

Exploration of evaluation and research methods for improving student learning in art and design

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Introduction

This paper is a comment on the problematics of evaluating an ongoing project on the impact of a self-and peer assessment programme on art and design students' approaches to their learning.

During the past four years I have been engaged in developing strategies, through curriculum and assessment design, that are intended to improve the quality of student learning in art and design. This development work is based on research evidence that clearly demonstrates that the *approach* that a student takes to learning has an impact on the *quality* of that learning. Much of the research evidence comes from a pilot project, directed by Graham Gibbs at Oxford Brookes University, which began in 1991. This project had its roots in work carried out in the early 1970s in Sweden and Australia by such educationalists as Ference Marton, Roger Saljo and John Biggs.

At the heart of this research work is a recognition that there are two extremes that a student might take when studying - a deep or a surface approach. In short, a deep approach is characterised by the student's attempt to make sense of the subject. Students taking this approach try to relate concepts and use evidence and rationality to make personally meaningful judgements about their understanding of the subject. Knowledge and understanding gained in this way is often longer lasting. A surface approach is characterised by a student trying to remember and recall what they have been taught. They have a conception of learning that distances themselves from making sense of what they are learning. There is a heavy dependence on the teacher to provide the goods. Knowledge is often short term.

Another characteristic which has to be taken into account is to do with the conceptions students have about what learning consists in.

According to Gibbs,

when students were asked what they thought good teaching consisted of some of them thought that the teacher should do all the work and make all the decisions. The teacher should select the subject matter, present it in teacher controlled classes, devise tests and mark students on how well they have learnt the material which has been presented. What is to be learnt and what learning outcomes should look like is completely defined by the teacher. Others think that while the teacher has the responsibility for setting the learning climate, for making learning resources available, and for supporting students, all the responsibility lies with the student; responsibility for selecting learning goals, devising appropriate learning activities and for judging when learning outcomes are satisfactory.
Gibbs G (1992)

The former is regarded as a 'closed' conception of learning and the latter as 'open'. It is not surprising, says Gibbs, that the 'closed' conception of teaching is held almost exclusively by those students who take a surface approach, whilst the 'open' conception of teaching is held by those who take a deep approach.

My research and that of others has led me to the firm conclusion that the nature of the assessment of the subject being studied is likely to have more effect on the student's approach to and conception of learning than any other single feature of their curriculum. No matter how interesting and challenging the content of the subject

might be during the course of study and no matter how deeply the student engages in the subject, it is quite possible for the assessment and its procedure to vitiate the whole enterprise. There is good evidence to show that whatever approach a student takes to a subject at the outset, they will take an increasingly surface approach as the assessments get nearer.

As a consequence of this I have designed an assessment programme which is intended to avoid those aspects of conventional assessments which promote a surface approach. This programme involves students using explicit criteria to assess their work and that of others. The criteria are presented under a series of domains which cover the range of activities in art and design practice. They are also structured in increasing sophistication, based on Biggs' SOLO taxonomy, (Biggs J B and Collis K F 1982), from a surface to a deep approach. When students assess themselves using the criteria they are effectively commenting on and establishing the approach they have taken to their learning.

The project, which began as a general investigation into the impact of self- and peer-assessment on student learning, has now crystallised into a three year action research, case study of a group of students following a joint honours course in art and design. This project is to be initiated during the coming academic year with a cohort of first year students.

During the past twelve months I ran small scale pilot project with a group of 40 first year students in order to evaluate the effectiveness of particular methods of data generation.

What I want to know is whether students, as a result of experiencing the self- and peer-assessment, have changed their conceptions and approaches to learning. Implicit in this question is that I take a phenomenographic approach to the evaluation. As I need to know what students' conceptions of learning are, traditional quantitative data collection methods appear to be inappropriate.

The context

In any phenomenographical analysis (Ballantyne R & Bruce C, 1994) it is important to identify features of the context which may make a contribution to the foreground of the research. Several of the features identified below have emerged as significant as a result of the administration of two questionnaires to the pilot study group.

The study group is 40 first year art and design students following a joint honours modular degree programme. There are certain characteristics of the programme that differentiate this programme from other art and design courses. Firstly, the majority of students following the programme have come directly from secondary school having completed their 'A'-levels. Most other art and design courses recruit students from art foundation courses which offer a year of 'diagnostic' tuition prior to them applying to specialist institutions for specific courses. Whilst there is little evidence of research in the sector of the impact of foundation courses on students' conceptions of learning it is reasonable to assume that the expectations of students following a foundation course would be somewhat more modified or transformed than those students who have not had that experience. Certainly, in interviews I have conducted with first year students who have attended foundation courses they tend to have clearer expectations of what higher education should provide than those who have not attended foundation courses. However, students who have moved directly from 'A'-levels to school tend to have firm conceptions of what learning and teaching consists in. Most significantly, many students report that their 'A'-levels were teacher centred and the learning experience was about cramming in knowledge and regurgitating it during examinations. Their experience of assessment was that it was something that

was done to them in somewhat mysterious circumstances. They handed in their work and a grade or mark was given by the teacher often without explanation.

A feature of the art and design course at Worcester is that it is intended to be explicitly student-centred. The projects are problem based, students work throughout each module as a member of a learning team which meets regularly to review each other's work and each student keeps a learning journal which is intended to enable students to demonstrate what kind of approach they are taking to the work set. Students are made aware that, as the course progresses, they are expected to move towards an increasingly more independent mode of working. A section of the assessment criteria refers specifically to students' personal and interpersonal skills.

The first year, and particularly the first semester, is a significant period of transformation for many students as they are asked to move from a teacher-centred (closed) conception of learning to a more student-centred conception (open).

Making this transformation is very difficult for some students. Whilst no student reported that they did not understand the purpose of the self and peer assessment, some student's responses to other questions indicated that they had difficulty accepting the transformation. Much of the concern was about the operation of the process of self-and peer assessment. Making sense of and applying the criteria was a reported difficulty of one or two students. The commitment of some students to the process was another. Whilst these problems diminished somewhat in the second semester as students reported a greater understanding of the process, it is clear that student anxiety about the processes of the assessment could cloud their conception of its worth and therefore vitiate their reports of their experiences. Students who had a negative experience of the process tended to report a negative response about the assessment's value.

However, although the art and design programme may be attempting to promote a deep approach to learning through student-centredness, it is not necessarily the case that the other subjects that the students are following are so doing. The influence that some subjects might have on students conceptions of learning should not go unregarded. There is much evidence to show that teacher-centredness has been a characteristic of many higher education courses. Some students could be having their initial, closed, conceptions of learning reinforced by these other subjects. How do students deal with these mixed messages? What impact would it have on the research that is looking particularly at art and design?

The questionnaires

At the end of each semester of their first year students were required to complete a questionnaire. Both questionnaires allowed students to reply anonymously. The purpose of this was to minimise the possibility of students making responses they felt I wanted them to - a strategic approach. At the end of the first semester they were asked:

Questionnaire 1

What do you think the purpose of the self and peer assessment was?

Was the purpose satisfied in this particular assessment? If so, how and why? If not, why not?

Was the process of the assessment clear to you? If not why not?

How could the process be improved?

How did you feel about assessing yourself?

What were the difficulties in assessing yourself?

How did you feel about assessing your colleagues?

What were the difficulties in assessing your colleagues?

How did your experience of this assessment differ from your previous experience of assessment?

Has the experience of this kind of assessment changed your approach to learning? What do you do now that is different?

If you were to be assessed in the same way for your next project would you approach your work differently? If so, what would you do that was different?

Out of forty questionnaires administered fifteen were completed and returned. This is clearly not a sufficient number for the questionnaire to be statistically significant in relation to a quantitative analysis.

At the end of the second semester the same students were asked:

Questionnaire 2

Has your approach to learning in art and design changed as a result of the self- and peer assessment process? If so, how?

Can you give a specific example of how your experience of the assessment has changed your approach to learning?

How can the self- and peer- assessment be improved?

When I constructed the first questionnaire I was keen to find out not only what the student's conceptions of, and approaches to, learning were but also how they had adapted to the processes and what might be changed as a result. It struck me at the time that each student's response to all the questions could provide broad evidence of their approach. By applying Bigg's taxonomy to the replies I felt it might be possible to determine, co-incidentally to the information, what the general orientation of the group was.

On reflection, and in the light of some of the responses, I'm not convinced that the evidence is so reliable as to fulfil this wish. Firstly, as the questionnaire was anonymous, I was unable to investigate further any issues that needed to be explained or substantiated. There were a number of these. The issue of anonymity did not confirm that students were not writing to please me although nothing confirmed the opposite either. The issue of sincerity will be key in a future exercise.

Secondly, the number of questions asked seems to have encouraged some students to return one word answers to some of the questions. I am not convinced that this necessarily reveals a surface approach but it wasn't particularly helpful. Also, students found themselves giving responses to questions which were more appropriate to subsequent questions. Hence, any opportunity to collate and relate focused responses was lost. Each questionnaire had to be taken as a whole.

Consequently, the second questionnaire was different. The fact that it was different, however, prevented other possibilities. The most obvious being the opportunity to compare like with like.

Below are examples of students' responses to the first questionnaire. I have provided instances, where possible, of a 'positive' and 'negative' response. Whilst the

questionnaire provides me with an illumination of the general view of the success of the assessment programme and possibly specific instances where practice can be modified and improved, it does not provide me with clear cut examples of students' conceptions of learning which can be acted upon in any meaningful way:

1 What do you think the purpose of the self and peer assessment was?

Peer assessment enabled me to see aspects of my work which I had not appreciated; to see my ideas in the context of what others were doing and to work as part of a team in evaluating a project in which we were all personally involved.

Self assessment - forced me to 'believe' in what I had produced, to re-evaluate ideas and work and think about how I could have done it differently or, if I had succeeded conveying ideas.

Initially, I thought that the purpose of the exercise to be a way of easing the work load of the lecturers concerned. I now realise that it was a learning process.

2 Was the purpose satisfied in this particular assessment? If so, why and how? If not, why not?

I felt that this purpose was satisfied in the last assessment because the peers assessing my work were able to tell me why they awarded marks for an aspect of the assessment and suggest ways to improve my work to achieve a higher mark. Hearing other peoples views sometimes makes one aware of other ways of approaching the work.

We were able to give and take ideas and evaluations, and to compromise amicably. I found it generally a reinforcing experience, and I think that others did too, in that we accepted each others judgements, and appreciated each others work.

The weakness with this assessment at the moment is that it's totally new to everyone. In my own personal experience I've never been encouraged to give or think about my own opinion, which takes a while to get used to. Especially as the majority of people are frightened of offending others or don't feel 'qualified' to give our view. As a result of this there wasn't much questioning of views or 'positive' criticism.

3 Was the process clear to you? If not, why not?

On firstly reading the assessment criteria notes I was a little puzzled with the personal development sections, but after the first time my assessment group met, we got the general idea of the process. The second assessment session, which included self, peer and tutor assessment, was a lot easier and quicker from the experience we gained from the first time.

The process also became clear when discussions in the assessment team took place, before the assessment procedure.

4 How could the process be improved?

Perhaps displaying work after assessment to see what other people have done to achieve the grade they were given. This would also help to moderate the marks as all students would then know what was expected for a certain grade.

I think tutor assessment should play a larger part as the tutor should have a better understanding of how to assess and grade the work than the students do.

5 How did you feel about assessing yourself?

Uncomfortable. I have always had a low opinion of my work despite grades and my current position. The criteria helped me realise how good my work was without it there would have been an even larger gap between the grade I'd given myself and what I was given by the group.

I took it more lightly than I should have. Although I'm never usually happy with my work I didn't want to give myself a low grade. Perhaps I need to be more honest.

6 What were the difficulties in assessing yourself?

Occasionally I assumed that I had fulfilled part of the criteria when really I had not. To successfully assess my own work I had to try and look at it as though for the first time, and only mark what was actually there, not what I thought was there - this was quite difficult.

I didn't see the need to spend so long on the assessment (suggested time - 1 hour).

7 How did you feel about assessing your colleagues?

I felt under pressure to give them good grades even when their work wasn't worth them.

I was worried about making certain comments about my group. They seemed the types to be easily offended!

8 What were the difficulties in assessing your colleagues?

That the most dominant in the assessment group tended to lead the marking and others in the group found it difficult to argue their own opinion of someone's work.

Fear by them, caused by the belief that these grades would effect their future, led to anger and being argumentative. I feel a less formal and SECRETIVE PROCESS would be of benefit.

9 How did your experience of this assessment differ from your previous experience of assessment?

Complete contrast. In the past 'teacher' always assessed ie handwork in one week, returned with grade the next week, and if lucky 'teacher' gave a comment.

It was very difficult for instead of working towards the teachers goals and that of the rest of the class, I was working to keep in line with that of my assessment group. I also see my grade as not being worth much as it was given to me by people on the same course instead of a teacher. I think many other people feel the same way.

10 Has the experience of this kind of assessment changed your approach to learning? What do you do now that is different?

I now write down, in more detail, the thoughts that are going round in my head - previously many were overlooked as insignificant to my work but I now realise that ideas which lead nowhere, or that are complete disasters, are very valuable in the learning process.

Not really, because my art work is still the same standard as it was at 'A' level. The only thing that differs is that I now have to look at Art history which has broadened my knowledge of art and makes me think more about what I am drawing.

11 If you were to be assessed in the same way for your next project would you approach your work differently? If so, what would you do that was different?

I think looking at the work of other artists helped me a lot in the last project. I think I would use this approach next time but perhaps consider what the artists have done in more depth.

Not really as I adjusted my way of working after our very first assessment.

The second questionnaire, which has so far elicited 17 replies, seems to make much the same contribution as the first. It is helpful in a general sense and whilst it provides clear cut examples of areas that can be developed it still does not provide the kind of qualitative data that would be useful in resolving my initial problem.

At the same time as I sent out the second questionnaire I included the Approaches to Learning Questionnaire. The intention was to see if there was any relation to be found between the open ended questions and the students' orientation to learning identified by the ALQ. There was a surprising correlation despite my doubts. As the students had been inducted into the concepts of deep and surface learning as part of the degree programme and also their assessment, I felt inclined to think that they would easily identify the structure of the questionnaire and take a strategic approach. Whilst, on the whole there seemed to be a reasonable consistency there also seemed to be some rather glaring anomalies. One or two students identified themselves as extremely high on the meaning orientation but their responses suggested otherwise.

Conclusion

The above account may not appear particularly successful in relation to its intentions but nevertheless, as far as the long term project is concerned, it has proven very useful. Eliciting students' conceptions of learning in art and design has not so far shown to be straightforward in any formal and systematic way. This does not mean to say it cannot be done. Students are regularly providing examples through their learning journals and their practical work. The task is to be able to harness this evidence in a way which demonstrates improvement or change.

One of the major difficulties in evidencing change is that the art and design programme of study in question makes very explicit to students at the outset of their studies what it is intending to do in relation to deep and surface approaches to their learning. What is emerging from the research is that this very act of explication enables those students who take a strategic approach to their learning to contaminate any questionnaire exercise.

Another difficulty is that of being able to isolate or differentiate the object of the exercise - self and peer assessment - from all the other features of the curriculum which contribute to students taking a deep approach to their learning. It may be that questionnaires do not lend themselves easily to determining exactly which features of the curriculum make the improved contribution. When responding to questionnaires, how do students know themselves which part of the curriculum is making what kind of contribution? How can we guarantee that their reports, no matter how sincere, are accurate or reliable.

Finally, phenomenographic approaches to eliciting students conceptions of learning tend to be post-experiential (Fleming 1995) and therefore reports after the event may well be influenced by the final outcomes of the event, in this case, for example, a good or bad grade. *When we elicit students' conceptions of their approach to learning may be as important as how we elicit them.*

What remains constant in all of this is, of course, those students who consistently take a surface approach to learning. There is evidence from the questionnaire exercise that there are some students who still take a surface approach despite the nature of the curriculum they are following. One fruitful strategy, therefore, might be to identify those students who take a surface approach at the beginning of their programme of study and follow their progress using a range of methods; questionnaires, learning journals, practical work, interviews and so on. By focusing on those students who are most likely to show sincere evidence of change, it might be possible to extrapolate an hypothesis which relates to the whole cohort.

References

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