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# The Role of Peer Review in Enhancing Understanding of Domain Class Diagrams for Information Systems Undergraduates

**Elvin Khoirunnisa**
Universitas Bina Nusantara, Indonesia
Email: elvin.khoirunnisa@binus.ac.id

*Correspondence: elvin.khoirunnisa@binus.ac.id

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**ABSTRACT**

This study explores the use of peer review as a pedagogical strategy to improve undergraduate students' understanding of domain class diagrams in an Information Systems course. The research examines students' experiences and perceptions of peer feedback during a domain class diagram modeling task. Quantitative data were collected through a Likert-scale survey, while qualitative insights were gathered from open-ended responses. Findings show that students generally perceived peer review as beneficial for reinforcing conceptual understanding, promoting critical thinking, and identifying modeling errors. Most students rated the clarity, usefulness, and educational value of peer feedback highly, especially in supporting their comprehension of object-oriented principles. Students also reported gaining diverse perspectives, improving soft skills such as giving and receiving feedback, and deepening their understanding through observation and reflection. The study concludes that peer review can be a valuable learning tool in technical modeling contexts when accompanied by clear rubrics, guidance, and reflective practice.

## INTRODUCTION

Understanding how to perform system analysis and design accurately is a fundamental skill for students in Information Systems (IS) programs, as emphasized in accreditation standards such as ABET (ABET, 2024). Competence in modeling—particularly in creating class diagrams—prepares students for real-world systems analysis development tasks and reinforces their readiness for professional practice. The class diagram is a component of the Unified Modeling Language (UML) that represents classes (collections of objects/things) and the relationships between them. A class diagram that contains only classes from the problem domain is called a domain model class diagram (J. Satzinger et al., 2015; J. W. Satzinger et al., 2015) However, despite its significance, many students face persistent challenges in mastering this topic. Common difficulties include accurately identifying and modeling relationships (such as associations and aggregations), correctly applying generalization (inheritance), and properly abstracting real-world entities into classes (Alturas, 2023; Apostol et al., 2024; Ciesla, 2021; Faitelson & Tyszberowicz, 2017; Shmallo & Short, 2020). A lack of competence in

modeling skills often leads to error-prone software designs, which may have negative implications for the software development industry as students enter the professional workforce (R. Kaur et al., 2023).

In response to these challenges, pedagogical strategies and constructive approaches should be adopted by IS educators to enhance students' engagement and deepen their understanding of complex topics such as software modeling. One pedagogical strategy is student peer review. In this paper, student peer review is also referred to as peer review, peer assessment, or peer evaluation, where students evaluate each other's work based on predefined criteria, providing constructive feedback and reflecting on their own understanding in the process. Compared to traditional teacher-centered instruction, which often restricts interaction to feedback provided solely by the instructor, peer review can be an alternative for student-centered learning, where students actively participate in the learning process (Serrano-Aguilera et al., 2021).

Previous research has highlighted the benefits of peer review in educational contexts. Reddy et al. (2021) identified student peer review as a collaborative dialogue that fosters knowledge creation, enabling deeper understanding and enhanced critical thinking. Similarly, Li et al. (2020) underscored the effectiveness of peer review as a pedagogical strategy within higher education, emphasizing its potential to support active learning and student engagement. Furthermore, Indriasari et al. (2020) provided a systematic review of gamification in peer review, finding that while gamification generally enhances student engagement, critical aspects such as reflection on feedback remain underexplored, suggesting areas for future research. To investigate the impact of peer review, A. Attarwala & K. Tian (2023) used a statistical framework to examine the peer review's impact on programming performance. Findings from this approach provide valuable insights into the effectiveness of peer review as a pedagogical tool.

In higher education, peer review has been widely adopted across various courses to support learning and skill development. For instance, Wallace et al. (2020) found that peer review, supported by coaching, improved student preparation and assignment quality in an undergraduate Health Science course. Empirical evidence from a Spanish university also shows strong alignment between peer and instructor evaluations and improved student performance in STEM disciplines (Serrano-Aguilera et al., 2021). Similarly, Finkenstaedt-Quinn et al. (2024) explored students' perceptions of peer review in an organic chemistry course, finding that structured assignment materials guided their review and revision processes. In another example, Hsieh et al. (2024) further investigated the impact of different peer review modes on an undergraduate writing course and found that peer review enhances students' writing performance. In creative fields such as architecture, Ardill (2025) explored university students' perceptions of peer review activities and found that peer reviews are appreciated as a dialogic feedback tool that promotes independent learning while significantly strengthening critical thinking and self-reflection skills.

## RESEARCH METHODS

To address the research questions above, a structured peer review activity was implemented in an Advanced Systems Analysis and Design course for second-year Information Systems undergraduates at a private university in Indonesia. A mixed-methods approach was adopted, combining a Likert-scale questionnaire to capture students' perceptions and self-reported learning outcomes, with open-ended questions to gather rich qualitative insights. Furthermore, the content of peer feedback was analyzed to identify recurring modeling issues and evaluate the quality of feedback (e.g., whether it was constructive or unhelpful).

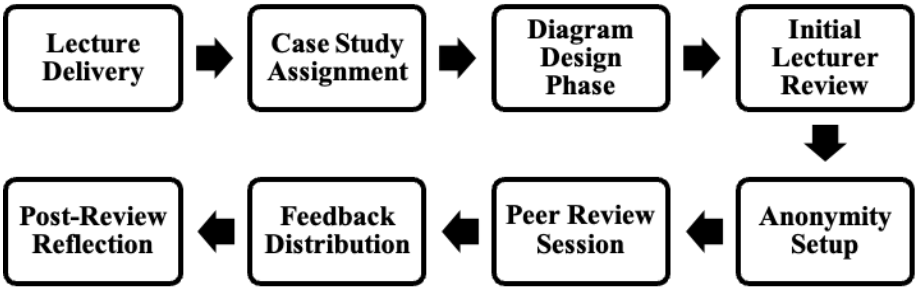


**Figure 1 Peer Review Activity Flowchart**

The peer review process was structured as a systematic approach to enhance students' understanding of *domain class diagrams* and develop critical academic skills, as shown in Figure 1. It began with the *Lecture Delivery* phase, during which the instructor imparted foundational knowledge on *domain class diagram* concepts, establishing the theoretical basis necessary for subsequent activities.

Following this, students engaged in a *Case Study Assignment*, where they received a real-world business scenario and formed collaborative groups of up to five members. This grouping fostered teamwork and collective problem-solving, essential competencies in *Information Systems* education.

During the *Diagram Design Phase*, groups applied their acquired knowledge by designing and submitting *domain class diagrams* within a one-week timeframe. This practical exercise encouraged active learning and reinforced conceptual understanding through hands-on experience.

The *Initial Lecturer Review* served as a quality control checkpoint, where the lecturer checked submissions. Subsequently, *peer review pairings* were assigned, facilitating reciprocal evaluation among student groups.

To promote objectivity and minimize potential bias, an *Anonymity Setup* was implemented, where each group was assigned a unique *Reviewer ID* and *Reviewee ID* to maintain anonymity throughout the process. *Anonymity* is an optimal solution to prevent students from fearing that their feedback might negatively affect peers, as such fear can demotivate their participation in *peer reviews* (Tornwall et al., 2022). *Anonymous peer assessment* has been shown to enhance students' perceptions of the learning value of peer

evaluation and to encourage more honest and critical feedback (Panadero & Alqassab, 2019).

In the *Peer Review Session*, each group critically assessed another group's diagram using a structured *peer review form* and *rubric*. The review emphasized key elements such as diagram structure, relationships, naming conventions, and alignment with the case study requirements.

Following peer evaluations, *Feedback Distribution* occurred, wherein original groups received anonymized feedback and were encouraged to reflect critically on the insights provided. This reflection phase supported *metacognitive* development and continuous improvement. The process concluded with a *Post-Review Reflection*, during which all students were invited to complete a survey reflecting on their experiences in both roles—*reviewer* and *reviewee*. The survey data collection period for this study spanned from March 26 to May 2, 2025.

## RESULTS AND DISCUSSION

As mentioned in research method section, this study employs a mixed methods approach to address the stated research questions and objectives. The quantitative component utilizes Likert-scale questions (1–5 scale) to capture students' perceptions of the peer review process in supporting their understanding of domain class diagrams. The qualitative component, through open-ended questions, explores the challenges experienced by students during peer review and gathers constructive feedback to improve the effectiveness of the process.

Data were collected anonymously via an online survey administered through Microsoft Forms, consisting of two demographic questions, ten Likert-scale questions, and two open-ended questions. The Likert-scale items focused on students' perspectives regarding the quality of feedback received, usefulness, comprehension, experience, and intention to recommend the peer review process. The open-ended questions invited students to reflect on which aspects of the peer review process were perceived as most beneficial, as well as to provide suggestions for improving the overall implementation. A total of 89 responses were collected. This number is considered sufficient for the purposes of a case study-based investigation.

### 1. Respondents Profile

The demographic profile of the 89 respondents (N = 89) who participated in this study is categorized based on gender and class group. As illustrated in Figure 2, there is a noticeable gender disparity among the respondents, with 65% identifying as male and 35% as female—reflecting the limited participation of women within that cohort of the Information Systems program. Respondents were also categorized by class group: LK11 and LI11. The distribution between these groups is relatively balanced, with 51% from LK11 and 49% from LI11. Both class groups were enrolled in the same course, received identical instructional materials, and engaged in the same peer review activities under the guidance of the same lecturer.

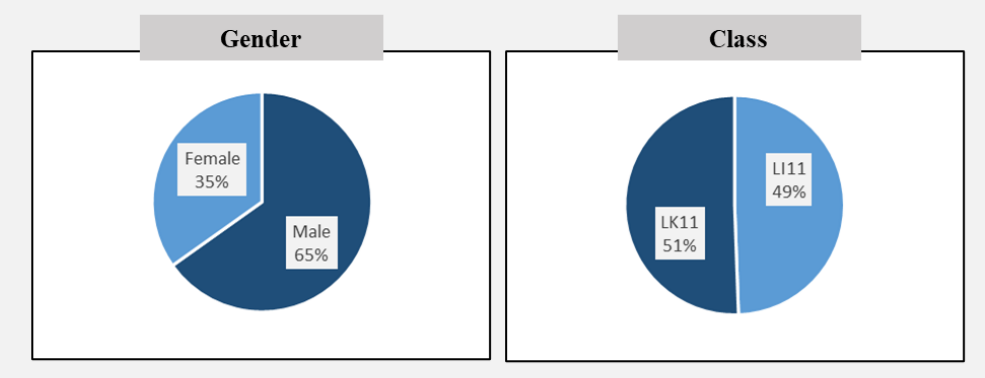


**Figure 2 Demographic distribution of the 89 student respondents by gender and class group**

## 2. Students' Perceptions of the Peer Review Process in Supporting Their Understanding of Class Diagrams

### a. Descriptive Statistics

The results of the Likert scale questions were analyzed using the mean and standard deviation to identify the general tendency of students' perspectives as well as the degree of homogeneity in their responses. As previously mentioned, students' views on the peer review process were assessed across five key aspects: the quality of feedback received, perceived usefulness, comprehension, overall experience, and their intention to recommend the peer review process.

### b. Quality of Feedback Received

The aspect of feedback quality received by students during the peer review process was assessed using a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). This aspect was measured through three questions, with the results presented as follows.

**Table 1. Students' perceptions of the quality of feedback received during peer review**

| Question | Mean | Standard Deviation |
|---|---|---|
| Was the feedback you received clear and easy to understand? | 4,101 | 0,675 |
| Did the feedback help you understand your mistakes and areas for improvement? | 4,101 | 0.622 |
| Did the reviewer provide specific input rather than just general comments? | 3,976 | 0.707 |

Based on Table 1 above, the mean score of 4.101 indicates that the majority of students agreed that the feedback they received was clear, easy to understand, and helpful in identifying mistakes and areas for improvement. However, for the third question, the mean score of 3.976 suggests that, on average, students held a more neutral view regarding whether reviewers provided specific input rather than general

comments. This finding highlights a potential area for improvement, suggesting the need for more targeted and detailed feedback in future peer review activities.

In terms of standard deviation, all items yielded values between 0 and 1, indicating that respondents' answers were consistent and relatively homogeneous, with most responses clustering around the mean.

### c. Perceived Usefulness

The perceived usefulness of the peer review process experienced by students, was assessed using a 5-point Likert scale, ranging from 1 (not useful) to 5 (very useful). This aspect was measured through a single question, with the results presented as follows.

**Table 2 Descriptive Statistics of Student Perceptions of Feedback Usefulness in Peer Review**

| Question | Mean | Standard Deviation |
|---|---|---|
| How useful was the feedback you received in helping you improve your class diagram? | 4,034 | 0,730 |

Based on table above, the mean score of 4.034 indicates that the majority of students agreed that the feedback they received was useful in helping them improve their class diagrams. The standard deviation, which falls within the range of 0 to 1, suggests that respondents' answers were consistent and homogeneous, with most responses concentrated around the mean value.

### d. Comprehension

The aspect of student's comprehension during the peer review process was assessed using a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). This aspect was measured through three questions, with the results presented as follows.

**Table 3 Descriptive Statistics of Students' Comprehension During the Peer Review Process**

| Question | Mean | Standard Deviation |
|---|---|---|
| Did you feel you had sufficient understanding to provide feedback to your peer? | 4,045 | 0,638 |
| Do you feel that the feedback you gave was truly helpful to your peer? | 4,045 | 0.619 |
| Did this peer review session help you better understand the concept of class diagrams? | 4,089 | 0.615 |

Based on Table 3 above, the mean score of 4.045 indicates that the majority of students agreed that they had sufficient understanding to provide feedback to their peers and that the feedback they provided was helpful. Furthermore, most students also

agreed that the peer review sessions contributed to a better understanding of class diagram concepts, as reflected in a slightly higher mean score of 4.089.

The standard deviation for all items falls within the range of 0 to 1, indicating that the responses were consistent and homogeneous, with the majority of students' answers concentrated around the mean.

**e. Experience**

The aspect of student's experience of peer review process was assessed using a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). This aspect was measured through two questions, with the results presented as follows.

**Table 4 Descriptive Statistics of Students' Experience with the Peer Review Process**

| Question | Mean | Standard Deviation |
|---|---|---|
| Did you feel comfortable receiving criticism and suggestions from your peer? | 4,045 | 0,638 |
| Was the peer review process conducted objectively and fairly? | 4,034 | 0.698 |

Based on Table 4 above, the obtained mean score of 4.045 indicates that the majority of students agree that they feel comfortable receiving feedback and suggestions from their peers. Most students also agree that the peer review session was conducted objectively and fairly, as reflected by the mean score of 4.034.

Based on the standard deviation values, all questions fall within the range of 0 to 1, indicating that the respondents' answers are consistent and homogeneous, with the majority responding around the average score.

**f. Recommendation**

The aspect of student's intention to recommend the peer review process was assessed using a 5-point Likert scale, ranging from 1 (strongly not recommend) to 5 (strongly agree). This aspect was measured through a single question, with the results presented as follows.

**Table 5 Students' Willingness to Recommend Peer Review for Future Learning**

| Question | Mean | Standard Deviation |
|---|---|---|
| Would you recommend peer review as a learning method for students in the future? | 3,517 | 1,226 |

Based on Table 5 above, the obtained mean score of 3.517 indicates that the majority of students hold a neutral view or are somewhat reluctant to recommend peer review as a learning method for future students. This finding highlights a potential area for improvement, warranting further investigation into the factors that influence students' opinions on recommending peer review as a learning approach.

The standard deviation value of 1.226, which exceeds 1, indicates a high degree of variability in the respondents' answers, suggesting a lack of uniformity in their opinions. This means that student responses were widely distributed, ranging from strongly not recommending to strongly recommending the peer review method.

**g. Top Two Box Analysis**

To further support the results of the previously presented descriptive statistics, a Top Two Box analysis was conducted to gain a more detailed understanding of the proportion of respondents who provided positive responses. This method focuses on the top two highest categories on the Likert scale. Responses rated as 4 (agree/recommend) and 5 (strongly agree/strongly recommend), which are generally interpreted as indicators of favorable sentiment. By analyzing these two categories, the Top Two Box approach offers deeper insights into the extent of positive perception among respondents toward the peer review process.

**Quality of Feedback Received**

The proportion of respondent's answer regarding the aspect of the quality of feedback received can be seen in Figure 3.

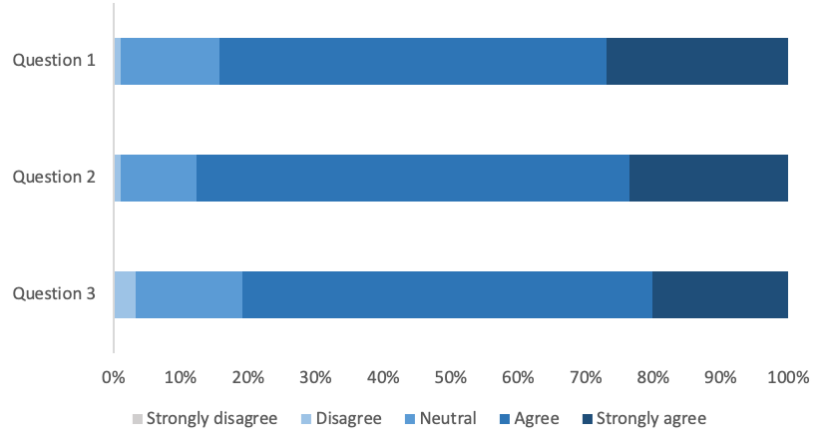


**Figure 3 Proportion of responses regarding the quality of feedback received during the peer review process.**

The chart illustrates that the majority of respondents have positive responses with all statements related to the quality of feedback received during the peer review process. Further details on the distribution of responses can be found in the following table.

**Table 6 Distribution of responses and Top Two Box analysis for quality of feedback received.**

| Question | Likert Score | | | | | Top Two Box |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | |
| 1. Was the feedback you received clear | 0% | 1% | 15% | 57% | 27% | 84% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | and easy to understand? | | | | | | |
| 2. | Did the feedback help you understand your mistakes and areas for improvement? | 0% | 1% | 11% | 64% | 24% | 88% |
| 3. | Did the reviewer provide specific input rather than just general comments? | 0% | 3% | 16% | 61% | 20% | 81% |

Based on Table 6 above, the majority of respondents provided positive evaluations regarding the quality of feedback received during the peer review process. A total of 84% of respondents indicated that the feedback provided was clear and easy to understand, while 88% felt that the feedback helped them identify mistakes and areas for improvement. Additionally, 81% of respondents stated that the reviewers offered specific input rather than merely general comments. These findings are consistent with previous results, which suggest that, overall, the peer review process has been effective in delivering constructive and comprehensible feedback. Nevertheless, the aspect of comment specificity still presents an opportunity for improvement, in order to ensure that the feedback provided is more targeted and in-depth.

**Perceived Usefulness**

The proportion of respondent's answer regarding the perceived usefulness of peer review process can be seen in Figure 4.

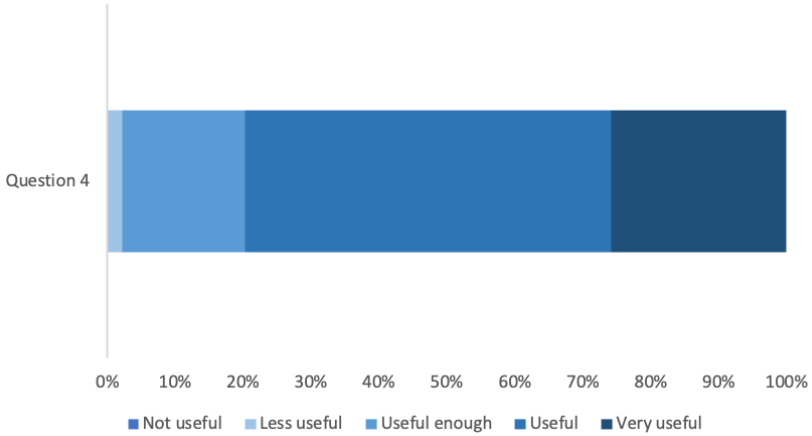


**Figure 4 Proportion of responses regarding the perceived usefulness of peer feedback.**

The chart illustrates that the majority of respondents have positive responses with all statements related to usefulness of peer review process. Further details on the distribution of responses can be found in the following table.

**Table 7 Distribution of Responses and Top Two Box analysis for perceived usefulness**

| Question | Likert Score | | | | | Top Two Box |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | |
| 4. How useful was the feedback you received in helping you improve your class diagram? | 0% | 2% | 18% | 54% | 26% | 80% |

Based on Table 7 above, the majority of respondents gave a positive assessment of the usefulness of the peer review process. A total of 80% of respondents indicated that the feedback they received was helpful in improving their class diagrams. This finding aligns with previous results, which suggest that the peer review process has generally succeeded in contributing meaningfully to students' understanding and improvement of their work. However, there remains room for enhancement in this aspect, as the proportion of positive responses has not yet reached a notably high level. Therefore, further investigation may be warranted to identify strategies that could enhance students' perceptions of the usefulness of feedback, ensuring that the input provided through the peer review process can be more effectively leveraged to support improvements in learning outcomes.

## Comprehension

The proportion of respondent's answer regarding the comprehension on peer review process can be seen in Figure 5.

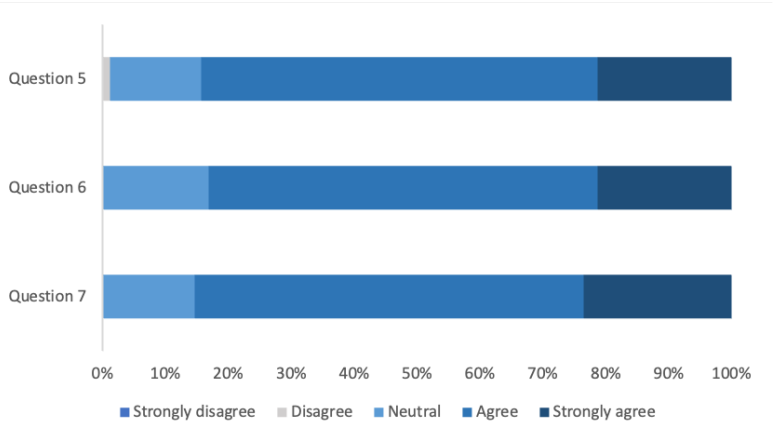


**Figure 5 Proportion of responses regarding comprehension of the peer review process.**

The chart illustrates that the majority of respondents have positive responses with all statements related to student's comprehension on peer review process. Further details on the distribution of responses can be found in the following table.

**Table 8 Distribution of Responses and Top Two Box analysis for the comprehension related questions.**

| Question | Likert Score | | | | | Top Two Box |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | |
| 5. Did you feel you had sufficient understanding to provide feedback to your peer? | 0% | 1% | 15% | 63% | 21% | 84% |
| 6. Do you feel that the feedback you gave was truly helpful to your peer? | 0% | 0% | 17% | 62% | 21% | 83% |
| 7. Did this peer review session help you better understand the concept of class diagrams? | 0% | 0% | 15% | 62% | 24% | 85% |

Based on Table 8 above, the majority of respondents provided positive evaluations regarding their understanding of the peer review process. A total of 84% of respondents reported feeling confident in their knowledge when assessing their peers' work, while 83% believed that the feedback they provided was useful and contributed to the improvement of their peers' work. Additionally, 85% of respondents stated that the peer review sessions helped them gain a better understanding of the class diagram concept. These findings are consistent with previous results, which indicated that the implementation of peer review generally has a positive impact on students' conceptual understanding of class diagrams, both in their roles as feedback providers and recipients.

## Experience

The proportion of respondent's answer regarding experience on peer review process can be seen in Figure 6.

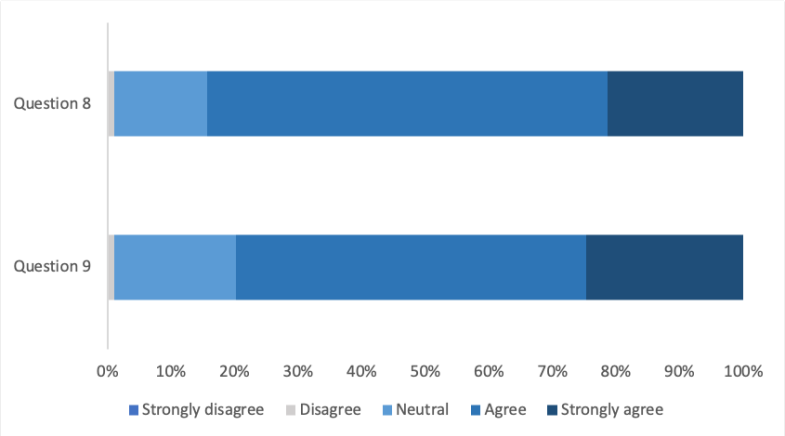


**Figure 6 Proportion of responses regarding overall experience in the peer review process.**

The chart illustrates that the majority of respondents have positive responses with all statements related to experience during the peer review process. Further details on the distribution of responses can be found in the following table.

**Table 8 Distribution of responses and Top Two Box analysis for peer review experience.**

| Question | Likert Score | | | | | Top Two Box |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | |
| 8. Did you feel comfortable receiving criticism and suggestions from your peer? | 0% | 1% | 15% | 63% | 21% | 84% |
| 9. Was the peer review process conducted objectively and fairly? | 0% | 1% | 19% | 55% | 25% | 80% |

Based on Table 9 above, the majority of respondents reported having a positive experience during the peer review process. A total of 84% of respondents felt comfortable receiving critiques and suggestions from their peers, indicating that most students demonstrate openness to feedback—an essential element in fostering a collaborative and reflective learning environment. Furthermore, 80% of respondents stated that the peer review process was conducted objectively and fairly, reflecting a relatively high level of trust in the integrity and equity of the activity. Overall, these findings align with previous results, which suggest that students generally have a positive experience participating in peer review, both in terms of their comfort in receiving feedback and their perception of the fairness of the process.

## Recommendation

The proportion of respondent's answer regarding the intention to recommend peer review process can be seen in Figure 7.

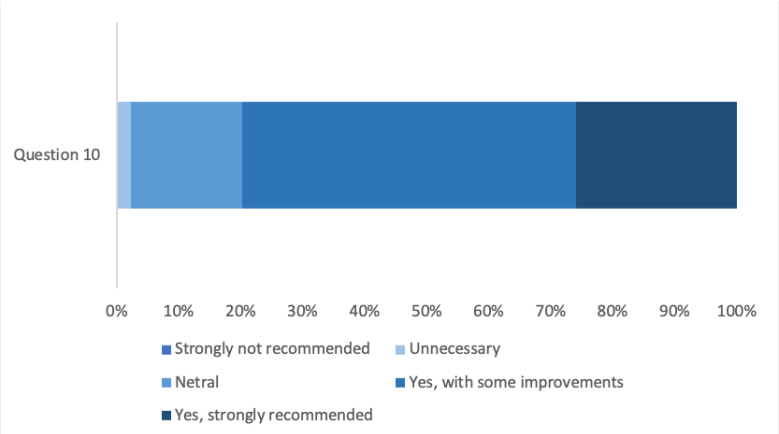


**Figure 7 Proportion of responses regarding recommendation intention for the peer review process.**

The chart illustrates that the majority of respondents have positive responses with all statements related about intention to recommend peer review process. Further details on the distribution of responses can be found in the following table.

**Table 9 Distribution of responses and Top Two Box analysis for recommendation intention**

| Question | Likert Score | | | | | Top Two Box |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | |
| 10. Would you recommend peer review as a learning method for students in the future? | 7% | 10% | 39% | 12% | 31% | 44% |

Based on Table 10 above, the data indicate that only 44% of respondents gave a positive assessment regarding their willingness to recommend the implementation of peer review in the future. Overall, this finding is consistent with previous results, which suggest that although some students feel comfortable with the peer review process, their confidence in recommending the activity to others remains relatively low. This low score may reflect experiences that were not entirely positive or a perception that the benefits gained were not significant. Therefore, this aspect warrants particular attention for further evaluation, especially in terms of enhancing the quality of the experience, the perceived benefits, and the clarity of the peer review's objectives.

**3. Student's Feedback Regarding the Peer Review Process**

**a. The Beneficial Aspect of the Peer Review Process According to Students**

Based on the students' responses presented in Table 11, three key impacts of the peer review process were most frequently mentioned as beneficial. The first was the benefit of identifying and correcting errors in assignments, which enabled students to make improvements. In detail, the first aspect highlighted by students was the opportunity to identify and correct errors in their assignments. The second aspect perceived as beneficial was the peer review activity encouraged the delivery of constructive and high-quality feedback. In addition, peer review fosters critical thinking skills, enhances the ability to exchange ideas, and helps students become more open and receptive to constructive feedback. The third aspect found beneficial by the majority of students was that the peer review process served as a platform for learning and the chance to gain diverse perspectives from peers.

Through this process, students received objective evaluations, which allowed them to identify the strengths and weaknesses of their work more comprehensively based on others' viewpoints. Through active involvement and reviewer's perspective, students gained opportunities to assess and deepen their understanding of class diagram concepts, particularly when they were required to explain or provide feedback on their peers' work.

This process also supports learning by observing, where students learn indirectly by seeing others' thought processes, problem-solving approaches, and the quality of their peers' work. Such exposure enriches their comprehension of the subject matter and encourages reflection on their own work. Furthermore, this process not only facilitates improvements but also serves as a form of validation and enhances the credibility of the work prior to finalization or publication, thereby enabling students to make meaningful revisions.

**Table 10 Themes, Frequency of Mentions, and Representative Statements from Student Feedback**

| Theme | Frequency | Representative Statements |
|---|---|---|
| Identifying own mistakes | 19 | "It is very useful to know our mistakes or shortcomings." |
| Constructive feedback | 18 | "Feedback helped us realize unclear parts of our answer." |
| Learning from peers/ Gaining others' perspectives | 15 | "I got new insights from how my classmates answered the same questions." "I learned by observing how others approached the task." |
| Clarity, gaining more understanding, and quality improvement | 14 | "It improved the structure and clarity of our final work." "Improves comprehension" |
| All aspects of peer review are beneficial | 6 | "All aspects were very beneficial to me." |
| No input / unclear responses | 17 | "–" / "NA" |

**b. Suggestions and Feedback Related to the Peer Review Process**

Based on the students' response, although the majority of students felt that the peer-review process provided significant benefits, several challenges emerged during its implementation. Some students reported that the feedback provided by their peers lacked relevance or was insufficiently detailed in explaining the shortcomings of their work. Concerns were also raised about the need to improve transparency and reduce bias.

To address these challenges, several suggestions were proposed. First, students recommended that feedback be more detailed to ensure it is easier for recipients to understand and implement. Second, they called for greater transparency in the peer review process, including the provision of training for reviewers to help them provide constructive and relevant feedback.

It was also recommended that brief training be offered on how to deliver respectful and constructive criticism, to ensure evaluations are fair and objective. Moreover, providing clearer guidelines for giving feedback would help reviewers be more focused and systematic in their evaluations. Additional time for discussion between reviewers and reviewees was also suggested, allowing feedback to be explained more thoroughly and enabling clearer clarification and fostering a deeper understanding of the feedback. This face-to-face session was not implemented due to

time constraints, highlighting the challenge of balancing structured peer review with limited available time.

## CONCLUSION

Based on the analysis conducted through both quantitative and qualitative methods, it can be concluded that students generally hold a positive perception across nearly all aspects, including the quality of feedback received, its perceived usefulness, comprehension, and overall experience. This indicates that the majority of students find the *peer-review* process beneficial, providing valuable feedback and supporting their understanding of *domain class diagrams*.

Students generally viewed the *peer review* process as highly beneficial in three key areas: identifying and correcting errors in their work, gaining diverse perspectives from peers, and fostering personal learning and skill development—especially in understanding *class diagrams* and enhancing critical thinking. The process also promoted *collaborative learning* and the ability to give and receive constructive feedback. Importantly, *peer review* has shifted the learning paradigm away from teacher-centered instruction and promotes a more dynamic, *student-centered learning* environment. Respondents also highlighted the importance of improving transparency and minimizing bias in the review process. To further enhance the effectiveness of the *peer-review* process, several improvements could be considered, such as facilitating face-to-face sessions between *reviewers* and *reviewees*.

This study offers valuable insights but is not without limitations. The reliance on self-reported data from students introduces the possibility of subjectivity and bias influenced by individual experiences, peer dynamics, or recent events. Future research could incorporate qualitative interviews to contextualize survey responses and explore the impact of *peer review* in varied *academic settings* and instructional formats.

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