



Peer assessment: An alternative to traditional testing

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Abstract

Traditionally, students were seen as passive receivers of information in the classroom who were expected to provide samples of their knowledge in teacher-made tests to be evaluated as drop-outs or successful learners. Teachers were both the source of information and the judge who evaluated student success. More recently however, alternative ways of assessment are being tried one of which is peer assessment which is defined as a student's evaluation of his own success. This paper reviews the literature on peer assessment briefly. It then reiterates the advantages and disadvantages of peer assessment, and concludes that peer assessment is a fruitful technique of classroom evaluation.

Keywords: Peer assessment; self-assessment; alternative evaluation; classroom techniques; education

1. Introduction

Traditional assessment techniques saw the student as a passive receiver of information who should be held accountable for absorbing information in the course, and giving it back to teacher in the test. Recently, however, the student is being ever more increasingly seen as a plausible source of self-assessment. Moreover, students are seen capable enough to assess their peers. Self-assessment requires the individual to assess oneself; peer assessment requires his peers to assess him.

Peer assessment is an assessment method through which the peers of a candidate or student are requested to provide information about his performance. It is considered by many educators and teachers to be a key technique to get students to take more responsibility for their learning. Reinders and Lazaro (2007) claimed that that if conducted appropriately, peer assessment can provide numerous benefits for the learners. Peer-assessment has the advantage of helping students to critically examine the learning in progress. Through this, students understand their own learning better (*Ibid*). It also helps the students to foster collaboration skills and improve autonomy (*Ibid*).

Self and peer-assessment are often considered together since they share many advantages. Peer assessment can help self-assessment. When students judge their peers' work, they can actually have the opportunity to examine their own work as well. Peer and self-assessment help students develop the ability to make judgements (Brown and Knight 1994).

Simply defined, peer assessment is students' evaluating their peers. Topping (1998) defines peer assessment as a process in which individuals judge the amount, level, value, quality, or success of the outcomes of their peers. Van Den Berg, Admiraal, and Pilot (2006) define peer assessment as a process in which students assess the quality of their fellow students' work and provide each other with feedback.

2. Literature Review

An extensive body of research on peer assessment exists. This section will briefly review some of the most important looks at peer assessment.

White (2009), in a review of student perceptions of assessment in higher education, claims that students have strong views about assessment methods and that these views affect how they approach learning. White further noticed that, when faced with peer assessment, students are worried about:

- their own awareness of their own deficiencies in subject areas
- not being sure of their own objectivity
- fairness of the peer assessment process
- the influence of such factors as friendship and hostility on their assessment
- the belief that it is not their job but the teachers' to assess

White (2009) also tried to find out students' feelings about the peer assessment process in an EPS course, and to show if it helped foster learning in students in such a way as to help them

become more effective public speakers. The results of White's study indicated that a majority of students had a positive attitude towards the peer assessment format that was used in the EPS course. However, some of the students expressed some doubts about this type of assessment. Although this type of assessment proved to be liked by most of the students, a minority of students expressed a sense of dislike or dissatisfaction with the process. The findings indicated that many students liked the process since they believed that it promoted their learning significantly. Furthermore, White's findings were indicative of the fact that for many of the students who took part in the study, the peer assessment process helped them to support and promote student learning about preparing, giving, and judging effective presentations.

An important study which dealt with students' perceptions of the peer assessment process was conducted by Ballantyne, Hughes, and Mylonas (2002). Unlike most of the studies which focused on the use of peer assessment with small groups of students, these researchers investigated the implementation of peer assessment in large classes. Their results indicated that the benefits received through peer assessment outweigh its shortcomings in spite of the fact that there were a number of specific problems associated with using peer assessment with larger classes.

This large study showed what students liked and disliked about peer assessment. One thing students liked about peer assessment was that they felt that peer assessment encouraged them to compare and reflect on their own work. Another positive point about peer assessment, as students said, was that it gave them the opportunity to develop skills which they thought were useful for their future career. However, there were some things the students disliked about the peer assessment process. The first point was that students believed that their peers were not competent enough in assessing each other. Another negative point the students pointed out concerned their peers' fairness. They thought that their peers might be either easy going or very strict in marking. Finally, a majority of the students felt that peer assessment was too time-consuming. Ballantyne et al. (2002) also suggested that a student performance in the peer assessment process should comprise 10-15% of the total score. The reason they mentioned was that such practice increased students' engagement in and commitment to the task. They also highlighted the fact that the assessment criteria should be clearly articulated since it is a fundamental aspect of the peer assessment process.

McLaughlin and Simpson (2004) studied how first year university students felt about peer assessment. Working in a context of a construction management course, their peer assessment

model asked students to assess their peers' group work. The researchers found that in this peer assessment model, students extremely liked the peer assessment process and regarded peer assessment as a very positive and helpful assessment experience. Students' perspectives about peer assessment showed that they felt they had learned a lot during the peer assessment process, and that they enjoyed assessing their peers' work; a significant number of students preferred peer assessment to the assessment merely provided by the teacher. The researchers finally came to the conclusion that the assessment process needs to be a learning tool that helps the learning process considerably.

Wen and Tsai (2006) investigated university students' views towards peer assessment. Having collected data from 280 university students in Taiwan employing a 20-item instrument, the researchers sought the students' attitudes towards and perceptions of peer assessment. The results revealed that students generally liked peer assessment since it gave them the chance to compare their work with their classmates; however, students were less appreciative of being criticized by peers and expressed a lack of self-confidence to peer assess their classmates. Students believed that on-line peer assessment is not merely a learning aid, but a technical instrument that facilitates the peer assessment process. An interesting outcome of the study was that males had more positive view towards peer assessment than females, and that students who had experienced peer assessment before had less negative views towards peer assessment. Furthermore, the majority of students held the view that peer assessment scores should account for merely a small part of the final score.

Vu and Alba (2007) investigated Australian university students' experience of peer assessment in a professional course. The peer assessment component was planned and structured so as to both evaluate and promote student learning. The authors reported that in their case study, peer assessment processes were useful for the students' learning. It was found that peer assessment had a positive effect on students' learning experiences with most students acknowledging learning from both the process and from their peers. The researchers finally enumerated several conditions for the successful implementation of the peer assessment process. These conditions were:

- 1) providing adequate and appropriate preparation for the successful implementation of peer assessment;
- 2) specifying the objectives of the course as well as the purpose of peer assessment;
- 3) determining the degree of teachers' assistance given during the peer assessment process; and

4) teachers' handling of fruitful discussion periods following peer assessment.

Saito (2008) examined the effects of training on peer assessment regarding oral presentations in EFL classrooms. In the first study, both the treatment and control groups were given instruction on skill aspects. However, only the treatment group was given extra 40-minute training on how to assess performances. The results did not show any significant differences between the treatment and control groups. In the second study, only the treatment groups were given longer training. Again, no significant correlation differences were noticed between the treatment and control groups. The final conclusion of the study was that peer assessment is a solid technique, which can be enhanced if assessors are trained suitably and effectively.

All the studies reviewed so far have taken into account students' perceptions in terms of peer assessment. In fact, they have studied peer assessment from students' perspectives. However, in a different study, Karaca (2009) investigated teacher trainees' opinions about the usefulness of peer assessment in order to determine whether or not their opinion differs according to such variables as (a) their gender, (b) having taken part in the peer assessment process before, and (c) believing in helpfulness of peer assessment process. Having gathered data from 175 teacher trainees, the researcher came to the conclusion that the teacher trainees thought positively about peer assessment, and that their beliefs were significantly related to the variables of their study. The results of this research also revealed that the teacher trainees thought of peer assessment as a useful assessment method that encouraged students to critically analyze their peer's work, allowed students to take part in the assessment process and fostered interaction among students in a course. Furthermore, the results indicated that teacher trainees believed that peer assessment could have some disadvantages. Such disadvantages, to them, included the fact that students might not be capable enough to evaluate each other, and that their evaluation might be affected by their friendly or hostile relationship.

In an attempt to identify secondary school students' perception of peer assessment and feedback, Peterson and Irving (2008) carried out an investigation. Using a mixed-method approach including focus groups, semi-structured interviews, questionnaires, and notes, the researchers arrived at feedback on students' perceptions of peer assessment. The students had a positive view about peer assessment, finding it a useful strategy for both students and teachers. They saw peer assessment as fun. With regard to feedback, students believed that feedback motivated them, provided information, and helped them seek new information.

In another piece of research, Bryant and Carless (2009) attempted to investigate how primary school students and their teachers perceive peer assessment. After collecting and analyzing data through extensive interviews and classroom observations, the researchers arrived at interesting findings. One outcome of the study was that teachers believed that peer assessment was a good technique that strengthened their efforts to improve their students' writing skill. However, some students considered peer assessment useful, while some others felt disappointed if they noticed that their peer was not providing good comments. A noteworthy point that was found in the study was that students' perception of peer assessment differed according to their language proficiency level and that of their peer. Students who had their work assessed by a student with higher level of language proficiency expressed dissatisfaction with the work since they could not identify the errors and hence would assume that their peer who was more proficient was right. High proficiency students, on the other hand, complained that their peer could not provide useful comments because he or she was less proficient than them. In this regard, some students did not favor peer assessment since they did not receive helpful feedback and comments from their peers. Instead, they preferred to receive feedback from their teacher who was a more reliable source of information in comparison with their peers. Overall, the results suggested that students had a positive view towards peer assessment because they learned from each other and also they had the opportunity to take responsibility for their own work. An important advantage of peer assessment pointed out by students who took part in this study was that peer assessment helped the students to prepare for examination and transition to secondary school education. Students argued that through peer assessment, they would be able to identify in advance the type of mistakes that they were likely to make in the examination and therefore find techniques to avoid them. Teachers' conception of feedback was similar to that of students in that they, too, saw peer assessment useful, and that it would help learners become more successful in their learning.

3. Advantages of Peer Assessment

Race (1998) and Bostock (2000) argued about the usefulness of peer assessment and listed its advantages as follows:

- Peer assessment gives students a sense of belonging to the assessment process and fosters their motivation;
- Peer assessment encourages a sense of ownership of the process in a sense that students feel they are a part of the evaluation process;

- Peer assessment improves learning;
- Peer assessment makes assessment a part of the learning process;
- Peer assessment encourages students' sense of autonomy in learning;
- Peer assessment helps students identify their weak and strong points;
- Peer assessment encourages students to analyze each other's work;
- Peer assessment improves self-assessment capabilities;
- Peer assessment encourages deep, meaningful learning;
- Peer assessment helps students to become more involved in the learning process;
- Peer assessment helps students recognize assessment criteria;
- Peer assessment reduces the instructor's marking load;
- Peer assessment provides better quality feedback;
- Peer assessment gives students a wider variety of feedback;
- Peer assessment saves time since several groups can be evaluated without teacher's presence; and
- Peer assessment develops a wide range of transferable skills that can be later transferred to future employment.

4. Disadvantages of Peer Assessment

In spite of the advantages of peer assessment, it can cause potential problems which need to be taken into account. Bostock (2000) and White (2009) argued that there are some potential problems in peer assessment. They claimed that, at first sight, the validity and reliability of assessment done by students will be under question. It is not clear whether the feedback from fellow students is accurate and valuable. Indeed, students may not be qualified enough to be able to evaluate each other; students may not take the assessment process seriously. The danger is that students may be influenced by friendships and solidarity among themselves; students may not like peers' marking because of the possibility of being negatively or unfairly evaluated by their peers, or being misunderstood. Another problem that may arise here is that since teachers are not involved in the evaluation process, students may provide each other with false information.

Given the fact that peer assessment is not void of problems, some researchers (e.g., Karaca, 2009) have presented some rules for peer assessment to be taken into consideration; these rules can considerably decrease the problems of peer assessment and hence make it more effective. The rules are listed below:

- Students should be presented with brief information on what they are supposed to do and what is expected of them;
- Students need to be familiar with the purpose of the evaluation;
- Students need to know what criteria to follow;
- Teachers need to make sure that students are following the criteria clearly and appropriately;
- Students need to practice the process in stress-free environments;
- Teachers should cooperate with colleagues who have already used peer assessment; and
- Teachers should not expect peer assessment to be perfect at first attempt.

5. Discussion

The argumentation and factual information provided in the sections above can imply that there is general consensus among researchers on the usefulness of peer assessment (PA) to promote learning. There are, however, some concerns about the implementation of peer assessment (Magin & Helmore, 2001). Table 1 summarizes the major arguments and counterarguments in relation to peer assessment:

Table 1

Arguments For and Against Peer Assessment

Main Arguments for Peer Assessment	Main Arguments Against of Peer Assessment
When students know that their peers' grade will be a part of the final evaluation, this makes a sense of seriousness and commitment within students.	Peer assessment is not accurate enough for summative assessment
Formative assessment alone is not taken seriously by the students.	Reliability and validity issues; students cannot effectively judge their peers' work
This practice gives students a strong sense of autonomy because they are making a decision that is important.	
Although in some contexts fair and valid peer assessments is difficult to do, such difficulties can be minimized or overcome.	
There are certain cases like oral presentations	

and communicating to an audience where peer assessment has advantages over teacher assessment.	
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The current interest in peer assessment has resulted in the interest of an ever more increasing number of schools and teachers' in adopting peer assessment as an alternative to traditional teacher-made tests.

6. Conclusion

The goal of any assessment process is to make assessment a learning tool that helps the learning process considerably. Peers assessment, since it involves students in the process of evaluating one another's performance, is potentially prewired for this goal. Peer assessment can foster in students a critical judging ability which they will take with them to their social adult life. When feedback is provided by peers through peer assessment, scaffolding comes in to help students learn more deeply. The nature of such scaffolding is social, so it helps group integrity.

In brief, peer assessment has lots of benefits for student achievement. The few potential problems that exist in peer assessment can be through teachers' careful explanation of the goals of peer assessment. Teachers can also develop and implement itemized, precise and objective guidelines for students to observe and follow in their practice of peer assessment.

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