



# Empowering Students For 21<sup>st</sup> Century Skills: The Role Of Peer Assessment

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## Abstract

In light of the rapid changes in the knowledge landscape and in order to create 21st-century skills in students to cope with the demanding nature of the world, reforming the education system is crucial. Assessment, as an essential component of the educational system, also needs reformation. Peer assessment is an important means of assessing pupils' development of 21st-century skills by evaluating the work of their peers, students may develop a deeper grasp of the calibre of their work by making use of peer assessment, a student-centered assessment technique. Furthermore, it not only assists students in acquiring knowledge but also assists them in developing cognitive and social abilities. This paper sheds light on the significance of peer assessment and its application as a learning tool. In addition, it also throws light on the benefits and challenges of peer assessment.

**Keywords:** Peer Assessment, Peer Feedback, 21<sup>st</sup> Century Skills,

## INTRODUCTION

In educational policies and practices, the focus on learning and learners is becoming increasingly important. There is still a huge need for achieving higher grades as measured following the evaluation criteria, benefiting students from their learning, and involving them in assessing their learning and the ability to make a decision (Deakin-Crick et al., 2005). Peer assessment is an important element of designing learning environments for them to become more participatory among students, which can achieve concepts such as learning between peers, collaborative learning, and problem-solving-based learning (Kollar & Fisher, 2010; Alias et al., 2015). Peer assessment in the education field has been achieved at an increasing rate in recent decades, using it as an assessment tool (Gielen et al., 2011). It represents a system for learning built based on learning directed around the learner with the other depending on effective learning, which focuses on the full integration of the student in the process of collaborative learning with peers under the supervision of the teacher (Thomas et al., 2011). Furthermore, it seeks to transform students from passive recipients of knowledge from teachers

to memorize and recall on tests to active learners and participants in the learning and evaluation process, interacting, searching and exploring, and reaching relationships between objects to generate new knowledge characterized by critical thinking and creativity (Lew et al.,2010). Peer assessment also helps to ensure a quality education for all students (Rogers & Threatt, 2000) and develops learner's self-direction as one of the quality measures in education (Papinczak et al., 2007). This active engagement in the assessment process will promote students' learning (De Wever et al.,2011) as well as promote 'responsibility towards students' (Gielen et al., 2010).

## **SIGNIFICANCE OF PEER ASSESSMENT**

Keeping in view the rapid changes in the knowledge landscape and developing 21st-century skills in students to cope with the demanding nature of the world, reformation of the education system is essential. Assessment being an integral part of the education system also needs reformation. Peer assessment as an effective way of assessing students for the development of 21st-century skills has its importance.

Kollar and Fischer (2010) contend that peer assessment is 'an important component' of a more participatory culture of learning' aiding 'the design of learning environments', as well as being, 'fundamentally a collaborative activity that occurs between at least two peers' (Kollar & Fischer, 2010). In addition, peer interaction of any form engages students in the development of their learning, not only academically, but cognitively and emotionally (Vickerman, 2009). Bloxham and West (2004) list the benefits for students in participating in peer assessment:

- It helps them understand the academic standards of the module
- It helps them to understand assessment criteria and how they are applied to students' work
- It helps them understand alternative approaches to academic tasks
- It develops their ability to make judgments and justify a point of view
- It develops their ability to give constructive feedback to peers
- It prepares them for autonomous learning by building their capacity to monitor their progress rather than rely on a third party to do it.

## **PEER ASSESSMENT AS A LEARNING TOOL**

As previously said, peer assessment is one of the learning tools for successful learning. Peer assessment serves the following purposes as a learning tool:

### **I. Collegiality and Collaboration**

Group work is a key component of the Critical Skills program's teaching and learning methods. Given that learners will participate in group work exercises, collegial relationships will be forming, with learners becoming more at ease in each other's presence; they will collectively begin to perceive themselves as a group. (Schein 1988). The growing perception of themselves as a group meant that the nature of the peer exercise constituted a social process based on interactive learning within a supportive environment, resulting in peer learning where students will value 'cooperation over competition' (Boud et al., 1999). Consequently, students will be able to connect and collaborate instead of engaging in the usual competitive positioning that takes place in formal education environments.

### **II. Critical inquiry and reflection**

Peer assessment exercises are very effective in encouraging pupils to "think it out" and "speak it out." Students' writing and oral communication will undoubtedly develop in clarity and coherence when they are asked to justify and explain their thought processes. They will learn how to critique and respond to the writing of another author, as well as how to contribute to writing most efficiently.

### III. Communication Skills

Effective communication plays a pivotal role in peer assessment, involving interactions between assessors and assesses, as well as between group facilitators and all members. The formal dimension of peer assessment entails the exchange of feedback and elaboration on comments, discussion of essay writing strategies, individual reflections on learning experiences pre- and post-assessment, and addressing any concerns or queries about the process. This collaborative dialogue encompasses the various processes integral to peer feedback. It aids in the development of students' communication abilities. (Ridley, 2004; Kollar & Fischer, 2010).

#### STRATEGY FOR PEER ASSESSMENT

Considering the function of the peer assessment, two major things must be considered: Initially, the assessment method should strive for the same level of accuracy as traditional approaches. and secondly, the approach must not be harmful to the students themselves. To evaluate peer performance in small groups, the teachers employed a variety of ways. Some assessment approaches, such as rate scales, single rates, point allocation, peer comparisons, and project diaries, can be employed, according to Baker (2008). Baker (2008) describes peer assessment approaches, which are summarised here.

##### I. Rating Scale

The Rating Scales technique is employed to evaluate various behaviors and can offer more nuanced rating information compared to other methods. Behaviorally Anchored Rating Scales (BARS) represent a type of rating scale where each point corresponds to a specific behavior essential for the team's success, making it clearer and minimizing confusion.

##### II. Peer comparison

By comparing teammates to one another, the peer comparisons approach chooses the team member who performed best on one or more performance criteria. The number of times a student's name is brought up by classmates in each dimension determines how many points the student receives.

##### III. Project Diaries

The Project Diaries method assesses team members' contributions at various stages of a collaborative project. Peers are asked to document the individuals responsible for specific tasks at multiple checkpoints during the semester. At the semester's end, instructors can compare the frequency with which each student is referenced to the maximum possible mentions. This method aids in clarifying performance expectations, fostering accountability, and reducing the impact of memory decay on peer assessment.

#### Benefits of Peer Assessment

Peer assessment has been effectively employed in elementary, middle, and high schools, including with very young kids and those with special educational needs or learning disabilities and it can result in improvements in the effectiveness and quality of learning (Scruggs & Mastropieri, 1998). The benefits of peer assessment based on research evidence are discussed below.

##### I. Peer Feedback

The basic purpose of peer assessment is to provide feedback to learners. Peer feedback can be positive, negative, or neutral. When feedback is received positively and wisely, it has the potential to reduce errors and promote learning. It is also required for the development and application of self-regulation skills. Butler and Winne (1995) contended that feedback serves numerous purposes, including the confirmation of existing information, the addition of new information, the identification of errors, the correction of errors, and the improvement of the conditional application of information.

##### II. Cognitive Gains

Cognitive Gains Peer assessment is associated with gains for assessors, assessees, or both (Topping, 2005; Topping & Ehly, 1998). Peer assessment has the potential to enhance reflection and the ability to apply knowledge to new situations, promoting self-evaluation and increased awareness of one's thinking processes. Cognitive and metacognitive benefits can be experienced before, during, and after the peer assessment process.

#### Improvements in Group work

Peer assessment plays a crucial role in enhancing group work by fostering a collaborative and reflective environment. Through peer assessment, individuals actively engage in evaluating the contributions and performance of their peers within the group. This process encourages students to critically reflect on their work as well as that of their peers, promoting a deeper understanding of the subject matter and improving

self-awareness. Additionally, receiving feedback from peers provides diverse perspectives and insights, which can lead to constructive discussions and problem-solving within the group. By participating in peer assessment, students develop essential communication and interpersonal skills, learn to provide and receive feedback effectively, and ultimately contribute to the overall improvement of group dynamics and productivity.

### III. Social Interaction

Peer assessment allows students to interact with their peers and creates high social skills while learning effectively (Edwards, 2013).

In addition to the above-mentioned benefits, other benefits are presented in the table given below.

Areas	Potential Benefits
Metacognitive	IV. Enhanced time for reflection, review, and summarization V. Promotion of higher-order thinking skills. VI. Increased comprehension of assessment nature and processes. VII. Strengthening of problem-solving abilities. VIII. Improved comprehension of high-quality work standards.
Time	<ul style="list-style-type: none"> <li>Saves teacher's commenting Time</li> </ul>
Feedback	<ul style="list-style-type: none"> <li>Amplified quantity of feedback</li> <li>Opportunity for more precise feedback</li> </ul>
Social Interaction	<ul style="list-style-type: none"> <li>Enhanced negotiation skills.</li> <li>Fostering of self-directed learning.</li> <li>Cultivation of collaboration skills.</li> <li>Encouragement of active learner roles.</li> </ul>
Linguistic development	<ul style="list-style-type: none"> <li>Improvement in verbal communication skills</li> </ul>

## CHALLENGES OF PEER ASSESSMENT

There are certain challenges of peer assessment which are listed below based on research evidence

### I. Quality and Standards

For peer assessment to maintain quality and standards, it relies heavily on peers' abilities to provide accurate, honest judgments of each other, as well as their genuine participation. Without these crucial components, there is a risk of wasted work and resources. However, prior studies indicate several challenges impacting the accuracy, honesty, engagement, and overall trustworthiness of peer marking (Sridharan et al., 2019). In terms of capability, evaluative judgments and providing effective and usable feedback to others are complex and must be learned (Boud et al., 1999). Behavioral concerns include incentives to mismark (competition); giving low marks to high-performing students; over-generous marking (particularly friends); sabotage (overrating self and underrating peers) to create self-advantage; collusion with a tendency to mark similarly to others (Sridharan et al., 2019). Moreover, psychological safety factors such as fear of disapproval, social pressure, and discomfort in marking peers can negatively impact honest assessment of peers (Vanderhoven et al., 2015). This is even more problematic when the peer assessment process is not anonymous leading to preconceived perceptions of the assessor and unwillingness to open disclosure of behavioral issues (Anson & Goodman, 2014). Attitude challenges include non-engagement or untruthful engagement with the peer

assessment activity, particularly in the formative context (either non-completion or random or insincere completion) (Sridharan & Boud, 2019).

## II. Validity and Reliability

Validity and reliability are critical for increasing the effectiveness of peer assessment. Validity refers to the use of an accurate unbiased relevant and aligned instrument to gain process and stakeholder acceptance (Speyer et al., 2011). Regardless of the performance of the peer assessment, reliability necessitates uniformity in marking. Factors affecting reliability include biased marking as a result of friendship, vindictiveness, reciprocity, and poor understanding of quality and standards, amongst others (Sridharan et al., 2019). The implementation of good calibration and moderation practises can improve reliability; however, it takes effort, time, and a constructive attitude on the part of stakeholders. Other challenges include thoughtful consideration of peer assessment design decisions surrounding: a sufficient number of peer assessors, incentives for taking it seriously, and anonymity to encourage honesty to ensure students' trust in the system (Freeman & McKenzie, 2002).

## CONCLUSION

Students' 21st-century skills can be developed as a result of peer assessment. Peer assessment can explicitly and effectively assist students in deep learning, collaborative work, and transitioning from dependence and independence to interdependence. Despite its limitations, peer assessment has the potential to be an authentic tool to foster learning. The key factor is the student's ability to perform assessments as well as the level of acceptance by teachers and students.

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