What Students Think Of Peer Assessment: Using Peer Assessment To Drive Student Learning Within A Social Constructivist Paradigm [*]

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Abstract

Following on from previous action research by the author on the role of self and peer assessment in students' learning within group projects (McGarrigle, 2010) the present case study used an action research framework to examine students' experience of assessment on a 'constructively aligned' (Biggs, 1999) second year module of an Honours degree programme in Early Childhood Education and Care in the South of Ireland. The study reports on a number of related areas including students' opinions of peer assessment, students' preferred study method and self assessment of learning skills and ratings of assessment tasks. A social constructivist paradigm can facilitate student learning through applying criteria to assess and provide feedback on each other's work (Rust, et al., 2005). A questionnaire delivered at the end of the module revealed that students do not appear to like peer assessment for various reasons including; the potential for conflict within the class, potential bias and lack of confidence in peer judgements compared to the tutor. The study poses a dilemma for the author and other educators applying social constructivist approaches to learning which attempt to involve the student in peer assessment. The researcher suggests as peer assessment requires collaboration and working together this can be at odds within the context of an individualistic, competitive education system. Further research on student experience of peer assessment may explore the interaction of age and gender on the emotional climate of group work and the transitions within the Zone of Proximal Development as students move to expert knowledge within project work. (Tillema, Leenknecht, & Seegers, 2011; Vu & D'all Alba, 2007; Davis, Kumtepe, & Aydenez, 2007; Taras, 2010).

Keywords: peer assessment, problem based learning, learning story

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1. Introduction

The literature on peer assessment has moved away from a focus on the reliability and validity of teacher and student marking (Falchikov & Goldfinch, 2000; Davies, 2009) towards a focus on the formative aspects of assessment for student learning (Wiliam, 2011) and using peer assessment to drive student learning (Race, 2009; Davis, Kumtepe, & Aydenez, 2007; McGarrigle, 2011; Vu & D'all Alba, 2007). I would agree that peer assessment can motivate students to engage with each other's learning products offering the potential for them to debate and discuss relevant content. Such an approach to learning fits neatly within a social constructivist approach suggesting that learning can be facilitated if students can be guided to talk with each other about their work.

To assist such a co-construction of knowledge students were asked to peer assess each other's work using criteria[1] discussed and negotiated with the researcher/teacher as recommended in the literature (Topping, 2009, p. 25). As Swaffield, (2011, p. 443) says:

'*Sharing criteria with learners enables them to develop a clear sense of what they are aiming at and the meaning of quality in any particular endeavour, which coupled with self and peer assessment helps students learn not only the matter in hand but also to develop metacognition*'.

Within a problem based framework, group projects were designed to promote students engagement with particular curriculum content centred on the range of models of early childhood from around the world such as Reggio Emilia in Italy and HighScope in America and from history – Montessori, Steiner, Froebel. These tasks required a group of three students to present their poster and handout of notes on one of the models to other student groups who moved around the class peer assessing. Though this peer assessment had a formative nature the marks counted towards the final grade in order to motivate students to participate and were complemented by an individual essay on the models of education was tutor assessed[2] having a mainly summative role. In this context, peer assessment assists students to move from naïve learner to expert other - or what is termed, in social constructivist theory, the More Knowledgeable Other - as they learn from each other's projects within the Zone of Proximal Development (Daniels, 1996, Vygotsky, 1978). Peer learning and assessment within groups requires a shift of focus from the teacher as expert to the peer as expert which can be a challenge for both student and lecturer/teacher. Particularly it brings into consideration the

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1   A tutor designed template was adapted in consultation with the students.

2   Peer assessment of essays was not used in this research.

issues around knowledge construction versus knowledge transmission and the underlying epistemology of the teacher/learner with their implications for role of each. Students in the second part of the course were required to present an individual 'learning story' based on their placement and focused on a particular child in accordance with the pedagogy of quality child centred assessment practices (Carr, 2001; Dunphy, 2010). Again marks for this formative assessment counted towards the final grade while an essay and exam aimed to fulfill a summative role.

So far in this article the focus has been on the process aspect of learning from the student perspective. Moving on to the facilitative role of the teacher using effective course design to promote student learning brings us to the notion of 'constructive alignment'. Rust, O'Donovan, & Price, (2005, p. 232) interpret Biggs' (1999) concept of 'constructive alignment' as requiring that '*everything in the curriculum—the learning outcomes, the learning and teaching methods and the assessment methods—should follow on one from another and be seamlessly, demonstrably interrelated*.' In this course I endeavoured to follow their suggestion and designed the assessment tasks and criteria within a broad problem/project based methodology (see Donnelly and Fitzmaurice, 2005) to promote student engagement with learning. The specific content related to learning about different approaches to Early Childhood Education that have been espoused in different parts of the world and in the history of the field and examining their influence on the development of the Irish curriculum (NCCA, 2010). As play based curricula are seen as a vital part of various curricular approaches then I hoped students would develop arguments to justify the role of play and to explore the potential for Margaret Carr's 'Learning story' approach to recording and documenting children's learning and development within their course in Pedagogy and Curriculum and their practice placements in Early Learning settings (Carr, 2001; Dunphy, 2010).

Previous research by the author into Self and Peer Assessment (2011) had revealed another student cohort's opinions on their assessment experience and the present study intended to follow on from this to learn more of 'What students think of peer assessment.' During my learning journey through the area I had discovered that peer assessment offered the opportunity for students to learn through discussion and debate and I came to view self assessment as a continuing process of metacognition as the learner becomes more aware of their own skills and abilities. I had also felt that self assessment was an activity carried out by the individual learner and used it to focus on their own contribution to the group process and development of communication and teamwork skills. The self assessment aimed to develop metacognition and motivate students' participation rather than assessing any learning product. In a sense to encourage discussion and the potential for learning I asked each group then to

self assess their own work having received feedback from other groups peer assessment. I see this peer assessment by groups as effectively re-defining self assessment as peer assessment. their placement and focused on a particular child in accordance with the pedagogy of quality child centred assessment practices (Carr, 2001; Dunphy, 2010). Again marks for this formative assessment counted towards the final grade while an essay and exam aimed to fulfill a summative role.

2. Method

Action research methodology is a common approach in education involving reflective inquiry into the practice of teaching and learning. As the Open University (Coats, 2005) states there are different schools within the field of action research placing a different emphasis on action or research. Leitch & Day (2000) discuss further the typology proposed by Grundy (1982) which suggested that there can be broadly 3 different types of action research ranging from 'technical action research' designed to make teaching more effective, to 'practical action research' requiring a reflection of the social situation that the educator finds themselves in and, finally, to the more critical questioning of social constraints found in 'emancipatory action research'. At first sight I see myself as, primarily, a teacher – researcher exploring the benefits and disadvantages of peer assessment located within the first 2 approaches interested in effective teaching and prepared to question my own practice but also feeling that the unequal power relationships between teachers and students would limit the possibility of true emancipatory research. Thus, the primary purpose of this study was to examine the impact of peer assessment on students and explore their feelings and opinions on the impact of peer assessment on their learning.

The current study involved organising the delivery of the course through a mixture of lectures and project based learning tasks with various assessment strategies including both peer and tutor assessment. Each group of 3 students were required to produce a poster and handout of notes on the particular model of education they studied. Then each group of 3 students listened to a brief explanation from all of the projects and evaluated the posters and handouts of notes on each model of education studied using an assessment sheet containing agreed criteria. This required each group to pay attention and discuss these pieces of work and then hand the sheets back to the group that was being assessed. Then each group could read the feedback and use these to decide on what mark to assign to their own project (self assessment by group - formative) and the marks were accepted by me and submitted towards the final grade. They could decide on how to award their mark – some decided to use the

average. The learning from this was to be integrated for each student in a tutor marked reflective essay (summative) with the title: 'How have international curricula influenced the main underlying principles and philosophy of Aistear'. The 'Learning Story' project involved students learning about this pedagogical approach and reporting back to class using a learning story based on one child they worked with on their placement (formative). A reflective essay (summative) was then required with the title: 'Discuss the role of learning stories in quality early learning settings.' A final exam was also part of the assessment strategy so the course involved both tutor and peer assessed elements. It can be seen that a serious attempt was made to achieve 'constructive alignment' within a social constructivist learning paradigm. The reflective essays and exams were designed to assess summative learning while the peer assessment fits into formative assessment both being clearly linked to course learning outcomes.

At the end of the course the researcher administered a questionnaire containing items derived from (Brown, 2006) Assessment Experience Questionnaire (AEQ), their ratings and opinions of peer assessment using a Likert scale (see Table 1 in Results section), preferred methods of study and their own learning skills and open ended questions on assessment and course content (see questionnaire in Appendix 1). The participants also completed Learning Styles inventories. The participants were 2nd Year students enrolled on the Early Childhood Education and Care degree course (n= 32) and the ethical process of gaining informed consent involved explaining the voluntary aspect of participating in the study and asserting the individual's right to withdraw at any stage. Also it was explained the research was for the purpose of the author's interest and it would not impact on their study or their course assessment. Anonymity in collecting the data would support this as well as promoting free expression of opinion.

3. Results And Discussion

The questionnaire was completed by 21 out of 32 students (29 female, 2 male) representing a response rate of 65.6%. Some of the most pertinent results are presented here in graphic form.

3.1 Student views of peer assessment

As can be seen from Figure 1, 62% of students in this study did not agree with the statement that 'peer assessment is a useful method to help me learn'.
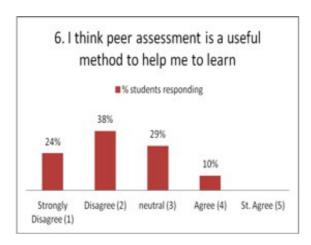
Figure 1: Item 6 – Responses by students on peer assessment as a useful method for learning.
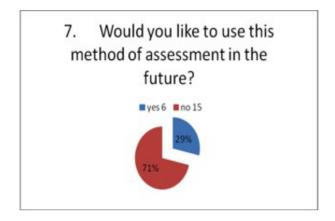

Figure 2: Item 7 – Responses by students on using peer assessment in the future.

Figure 2 shows that 71% reported that they would not like to use this method in the future. As a researcher biased in favour of peer assessment through valuing its role within social constructivist learning theory such a negative view was a bit of a shock to me and required some reflective questioning to interpret this result. Some of the comments by participants to later open ended questions revealed that there were concerns over the capacity of students to grade each other's work, fears over bias and the potential to cause conflict. A preference was expressed toward teacher assessment who was seen as having more expert knowledge and being more objective. One commented: '*I don't believe that peer assessment is fair as we are not qualified to assess each other's work*'. The students seem to regard the expert role of the teacher in a prominent position in relation to feedback as 91% of participants

preferred to receive feedback from the tutor rather than a colleague. Another commented that they preferred feedback from a tutor '*as they are better qualified to give me constructive feedback*'.

I found myself questioning the value of peer assessment - an approach in which I had seen such promise from previous research (McGarrigle, 2010). Was there any positive response to a process that I firmly believed did help students to learn? Perhaps a glimmer of hope was to be gained from answers to Item 9 (see Figure 3) where 62% felt that peer assessment allowed them to discuss and learn from each other. This does seem to indicate some validation of my notion that peer assessment can provide the opportunity for informal learning. It seems that giving a grade creates the problems for this group of students.
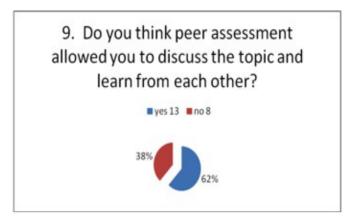

Figure 3: Item 9 – Student view on peer assessment facilitating discussion and learning.

3.2   Students' self assessment of their own learning styles.

As metacognition is implicated in learning (Nicol & MacFarlane-Dick, 2006) the participants were asked to pick out their most favoured skills from a list and rank them from 1 to 3. They were also asked to put an X next to their least favoured skill. Results can be seen in Table 1. The order of most favoured skills was arrived at in y column represent computing the total number who chose to assign 1 by 3, choice 2 by 2 and choice 3 by 1. As can be seen the most favoured skill was writing followed by discussing, organising and drawing/designing. Interestingly 'presenting to an audience' was least favoured by a long way with 'drawing/designing' also not too popular. From previous teaching experiences students who make a presentation usually switch off after they are over the stress of making their own. This usually means that they have lost the opportunity to learn from the other presentations of their

peers. The tutor who assesses their presentations is usually more wiser by the end of the process. By using poster presentations and deliberately arranging for each group to move around the class informally to assess the work the peer assessment was more able to drive the learning.

	1	2	3	x	y
Presenting to an audience	2	2		10	10
drawing/designing	3	3	2	5	17
Discussing	5	2	3	1	**22**
Organising	3	4	1	1	**18**
Writing	7	3	2		**29**
keeping on task	2	1	3		11
encouraging others		1	4	1	6
thinking up new ideas		4	4		12
putting a report together			2	2	2
Planning		6	1	1	13

Table 1: Students' self-assessment of their own learning skills.

3.3   Students' preferred method of studying

Further insight into how students preferred to study was gained from participants rating 1 to 3 their preferred method of study (see table 2).

How I like to study

List 1 to 3 of the following as your preferred methods of studying.

	1	2	3	y
Read text book and make notes	8	3	7	37
Watch a film on subject and discuss	5	2	2	21
Research on computer	1	2	6	13
Attend lecture	4	5	4	26
Study on own	2	5	2	18
Study with others in a group	1	5	1	14
Go to library	2	1	1	9

Table 2: Students' preferred method of study

3.4   Student ratings of assessment tasks

Reading the text book and making notes, attending lectures were most preferred followed by watching a film and discussing. Going to the library, researching on the computer and group work were least preferred. How should these results be interpreted? Are these students trying to tell me they prefer traditional methods such as reading text books and attending lectures rather than group work? Is this another slap in the face of social constructivist views of learning? Perhaps consideration should be given to the wider context of education – how much are students encouraged to self or peer assess their work in higher education? Is the traditional knowledge transmission lecture still dominating over collaborative knowledge construction approaches based in problem based methodology? Conflicting messages from lecturers and higher education could explain the inconsistency in student responses in this study.

			average ranking	rank order
Group Project	Models of education	Poster	3.2	2
Group project	Models of education	Handout	4.05	4
Individual essay	Models of education	Essay	4	3
Group project	Aistear theme	Presentation	4.2	6
Exam	at end of course	Tutor assessed	6.45	7
Individual project	Learning Story	Peer assessed	1.95	1
Reflective essay	Learning Story	Peer assessed	4.15	5

Table 3: Students rank ordering of assignment tasks

So what do they think of the different assignment tasks required on the course and what would they keep or drop if they had the choice? As can be seen from Table 3 students ranked the learning story as most preferred and tutor assessed exam as least preferred. Though they expressed a dislike for group work they indicated the group project that produced the poster as next most preferred to the learning story followed by the tutor assessed essay. In terms of my own opinion on this I felt that the essays for this part of the course demonstrated the students had integrated the learning from their group project (*summative*)[3] which I attributed to peer assessment requiring them to learn about other models of education studied and presented by other students. In the open ended questions and other items the majority of students indicated they would drop peer assessment and found the 'Learning Story' to be the most valuable part of the course. A typical comment on the Learning story approach was that

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3 Of course this could be biased and perhaps could be checked by having the essays marked by another person. However, I felt that students remained experts on the model of education they worked on and their knowledge of other ones was still limited in the essay though it developed further as a result of feedback on the essays.

'*it allows you to learn more about the child, their interest and how they learn and how they see and explore their world and learning*'.

Another comment highlighted the value of 'Learning stories' in communicating with parents:

'*I think it is a very good approach. Its creative, fun to do and really captures the child's interest. It also looks better showing parents a learning story booklet than something like a checklist.*'

4. Discussion

My interpretation of the final rank ordering of assignment tasks is that the student focus is on content whereas my focus as a teacher has been on process. What have I learned is their priority? The students found the 'Learning story' approach to be an excellent way for children to learn yet the manner in which I taught it involved some of the 'messiness' of problem based learning. At the start students were required to grapple with unanswered questions about what the learning story approach was and uncertainty continued for a number of weeks till they had investigated the approach through study and discussion. They also experienced difficulties on placement where it was unfamiliar to some practices. In a sense this was 'emancipatory action research' as the students were effectively introducing a new practice to some Early Childhood settings (see Carr, et al., 2002). I also felt unsure of how students would manage this. The 'Learning story approach can be viewed as a critique of the 'folk model of assessment' (Carr, 2001) of child development and encourages child practitioners to engage the interest of the child and start a process of telling the story of their learning in an accessible, child friendly way. The students were encouraged to use visual, simple materials and informally present the story in class. I would argue that the process of learning through discussion generated by peer assessment facilitated the acquisition of content in this regard.

5. Conclusion

Having asked the question 'What do students think of peer assessment?' and got a largely negative answer which goes counter to my experience as a teacher and my faith in social constructivist theory of learning I find myself reflecting on its use in my future practice. The opinions of this cohort largely ignore the benefits for learning and focus on the negative, emotional responses such as the potential for bias and conflict arising from asking students to

assign marks to each other's work. Vu & D'all Alba (2007, p. 543) note that

>   'ethical challenges may emerge, such as tensions related to making judgements on peers' work and dealing with diversity in their backgrounds, learning modes and achievements. Of particular concern, peer assessment may cause friction among peers, including feelings of hurt or betrayal resulting from comments or unexpected marks.'

However, they also note that without assigning actual marks peer feedback may be limited in its effect on learning:

>   'The act of marking demands that students take greater responsibility, as they are required to base their judgements on thorough examination of the quality of their peers' work. Thus, they are more likely to gain deeper understanding of the subject matter (Biggs, 1999)'.

It seems the field is fairly convinced of the benefits of peer assessment and is cognisant of the tensions involved in marking the work of peers. I feel the emotional aspects related to giving a mark have always been a factor in teachers' marking and feedback and shifting that responsibility to students through peer assessment requires sensitive management in much the same way as preparing students for an end of year exam to ensure they perform to the best of their abilities. For my future practice I intend to reassure students that giving and receiving feedback has an emotional impact but is beneficial if we are to continuously improve. In the context of early childhood education where reflection on practice is stressed then students may be encouraged by this. I also feel that stressing the process is important and that the mark is secondary to learning more about the topic. To challenge student notions in this regard may be problematic in the context of higher education where achieving the highest mark is prioritised. Wider discussion of these issues in higher education is required in order to find ways to support lecturing staff attempting to move from the dominant knowledge transfer mode. Further study is suggested into how lecturers can manage the emotional climate as students move from naïve to more expert forms of knowledge.

The issue of peers and expert knowledge requires further discussion. Within a course there may be core elements of content that students wish to acquire through their study. The teacher is seen by students as the expert who can transmit that knowledge and check their understanding through assessment. Davis, Kumtepe, & Aydenez, (2007, p. 121) in a study of online discussion boards about peer assessment by science teachers found 2 contrasting trains of thought that relate to this. One train of thought identified assessment for 'accountability' which was concerned with authoritarian teaching values focussing on 'grades-as-currency, fairness and expertise' which contrasted with a view of assessment for continuous improvement related to independent and interdependent teaching values, such as

quality, community and student goals for learning'. This can cause tension in a community of learning. I am also required to move between expert teacher and collaborative co-enquirer if I am to encourage students to find out for themselves. In a way I find a helpful parallel in how adults play with children where the adult pretends not to know something in order to encourage the child to discover except in this case my students know that I am pretending.

If social constructivist theory suggests knowledge is actively constructed through dialogue then I am required as a teacher to manage the emotional and cognitive climate governing the processes whereby students learn. Some factors such as age, culture and gender may impact on group learning and peer assessment especially where a more diverse student body includes a mixture of mature and younger students. As the 'learning story ' was an individual project with group discussion fostered by peer assessment perhaps more work is required on comparing individual to group projects. As I reflect on this and the student aversion to group work I cannot avoid considering the context that students find themselves in – a competitive, individualistic society - which may be at odds with collaborative work from a social constructivist perspective. As a teacher peer assessment has been, and will continue to be, part of my learning story. Or should that be our learning story?

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