

Assessing Design through Assessment Buddies

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Abstract

This paper discusses the impact of 'Assessment Buddies', a specially developed assessment and feedback system implemented within a second year industrial design module at Coventry University, UK.

The system was developed in response to the need for a successful assessment and feedback system that could cope with the complexities of a creative subject, and also in response to the need to address student dissatisfaction with assessment and feedback as evidenced by the regular UK National Student Survey.

The findings from student focus groups and questionnaires show that the Assessment Buddy system offers the opportunity for a more flexible approach to the assessment of creative subjects and also speaks to best practice as outlined in the NSS Student Charter.

At the time of writing the Assessment Buddy system is embedded in the second year assessment procedures for the automotive design course, and is being introduced into Year 3, with plans for Year 4 to follow.

Keywords: *action research, industrial design, curriculum development assessment*

Introduction

The philosophy underpinning the industrial design course at Coventry University is to foster creativity and critical thinking in order to prepare graduates for successful entry into the professional design community of practice.

One of the most important aspects of this preparation is the provision of positive critical assessment and feedback so students can successfully negotiate their journey towards a professional design identity. However, the provision of critical assessment and feedback can be problematic.

Firstly, according to the National Union of Students satisfaction survey, higher education students have consistently expressed dissatisfaction with the assessment and feedback they receive (NUS 2012). To address this, they have launched an Assessment and Feedback Charter, which contains ten key principles aimed at addressing issues such as the lack of formative, face-to-face, verbal and timely feedback (NUS 2012a).

Secondly, assessment within a creative discipline can be complex, particularly when creativity itself is problematic, as reflected by Sarkar and Chakrabarti (2011) in their paper on the development of a new method for assessing the creativity of products. The authors cite Amabile (1983) who defines creativity as 'the process by which something judged (to be creative) is produced' and Torrance (2010), who expresses it as 'fluency, flexibility, originality, and sometimes elaboration.' After analysing over 160 definitions, Sarkar and Chakrabarti propose: 'Creativity occurs through a process by which an agent uses its ability to generate ideas, solutions or products that are novel and valuable.' Further, Christians argues that most definitions of creativity encompass '...unusualness, appropriateness, transformational power and condensation of meaning.' (1992 cited in Osmond and Bull 2007)

Charyton and Merrill (2009) also discuss this within engineering design, and outline the development and testing of an assessment tool designed to measure students' creative abilities. This need for measurement is further reflected by Cowdroy and Williams (2006) who describe the process an Australian design course undertook to establish clear assessment criteria, rather than relying on 'established best practice' and 'tacit' knowledge.

Therefore, successful assessment and feedback methods within a creative discipline with no 'finite solutions' and which contain ambiguous terms such as 'creativity' and 'originality' (Davies 2003) are problematic, especially as summative marking schemes are seen to offer little value in isolation.

Consequently, there is a great emphasis placed upon formative feedback, often given during the studio 'crit', at which students present complex pieces of work - which can encompass areas such as ergonomics and engineering - to an assembled audience. Thus the studio crit can be a 'scary' experience for students who may be nervous about presenting their work, and hence may be unable to 'hear' and inculcate the feedback. As a result 'much of the verbal formative assessment feedback [is] literally falling on deaf ears.' (Blair 2006)

To address this, Coventry University has developed 'Assessment Buddies', a system that aims to provide critical, timely and effective assessment within a creative discipline. The development of the system, whilst recognising the impact of the increase in student numbers in design education on resources and teaching methods (Jeffries 2007), was primarily established to improve the immediacy and effectiveness of formative feedback to both large and small groups of students.

Introduced to second year students in the academic year 2009-2010, focus groups with students who participated indicated that the Assessment Buddy system was successful, albeit with a few teething problems. Now in its third iteration, further information has been gathered from focus groups with 7 students (now in Year 4) who experienced the 1st iteration, and also from 4 students (now in Year 3) who experienced a 3rd iteration of the system in 2010-2011. The students were also asked to fill out a questionnaire adapted from the NSS survey (see Appendix 1).

Therefore, this paper considers the success of Assessment Buddies as a system for providing assessment and feedback in relation to the complexities of creative assessment, and - given that student satisfaction is to become ever more important with the new UK fee structure from 2012 - assesses how it measures up to aspects of the NUS Assessment and Feedback Charter.

Assessment Buddies

The Assessment Buddies system, modelled on industry practice, was firstly introduced during a crit with a second year cohort of industrial design students in the academic year 2009-2010.

The focus was on one particular module – Automotive and Transport Design Specialist Skills – and, in essence, each presenting student was allocated two student ‘assessment buddies’ who took notes during staff feedback. After the assessment was complete, the presenter and buddy would read and agree the feedback and a staff member would countersign the notes. The summative mark would then be conveyed up to three weeks after the presentation.

Research from this student cohort (see Clough et al 2010) indicated that the system was successful for students who had prepared well for the crit and thus did not appear to have problems presenting in public. In addition, these students appreciated the opportunity to have a conversation about their work with staff, who - freed from taking notes - were able to watch, listen and interactively respond to the presentation. Nevertheless, there were teething problems: in addition to the fact that some students seemed unprepared, there was a disparity in the note-taking quality of the ‘buddies’, with some making few notes and others making too many. Also, students who presented at the beginning of the week often did not return to undertake their ‘buddy’ task, and thus the burden on the remaining students became much heavier as the week progressed.

The system, now in its third iteration, has been fine-tuned to maximise the creative feedback process and the feedback form now includes ‘positive’, ‘OK’ and ‘negative’ categories. In addition, an audio recording of the session is provided which is sent to the students within one week of the crit, followed by the final summative mark seven days later. The module is also underpinned by ‘round-table’ tutorials throughout the year, which allow the students to share methodology, provide mutual support and engage in ‘light’ critique. Further, the ‘buddies’ are now volunteers, rather than conscripts, and the volunteering guidelines specify that they undertake a commitment to the task regardless of when they are presenting, with the ‘pay-off’ being access to all presentations during the week.

Findings

The Year 3 students were firstly asked what they understood by feedback, and there was a general consensus that good feedback focused on how to move forward successfully:

Yeah, just general pointers about the way to take your project forward for next time and how you can improve it

There was also a general consensus about the importance of receiving both positive and negative feedback:

It is probably a general critique of a project or a piece of work that you have done, so receiving positive comments as well as negative and how you can improve on what you have done

Asked about any incidences of 'bad' feedback, the students had previously experienced a range – from no feedback at all – to receiving a summative mark with little or no explanation attached:

I think the worst bit of feedback I had was with the [...] module and we were all sent a letter with a sheet of adjectives on that they circled... it was just not very personal to your project

In contrast, good feedback was seen to contain a number of factors, for example one-to-one tutorials at which they 'could spark off ideas' and also the access to a range of opinions:

At the end of the last project I had two people doing the feedback and it was good because one person can always be subjective and like a project whereas someone can see the fault in it and you can get both opinions

However, the students did acknowledge how difficult it is to mark a creative piece of work due to the complexities involved, not least that there were different course titles which placed different weighting on particular aspects of the work:

It is tricky because the course is trying to accommodate different job titles so areas will almost be given a similar weighting to each other...you might find a package drawing or technical drawing is given the same value as a render or a really nice illustration

In relation to the Assessment Buddy system, the students were offered both one-to-one and 'round-table' studio tutorials which they found useful when building up to the crit:

Feedback from the [...] project we did last year was quite in depth and helped us with ideas of how to go forward with presentations - we struggled to make [our] presentation work with everyone's stuff in it and the feedback we got from that was quite useful

When asked specifically about the Assessment Buddy system, the Year 3 students liked the idea of the three categories present on the form, namely the space to write down four 'positive', four 'OK' and four 'negative' points, but did find that sometimes there wasn't always four points for each category. This tended to be the case for student presentations which were not up to standard:

There was not always four things in each of those categories - for example, I saw people who I didn't even know were in my year come in to present...and the lecturers didn't have too many good things to say about their work - so in that case you struggled to find four things

Also one student struggled a bit to distinguish between the positive and OK categories, and sometimes the language was over simplified. Having said this, the students did appreciate that the form allowed bespoke comments from tutors and also that the system gave them access to a range of opinions:

[the] comments that were made [were] tailored and bespoke to the person's project [so] you are not being shoehorned into categories

Also appreciated was the chance to see other people's work that the system offered, which for one student was one of the main reasons for 'being a buddy'. Another picked up presentation skills - felt to be an important because 'in this business you have to learn it' - that he could apply in his own presentation:

You also get some ideas - that slide might fit in there, how to lay it out

The students also valued the face-to-face nature of the crit that the system enabled through freeing the lecturers from taking notes and thus they were not talking to 'someone with their head down writing'.

Overall, the system was felt to be more successful than the traditional 'pin up and leave' crit, primarily because feedback was received on the day. Another bonus was that the students were not surprised when they received their summative mark two weeks later: in some cases students did not bother to check what mark they actually achieved:

To be honest I have got to the point where I just don't care about the mark

Turning to the Year 4 students, they also felt that feedback needed to be constructive and offer 'ways to improve'. Similarly they felt that feedback didn't always need to be positive and they appreciated the balance offered:

I think it needs to be balanced as well - if there's too much criticism you don't feel great at the end of it

For these students, 'bad' feedback related to tutors not understanding the thought processes behind their piece of work, although this seemed to be due to the involvement of tutors who were not completely immersed in their projects:

If you are talking through your project with someone who hasn't really been completely immersed into it and they pick you up on something: 'why have you done that' they assume that you haven't thought about it this way and they just assume that you haven't taken this and that into account.

Whereas for one student, a good piece of feedback related to the feeling of things 'coming together':

When we started to relate everything to engineering and started to do things rather than just illustration - actually doing a vehicle project from start to finish...you start to see where you have gone wrong, like fitting an engine properly or some bits of surfacing. They do pick up on that and you remember it for the next time

As with the Year 3 students, there was also the recognition that measuring a creative subject could be problematic and so they agreed that the marking process could be somewhat subjective:

You are never going to find it where the tutor can take their opinion out of marking because that is the purpose of the marking

Addressing this subjectivity, which could sometimes lead to conflicting opinions from tutors, meant some students had to rely on their own judgment, which one student likened to building 'your own internal filter'.

In contrast to the Year 3 students (who experienced the fine-tuned system), the comments from the Year 4 students contained criticism:

I think when the buddy system first came in I think there were quite big problems with it: you wouldn't have to hand in your work until you were presenting and you would have people being buddies on the Monday and presenting on the Friday and so not only have they got extra days to do their work but they also knew exactly what to present

Some of the students found that being a buddy in the same session as their presentation slot was problematic as they could become distracted. Also, some buddies left after their presentation, never to return:

You buddied the person who was in your session so you were guaranteed a buddy, but the problem with that is if you are up next you are constantly thinking about your presentation

There was also an issue with space on the feedback form in that there 'was not enough room to write things'. The quality of the note taking was also variable, ranging from the 'brilliant' to buddies giving their own opinions or not wanting to write down negative comments:

Worst still is when people completely miss the point of what the buddy system is and write their own assessments or opinion – this lecturer here giving you their opinion is actually just decoration, but actually 'you fellow student, what do you think'?

Because of this variability, the students felt that buddying skills needed to be addressed by a follow up post-buddy session

There also seemed to be a disconnect between the feedback on the day and the summative mark given three weeks later:

Sometimes you can get really good feedback that is really awesome and you can crack the champagne open, then you get the mark back three weeks later and it is not really a reflection of what went on with that situation

Nevertheless, the students still felt that the original Assessment Buddy system was a vast improvement on the 'pin up and leave' method, the shortcomings of which the new system highlighted:

Much better than the pin up and leave: in fact it highlighted it – it wasn't that much of a problem until we started doing the buddy system just how crap it is to do the work, put it on the wall and just leave it and then come back and get a nod or a shake about whether it was OK

As with the Year 3 students, this cohort also appreciated the amount of feedback they received and how the system minimised the potential for 'tuning out' due to nervousness:

You can tune out sometimes when you are having your feedback - it depends on your mood, how nervous you are or how confident you are.

Unlike the Year 3 students, these students did not receive an audio file and they felt that this would have been useful as it would negate any tendencies by the buddies to give their own opinions or display problematic handwriting. Even better would have been access to a video of the presentations:

With the video you could look at your body language as well, because that is important when you are presenting - a lot of this presenting is to our peers or other people in the industry

The immediacy of the feedback was also appreciated by the students as 'you instantly know where you have gone wrong'.

Although the Assessment Buddy system was developed with industry standards in mind, those who had undertaken work placements in Year 3 found that an industry crit was a lot simpler:

When I got into industry there was a 3 week sketch phase; here you would never be able to do that, but basically they just wanted to see how many ideas we could chuck out in a certain time period – take as long as you need, put as many ideas as you have got on the table and then we will go through them and see which ones are worth developing

Having said this, they recognised that there is a difference in the criteria outcomes between industry and university:

When you are in industry you are one unit supporting a company and it is important that everyone gets a view on what could go into production – whereas when you are a student it is about your personal development

As with the Year 3 students, for these final year students, summative marks had almost become the least important aspect of their assessments:

If I am honest the marks are not really my biggest concern – it is just a bit of paper at the end of the day what degree classification - marks for me are not hugely important it is whether I have learned something, moved forward, pushed myself further

I want to get a half decent degree and passing it would be handy but I am more concerned with my attributes and what I have learnt and how I have developed over the four years rather than a 70% mark.

The difference in experiences of the system between the Year 3 and Year 4 students was reflected in the responses on the questionnaire. The questionnaire was adapted from the NSS survey, in that the same questions were used, but tailored to the module, rather than the course.

The students were given the options of 'definitely agree', 'mostly agree', 'neither', 'mostly disagree', 'definitely disagree' to a series of 22 questions under headings relating to teaching, assessment, academic support, organisation, learning resources and personal development.

The results from the Year 3 students showed that not one student disagreed with any of the questions on the questionnaire. In fact, 86% of the questions attracted over 75% in terms of 'definitely agree' or 'mostly agree' answers, with only 14% attracting 50% agreement. The questions which scored most highly related to the teaching on the module, how interesting the subject matter was, whether they received detailed comments on their work and sufficient advice and support. Positive comments included 'good feedback', 'one to one tutorials beneficial' and 'I was able to take lecturers comments and use immediately'.

In contrast, the results from the Year 4 students were much more spread out across the answer options: 54% of the questions attracted over 75% agreement, with only 18% attracting over 50% agreement.

More specifically in terms of the Assessment and Feedback section of the questionnaire (Table 1), there were distinct differences between the Year 3 and Year 4 groups. Although there was broad agreement about how clear the marking criteria had been, how promptly the students received their feedback and how well the feedback helped them clarify their work, only 14% of the Year 4 students felt that the assessment arrangement and marking had been fair. In addition, only 28% of the Year 4 students agreed that they received detailed comments on their work, as opposed to 75% of the year 3 students.

These results align with the comments from the Year 4 students about the 'hit and miss' nature of the comment taking by the 'conscripted' buddies during the first iteration. Also the lack of an audio file could have led to students' not remembering feedback clearly. Despite this, there were some positive comments such as: 'As a whole I believe that experience has been positive and I feel like I have achieved' and 'Well structured, great enthusiasm, tuition and feedback from [tutor]'.

Table 1: Assessment and Feedback Section of the questionnaire

Assessment and Feedback: agreement ¹	Year 3 (%)	Year 4 (%)
5. The criteria used in marking have been clear in advance	50	43
6. Assessment arrangement and marking have been fair	75	14
7. Feedback on my work has been prompt	75	71
8. I have received detailed comments on my work	75	28
9. Feedback on my work has helped me clarify things I did not understand	50	57

Discussion

It is clear that both the Year 3 and Year 4 students in this study recognised the difference between constructive and non-constructive feedback and they appreciated the immediacy and quantity of the comments enabled by the Assessment Buddy system. There were also indications that the system, by emphasising formative feedback, had led to a reduction in the importance that the students placed on summative marks, such that they began almost to dismiss the percentages attached to their work.

It was also clear that, freed from the need to take notes, the tutors were able to engage with students and to enter into a conversation about the work that was tailored to the actual output. In other words, the conversation - although retaining the module outcomes firmly in mind - was relatively unstructured and followed the give and take of the discourse.

Other benefits of the system included the chance for students to see a range of work, and also the exposure to a variety of presentation skills, seen as important to employment prospects.

For the Year 3 students, there was the added bonus of a lack of disconnect between the formative and summative feedback, in that they were rarely surprised by their eventual marks. This seems to indicate that the 3rd iteration of the system was bolstered by the a clearer feedback form, thus enabling the buddies to write down important points more easily, points that were enhanced by the audio file provision.

¹ 'Definitely Agree' and 'Mostly Agree' answers aggregated

For the Year 4 students, although several problems with the 1st iteration of the system were mentioned, including buddy unreliability, poor handwriting and the potential for buddies to include their own opinions, the system still provided a much better feedback experience than the pin up and leave system. In addition, the fourth year students felt that the system offered them the opportunity for a 'coming together' of disparate subjects, in that the presentations brought together several different design aspects. However, the students who had undertaken a work placement did feel that the system was more complex than within industry, but they recognised that the university crit was more attuned to their personal development and also that the industry crit had been at a early sketch phase.

Both sets of students also had a clear grasp of some of the complexities of assessment and feedback within a creative subject, and recognised how difficult it could be for tutors to mark very different pieces of work. For the Year 4 students this had aided the development of an 'internal filter' through which they could inculcate feedback and use it to make balanced decisions about future work. Further, the system provides flexibility as the formative feedback can include constructive dialogue on all aspects of the work, some of which may not be explicitly addressed by written module outcomes.

Turning to the NSS Student Charter, the Assessment Buddy system aligns with points 1 to 5 (see Appendix 2): for example the need for formative assessment and feedback, the provision of a variety of assessment methods, face-to-face feedback and perhaps, most importantly, timely feedback. As such, the system offers a variety of assessment methods – formative face-to-face conversations, audio backup and summative marks. Finally the system addresses the oft-cited problems with timely feedback in that the students are offered lengthy, tailored and quality feedback on the day of the crit, instead of having to wait.

Overall, the students were positive about the system and considered it a much better method of assessing their work than the traditional 'pin up and leave' method.

Conclusion

This paper discusses the impact of 'Assessment Buddies', a specially developed assessment and feedback system implemented within a second year industrial design module at Coventry University.

The system was developed in response to the need for a successful assessment and feedback system that could cope with the complexities of a creative subject, and also in response to the need to address student dissatisfaction with assessment and feedback as evidenced by the regular UK National Student Survey.

The findings from two focus groups and a questionnaire have shown that the Assessment Buddy system offers the opportunity for a more flexible approach to the assessment of creative subjects and also speaks to best practice as outlined in the NSS Student Charter.

At the time of writing the Assessment Buddy system is embedded in the second year assessment procedures for the automotive design course, and is being introduced into Year 3, with plans for Year 4 to follow.

Finally, although not specifically addressed in this research tranche, it is possible that from the perspective of international students the Assessment Buddies system may offer an advantage when compared to methods that privilege written feedback. Firstly, the buddies are directed to make specific bulleted notes and can take time to write neatly in block capitals, thus aiding international students for whom handwriting may be hard to

decipher. Secondly, international students have the added pressure of receiving verbal feedback in English, and so the ability to review the audio file can only aid understanding. It is hoped to recruit a number of international students for participation for future research in this area.

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Appendix 1

201AT Automotive and Transport Design Specialist Skills Questionnaire²

Please tick	Definitely agree	Mostly agree	Neither	Mostly disagree	Definitely disagree	Not applicable
Teaching on my module						
1. Staff are good at explaining things						
2. Staff have made the subject interesting						
3. Staff are enthusiastic about what they are teaching						
4. The module is intellectually stimulating						
Assessment and feedback						
5. The criteria used in marking have been clear in advance						
6. Assessment arrangement and marking have been fair						
7. Feedback on my work has been prompt						
8. I have received detailed comments on my work						
9. Feedback on my work has helped me clarify things I did not understand						
Academic support						
10. I have received sufficient advice and support with my studies						
11. I have been able to contact staff when I needed to						
12. Good advice was available when I needed to make study choices						
Organisation and management						
13. The timetable works efficiently as far as my activities are concerned						
14. Any changes in the module content or teaching have been communicated effectively						
15. The module is well organised and is running smoothly						
Learning resources						
16. The library resources and service are good enough for my needs						
17. I have been able to access general IT resources when I needed to						
18. I have been able to access specialised equipment, facilities or rooms when I needed to						
Personal development						
19. The module has helped me to present myself with confidence						
20. My communication skills have improved						
21. As a result of the module, I feel confident in tackling unfamiliar problems						
22. Overall, I am satisfied with the quality of the module						

Thinking about the module as a whole, are there any positive or negative aspects you would like to highlight?
Positive:
Negative:

² Adapted from the National Student Survey: www.thestudentsurvey.com

Appendix 2

National Union of Students Charter on Feedback and Assessment³

1. Formative assessment and feedback should be used throughout the programme
2. Students should have access to face-to-face feedback for at least the first piece of assessment each academic year
3. Receiving feedback should not be exclusive to certain forms of assessment
4. Feedback should be timely
5. Students should be provided with a variety of assessment methods
6. There should be anonymous marking for all summative assessments
7. Students should be able to submit assessment electronically
8. Students should be supported to critique their own work
9. Programme induction should include information on assessment practices and understanding marking criteria
10. Students should be given the choice of format for feedback

³<http://www.nusconnect.org.uk/news/article/6010/720/>