**An exploration of the impact of peer assessment on student understanding of the assessment process and criteria.**

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**Abstract**

Peer assessment has often been used and examined in relation to student engagement. There is also a place for investigation into the effect it has on a students’ perception and understanding of the assessment process and criteria used. This small scale qualitative study has given an indication that peer assessment can have a beneficial effect on the understanding students have of the assessment process. Larger studies are required to determine whether this is a tool that can be used to improve student assessment outcomes, particularly in relation to their understanding of the assessment criteria. This also involves them being more aware of what it is like to critically review a piece of work, and so enhance their ability to critically review their own work before submitting. It is has been shown that preparation for the task is of benefit but can be time consuming. You need to have a team of motivated lecturers who are willing to put in the time and effort to prepare the students adequately for peer assessment.

**Introduction**

Peer assessment has been used in teaching for many years and the benefits to the student’s learning when this is utilised are well known (Ayres, 2015). The focus of this report is on the learning process in relation to the understanding students have of the assessment process and criteria. Specifically whether peer assessment aids their understanding of assessment criteria and marking and so promotes learning in this area. A small scale qualitative study was carried out to assess this. The details of this study will be examined and discussed. This will include a discussion of the findings and their application to practice.

**Background & Rationale**

Within the discipline of Midwifery there has to be equal significance given to practice based and theoretical learning as stipulated by the Nursing and Midwifery Council (NMC, 2009) and the Department of Health (DoH, 2012). In the practice placement, a mentor who has received appropriate training will undertake assessment of the student. There are generally higher marks awarded in practice than theory, all of which combine to give an exit award at the end of the training. The written feedback given on any theoretical assessment in theory can cause a great deal of anxiety and often requires verbal feedback from the lecturer to help the student understand the points made. In theory the educationalists, in this case Midwifery lecturers, have to complete a teaching course validated by the NMC and an NMC mapping tool to provide evidence they have knowledge, skills and experience to meet the criteria required for entry to the NMC register as a teacher (NMC, 2008).

 Peer assessment has been generally evaluated in relation to student engagement (McGarr & Clifford, 2013; Casey et al, 2011) and as a valuable part of the student learning process (Topping, 2009; Esfandiari & Myford, 2013). However the focus for this investigation is the effect it has on the way the student understands what is expected of them in the assessment itself, and how well they understand the marking system and process the lecturers follow to arrive at a mark. Bloxham (2015) discusses the importance of the student being able to self assess. They are able to do this if they understand what is expected of them and can assess their own work against this. The main benefit of peer assessment with this focus was on the students experience as peer assessor for others work, not on having their own work assessed.

Topping (2009) notes that involvement in peer assessment can aid development of transferrable skills for life as peer assessment is something that continues long after training is completed. As a midwife you are embarking on a career path that involves lifelong learning as a professional requirement (NMC, 2015). It therefore follows that a training course for midwives needs to incorporate facilitation of the development of these skills. As previously mentioned midwives are required to use assessment skills in their day-to-day work and this is particularly relevant when assessing students in the practice area. They are assessing whether the student should pass or fail a competency as determined by the NMC (2009) guidelines and stipulations. Therefore it follows that if, as students, they are taught the skills required when assessing another’s work this can translate into a valuable skill as a qualified midwife. Therefore assessment skills are transferrable and a valuable resource for future practice (Kearney & Perkins, 2014).

A literature review was then carried out for which a literature search was undertaken. The following terms were used:

Peer assessment/student/engagement/assessment process/undergraduate.

These terms were used in varying combinations and a total of 31 articles were returned. These were the reviewed in terms of relevance and reduced to 12 articles for consideration. The summary of the findings of this review were that whilst peer assessment is effective for student engagement in relation to learning and understanding the assessment process, preparation is essential (Kearney & Perkins, 2014). Elwood & Klenowski (2002) propose that only when assessment is fully understood can it then be used to enhance learning. Peer assessment can be a tool to demystify how assessments are marked and the skills of critical thinking and critiquing of another’s work will support and facilitate this transparency. Bloxham and West (2004) studied the effect of peer assessment on the development of students’ conceptions of the assessment process. They found that the effect was considerable in the beneficial effect peer assessment had on the students understanding of assessment criteria and the ability for them to better understand the assessment feedback. There were only 2 articles that included a focus on understanding of the impact of peer assessment on the understanding students have of the assessment process. For the most part the focus was on student engagement. This then provided the rationale for focussing mainly on student understanding of the assessment process as this has had less focus and investigation in the literature examined.

A single cohort of students undertaking a BSc (HONS) 3 year midwifery course were involved in this study. The results of the first summative assignment for their second year were examined. This is also their first assignment to complete at academic level 5. Of the 17 students 3 achieved less than 40% (refer) and 3 achieved 40-44%. Even with the students who did pass with a higher mark there was a large number of queries about how the assignment was marked and why comments were made. The lecturer team offer a great deal of advice on preparation and the students are encouraged to make a plan for each assignment. All members of the teaching team then review this by including all in email correspondence so as to give consistent agreed advice and answers to queries. Many students had a one to one meeting with a lecturer to discuss the marking and comments so as to aid understanding and the acceptance of the marks. This would involve reading through the comments made and discussing them to assist with clarification of the meaning. It is noted that this may be particular practice to the university in which the students were enrolled.

It became apparent through discussion that one of the factors contributing to the students’ reactions to the assignments results was that they did not fully understand what the marking grid meant or had issues about he comments assigned throughout their work. The marking grid provides the criteria by which the assignment is marked and graded. Lecturers give constructive advice on how to improve, or indeed to highlight good points within the text add these comments. It was the amount of discussion and anger generated by the results of this assignment initiated the investigation into peer assessment as a way to ensure better understanding of what is expected from each assessment for the students through the teaching sessions we have.

**Aims**

The research aim defined for this study is ‘to advance an understanding of the impact of including peer assessment as part of the learning process on student engagement and understanding of the assessment process.’

Though student engagement is mentioned it is in relation to whether or not the use of peer assessment does actually improve the understanding the students have of the assessment process and what is expected of them from each assessment. For the purposes of this study the following definition of peer assessment was used:

‘..an arrangement for learners to consider and specify the level, value, or quality of a product or performance of other equal status learners’.

(Topping, 2009, p20)

**Method**

A small scale qualitative study was carried out. It is the experience of peer assessment on the students’ own perception of how assessments are marked and critiqued that is of interest. This relates to how we socially construct meaning from our experiences and so adopts qualitative methods to investigate and a questionnaire with some open ended questions was chosen. Cohen et al (2011) describe open questions as allowing the participant to explain and qualify their answers so giving richer data that was possible with the small number of participants involved. The students had an infectious diseases workshop where each student had to give a presentation in class on the same day. This was identified as the best opportunity to implement and evaluate peer assessment and the effect on understanding of the assessment process. Peer assessment is often used in this session and the outcomes of the presentations are formative and have no bearing on the final degree classification. Therefore ethical approval was not considered necessary. The students were given a verbal explanation of the purpose of the peer assessment. The feedback questionnaire was circulated afterwards and completed voluntarily and anonymously by the students.

There were a total of 17 students. Each student in turn had to present to the class and then answer any questions raised. An explanation of the process of peer assessment process and what was expected of them was e mailed a week before the session as well as discussed in class. This gave the opportunity for any queries to be raised and answered.

The assessment tool chosen for the students to use for peer assessment (see Appendix 1) was then circulated on the day of the workshop. It was deliberately worded in such a way that required careful reading and understanding of the criteria for each mark, not just a scale; good-poor. Previously the assessment tool used was much more simple, ordinal scale which required the students to circle one word. The tool used was deliberately chosen as it had more lengthy descriptors so it would be more like the marking rubric now used by midwifery lecturers. The students filled one assessment sheet per student presentation and a buddy for each student presenting was allocated. The purpose of the buddy was to collate the feedback for that student. This was then fed back to the student before the end of the day.

The students were then asked to complete feedback in the form of a questionnaire (see Appendix 2) to provide information on how they had found the whole process and whether or not it had improved their understanding of assessing others and what is involved. It allowed for further comment and information to be given as well as answers on a scale (strongly agree – strongly disagree). This was sent to them 2 days after the workshop, and a follow up e-mail again requesting completed feedback forms was sent one week later. The questionnaires were returned anonymously in a designated box within the university.

**Results**

Of the 17 students involved only 10 eventually returned their feedback forms. A deadline of one month from the date of the workshop was given for these to be returned. Of the 10 who completed the feedback 100% said it had improved their understanding of the assessment process and they found the assessment tool easy to use. Some comments were;

‘Yes, I think it is a good idea – it makes us think about not only the content in presentations such as these but also all of the other aspects taken into consideration.’ (Student A)

‘I think that it has helped as it has made me understand how hard it can be to assess work’. (Student B).

‘Yes. It gives you an idea of what the markers are looking for, broken down into detail. Just the little things about making sure you make eye contact, being heard, and frequently reflecting on the objectives of the presentation.’ (Student C).

One student found it particularly hard and commented that:

‘I definitely wouldn’t want to be the one assessing assignments!’ (Student D).

Most responses indicated that they felt they became better able to be objective as the day progressed though there was a feeling of not wanting to be unfair to others. In answer to question 3. ‘Were there any factors which affected the objectivity of your feedback?’ the answers were varied.

‘…I think there were factors, one being not wanting to dishearten anyone for all the hard work they had put into the presentation so wasn’t as harsh because we are all friends!’ (Student E).

‘No, I tried to be as objective as possible for the task’. (Student F).

‘ I found it hard to give negative feedback or criticism to my friends as I did not want to offend them.’ (Student B).

There was one comment that appeared to show the student had fully engaged in the task and reflected on it;

 ‘I think having to do this has given me a better understanding of how it feels for the tutors to grade our work. Nobody wants to make someone feel bad about his or her work but also you are doing people no favours if you do not point out how to improve. That is a hard job and one that I appreciated more after this day.’ (Student G).

Results for a summative assignment completed before using peer assessment: 3 refer results (<40%) and 3 results of 40-44%: (35% of the cohort).

Results for a summative assignment completed a short time after the peer assessment: 1 refer and 1 pass <44% (42%), 11% of the cohort.

Whilst these results are specific to a small study within one university and only a small number of participants it is interesting that the there was a significant improvement in outcomes from the summative assignment before the intervention, to the summative assignment completed afterwards. This would indicate that the peer assessment may have been a contributory factor and further use of peer assessment alongside audit of assessment results would be useful to ascertain if this is a recurrent theme or not.

**Discussion**

The study is small scale, specific to one university and therefore not able to be generalised to a wider population. However the results do support those of Bloxham & West (2004) and Kearney & Perkins (2014) that peer assessment does enhance a students understanding of the assessment process. This then gives them a greater insight into how work is assessed and what qualities and criteria are required. In turn this understanding and insight can be beneficial if used when assessing their own work before submission. The comments from the students involved in this study support this and sometimes show surprise at how difficult it can be to assess another’s work.

Rust et al (2003) noted that for students to have the tacit knowledge involved in assessment marking there had to be some socialisation processes in place. This was also supported by Bloxham & West (2004), who found that just supplying written marking criteria was not enough to make this transparent to students. Kearney & Perkins (2014) noted that the system they utilised involved preparation of the students for peer assessment. This served to enhance the process of peer assessment as the students were prepared for the role of assessor. It was noted that it was burdensome to implement, partly due to the time for preparation of students required. However it may be that once this initial time was used to prepare the students it would not then need to be repeated throughout the rest of the course. Peer assessment could then be used as required. This study

A limitation of this study is that the students were not given much time or instruction for the role of assessor. They were given verbal information and instructions one week before the task but only received the peer assessment tool on the morning of the workshop. They had previously experienced some peer assessment when grading group presentations. This was minimal and most of the students did express they were under prepared and unable to take on this task competently.As has been noted (Topping, 2009) the time given for preparation for the role of peer assessor can affect how well it is received and understood and as a consequence the benefits gained. Bloxham & West (2004) also moderated the peer marking done, so students not only had the experience of marking assessments but also feedback on how they had done in this role. They noted that this exposed the students to the complete marking process by including moderation and may have encouraged them to pay better attention to the assessment criteria and marking scheme. This is also an area that should be included if you are using peer assessment as effectively as possible. Therefore it would be good practice to include moderation when using peer assessment in the future.

Some students had commented in their feedback that they had felt unprepared for the role of assessor but did find it easier as the day went on. This would imply that experience in the role and familiarity with the assessment criteria did make a difference to the level of competence felt by the student. It should be noted that very little preparation for the role of peer assessor was carried out prior to the day, which may have had an effect on how prepared the students felt.

After collating the feedback it may have been beneficial to add a question about whether or not the students felt their understanding of assessment criteria rather than the assessment process. The assessment process does encompass the experience of having to critically examine the work of a peer and make a judgement on the standards met, but the assessment criteria would have added another dimension. This may also have elicited responses as to whether the student felt better prepared to be able to critique their own work when preparing for assessment submission.

The summative assignment completed by the students prior to this intervention yielded 3 refer results (<40%) and 3 results of 40-44%. This was 6 out of 17 students (35% of the cohort), which is quite a high proportion. The assignment completed a short time after the peer assessment session resulted in only 1 refer and 1 pass <44% (42%), 11% of the cohort. This is a huge improvement. Whilst it is impossible to establish a causal relationship between the intervention and these results it is interesting to note. There are far too many variables that could have affected the performance of the students; learning from the feedback from the first assignment; lecturer intervention (extra preparation for next assignment); different topic and so on that could have had an effect. However it can provide justification for further investigation as to whether there is a causal relationship between peer assessment, understanding of assessment criteria and processes and student grades. Casey et al (2011) note that it is by reviewing your peer’s work that can facilitate you reflecting on your own and ways in which to improve it. They also noted that some students might be more skilled in assessing and more conscientious than others. It would be pertinent to note that this can equally apply to lecturers and supports the need for moderation to ensure a fair process is followed.

**Conclusion**

Peer assessment has been used and examined in relation to student engagement. There is also a place for investigation into the effect it has on a students’ perception and understanding of the assessment process. This small-scale qualitative study has given an indication that peer assessment can also have a beneficial effect on the understanding students have of the assessment process and criteria used. Larger studies are required to determine whether this is a tool that can be used to improve student assessment outcomes, particularly in relation to their understanding of the assessment criteria. This also involves them being more aware of what it is like to critically review a piece of work, and so enhance their ability to critically review their own work before submitting. It is has been shown as discussed that preparation for the task is of benefit but can be time consuming. Therefore you need to have a team of motivated lecturers who are willing to put in the time and effort to prepare the students adequately for peer assessment.

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**Appendix 1**

Presentation Evaluation Form

Presenter Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Infectious Disease\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CONTENT – Organization Evaluation Comments

1. Presentation flowed logically and was clear. Title matches presentation. Discussion precise and confined to topic. Excellent

Generally well organized; occasionally skipped around; occasionally wordy. Good

Hard to follow; more logical flow needed. Discussion not relevant to subject matter. Poor

2. Presenter was knowledgeable about subject matter. Excellent

Presenter somewhat knowledgeable about subject matter. Occasionally unable to clearly explain some concepts. Good

Presenter was not knowledgeable about subject matter.

Unable to clearly explain most concepts. Poor

CONTENT - Objective

All objectives were stated and emphasized; all objectives were covered/met. Thorough elaborate discussion of topics and relevant recommendations. Excellent

Some objectives were not clearly stated; the discussion did not reflect the objectives. Minimal discussion with no extrapolation to relevant information. Good

Objectives were not stated and appeared to be not considered given design of discussion. Poor

CONTENT - Discussion of Infectious Disease

1. Disease state discussion relevant to presentation; Excellent

Disease state too broad and difficult to relate to presentation. Good

Not enough disease state information presented. Poor

CONTENT - Interpretation of Primary Literature

1. Primary literature thoroughly reviewed and relevant to presentation. Appropriate literature reviewed. Excellent

Primary literature somewhat reviewed and relevant to presentation.

Incomplete review of data. Good

Primary literature reviewed but not relevant to presentation and/or too many/few studies. Poor

2. Accurate and thorough interpretation of primary literature(comments on design, limitations, statistics, and applicability to patient population). Discussed strengths and weaknesses of studies and provided own opinion. Excellent

Partial assessment/interpretation of primary literature. Only presented investigator's conclusions. . Good

Did not interpret primary literature. No discussion of strengths and weaknesses of studies. Did not provide rational conclusions. Poor

COMMUNICATION – Verbal

Evaluation Comments

1. Presenter easily heard (adequate volume/tone/enunciation). Easy to follow & listen to. Proper use of all terminology Excellent

Presenter with adequate volume, but some words lost to mumbling. Good

Presenter not easily heard from the back of the room. Demonstrated lack of interest in top and/or inappropriate medical terms. Poor

2. Efficient use of time, good pace. Excellent

Rate appropriate the majority of the time with some parts too fast or too slow. Good

Rate of delivery was too slow/too fast; inefficient use of time. Poor

COMMUNICATION - Non-Verbal

No distracting mannerisms, gestures; exhibited polish, poise; maintained eye contact with audience; used notes infrequently Excellent

Mildly (1-4) distracting mannerisms or gestures; usually polished and poised. Read some of the presentation with some eye contact. Minimum use of stall words. Good

Many distracting mannerisms, detracted from the presentation. Did not speak with confidence. Read most of presentation with no eye contact. Poor

COMMUNICATION - AV Materials/Handouts

1. Discussion of graphs/diagrams included; NO spelling errors; familiar w/AV equipment; appropriate number of slides used. Excellent

Some disorganization of slides, busy slide(s), too many/too few slides; few spelling errors. Good

Slides are very unorganized with multiple spelling/grammar errors; unfamiliar with AV equipment. Poor

2. Well organized handout that coincided with slides. Referenced summary includes comprehensive overview of discussion. NO spelling/grammatical errors. Excellent

Some disorganization of handout. Handout difficult to follow and/or was not an overview of the presentation. Few spelling/grammatical errors. Good

No handout provided OR handout provided is disorganized with multiple spelling/grammatical errors. Poor

COMMUNICATION - Ability to Answer Questions

Presenter able to respond to questions with confidence and knowledge. Appropriately anticipated audience questions. Demonstrates integration of material. Excellent

Presenter somewhat able to respond to questions; was not able to respond without referring to notes. Provides pertinent information missed during presentation. Good

Presenter not able to appropriately respond to questions; did not anticipate audience questions; did not appear prepared. Poor

Additional Comments:

Appendix 2

Feed back form for students.

Evaluation of participation in peer assessment.

The purpose of this feedback is to inform further teaching practice using peer assessment. It is particularly aimed at understanding whether participating I peer assessment enhanced your understanding of the assessment process.

For questions 1-4, 6,7 please use the scale below to answer.

A) strongly agree

B) agree

C) don’t know

D) disagree

E) strongly disagree

1. How confident did you feel in your ability to assess each presentation?

Comments

2. How objective were you when assessing your colleagues?

Comment

3. Were there any factors which affected the objectivity of your feedback?

Comments

4. Did you find the feedback tool and instructions given useful and clear?

Comments

5. Which element of the feedback did you feel was the most difficult to

evaluate?

Comments

6. Did find that your evaluation of presentations changed throughout the day as you gained experience using it?

Comments

7. Do you think the process of peer assessment has enhanced your understanding of the assessment process?

Please provide your rationale for this in the comments box below.

Comments

ADDITIONAL COMMENTS -