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REVIEWER'S REPORT

Manuscript No.: IJAR-50341

Date: 19.02.25

Title: A COMPARATIVE STUDY OF EFFECTIVENESS OF TWO DIFFERENT TEACHING METHODS SEMINAR & A MODIFIED FORM OF GROUP DISCUSSION (JIGSAW TECHNIQUE)

Recommendation:

- Accept as it is
- Accept after minor revision.....Yes.....
- Accept after major revision
- Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		√		
Techn. Quality		√		
Clarity			√	
Significance		√		

Reviewer Name: Dr. Jyotika Singh

Date: 19.02.25

Reviewer's Comment for Publication.

(To be published with the manuscript in the journal)

The reviewer is requested to provide a brief comment (3-4 lines) highlighting the significance, strengths, or key insights of the manuscript. This comment will be Displayed in the journal publication alongside with the reviewers name.

The manuscript presents a valuable comparative analysis of seminar-based learning and the Jigsaw technique, highlighting the latter's effectiveness in enhancing student engagement, retention, and knowledge acquisition. The study's rigorous methodology, including pre- and post-tests, strengthens its findings. The insights on student perceptions and the practical implications for medical education make this research particularly relevant for improving teaching-learning strategies.

Rationale for minor revision: The study is well-structured with a clear objective, methodology, and statistically sound results, offering valuable insights into teaching-learning methods. However, minor revisions are needed for clarity, grammar, and consistency. Some sentences require restructuring for readability, and terminology should be standardized (e.g., consistent use of "Jigsaw technique"). Additionally, gender-neutral language should replace "his subtopic." These refinements do not impact the core findings but will enhance professionalism and clarity. Hence, acceptance is recommended after minor revision.

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Detailed Reviewer's Report

Introduction

This study evaluates the effectiveness of two teaching methodologies—seminars and a modified form of group discussion (Jigsaw technique)—in enhancing student learning. The shift from traditional teacher-centred approaches to student-centred methods is emphasized, with the objective of determining which method is more effective for medical students. The Jigsaw technique, which promotes active learning and peer teaching, is compared to seminars, which focus more on structured presentations and discussion.

Methodology

The study follows a quasi-experimental design conducted among second-year MBBS students at a private medical institution in South Kerala. Institutional Ethics Committee clearance was obtained before the study. Forty students were divided into two groups using convenient sampling: Group I (Seminar) and Group II (Modified Group Discussion). Both groups were provided with reading materials two weeks before the session and took a pre-test. Group II was further divided into sub-groups for the Jigsaw technique, where students first discussed specific topics in small groups and later reassembled to share knowledge. Post-tests were conducted after each session, and feedback forms were collected to assess students' perceptions of the methods used. Statistical analysis was performed using SPSS-20, employing the paired t-test to measure knowledge improvement.

Results

Statistical analysis demonstrated significant improvement in knowledge for both groups. Group I (Seminar) showed a t-value of 7.401 and a p-value < 0.001 , indicating knowledge gain. However, Group II (Jigsaw technique) showed a higher t-value of 16.327 and a p-value < 0.001 , signifying a more substantial impact on learning. From pre-test results, only 10% of students in Group I scored above 10 marks. Post-test results revealed an improvement to 40% in Group I, while in Group II, 80% scored above 10 marks. Student feedback suggested that 70% found the Jigsaw method more engaging, 62.5% reported better understanding, 72.5% experienced better retention, and 80% felt more involved. However, 75% of students found it more time-consuming compared to seminars.

Discussion

The findings highlight that the Jigsaw technique is more effective in promoting active participation, better retention, and improved understanding compared to traditional seminars. While seminars provide a structured approach, they may not engage all students equally. The Jigsaw technique ensures that every participant plays an active role in both learning and teaching, reinforcing the idea that "to teach is to learn twice." This method also fosters peer interaction and enhances communication skills, which are critical for medical students.

However, despite its benefits, the Jigsaw technique demands more resources, including time, materials, and trained facilitators, which can be a limitation in large classrooms. Moreover, some students might struggle with self-directed learning, potentially impacting their knowledge acquisition.

Strengths

1. The study provides a direct comparison between two widely used teaching methods.
2. Statistical analysis supports the findings, demonstrating the effectiveness of the Jigsaw technique.
3. The study incorporates student feedback, offering valuable insights into their learning experiences.
4. It highlights an innovative teaching strategy that can be adapted in medical education.

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Limitations

1. The sample size of 40 students is relatively small, limiting the generalizability of the results.
2. The study relies on convenient sampling, which may introduce selection bias.
3. The study focuses only on short-term knowledge retention; long-term effects remain unexplored.
4. Resource constraints, such as time and trained facilitators, may affect the feasibility of large-scale implementation.

Conclusion

The study concludes that the Jigsaw technique is a highly effective student-centered teaching-learning method compared to traditional seminars. While seminars enhance presentation skills, the Jigsaw technique fosters active learning, better retention, and deeper subject understanding. Both methods contribute to knowledge enhancement, but the Jigsaw technique shows superior effectiveness in engaging students.

Recommendations

1. Institutions should consider incorporating the Jigsaw technique into medical education to improve student engagement and retention.
2. Faculty members should receive training on implementing structured group discussions to maximize their effectiveness.
3. Future studies should assess the long-term impact of Jigsaw learning on knowledge retention and clinical application.
4. Additional resources, such as structured guidelines, facilitator training, and evaluation tools, should be developed to support the implementation of the Jigsaw technique.

Final Thoughts

This study provides valuable evidence supporting the use of the Jigsaw technique in medical education. While challenges such as resource constraints exist, the potential benefits for student engagement, knowledge retention, and skill development make it a promising alternative to traditional seminar-based learning. Further research and structured implementation can help refine this approach for broader adoption in medical curricula.

Thank You