

Bias in Peer Assessment: Challenges, Solutions, and Best Practices for Fair Student Evaluation

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ABSTRACT

Bias in student evaluations is a persistent challenge in peer assessment, often leading to inaccurate or unfair outcomes. This study investigates strategies to minimize bias and enhance the objectivity and reliability of peer assessment practices in educational settings. A Systematic Literature Review (SLR) was conducted, analyzing 53 peer-reviewed journal articles published between 2019 and 2023. Articles were sourced using the Publish or Perish application, which extracts data from Google Scholar, selected for its extensive coverage of open-access academic sources. Inclusion criteria focused on article quality, thematic relevance to bias in peer assessment, and novelty of insights. Key databases such as Scopus and Web of Science were used to validate and cross-check influential studies. The review identified several effective strategies for minimizing bias in peer assessment. These include maintaining student anonymity, using structured rubrics, providing evaluative training, and incorporating teacher supervision. Each approach demonstrated significant improvements in the fairness and accuracy of assessments across diverse educational contexts. Compared to previous literature, this study offers a more comprehensive synthesis of bias-reduction techniques and emphasizes their practical applicability. By adopting these strategies, educators can improve the validity of peer feedback, fostering more equitable assessment environments and promoting student growth through reflective learning.

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1. INTRODUCTION

The shift from a teacher-centered to a student-centered learning paradigm has been widely promoted in response to the growing recognition that students are not only objects of instruction but also active subjects in the learning process (Awacorach et al., 2021). This transformation also affects how assessments are conducted in the classroom. Traditionally, assessment was solely the

responsibility of teachers; however, educational reform calls for more inclusive and participatory approaches (Awacorach et al., 2021).

As a result, there is a growing need for more comprehensive assessment methods that actively involve students in the evaluation process. One such approach is peer assessment, which empowers students to evaluate the work of their peers, promoting greater engagement, reflection, and responsibility in learning. This technique aligns with student-centered principles by recognizing learners as capable evaluators and co-creators of their educational experience.

Peer assessment is an assessment technique that allows students to provide feedback on the performance of their colleagues (Jia et al., 2021). In the educational context, peer assessment can be used to measure students' abilities in various fields, including interpersonal skills, problem-solving abilities, and conceptual understanding (Jia et al., 2021). In addition, peer assessment can also help students develop self-evaluation skills and provide constructive feedback to their colleagues (Hoang et al., 2022).

There are several reasons why peer assessment is important in the context of classroom learning; First, peer assessment can improve assessment skills (Mohammed & Baysen, 2022). Through peer assessment, students will get used to evaluating the work of their classmates. This can help them develop good and objective assessment skills (Mohammed & Baysen, 2022); Second, peer assessment can increase responsibility (Li et al., 2020). Peer assessment can also help students feel more responsible for their own work, because students will receive feedback from their classmates. This can encourage them to put more effort into creating quality work (Li et al., 2020). Third, peer assessment can develop social skills (Ng & Yu, 2023). Peer assessment can also help students develop social skills, such as the ability to give and receive feedback in a polite and effective way (Ng & Yu, 2023).

Even though this assessment technique has many advantages, the use of peer assessment also has challenges that need to be overcome (Adachi et al., 2019). One of the main challenges is the tendency to provide unbiased or inaccurate feedback due to bias (Adachi et al., 2019). Bias can occur when assessors are influenced by non-academic factors such as liking or disliking their friends, the tendency to choose close friends, or other factors that are not relevant to students' academic performance in class (Rezai et al., 2022). This of course can lead to inaccurate and unfair assessment results, and this assessment tends to be very subjective. To overcome this challenge, it is necessary for a teacher to understand and take preventive action, as well as provide effective feedback (Magin, 2021). Through this study, the article will discuss how the teacher's strategies and steps are in minimizing and even preventing bias in peer assessment techniques. This is important because a good assessment is one that is able to provide measurements that are valid, objective, and in accordance with the empirical facts that exist within students in the class.

Several studies have revealed the effectiveness of peer assessment in helping students reflect and improve their learning performance (A. Wijayanti, 2022). For example, Wijayanti found that peer assessment positively influenced student behavior in the classroom. Similarly, Double and McGrane (2020) concluded that peer assessment has a positive impact on students' academic performance, albeit with small to moderate effect sizes. They also noted that peer assessment tends to be more effective than teacher-only assessments. However, concerns about objectivity remain. Sridharan et al. (2019) examined the reliability of peer assessments and found that many students were reluctant to provide honest evaluations, often giving favorable scores to friends regardless of actual performance. In response to such concerns, several previous studies have attempted to mitigate bias by introducing anonymous assessments, clear rubrics, and training sessions for peer evaluators. Despite these efforts, challenges persist in ensuring fairness and accuracy.

The four studies discussed above primarily examine the concept of peer assessment and its influence on changes in students' behavior and academic performance in the classroom, without addressing the issue of bias in its implementation. However, objectivity is a crucial aspect of peer assessment, as there is often a tendency for students to provide inflated or inaccurate evaluations due to personal relationships. Addressing this gap, the present article focuses on how to achieve objectivity in peer assessment and outlines appropriate steps to minimize potential bias during the process. By

analyzing the factors that contribute to bias and identifying effective strategies to enhance fairness and accuracy, this study aims to offer practical recommendations for teachers to improve their competence and skills in conducting peer assessments in a more professional, equitable, and impactful manner within the classroom learning environment.

2. METHODS

This research utilizes a Systematic Literature Review (SLR) as its chosen research methodology. A Systematic Literature Review is a research approach employed to identify, assess, and interpret research findings pertaining to a particular research subject (Triandini et al., 2019). This methodology proves to be highly advantageous for researchers as it allows them to amalgamate diverse relevant research outcomes, rendering the presented information more comprehensive and well-rounded (Afsari, Safitri, Harahap, & Munthe, 2021).

This study conducted a Systematic Literature Review of peer assessment articles published between 2019 and 2023. The search used multiple educational research databases—Springer, Taylor & Francis Group, ERIC, and Google Scholar—chosen for their accessibility and relevance to classroom-based peer assessment. Unlike broader databases like Scopus or Web of Science, these sources provided better access to full-text education articles. The Publish or Perish application aided the process by filtering, ranking, and evaluating articles based on citations, publication year, and keywords, ensuring the selected literature was recent and highly relevant.

The search employed keywords "Peer Assessment" and "Bias in Assessment," specifically confined to articles published within the 2019-2023 timeframe. Initially, a total of 1000 articles were gathered, but subsequent filtering was applied based on two criteria: 1) Article quality, and 2) Recency of content, resulting in a final selection of 372 articles. These articles underwent further scrutiny for thematic relevance, culminating in the identification of 102 journal articles. Following this, a review of the titles and abstracts of these articles was performed to pinpoint those that closely aligned with the research theme, ultimately yielding a final compilation of 53 articles for reference. These articles were predominantly sourced from educational journals, both at the national and international levels. The following diagram illustrates the sequential steps involved in this process.

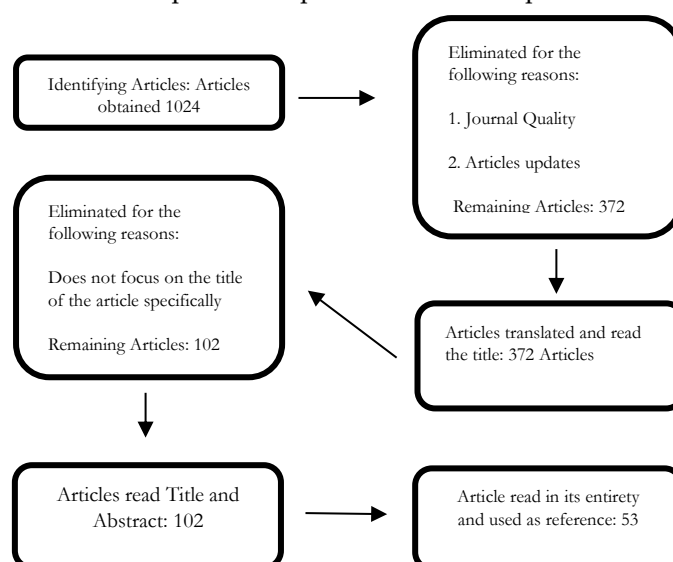


Figure 1. Illustration of article search steps

3. FINDINGS AND DISCUSSION

3.1. *Peer Assessment: Concept, Advantages and Challenges*

Peer assessment is an assessment approach in which students can carefully evaluate the work of peers, including assessment and providing feedback through peer assessment activities (Panadero & Alqassab, 2019). The main purpose of *peer assessment* is to help students understand the strengths and weaknesses of their own work, increase self-understanding, and facilitate personal growth and development (Panadero & Alqassab, 2019).

In *peer assessment*, students play a dual role, namely as assessors and assesses (Hwang & Chang, 2021). During the *peer assessment process*, students as assessors can provide their opinions and personal feedback to their peers. They analyze and provide a constructive assessment of the work of their classmates based on predetermined criteria. As assessors, they can decide whether to accept the peer's perspective and revise their work (Hwang & Chang, 2021).

From the description above it appears that the role of students in implementing *peer assessment* is important because they are not only the object of assessment but are also tasked with providing an assessment of the process and performance results that have been achieved by their colleagues. Guo & Lei explained that the characteristics of this assessment approach are active involvement and communication skills (Guo & Lei, 2020). Active involvement means that participants must be actively involved in the *peer assessment process* (Adachi et al., 2019). This includes providing constructive feedback, following established guidelines, and participating in group discussions to discuss the results of the assessment (Hidayat, 2019).

Wing Shui Ng & Guoxing Yu explained that in peer assessment the factors that determine its success and effectiveness are clear assessment guidelines and effective communication (Ng & Yu, 2023) & (El-Senousy, 2020). A clear assessment guide means that it is important for a teacher to have a clear and detailed assessment guide. This guideline should outline specific assessment criteria and provide clear instructions on what to expect from each aspect of the assessment (Elmedina Nikoçeviq-Kurti, 2022). With clear guidelines, participants will have the same understanding of the assessment standards used, so that assessments can be carried out consistently and fairly. While effective communication means that participants must have the opportunity to ask questions, provide feedback, and share their views clearly and openly (El-Senousy, 2020). Effective communication can help avoid misunderstandings and ensure a better understanding of the assignment being assessed.

In the context of classroom learning, *peer assessment* provides a new perspective in teacher assessment (Panadero & Alqassab, 2019). This assessment tends to emphasize aspects of collaboration and communication, although it does not rule out the possibility of strengthening aspects of competition (Sridharan et al., 2019). Nevertheless, one of the main advantages of *peer assessment* is that it provides a different perspective (Hwang & Chang, 2021). Students who are assessed by their peers will gain a different perspective from those who have the same or similar understanding of the task or project being worked on (Hwang & Chang, 2021). This can provide new insights and thoughts that we may not have realized before.

In addition, peer assessment can also help improve students' evaluation and self-development abilities (Ng & Yu, 2023). In the peer assessment process, individuals need to critically evaluate the performance of their friends based on established criteria (Double et al., 2020). This certainly involves the ability to recognize strengths and weaknesses in other people's work, and provide constructive feedback to help them grow and develop (Panadero & Alqassab, 2019). In carrying out this assessment, students can also gain a better understanding of the expected quality standards and improve their own understanding of a particular topic or subject.

Although *peer assessment* has several advantages, it also has several weaknesses and challenges. One of them is when there is an imbalance of skills and knowledge possessed by students (Del Pozo García, 2020). In peer assessment, challenges that arise due to an imbalance of skills and knowledge can

have a significant impact. This challenge occurs when group or team members have different levels of ability in carrying out the tasks or projects being assessed (Golightly, 2021).

In a group or team, each student has a unique background, experience and knowledge (Lorenzetti, nd). They may have different levels of skill in carrying out certain tasks, different understandings of relevant topics or concepts, or different abilities to apply their knowledge in a given context (Carlsson Hauff & Nilsson, 2022). This imbalance can arise due to differences in background and previous educational experience, interests, or opportunities given to group members.

The main challenge faced in this situation is maintaining fairness and objectivity in *peer assessment* (Carlsson Hauff & Nilsson, 2022). Group members who have higher skills and knowledge tend to be able to produce better or quality work, while group members with lower skills and knowledge may experience difficulties or have unsatisfactory results (Carlsson Hauff & Nilsson, 2022).

When conducting a peer assessment, group members must be able to see the differences in skills and knowledge (Carlsson Hauff & Nilsson, 2022). They need to appreciate the efforts and contributions of students which may not be proportional to the final results obtained (Tuzcu-Eken, 2021). However, this challenge can affect the fairness and objectivity of the assessment (Tuzcu-Eken, 2021).

An imbalance of skills and knowledge can also affect dynamics within a group or team. Group members who have higher skills may feel frustrated or burdened with additional responsibilities to help other group members (Yuliasari, 2020). On the other hand, group members who have lower skills may feel inadequately valued or feel pressured because they feel unable to match the performance of their peers (Hidayat, 2019).

It is important for group or team members to communicate openly and honestly about the challenges they face in terms of an imbalance of skills and knowledge (Hidayat, 2019). By understanding each other and building trust, they can find solutions together and overcome these imbalances (Mumpuni et al., 2022). This could include providing additional assistance to group members in need, apportioning tasks fairly based on individual skills, or providing needed training and resources to upgrade the skills and knowledge of lesser group members (Tuzcu-Eken, 2021).

Peer assessment is an evaluation approach that positions students as active participants in the assessment process, both as assessors and assesses. This dual role fosters the development of critical thinking, communication skills, and a deeper understanding of subject matter. Numerous studies highlight that the effectiveness of peer assessment depends heavily on the clarity of assessment guidelines and the quality of communication among students. Transparent criteria and opportunities for open discussion enable students to give more meaningful and objective feedback. Nonetheless, peer assessment presents challenges, including potential bias and disparities in student competencies, which may affect the fairness and validity of the evaluation process. In classroom settings, peer assessment broadens students' perspectives on learning tasks and promotes self-reflection and collaborative learning development.

These insights are particularly relevant in the Indonesian educational context, where participatory learning and soft skill development are increasingly emphasized. Challenges such as unequal student abilities and bias in peer assessments must be addressed systematically. Teachers play a vital role in ensuring this by designing clear rubrics, training students in constructive feedback, and fostering a classroom culture grounded in open and respectful communication. The practice of peer assessment also aligns with Vygotsky's social constructivist theory, which emphasizes learning through interaction, particularly within the zone of proximal development (ZPD). Additionally, Kolb's experiential learning theory reinforces the idea that authentic learning emerges from experience, including the reflective process of assessing and being assessed by peers. Thus, peer assessment is not only an assessment strategy but also a pedagogical method rooted in theory that supports active, collaborative, and reflective learning aligned with 21st-century educational goals.

3.2. Promote Participant educate As Evaluator

Evaluation is usually considered as something to do by teachers to students. This has implications for the teaching and learning process, which positions students as recipients of criticism for what they have achieved by the teacher (Golightly, 2021). Through peer assessment, learning tends to position students more as an important part of the learning process, especially in the assessment aspect. Learners are not only objects that are assessed, but also have a contributing role in contributing to the development of their friends' learning (Golightly, 2021).

Promoting students as assessors is a very important and useful initiative in the world of education (Nejad & Mahfoodh, 2019). Traditionally, assessment at school is carried out by teachers or lecturers as the only authority providing an assessment of student performance (Suardipa & Primayana, 2020). However, this approach has limitations and does not give students the opportunity to play an active role in the assessment process (Nejad & Mahfoodh, 2019). Therefore, involving students as assessors can provide a number of significant benefits.

One of the main benefits of promoting students as assessors is the development of a deeper understanding of the material being studied (Suardipa & Primayana, 2020). When students become assessors, they must analyze and evaluate the work of their classmates (Suardipa & Primayana, 2020). This requires a deep understanding of the topic being studied, as well as the ability to identify strengths and weaknesses in the work. By conducting an assessment, students are actively involved in parsing the concepts they have learned and applying them in a real context (Jundi & Yasin, 2020). This can certainly help them strengthen their own understanding and deepen their knowledge of the subject.

In addition, involving students as assessors can also develop important assessment skills (Achadah, 2019). These skills include the ability to observe, analyze and provide feedback on the work of others (Achadah, 2019). In the assessment process, students need to learn to identify objective and relevant assessment criteria, and apply these criteria fairly and consistently. They must also learn how to provide constructive and meaningful feedback, which can help their classmates to improve their future performance (Yesil Cinar & Sata, 2021). These judgmental skills are invaluable in real life, both in educational contexts and in professional careers, where the ability to evaluate and provide effective feedback is essential.

In addition to evaluation skills, promoting students as assessors also enriches their social skills (Jundi & Yasin, 2020). When students become assessors, they engage in interactions with their classmates in different contexts. They must be able to communicate clearly, respect the opinions of others, and maintain positive relationships (Lorenzetti, nd). This helps develop strong interpersonal communication skills, empathy, and an understanding of other people's perspectives (Lorenzetti, nd). This ability is invaluable in preparing students for success in social and professional life, where communication skills and the ability to work collaboratively with others are very important (Del Pozo García, 2020).

In addition to the individual benefits obtained by students, promoting students as assessors also creates an inclusive and participatory learning environment (Zubaidah, 2020). When students are given the opportunity to be assessors, they feel valued and have a voice in the assessment process. This helps create a culture of mutual trust and respect in the classroom, where each student feels that their views are important and heard (Lorenzetti, nd). In an environment like this, students feel more enthusiastic and motivated to participate actively in learning, because they know that their contribution is valued and recognized.

The involvement of students in the assessment system also provides valuable and in-depth learning experiences (Ayuningtyas et al., 2019). The assessment process that involves students enables them to engage in critical thinking, analysis, and reflection (Zubaidah, 2020). They learn to see a work from a broader perspective, consider various aspects and understand the larger context (Zubaidah, 2020). In addition, they also develop important self-reflection skills, because they have to reflect on their own assessment processes and consider how they can improve their assessment skills in the future

(Achadah, 2019). Such learning experiences provide students with deeper insights into learning and help them develop the ability to continue learning throughout life.

Overall, promoting learners as evaluators is an important step in modern education. This gives students the opportunity to play an active role in the evaluation process, developing a deep understanding of the material being studied, evaluation skills, social skills, and critical thinking skills. This can certainly create an inclusive learning environment, strengthen student participation, and provide valuable learning experiences. By promoting students as assessors, we open the door to greater personal development, academic growth, and lifelong learning.

The idea of promoting learners as evaluators is strongly supported by several educational theories, particularly Vygotsky's social constructivism and Bandura's social learning theory. Vygotsky emphasizes that learning is a socially mediated process, where cognitive development is fostered through interaction with others in the zone of proximal development (ZPD). When students take on the role of assessors, they engage in collaborative dialogue, reflective thinking, and scaffolded learning, which accelerates their cognitive growth. Likewise, Bandura's social learning theory underlines the role of observational learning and reciprocal interaction; by evaluating peers, students observe diverse approaches to problem-solving and internalize effective strategies. This process enhances not only their academic competence but also their self-efficacy and interpersonal skills. Thus, involving learners as evaluators not only enriches their understanding but also cultivates the soft skills and reflective practices essential for lifelong learning and holistic development.

3.3. Factors Influencing Internal Bias in Peer Assessment

3.3.1 Cognitive Biases: Subjectivity and Stereotypes

Bias in peer assessment can often be traced back to internal cognitive predispositions such as subjectivity and stereotypes. According to Wijayanti & Mundilarto (2019), individual subjectivity frequently influences assessment outcomes, as students may unconsciously evaluate peers based on personal preferences, styles, or personality traits rather than the actual quality of the work. Fathullah & Sunarti (2019) add that each individual brings personal values and preferences that can color their judgments, leading to biased evaluations that reflect the rater's inclinations rather than objective criteria.

In addition, stereotypes represent another cognitive bias that significantly affects peer assessment. Amodio & Devine (2019) and Meixiu Lu (2022) explain that in social contexts like schools, students may develop preconceived notions about others based on attributes such as race, gender, religion, or socioeconomic background. These stereotypes can lead assessors to unconsciously deliver evaluations that align with their biases rather than with the actual performance. Bauer & Baltes (2022) highlight that stereotypes are deeply intertwined with inner bias, potentially distorting assessors' expectations and perceptions of quality (Murdianto, 2019; Eaton et al., 2020). For example, an evaluator may overestimate the quality of a peer's work simply because they hold a positive stereotype about that individual's group (Eaton et al., 2020).

3.3.2 Social Influences: Group Pressure, Conformity, and Majority Influence

Social dynamics also contribute significantly to bias in peer assessments. When evaluations are conducted within a group, students are often influenced by the opinions of others in the group, leading to social conformity and majority influence (Stelmakh et al., 2019). According to Magin (2021), peer pressure within groups can discourage students from expressing differing or independent evaluations. Instead, they may align their judgments with those of the majority to avoid conflict or social isolation (Manzoor & Shah, 2021).

This tendency to conform is further reinforced by social norms and expectations. Teplitskiy et al. (2019) explain that students naturally aim to avoid disagreement or disapproval from their peers, leading them to adopt popular opinions even when they privately disagree. Carlsson Hauff & Nilsson (2022) argue that this conformity undermines objectivity, as students may suppress divergent views or

overlook critical information that contradicts group consensus. Majority influence amplifies this issue: when a dominant opinion emerges in the group, individual students may feel compelled to match their evaluations with that prevailing view, regardless of personal judgment or evidence (Tamblyn et al., 2019; Magin, 2021).

3.3.3 Assessment Bias: Rating Inflation and Favoritism

Apart from cognitive and social dimensions, peer assessment is also vulnerable to systemic assessment biases such as rating inflation and favoritism. These biases often stem from interpersonal relationships or a desire to maintain harmony within the group. Students might give overly positive evaluations to friends or peers they wish to support, irrespective of the actual quality of the work. This behavior compromises the fairness and validity of the assessment process, diluting its educational purpose. As highlighted by the previous studies, these forms of bias must be addressed through clear rubrics, training in objective evaluation, and fostering a classroom culture that values fairness over familiarity.

Social influence in *peer assessment* is very important to watch out for, because it can cause bias that is detrimental and not objective. Therefore, it is important to create an environment that supports freedom of expression, embraces diversity of viewpoints, and provides space for individuals to convey objective judgments based on the actual quality of work. It is also important to consider selecting a diverse and representative assessor so that social influences that might influence the assessment can be minimized. By understanding these social influences, we can work to reduce bias in peer assessment and encourage more objective and fair judgments.

3.4. Technique Overcoming inner bias in Peer Assessment

Avoiding internal bias in peer assessment is critically important, as it directly impacts fairness, trust, and the accuracy of results (Sridharan et al., 2019). Bias can distort evaluation outcomes, leading to unfair and subjective judgments. This, in turn, may negatively affect the individuals being assessed, strain peer relationships, and reduce the overall effectiveness of group work.

In the learning context, teachers play a vital role in minimizing bias during peer assessments (Kaewsaiha & Chanchalor, 2020). As educators, they are responsible for creating a fair, objective, and inclusive learning environment. Within peer assessment, teachers act as both facilitators and supervisors, ensuring that evaluations are conducted fairly and without personal prejudice (Adachi et al., 2019).

The primary reason teachers must ensure fairness in peer assessment is their responsibility to uphold academic integrity and protect each student's right to objective evaluation (Kaewsaiha & Chanchalor, 2020). Biased assessments can result in capable students receiving lower evaluations and vice versa, undermining both individual growth and group dynamics. To avoid this, teachers must ensure that peer assessments are guided by clear, objective, and consistently applied criteria.

Several strategies can be implemented by teachers to promote objectivity and minimize bias in peer assessment processes.

First, teachers must build awareness of bias. They should help students understand how biases, stereotypes, and social pressures can influence judgment (Iezzoni, 2019; Sridharan et al., 2019). By promoting critical reflection and offering real-world examples, teachers can equip students with the tools to recognize and reduce bias in their evaluations (Tamblyn et al., 2019).

Second, integrating lessons on fairness, justice, and inclusivity into the peer assessment process can further strengthen student awareness (Meletiadou, 2021). Teachers can encourage respect for diversity and reinforce the idea that assessment should be based solely on the quality of work, not on personal factors such as background, gender, or subjective preferences (Yesil Cinar & Sata, 2021; Manzoor & Shah, 2021).

Third, it is essential for teachers to establish clear and objective assessment criteria (Meletiadou, 2021). When students have specific guidelines to follow, their evaluations are more likely to be focused and consistent. Teachers can involve students in the development of these criteria to ensure relevance and mutual understanding, which can also enhance student engagement and ownership of the assessment process (E. Wijayanti & Mundilarto, 2019).

Fourth, teachers should provide constructive guidance and feedback. By teaching assessment methods, offering models of objective evaluation, and giving feedback on student assessments, educators can help learners refine their evaluative skills (Lerchenfeldt & Taylor, 2020; Teplitskiy et al., 2019). Constructive feedback also helps students reflect on their own biases and improve future assessments.

Fifth, ongoing monitoring and review of the peer assessment process is essential. Teachers should actively check for consistency, fairness, and potential bias in student evaluations (Yesil Cinar & Sata, 2021; Carlsson Hauff & Nilsson, 2022). Engaging students in reflective discussions about their assessments can further help uncover hidden biases and improve awareness (Manzoor & Shah, 2021).

Finally, teachers must support students in developing the awareness and skills necessary for effective peer assessment (Eaton et al., 2020). This can be achieved through classroom discussions, collaborative activities, and even specialized workshops that focus on fairness, objectivity, and constructive feedback. Encouraging students to share experiences and learn from one another fosters a culture of integrity and mutual respect in the learning environment (Sridharan et al., 2019).

By implementing these strategies, educators not only ensure fairer peer assessments but also help students grow into more reflective, ethical, and responsible learners.

More technically, avoiding bias in *peer assessment* on Islamic Religious Education subjects can be done by paying attention to the following matters:

3.4.1 Clear Assessment Guidelines

Islamic Religious Education teachers need to provide clear assessment guidelines to students. This guide should include specific and objective assessment criteria, as well as examples illustrating different levels of performance (Lerchenfeldt & Taylor, 2020). This will help students make more accurate assessments and reduce the possibility of bias.

Clear assessment guidelines are a key component in the implementation of an effective peer assessment (Wride, 2020). Peer assessment is a process by which students assess the work or achievements of their fellow students, and clear assessment guidelines are essential to ensure uniformity, consistency, and transparency in this process.

One concrete example that can be done by Islamic Religious Education teachers in providing clear assessment guidelines to students can be done through; *first*, Islamic Religious Education teachers can start by explaining the concept of peer assessment to students. He can explain that peer assessment is a process in which students provide feedback and evaluate the work or achievements of their peers; *Second*, Islamic Religious Education Teachers can help students understand the assessment criteria that will be used in peer assessment; *Third*, the teacher shows students concrete examples of how peer assessment can be done. For example, he can demonstrate how to provide constructive feedback using polite and constructive language; *Fourth*, provide clear assessment guidelines for students; *Fifth*, provide time for students to discuss and exchange ideas about brand work; *Sixth*, at this stage the Islamic Religious Education teacher can collect the results and conduct an evaluation.

Furthermore, clear assessment guidelines help achieve consistency in assessment (Wride, 2020). When students use the same guidelines and follow specified criteria, their assessments become more consistent (Kaewsaiha & Chanchalor, 2020). This ensures that every student gets a fair and balanced assessment of their work (Lerchenfeldt & Taylor, 2020). Consistency in grading also helps in objectively comparing student performance, thereby providing a solid basis for identifying their strengths and weaknesses.

3.4.2 Anonymity

In this context, Islamic Religious Education teachers can apply an anonymity system in peer assessment (House, 2022). In this way, students will not know who they are grading and the student being assessed will not know who gave the grading. This anonymity can help reduce bias that may arise due to factors such as personal relationships or popularity (Shah, 2022). In the context of learning Islamic religious education, teachers need to ensure anonymity in peer assessment using clear and tested methods. For example, the Islamic Religious Education teacher gives each student a piece of paper with a unique identification number. When doing the assessment, students write down the identification numbers of their peers without mentioning their own names or personal identities. This ensures that the assessment given is not influenced by personal factors or social interactions among students.

Anonymity helps prevent unfair discrimination in judgment (Shah, 2022). When a learner's identity remains confidential, assessment will not be affected by factors such as race, gender, or personal background. This is important to create a fair and equitable environment for all members in peer assessment (Houser, 2022). In addition, anonymity can also help eliminate personal biases that may arise in judgments. When people rate their peers anonymously, they are not swayed by personal preferences, friendships, or rivalries that might affect the objective judgment (Shah, 2022). Thus, the assessment decision is based on the actual quality of the work.

3.4.3 Balanced Rating Scale

At this stage, Islamic Religious Education teachers must ensure that the rating scale used is balanced and objective. Avoid using scales that are too general or ambiguous (Zhan, 2021). For example, a numerical scale from 1 to 5 with clear descriptions for each level of assessment can be used (Meletiadou, 2021). This will help reduce conflicting interpretations and ensure that the assessment is carried out objectively.

A balanced rating scale is very important in assessment because it provides a consistent structure and framework for assessing the performance of a person or a particular product (Zhan, 2021). The main objective of using a balanced rating scale is to ensure that all relevant and important aspects of the assessment are given proper weight and treated fairly (Tuzcu-Eken, 2021). For example, in assessing understanding of religious concepts, a balanced rating scale can cover a wide range of ratings. Islamic Religious Education teachers can provide a scale that includes a "Very Good" category for students who demonstrate a deep understanding, ability to apply concepts in everyday life, and provide concrete examples. On the other hand, the rating scale must also include the "Needs Improvement" category for students who still need an increased understanding of religious concepts, application of values, and stronger arguments in answering questions.

Overall, the use of a balanced rating scale is essential to achieve a fair, objective and reliable assessment. By developing relevant scoring criteria, assigning appropriate weights, and using an objective rating scale, a balanced rating scale helps ensure that all aspects that matter in the assessment are accounted for fairly and consistently.

3.4.4 Assessment Training

At this stage, Islamic Religious Education teachers can provide training to students on how to carry out objective and fair assessments (May, 2019). This can include discussions about bias and how to identify it, examples of good judgment, and exercises in making consistent and objective judgments (Zhan, 2021). This training can help students become more aware of potential biases and improve their ability to make fair judgments.

Assessment training is a process designed to equip individuals with the skills and knowledge necessary to carry out an effective and objective assessment. Assessment training can be given to various groups, including supervisors, lecturers, teachers, or anyone who is responsible for evaluating the performance, achievements, or quality of a person or product (May, 2019).

3.4.5 Monitoring and Feedback

In this stage, Islamic Religious Education teachers need to monitor the peer assessment process regularly. They can exercise oversight to ensure that assessments are carried out correctly and identify possible biases. In addition, teachers must provide constructive feedback to students about their assessment (Lerchenfeldt & Taylor, 2020). This will help students understand the strengths and weaknesses of their assessment and provide opportunities for improvement. For example, Islamic Religious Education teachers actively supervise students when they grade each other's work in peer assessment sessions. After that, the Islamic Religious Education teacher gave clear instructions about the assessment criteria and gave concrete examples. After the assessment is complete, the teacher provides immediate feedback to each student, discussing the strengths and weaknesses of their work in detail. Group reflection sessions are also held, where students discuss experiences and provide constructive feedback to their peers.

Supervision and feedback play a very important role in peer assessment (Lerchenfeldt & Taylor, 2020). Supervision relates to monitoring and supervision of the assessment process by an authorized person or mentor, while feedback involves providing information and constructive evaluation to the individual being assessed (Lerchenfeldt & Taylor, 2020).

4. CONCLUSION

This study affirms that peer assessment is a pedagogically valuable tool that fosters critical thinking, self-reflection, and collaboration, while actively engaging students in the evaluation process. It reveals that, despite its benefits, peer assessment is susceptible to biases arising from personal preferences, social dynamics, and internalized stereotypes, which can compromise fairness and accuracy. Key strategies identified to mitigate these issues include the use of clear and objective rubrics, anonymity in assessments, teacher oversight, and targeted training to enhance students' evaluative abilities. The study's findings, particularly within the Indonesian educational context, contribute to a deeper understanding of both the potential and the limitations of peer assessment practices. However, a notable limitation of this research lies in its reliance on secondary data from published literature, which may not fully capture real-world implementation challenges or student perspectives. Future research should consider empirical investigations involving direct classroom applications to evaluate the effectiveness of bias-reduction strategies in practice. Additionally, exploring peer assessment across varied cultural and educational settings could offer broader insights into its adaptability and impact. By addressing these areas, future studies can further refine peer assessment models to ensure they are equitable, reliable, and capable of supporting essential competencies such as autonomy, empathy, and accountability in student learning.

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