Faculty results for overall satisfaction from the official student evaluation survey for semester 2, 2011 was 3.43 (on a scale of 1 to 5). The overall satisfaction from the trial student focus group conducted a few weeks later was 3.91, which represents a significant variation. Further manual trials and the first Automated Audience Feedback trial were conducted in semesters 2 and 3 of 2012 with similar disparate results.

CONCLUSIONS/RECOMMENDATIONS/SUMMARY
The data collected from the focus groups (both conversational data and satisfaction metric) are considered valid since it relates to relevant issues and measures what was intended. The data are also considered reliable since similar issues are raised in different forums such as open questions on formal student evaluations. Nevertheless, reliability will be improved when the ‘audience feedback’ software is incorporated into the system. The data collected has certainly proven useful in augmenting information from the formal student evaluations and has been used to make changes to programs and for internal reporting purposes. Therefore the implemented system answers the research question stated in the Introduction in the affirmative: it is possible to collect valid, reliable data from external/distance students on their learning experiences in Faculty programs through the use of structured focus groups.

KEYWORDS
Focus Groups, Student Evaluation Surveys, Audience Response Devices
Introduction and background

Benefits of collecting student feedback on courses, programs, learning experiences, and their perceptions of teaching quality, are well documented in the literature. In the higher education system, this feedback is generally collected via student evaluation surveys. Many studies on student evaluation surveys support the notion that appropriately constructed, administered, and interpreted surveys can be valid and reliable (for example Braskamp & Ory, 1994; Chen & Hoshower, 2003). Unfortunately, recent research (for example Slade & McConville, 2006) provides some criticism of institutional student feedback systems though their findings do not necessarily repudiate the inherent benefits of student feedback. Criticisms of the student evaluation surveys are many and varied but the most common are that they are biased, and influenced by a number of non-teaching-related factors (Al-Issa & Sulieman, 2007). The bias stems from the suggestion that students do not have the skills to effectively judge the quality of teaching, and that the surveys can become popularity contests (essentially, giving students high marks/grades can lead to high student evaluations). Although there have been some questions over the causal link between grades and student evaluation scores, recent research by Vaillancourt (2013) strongly indicates that students do show bias ‘aggress against professors’ (Vaillancourt, 2013, p. 71) through poor teaching evaluations. Further bias noted by several researchers (for example Al-Issa & Sulieman, 2007; Davies, Hirschberg, Lye, Johnston, & McDonald, 2007; Palmer, 2011) is that: small classes rate higher than large ones; advanced level classes rate higher than early-year classes; and there are general rating variances in different discipline areas.

At the University of Southern Queensland, a small regional university with an international reputation for its distance education, collection of student feedback data is logistically difficult since approximately 75% of students study off-campus in the external or distance education mode. A recent search carried out by Cummings et al (Cummings, Ballantyne, & Regan, 2012 unpub.) on a random selection (approximately forty) of Australian universities web sites revealed that nearly all used some student evaluation surveys, and that around three quarters of the Australian universities administered their surveys entirely online. This data is consistent with (Gamlil & Davidovitz, 2005) who commented on a trend towards online surveys in the USA at that time. Anderson, Cain, and Bird (2005) concluded that online evaluations were more effective at collecting constructive feedback than paper-based methods and, when coupled with completion incentives, the student response rates could be significantly improved. As noted by Roval et al (2006) and Palmer (2011), the fact that students are studying by external/distance/online mode means USQ may expect a significantly lower rating from the students on evaluation surveys. This raises a question as to whether the official student evaluations ought to be supplemented with other (perhaps more reliable) data.

From Semester 2, 2006 until Semester 2, 2012, USQ used three student evaluations (entirely in online format from 2007): the Student Evaluation of Courses (SEC) designed to evaluate the quality of the course experience; the Student Evaluation of Learning and Teaching (SELT) designed to evaluate the quality of the teaching courses; and the Student Evaluation of Distance Learning and Teaching (SEDLT) instrument designed to evaluate the quality of the learning and teaching delivered through the web and distance modes. Feedback from students indicated that they may have been suffering from survey fatigue, so from semester 2, 2012, USQ adopted a new process for student evaluations involving a single online instrument for all course offerings. The response rate for student evaluation surveys at USQ is typically around 15-30% and this has not improved significantly since the move to a single instrument. USQ shares this problem of low response rates with many other institutions. But, despite the criticisms of low response rates and possible bias, it is clear that Universities in Australia generally support the student evaluation/feedback surveys as a mechanism for providing useful information to the institution and for reporting purposes. This is certainly the case at USQ, and the plan is to continue with the student feedback process, in conjunction with a concerted effort to improve the response rate.
In addition to internal student surveys, many Australian universities participate in the annual Course Experience Questionnaire (CEQ) conducted by Graduate Careers Australia as part of their Australian Graduate Survey (Graduate Careers Australia, 2013). Results from the CEQ are publicised in the Good Universities Guide, and Universities use their data internally to report on program quality. Graduate Careers Australia requires a response rate of at least 50% for results to be included in the National data set, but they report typical response rate range from 60% to 65% (Graduate Careers Australia, 2013).

During the past few years, the Faculty of Engineering and Surveying (FoES), one of five faculties at USQ, has also identified the problems mentioned earlier of small response rates, possible bias, general questions over data validity, relevance and wording of survey questions, and systems problems such as timeliness of official reports. The response rate for internal student evaluation surveys in FoES is typically around 25%. Due to this poor response rate, the data may not be reliable and the views of those who respond may not be representative of the overall student cohort. It is therefore risky to base management decisions on student satisfaction, teaching quality, and course quality on these data. Clearly, a more robust and reliable method of gathering feedback from students was needed that would provide more confidence in the data. For various reasons clarified later in this paper, it was considered that structured student focus groups might provide such a vehicle.

The focus of this paper is on the research question: Is it possible to collect valid, reliable data from external/distance students on their learning experiences in Faculty programs through the use of structured student focus groups? Clearly the existing questionnaires were not achieving this. Consequently, the research method involves decisions about what additional data could be collected, how it could be collected to ensure representativeness, how the system could be implemented, and evaluation of the system based on validity, reliability, and usefulness.

Detailed discussions about the general design of questionnaires, specific information on how to improve response rates, particulars on the delivery platforms, and what factors influence students to respond, are all beyond the scope of this paper. Instead, the paper concentrates on the design and validation of a system to capture supplemental data as described above.
Method

Design of the Student Focus Group System

FoES programs are accredited by Engineers Australia (EA) for delivery in the distance education mode. To satisfy EA’s requirements and to provide adequate exposure to professional practice and laboratories, students who study off campus are required to participate in residential schools, conducted on-campus, that are the equivalent of one academic week each semester of equivalent full time study.

For many years FoES has received valuable feedback from its final year students through structured focus group discussions held during students’ last residential school where they present outcome from their final year project work. These are often called ‘exit surveys’ since they involve only the final year project students who are likely to be exiting the Faculty in the near future due to graduation.

One of the problems identified with this system is that it only involves students who have been in the system for some time and for whom most recent memories will be of final year courses. There is no opportunity to gain input from students earlier in their programs, and this is a time that can have the greatest impact on student retention and satisfaction.

Since low response rates to student surveys is an issue, and students need alternative opportunities to have input into courses and program review, design and delivery, it was agreed that the earlier year residential schools provide an ideal opportunity for the conduct of student focus groups and other input from student stakeholders in the quality cycle of program improvement. The opportunity was therefore taken to extend the student focus group concept to other residential schools conducted in earlier years of the programs. This allowed FoES to gather reliable information to augment and supplement the feedback data received from the official online student evaluation.

One of the causes identified for low response rates for online surveys is that of convincing students that their opinions matter and will have an impact (Spencer & Schmelkin, 2002). This is relevant to all surveys, not just those administered online, so logically one of the most constructive strategies for improving student engagement and response rates is to impress upon students the importance of the results (Sorenson & Reiner, 2003). Anderson, Brown and Spaeth (2006) assert that student engagement can be achieved by making the evaluation process a productive, formative exercise that promotes improvement while at the same time recognising students’ individual experiences as learners. Thus a key point of any proposed new system for gathering student feedback is that it needs be engaging for the students and that they are aware of the participation benefits.

The focus groups were designed to encourage and facilitate students’ participation in the processes by firstly communicating and demonstrating the results of action taken and changes implemented as a result of earlier sessions (closing the feedback loop as recommended by Ballantyne, 1997; Bennett & Nair, 2009; Leckey &Neill, 2001); and secondly by using the sessions as an educational process in their own right (for example developing students’ skills in quality systems management). Accordingly, at the beginning of all focus groups, students were provided examples of how feedback has been used in recent times to make changes to courses and programs.

Logically, the quality of data and information obtained from student evaluations is only as good as the instrument/questionnaire used to collect the data (Marsh, 1987). Student responses to specific questions were collected at the focus group sessions. The sessions began by telling students of three important changes that have been made to the program, curriculum, delivery, or individual courses as a result of feedback obtained at earlier focus group sessions (the ‘Why Bother’ part of the focus group). The predetermined focus questions were then presented three distinct groups. It should be noted that the questions were slightly different for each year level of the program. The first group of focus questions was focussed on what the student did (the ‘What I Did’ part of the focus group). The second
was focussed on what the student is getting out of their program (the ‘What I Received’ part of the focus group). And the third was focussed on the effect on the students (the ‘Effect on Me’ part of the focus group). Ensuing discussions were summarised and minuted, after which data was collected on the overall satisfaction metric.

The sessions were conducted in a relaxed atmosphere by university support staff and discussion outside the predetermined questions was encouraged. Since faculty staff were not present, it was believed students would be encouraged to talk freely, openly, and honestly about their experiences without any fear of retribution.

Results
The process was trialled in late 2011 in two first year practice courses that were undertaken by all students in the faculty. Although participation was not mandatory, the focus groups were conducted over the lunch hour on the last day of the residential school, where lunch was provided for all students to encourage maximum participation. Attendance was estimated at around 95% of students. Results from the initial trial provided valuable insights that were triangulated with feedback from the official final year exit interviews and formal online student evaluations and included in the Faculty’s planning process. Several key issues were discovered that led to changes in processes related to program delivery. Though the details of these are not relevant here, four notable examples are: changes to standardise course delivery on the learning management system; review and update of early year mathematics courses; changes to later year problem-based learning courses; and the introduction of more formal work integrated learning and recognition of prior workplace learning into the programs.

To check data against official questionnaires, it was decided to also gain student feedback on one key question on overall satisfaction with the program. At the end of the session students were asked to fill in one number on a small note in response to the following question: Overall, I am satisfied with the quality of my program (response on five point Likert scale from ‘strongly disagree’ to ‘strongly agree’). The open forum was conducted first and the collection of numeric satisfaction data conducted at the end of the session (voluntary only).

Table 1. Summary Statistics for 3 Focus Groups of first and second year FoES Students

<table>
<thead>
<tr>
<th>Variable</th>
<th>Survey Date</th>
<th>Focus Group Result</th>
<th>Official Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Student satisfaction</td>
<td>Semester 2, September 2011 (n=84)</td>
<td>3.91</td>
<td>3.43</td>
</tr>
<tr>
<td>Overall Student satisfaction</td>
<td>Semester 2, September 2012, (n=32)</td>
<td>3.55</td>
<td>3.44</td>
</tr>
<tr>
<td>Overall Student satisfaction</td>
<td>Semester 3, February 2013, (n=42)</td>
<td>3.79</td>
<td>3.44</td>
</tr>
</tbody>
</table>

The Faculty results for the overall satisfaction from the official student evaluation survey for semester 2, 2011 was 3.43 (on a scale of 1 to 5). The overall satisfaction from the trial student focus group conducted a few weeks later was 3.91, which represents a significant variation. Results for the overall satisfaction from the official student evaluation survey for semester 2, 2012 was 3.44, while the overall satisfaction from the student focus groups a few weeks later was 3.55 – a less substantial variation. The semester 3 focus group satisfaction of 3.79 was significantly different from the official semester 2 2012 survey.

Discussion
Comments from students at the focus group sessions allowed us to identify and reflect on areas of teaching and program delivery that may be improved, which otherwise would have gone undetected. From that perspective the system has proved useful. The focus groups
have provided students an opportunity to have a voice (particularly for the external students) and from that perspective they have proven a great success with many positive comments received from students.

Our comparison at the end of the Results sections is considered valid, but should be used with caution as there is significant variation between courses surveyed. The collection of this data is cumbersome, and to simplify the process, collection of the overall program satisfaction metric may be achieved by electronic means in the future (perhaps incorporated with the 'worm poll' software detailed later in this paper with audience interface as per Fig.1).

Care needs to be exercised when comparing responses since the official student evaluations are course-specific, while the student focus groups questions are designed to be more program-specific. This is particularly so given the facilitators purposefully have students focus on their overall program experiences through the questions being asked. Nevertheless, discussions raised by students on individual courses are still valid and reliable and have therefore been compared against class response from the official questionnaires, and augmented with data from assessments, and retention and progression rates to form a rich source of information on which to make management decisions.

![Figure 1: Proposed Audience Response System Slide](image)

One of the problems of collecting conversational responses in the focus groups is that an individual student expressing an opinion may not represent the views of the other students in the group. Minuting the statement(s) for later analysis does not provide any notion of the level of agreement amongst the cohort. To provide this information, it is planned to simultaneously collect data on student approval/disapproval of the discussions through the use of 'worm poll' software. Most readers will be familiar with 'worm poll' software in its use in the media to provide real-time data about audience responses to what is being said during an events such as political debates. In most cases this would require specialised handsets, but the use of suitable interactive audience response software on mobile phones or similar wireless devices will also be investigated. The technology used may also facilitate automated collection of the overall satisfaction indicator mentioned earlier. One issue that will need to be addressed with the 'worm poll' is whether it ought to be seen by the group during the discussions since this may lead to group think. Implementation and results from this aspect will be researched and reported in coming years.

**Conclusions**

The data collected from the focus groups (both conversational data and satisfaction metric) are considered valid since they relate to the relevant issues, and they measure what was intended. The data are also considered reliable since similar issues are raised in different forums such as open questions on formal student evaluations. Nevertheless, reliability will be improved when the 'worm poll' software is incorporated into the system. The data collected has certainly proven useful in augmenting information from the formal student evaluations and has been used to make changes to programs and for internal reporting purposes. Therefore the implemented system answers the research question stated in the
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References


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