



Available Online at EScience Press
International Journal of Education Foundations
ISSN: 3078-7866 (Online), 3078-7858 (Print)
<https://ijef.esciencepress.net>

RESEARCH ARTICLE

Contribution of Peer Assessment on Mathematics Learning Outcomes among Secondary School Students: A systematic Review of Literature

Deodath Meney, Kalafunja Osaki, Prosperity Mwila

Department of Education Foundations, St. Augustine University of Tanzania

Corresponding Author

Deodath Meney, Email: deomeney@gmail.com

Author's Contributions

All authors contributed equally to this research.

Article History

Received February 23, 2026; Accepted: April 19, 2026; Published: July 24, 2026.

ABSTRACT

Peer assessment has gained wider attention as a formative practice in mathematics education. Recent studies describe peer review as a process that deepens reflection during classroom assessment. The approach allows learners to examine peer responses, discuss errors, and apply shared judgement criteria. This review article examines how peer assessment contributes to mathematics learning outcomes among secondary school students. Attention is directed to mathematics test scores, problem solving ability, computational accuracy, and procedural correctness. The review also considers feedback exchange, learner interaction, and assessment criteria as supporting classroom processes. A structured review procedure was used to identify, screen, and synthesize relevant literature for the article. The reviewed evidence suggests that peer assessment can support improvement across several mathematics outcomes. However, the strength of this contribution depends on how carefully the practice is organized in classrooms.

Keywords: Peer assessment; mathematics learning outcomes; mathematics test scores; problem solving ability; computational accuracy

INTRODUCTION

Mathematics remains one of the core school subjects because it supports reasoning and disciplined thinking among learners. Recent literature shows that mathematics learning strengthens analytical judgement in classroom and daily contexts (Arthur et al., 2024). The subject also builds a foundation for science, technology, and numeracy based decision making in later education. Other authors note that mathematical learning supports interpretation of quantities, patterns, and relationships during school tasks (Biton, 2025c). These abilities are important because they extend beyond examination performance into wider academic and social life. Strong mathematics learning also prepares learners for complex study demands in advanced levels of education (Chang et al., 2021). For

this reason, mathematics continues to occupy a central place in secondary school curricula. This importance makes persistent weakness in mathematics learning a serious educational concern.

Despite this importance, many secondary school students continue to experience weak mathematics learning outcomes across different contexts. Studies report that many learners struggle to reach expected levels of understanding in mathematics classrooms (Pericleous et al., 2025). Difficulties often appear when students are required to solve unfamiliar problems or explain their reasoning clearly. Related work shows that learners face challenges when applying concepts in classroom exercises and written tasks (Patchan et al., 2022). These problems are reflected in weak confidence, low persistence, and reduced readiness for

advanced study. Other studies further indicate that students frequently make avoidable computational errors during mathematics activities (Mawak & Odulum, 2024). When such weaknesses persist, they limit both academic progression and sustained interest in the subject. This pattern creates a strong need for classroom practices that can improve mathematics learning outcomes.

In response to this concern, schools have increasingly turned to learner centred approaches within mathematics teaching and assessment. Current evidence indicates that learner centred classrooms encourage active participation during the learning process (Arthur et al., 2024). These approaches invite students to discuss ideas, test interpretations, and construct understanding through direct engagement. Other studies connect such engagement with improved conceptual clarity and stronger involvement in lesson activities (Baiduri, 2022). Classroom interaction also gives learners opportunities to explain methods and compare ways of solving problems. Research further links learner interaction with stronger academic performance during cooperative mathematics tasks (Biton, 2025a). These benefits explain why teachers continue to explore participatory assessment practices in mathematics lessons. Within this broader movement, peer assessment has emerged as one important classroom strategy.

Peer assessment has gained attention because it moves learners from passive reception toward active academic judgement. Research shows that participation in peer review improves awareness of evaluation standards and expected quality (Ayalon & Wilkie, 2021). In this process, students review peer responses by using agreed criteria or teacher guided expectations. Other studies show that peer evaluation can improve clarity of assessment criteria during mathematics activities (Chang et al., 2021). Learners therefore examine solutions, compare methods, and identify strengths or errors in presented work. Interaction during peer review has also been linked with improved reasoning processes among mathematics learners (Veuillez-Mainard & Modeste, 2023). These features make peer assessment more than a marking exercise because it creates a learning opportunity. That opportunity has important implications for mathematics learning outcomes in secondary schools.

Peer assessment also functions as a social learning process through which students exchange feedback and negotiate meaning. Studies explain that feedback

exchange helps learners identify mistakes and refine understanding of mathematical ideas (Panadero et al., 2022). Comments from peers can guide revision, encourage comparison, and draw attention to expected solution quality. Scholars further note that reviewing peer work promotes deeper cognitive processing during mathematical tasks (Double et al., 2020). This deeper processing occurs because students must judge responses rather than simply produce answers. The use of shared assessment criteria also supports consistency and fairness during peer judgement activities (Tai et al., 2023). Together, these processes connect peer assessment with better reasoning, correction, and reflective learning. Such links justify closer review of how peer assessment contributes to mathematics learning outcomes.

Although peer assessment is widely discussed, the reported outcomes are often described in broad and general terms. Several studies associate peer assessment with better mathematics performance without specifying clear outcome measures (Patchan et al., 2022). This makes it difficult to determine exactly what aspect of learning improves through peer evaluation. Other accounts report positive achievement patterns but do not separate test performance from broader classroom improvement (Biton, 2025c). Without clearer outcome indicators, the practical value of peer assessment remains harder to interpret. Further literature also shows variation in reported effectiveness across different classroom settings (Zulliger et al., 2022). These weaknesses create the need for a more organized review of evidence around distinct learning outcomes. This article responds by focusing on measurable dimensions of mathematics learning.

The present article is written as a review paper that aligns its structure with a journal style model. Review literature emphasizes that systematic organization strengthens clarity and trust in scholarly synthesis (Onwuegbuzie & Frels, 2016). For that reason, the discussion is organized around clear sections that move from background to findings. Methodological guidance also stresses explicit identification, selection, and synthesis of included studies (Moher et al., 2010). The article therefore combines conceptual discussion with a structured review procedure and thematic analysis. Reporting guidance further encourages transparent presentation of search, screening, extraction, and interpretation processes (Page et al., 2021). This structure helps the reader follow how evidence was assembled and interpreted across the

article. It also prepares the ground for a focused discussion of mathematics learning outcomes.

Purpose of Study

This review article examines how peer assessment contributes to mathematics learning outcomes among secondary school students. Existing literature often reports improvement in performance without identifying specific outcome dimensions clearly (Pericleous et al., 2025). That tendency leaves uncertainty about what exactly changes when peer assessment is used in mathematics classrooms. Other studies discuss gains in achievement but give limited attention to task based evidence of change (Mawak & Odulum, 2024). The present review therefore concentrates on four outcome areas that can be discussed in clearer terms. Relevant literature also suggests that these areas are influenced by feedback, learner interaction, and assessment criteria (Panadero et al., 2022). The review focuses on test scores, problem solving ability, computational accuracy, and correct mathematical procedures. This focus offers a clearer basis for interpreting the contribution of peer assessment in mathematics learning.

Conceptual Framework

The conceptual framework of this article views peer assessment as an interactive classroom process that connects judgement with learning. Feedback exchange is central because it helps learners recognize mistakes and improve responses (Panadero et al., 2022). Within this process, students comment on peer work, explain corrections, and suggest ways of improving solutions. Learner interaction is also important because discussion strengthens clarification and shared interpretation of mathematics ideas (Double et al., 2020). These interactions allow students to compare methods and internalize standards of acceptable mathematical work. Assessment criteria complete the framework by guiding judgement through explicit expectations and fair comparison (Tai et al., 2023). Together, these elements connect peer assessment with stronger understanding, correction, and reflective engagement during tasks. The framework therefore links classroom review practices with measurable mathematics learning outcomes.

METHODOLOGY

Sources and Search Procedures

The search process followed a structured procedure

aimed at identifying relevant studies on peer assessment and mathematics learning outcomes. The process began with a keyword search conducted across academic databases and journal repositories. Keywords used in the search included peer assessment, mathematics achievement, problem solving ability, computational accuracy, and secondary students. These terms were combined in different ways to capture a wide range of related studies. The initial search yielded a total of 58 records. All identified records were compiled into a single list for screening. No duplicate records were identified at this stage. The screening process then involved reviewing titles and abstracts to determine relevance to the focus of the review. During this stage, 27 records were excluded because they did not address mathematics learning outcomes or did not involve peer assessment.

The remaining 31 articles were subjected to full-text assessment. Each article was carefully examined to determine whether it met the inclusion criteria. During this stage, 14 articles were excluded because they lacked sufficient focus on the identified outcome areas or did not provide adequate detail on peer assessment processes. The final stage resulted in 17 studies that were considered suitable for inclusion in the review. This process ensured that only relevant and focused studies were retained for analysis. The review process has been illustrated in figure 1.

Data Extraction

After the selection of studies, data extraction was conducted in a systematic manner. Each article was reviewed in detail to identify key information relevant to the purpose of the review. Information extracted included the focus of the study, the context in which it was conducted, and the main findings related to peer assessment. Attention was also given to how peer assessment was implemented in each study. This included identifying the form of assessment used, the nature of feedback, and the role of learners during the evaluation process. Extracted data were recorded in a structured format to allow comparison across studies. The extracted information was then organized according to the four outcome areas guiding the review. These included mathematics test scores, problem solving ability, computational accuracy, and correct mathematical procedures. This organization supported consistency in the subsequent analysis.

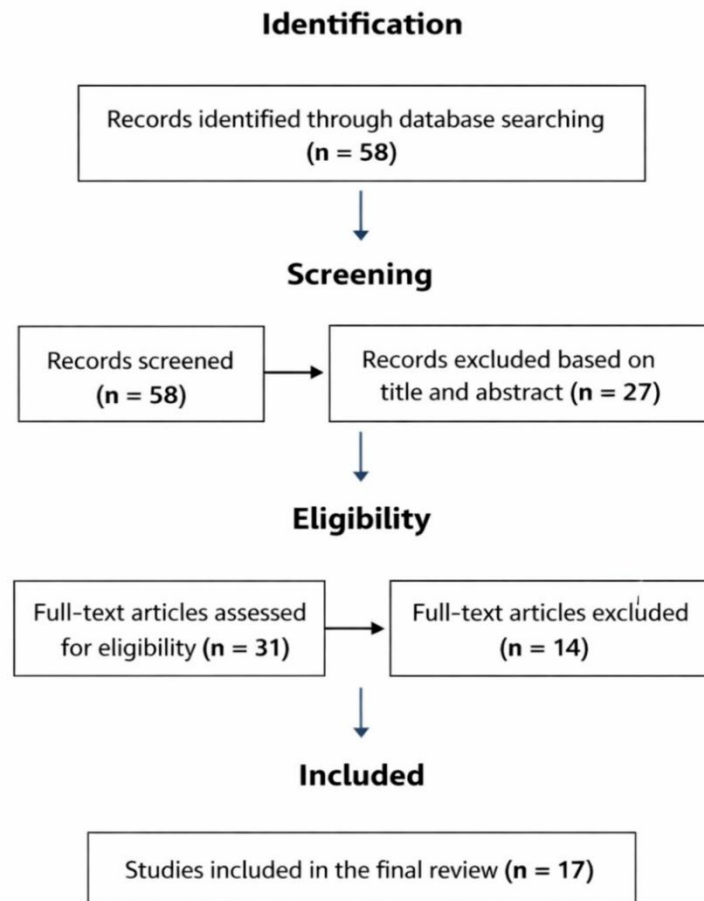


Figure 1. Summary of the search and screening procedure used in the review article

Data Analysis

The analysis followed a thematic approach based on the identified outcome areas. Extracted data were grouped into themes corresponding to the four areas of interest. Within each theme, findings from different studies were examined and compared to identify patterns. The analysis focused on identifying both supportive and contrasting evidence across the studies. Similar findings were grouped together to highlight consistent patterns, while differences were examined to understand variation in results. Attention was also given to conditions under which peer assessment appeared to be effective or less effective. The process further involved linking findings across themes to provide a comprehensive understanding of the contribution of peer assessment. This approach allowed the review to present a coherent synthesis of evidence. The analysis therefore produced a structured interpretation of how peer assessment influences mathematics learning outcomes.

Data Extraction

Each selected study was read carefully so that comparable information could be extracted across the review. Methodological guidance states that extraction should capture the features most relevant to the review question (Hallinger, 2014). Attention was given to study focus, context, reported outcomes, and the classroom processes discussed. Critical appraisal work also emphasizes the need for extraction that is clear enough to support reliable synthesis (Hong & Pluye, 2019). Special emphasis was placed on evidence about test scores, problem solving, computational accuracy, and procedural correctness. Review tools further recommend attention to conceptual and methodological details that explain reported findings (Rouleau et al., 2023). Evidence on feedback, interaction, and criteria was also extracted because these processes recur across the literature. This stage produced an organized evidence base for thematic interpretation in the article.

Data Analysis

The extracted studies were analyzed through thematic synthesis in line with the purpose of the review. Review

scholars explain that synthesis should organize evidence around concepts that answer the guiding question (Hallinger, 2014). The analysis therefore grouped the literature according to the four mathematics learning outcomes under review. Transparent synthesis also helps reveal recurring patterns, tensions, and uncertainties across selected studies (Hong & Pluye, 2019). Within each theme, the discussion considered supportive evidence, weak areas, and conditions affecting reported results. Methodological commentary further notes that interpretation becomes stronger when similarities and contrasts are both examined (Rouleau et al., 2023). The final discussion then connected these patterns to the broader idea of peer assessment as guided classroom learning. This approach made the review coherent and suitable for journal style presentation.

RESULTS AND DISCUSSIONS

The reviewed literature reveals several recurring patterns regarding peer assessment and mathematics learning outcomes. Many studies link peer assessment with measurable improvement in specific mathematics related indicators (Pericleous et al., 2025). At the same time, the evidence also shows variation in strength, clarity, and classroom conditions. Other studies caution that positive outcomes depend on how the assessment process is implemented and guided (Zulliger et al., 2022). The discussion below therefore presents both the positive contribution and the conditions surrounding that contribution. Related literature further suggests that feedback quality and assessment criteria influence the depth of improvement (Panadero et al., 2022). The findings are organized under headings that reflect the major mathematics outcomes reviewed in the article. This arrangement allows the evidence to be interpreted in a more focused and useful way.

Mathematics Test Scores

A major pattern in the reviewed literature is the association between peer assessment and better mathematics test scores. Studies report that rubric guided peer review can improve mathematics outcomes among learners in classroom settings (Pericleous et al., 2025). When students examine responses closely, they become more aware of correct answers and expected performance standards. Other literature also identifies a positive relationship between peer assessment scores and formal examination results (Biton, 2025c). This suggests that peer review can support stronger preparation for assessed

mathematics tasks. Peer supported evaluation has likewise been linked with improvement in mathematics related performance measures (Patchan et al., 2022). These repeated patterns indicate that peer judgement may contribute to stronger test related achievement. The evidence therefore supports a positive connection between peer assessment and mathematics test scores.

A further issue concerns how peer assessment strengthens test performance through repeated engagement with response quality. Studies on sustained participation show that repeated assessment involvement can improve academic achievement over time (Baiduri, 2022). When learners review several responses, they become better at recognizing accurate work and weak reasoning. Other studies also note that repeated attention to criteria can strengthen alignment between judgement and performance (Chang et al., 2021). This repeated practice appears to improve preparedness for tests because learners internalize expectations gradually. Related evidence further associates peer review with improvement in mathematics tasks that resemble examination demands (Mawak & Odulum, 2024). Such improvement is important because it links classroom interaction with visible academic results. Repeated peer assessment may therefore strengthen test performance through continued comparison and correction.

Even so, literature on test scores also reveals some caution that must be considered during interpretation. Several studies discuss performance gains broadly while offering limited detail about the exact measures used (Patchan et al., 2022). This makes it difficult to judge how large the contribution to test performance really is. Other authors report that weak learner feedback can reduce the value of peer review activities (Panadero et al., 2022). When comments are too brief, students may not know how to revise or improve future answers. Variation in classroom conditions has likewise been associated with uneven assessment outcomes across settings (Zulliger et al., 2022). These cautions do not remove the positive pattern, but they qualify its strength and consistency. Test score gains remain promising, yet they depend on how well peer assessment is organized.

Problem Solving Ability

The reviewed literature also shows a meaningful connection between peer assessment and problem-solving ability in mathematics. Studies indicate that learner centered assessment can support improvement

in mathematical problem solving processes (Ukobizaba et al., 2021). Problem solving improves when students compare several solution paths rather than relying on one familiar approach. Other work links interaction during peer review with stronger reasoning and explanation during mathematics activity (Veuillez-Mainard & Modeste, 2023). Through such interaction, learners begin to notice why certain procedures work better in specific problems. Research further associates evaluation of peer work with deeper engagement in mathematical tasks and ideas (Biton, 2025a). These features show that peer assessment can open space for richer mathematical reasoning. The evidence therefore supports a positive contribution to students' problem solving ability.

Another important pattern concerns the role of comparison in shaping problem solving during peer assessment. Studies report that discussing alternative approaches can strengthen engagement with mathematical reasoning (Husband & Nikfarjam, 2022). Students benefit when they observe that the same problem may be solved through different, yet valid, methods. Other literature also links analysis of peer solutions with improved reasoning processes during task completion (Veuillez-Mainard & Modeste, 2023). This comparison widens learners' understanding of strategy choice and helps them reflect on efficiency. Related research further associates evaluation of different strategies with improved analytical thinking in mathematics settings (Brignell et al., 2019). Such experiences are valuable because problem solving depends on flexible thinking rather than memorized steps alone. Peer assessment can therefore strengthen problem solving by exposing learners to multiple solution strategies.

At the same time, some uncertainty remains regarding the measurement of problem solving improvement across studies. Several authors discuss reasoning growth without specifying how problem solving ability was measured in practice (Baiduri, 2022). This makes comparison across studies more difficult and weakens precision in interpretation. Other reports also emphasize reflective thinking while giving less attention to observable task performance (Møllersen & Micheron, 2025). As a result, the literature sometimes shows cognitive improvement more clearly than measurable outcomes. Variation in reported effects has also been noted across classrooms using different assessment arrangements (Arthur et al., 2024). These limits suggest the need for careful reading of positive claims about

problem solving gains. Even so, the overall trend still points to a meaningful contribution of peer assessment.

Accuracy in Mathematical Computations

The literature further indicates that peer assessment can contribute to accuracy in mathematical computations. Studies have reported close alignment between peer generated scores and teacher scores in mathematics tasks (Chang et al., 2021). That alignment suggests that learners can recognize correct and incorrect calculations with reasonable consistency. Other research also shows stable scoring patterns when peer assessment is conducted under structured classroom conditions (Zulliger et al., 2022). Such stability matters because computational accuracy depends on attention to detail and careful correction of errors. Related studies also associate engagement in peer assessment with improved academic correctness in mathematics work (Mawak & Odulum, 2024). These findings support the view that peer review can strengthen accuracy during classroom computation. The contribution appears especially relevant where learners repeatedly check and revise each other's work. Accuracy may improve because peer assessment requires students to notice mistakes that might pass unnoticed in individual work. Research suggests that feedback exchange draws attention to errors and supports revision of mathematical responses (Panadero et al., 2022). When students explain corrections, they become more aware of the steps that produced an inaccurate answer. Other studies also link identification of knowledge gaps with peer interaction during mathematics learning (Møllersen & Micheron, 2025). This process helps learners move from careless computation toward more deliberate and checked performance. Related work further notes that peer engagement can improve recognition of errors during mathematical activity (Biton, 2025a). These processes give computational accuracy a practical route through review, discussion, and correction. Peer assessment can therefore strengthen accuracy by making error detection a shared learning task.

However, improvement in computational accuracy is not automatic in every peer assessment setting. Some studies note that learners may misjudge errors when their own mathematical understanding remains weak (Tai et al., 2023). This means inaccurate peer comments can sometimes confirm rather than correct a wrong answer. Other reports show that outcomes vary when assessment procedures are applied unevenly or without training (Arthur et al., 2024). Where guidance is

limited, students may focus on final answers without understanding the underlying calculations. Variation in effectiveness has also been reported across instructional settings using different peer assessment routines (Zulliger et al., 2022). These cautions suggest that computational gains depend on support, clarity, and student readiness. Accuracy can improve through peer assessment, but only when the process is carefully guided.

Use of Correct Mathematical Procedures

Another strong theme in the literature concerns the use of correct mathematical procedures during task solving. Studies link engagement with peer work to stronger attention to procedural steps in mathematics tasks (Biton, 2025a). During review, learners examine how an answer was reached rather than looking only at the final result. Other research also associates awareness of expected procedures with better judgement of solution steps (Ayalon & Wilkie, 2021). This attention is valuable because many mathematics tasks require correct method as well as correct answer. Rubric guided peer review has further been linked with improved application of correct procedures during tasks (Pericleous et al., 2025). These patterns show that peer assessment can direct learners toward procedural accuracy and discipline. The evidence therefore supports a positive contribution to correct mathematical procedures.

Repeated engagement with peer review may also strengthen procedural understanding over time. Studies on repeated participation report improvement in achievement among learners engaged in peer and self assessment (Baiduri, 2022). With continued exposure, students become more familiar with the sequence and logic of acceptable solution steps. Other literature also reports a positive relationship between peer assessment scores and academic performance in mathematics (Biton, 2025c). That relationship suggests that repeated review can help learners internalize appropriate methods more securely. Related classroom evidence further associates peer interaction with improved mathematics performance among school learners (Ngonche, 2020). These findings imply that procedural strength develops when students repeatedly judge how solutions are constructed. Peer assessment may therefore support correct procedures through repeated exposure to structured mathematical reasoning.

Yet, the literature also shows that procedural improvement depends strongly on the quality of

assessment criteria. Studies indicate that clear criteria help learners evaluate mathematical work more consistently during peer review (Chang et al., 2021). When criteria are vague, students may approve an answer even when the method is incorrect. Other authors also note that peer assessment increases awareness of expected standards and procedures (Ayalon & Wilkie, 2021). That awareness becomes useful only when learners can apply it accurately during judgement of peer solutions. Inconsistent use of criteria has further been linked with incorrect judgement of procedures in peer assessment (Double et al., 2020). These limits show that procedural gains are not automatic products of participation alone. Correct procedures improve more convincingly when review criteria are explicit and consistently used.

Implementation Conditions across Outcomes

Across all four outcomes, the reviewed studies show that implementation quality influences the strength of peer assessment effects. Several studies report limited improvement where classroom conditions weaken the assessment process itself (Zulliger et al., 2022). Such conditions include weak feedback, unclear criteria, uneven participation, and limited learner preparation. Other studies show stronger results where learner centred assessment is organized carefully and used consistently (Arthur et al., 2024). This contrast suggests that peer assessment is not effective merely because it is introduced into a lesson. Evidence shows that good feedback practices are necessary for meaningful peer judgement and learning support (Panadero et al., 2022). Implementation quality therefore acts as a bridge between the method and the learning outcomes discussed. Without that bridge, the contribution of peer assessment becomes less reliable and less visible.

A related issue is that the same classroom processes appear repeatedly across the four mathematics outcomes reviewed. Feedback exchange is repeatedly identified as a mechanism that improves correction and understanding during peer assessment (Panadero et al., 2022). Learner interaction also appears important because discussion opens space for clarification and shared reasoning. Other studies connect peer interaction with stronger cognitive processing and problem solving during mathematics learning (Double et al., 2020). Assessment criteria form another recurring process because they guide judgement and support fairness in evaluation. Research further emphasizes that criteria help learners judge peer work against agreed academic standards (Tai et al., 2023). These

shared processes explain why peer assessment can influence several learning outcomes at the same time. They also show that implementation quality must be considered in any interpretation of the review findings.

CONCLUSION

Peer assessment remains a meaningful classroom practice for strengthening mathematics learning outcomes among secondary school students. The reviewed literature supports positive links with test scores, problem solving ability, computational accuracy, and procedural correctness. These gains appear to develop through feedback exchange, learner interaction, and sustained attention to expected standards. Students benefit when they compare responses, explain errors, and judge work through clear assessment criteria. The review also shows that positive outcomes are strongest when teachers guide the process carefully. Weak feedback, unclear criteria, and limited preparation can reduce the value of peer assessment activities. For that reason, peer assessment should be treated as a guided instructional strategy rather than a simple classroom routine. When it is organized well, it offers practical support for stronger mathematics learning in secondary education.

REFERENCES

- Arthur, Y. D., Dogbe, C. S. K., & Asiedu-Addo, S. K. (2024). Enhancing performance in mathematics through motivation, peer assisted learning, and teaching quality: The mediating role of student interest. *Eurasia Journal of Mathematics, Science and Technology Education*.
- Ayalon, M., & Wilkie, K. J. (2021). Investigating peer-assessment strategies for mathematics pre-service teacher learning on formative assessment. *Journal of Mathematics Teacher Education*, 24, 399–426.
- Baiduri, B. (2022). Effect of self and peer assessments on mathematics learning achievement. *Al-Jabar: Jurnal Pendidikan Matematika*, 13(1), 13–21. <https://doi.org/10.24042/ajpm.v13i1.10731>
- Biton, Y. (2025). Learning mathematics through peer assessment: How can we assess something that we ourselves do not know how to solve? *Eurasia Journal of Mathematics, Science and Technology Education*, 21(1), em2557.
- Brignell, C., Wicks, T., Tomas, C., & Halls, J. (2019). The impact of peer assessment on mathematics students' understanding of marking criteria and their ability to self-regulate learning. *MSOR Connections*, 18(1), 46–55. <https://doi.org/10.21100/msor.v18i1.1019>
- Chang, D., Hwang, G.-J., Chang, S.-C., & Wang, S.-Y. (2021). Promoting students' cross-disciplinary performance and higher order thinking: A peer assessment-facilitated STEM approach in a mathematics course. *Educational Technology Research and Development*, 69, 3281–3306.
- Double, K. S., McGrane, J. A., & Hopfenbeck, T. N. (2020). The impact of peer assessment on academic performance: A meta-analysis of control group studies. *Educational Psychology Review*, 32(2), 481–509. <https://doi.org/10.1007/s10648-019-09510-3>
- Mawak, J. J., & Odulum, F. C. (2024). Effects of peer assessment strategy on students' attitude and achievement in mathematics in senior secondary schools. *Greener Journal of Educational Research*, 14(1), 17–26.
- Møllersen, K., & Micheron, D. (2025). The blind leading the blind? Filling the knowledge gaps by student peer assessment. *Journal of STEM Education: Innovations and Research*, 26(1), 32–37. <https://doi.org/10.63504/jstem.v26i1.2680>
- Ngonche, A. E. (2020). *Application of peer assessment approaches to teaching of mathematics: The effectiveness and learner perceptions* (Master's thesis).
- Panadero, E., Jonsson, A., & Botella, J. (2022). Effects of self-assessment and peer assessment on student learning: A meta-analysis. *Educational Research Review*, 37, 100484. <https://doi.org/10.1016/j.edurev.2022.100484>
- Patchan, M. M., Rambo-Hernandez, K. E., Deitz, B. N., & McNeill, J. (2022). Using peer assessment to improve middle school mathematical communication. *The Journal of Educational Research*, 115(2), 146–160.
- Pericleous, S., Tsolaki, E., Charalambides, M., & Panaoura, R. (2025). The impact of rubric-guided peer review and self-assessment in an engineering math university course. *Education Sciences*, 15(11), 1433. <https://doi.org/10.3390/educsci15111433>
- Tai, J., Ajjawi, R., Boud, D., Dawson, P., & Panadero, E. (2023). Developing evaluative judgement: Enabling students to make decisions about the quality of work. *Assessment & Evaluation in Higher Education*, 48(1), 1–15.

<https://doi.org/10.1080/02602938.2022.2038958>

- Ukobizaba, F., Nizeyimana, G., & Mukuka, A. (2021). Assessment strategies for enhancing students' mathematical problem-solving skills: A review of literature. *Eurasia Journal of Mathematics, Science and Technology Education*, 17(3), em1945.
- Veuillez-Mainard, J., & Modeste, S. (2023). *Évaluation entre pairs en mathématiques: activité*

d'étudiant·es lors d'évaluations de preuves (arXiv:2310.17213). arXiv.

<https://doi.org/10.48550/arXiv.2310.17213>

- Zulliger, S., Buholzer, A., & Ruelmann, M. (2022). Observed quality of formative peer and self-assessment in everyday mathematics teaching and its effects on student performance. *European Journal of Educational Research*, 11(2), 663–680.