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Aim of NIJ

To publish high-quality original research articles in the field of nursing that are novel and innovative in their findings that make substantial theoretical and practical advances in the nursing profession.

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From the Editorial's desk: "Need for innovations in nursing research approach for holistic health outcomes."

It is with great pleasure to present the current issue of the Nursing Innovators Journal (NIJ), an open-access, double-blinded, peer-reviewed international journal. NIJ brings together a diverse collection of scholarly research work from nursing that reflects the contemporary development, emerging evidence, and evidence-based practices within the fields of community health nursing, mental health nursing, obstetrical gynecological nursing, pediatric nursing, and medical surgical nursing in health sciences.

The present issue of the journal is unified by a central theme on innovations in nursing research, its interventions for holistic health outcomes, emphasizing the critical role of innovative educational strategies, evidence-based interventions, and holistic nursing care in addressing contemporary health challenges across the lifespan. The articles in this issue explore diverse dimensions of nursing practices, ranging from child and adolescent health, maternal and family care, clinical and surgical nursing, to elderly care from various nursing specialities. This issue highlights the impact of structured teaching programs, simulation-based learning, and evidence-based practice in achieving nursing excellence. Overall, these contributions pointed out the importance of preparing a competent, ethical, and empowered nursing workforce capable of responding to evolving healthcare needs at both national and global levels.

Recently, around the world, rapid changes are happening, from rising incidence of non-communicable diseases to unprecedented rises in mental health issues to the increased global life expectancy up to 74.5 years for males and 79.1 years for females in 2050, as projected by the United Nations. And from war-conflict-ridden countries, humanitarian crises, and greying populations to the latest developments in artificial intelligence and research advancements around the world, the scope for the caring science of nursing is huge. Conducting relevant nursing research that addresses such societal changes and issues through innovative research with a strong ethical background is a glaring need. Finding such articles has become an essential step in the dissemination of nursing research in today's academic journal world.

The concern rises when the nursing research is done for the sake of doing it, while innovation and methodological rigor are given a miss. With the threat for plagiarize content, and AI content mixed with it, the originality in research articles needs to be under strict scrutiny nowadays. As a nurse innovator, novelty must stay humane and use digital technology ethically and appropriately. The nursing researchers must be wary and alert to the lure of unethical research conduct in any form. The world is changing, with ever-evolving health care demand. Let's us put-up a discerning bird-eye view, and act to match the evolving researchable gaps beat by beat with humane innovations of caring that are culturally inclusive and sustainable ways. The need for conducting good, honest, need-based, innovative nursing research is a nonnegotiable and palpable fact.

NIJ and its editorial board are committed to providing genuine content for the readers that is based on authentic and original research and academic expertise. We ensure this commitment through our double-blinded peer-reviewed process and stringent SOP editorial process to bring out the issue of high-quality academic research based on methodology rigor and its findings for the profession and public at large.

The views and opinions expressed in the published articles are solely those of the authors and do not necessarily reflect the views of the editor, editorial board, publisher, or affiliated institutions. The journal assumes no responsibility for any consequences arising from the use of the published content. On behalf of the editorial team, I extend our sincere appreciation to all contributors and readers for their continued support.

Warm regards.

Prof. Laishangbam Bijayalakshmi Devi

Editor, Nursing Innovators Journal, MKSSSBTINE, Pune

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"Comparison of Jigsaw Versus Lecture Methods as Teaching Strategy on Nursing Students' Knowledge of Ulcerative Colitis."

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Abstract: *Nursing education is aimed at preparing nursing students as future professionals to meet the demands of a rapidly evolving health landscape. To match the changes, nursing educators should be able to adopt innovative teaching strategies to equip nursing students with improved knowledge. This study aimed to compare an innovative teaching strategy with the conventional lecture method to determine which strategy is more effective in improving student knowledge attainment on a disease condition.* ***Objective:*** *Compare the effect of Jigsaw versus the lecture method as a teaching strategy on knowledge of ulcerative colitis among nursing students.* ***Method and Materials:*** *The research adopted a quantitative approach & experimental pre-test post-test group design, using non-probability convenient sampling. Nursing students were randomly assigned to two groups. Group A received the innovative Jigsaw teaching strategy, and Group B received the traditional lecture method. In Jigsaw, the students were further divided into six subgroups and were allotted subtopics. Group B was taught the conventional lecture method by using a PowerPoint presentation complemented with audiovisual aids. Before teaching the topic on ulcerative colitis, both groups were given a pretest with a 44-item multiple-choice questionnaire on this condition.* ***Results:*** *All participants were girls, and the majority of 86% were between 20 and 21 years. The pre-test scores of both groups were not statistically significant by using an independent t-test. The paired t-test between the same groups' pre- and post-scores showed a highly significant p-value ($p = 0.01$) for the Jigsaw method, whereas it was not significant for the lecture method ($p = 0.09$). The post-test scores of both groups were analysed through an independent t-test ($p = 0.04$) showed positive significance with the Jigsaw method.* ***Conclusion:*** *The study found that the Jigsaw teaching method was more effective as compared to the traditional Lecture method. In response to the open-ended question regarding their satisfaction with the teaching methods, participants expressed that the jigsaw innovative strategy was more engaging, interactive, and enjoyable. The Jigsaw method is recommended as a more effective alternative to lectures for educating nursing students on disease conditions.*

Keywords: *Jigsaw strategy, Lecture strategy, knowledge, nursing students, ulcerative colitis*

I. Introduction:

Effective teaching strategies are essential for fostering student engagement, understanding, and academic achievement. Among the wide array of instructional methods, the Lecture and Jigsaw approaches stand out for their contrasting yet complementary strengths in the learning environment. The Lecture method is one of the oldest and most traditional forms of instruction. It involves a teacher-centred approach where the instructor delivers content directly to students, typically in a structured and time-efficient manner. This method is widely used in higher education and large classroom settings for its ability to cover substantial content within a limited timeframe. In contrast, the Jigsaw method is a cooperative learning strategy that emphasizes student collaboration, responsibility, and active participation, promoting both individual accountability and collective learning. The method encourages deeper understanding, critical thinking, and social skills by transforming students into active contributors to the learning process. This study gives a comparative exploration of these two distinct yet valuable teaching methods, highlighting how each can be effectively used depending on educational goals and classroom dynamics.[1]

Darabi F, Karimian Z, Rohban A. (2025) A quasi-experimental study was undertaken to evaluate the comparative impact of traditional lecture-based teaching and Jigsaw Cooperative Learning (JCL) on student knowledge, performance, and satisfaction. The study involved 50 undergraduate public health students selected through convenience sampling. Following the instructional intervention, students' performance and satisfaction were assessed using two researcher-developed questionnaires consisting of 80 and 18 items, respectively. Pre-test scores for knowledge were relatively similar across both groups; however, post-test results revealed a significant improvement in the JCL group (mean score: 16.68) compared to the lecture group (mean score: 10.76) ($p < 0.001$). Furthermore, the JCL group outperformed the lecture group in various

performance indicators such as poster and pamphlet preparation, role-playing, and slide creation, all showing statistically significant differences ($p < 0.001$). In terms of satisfaction, students taught through the JCL method reported higher scores across most subscales, except for motivation ($p= 0.17$) and problem-solving ($p = 0.43$), where no significant difference was found. These findings suggest that JCL enhances student learning, leading to better academic outcomes and a more satisfying learning experience, supporting its integration into contemporary teaching practices.[1]

Sanaie N, Vasli P, Sedighi L, Sadeghi B. (2019) conducted a quasi-experimental study between January and November 2018 to compare the effects of lecture-based and Jigsaw teaching methods on self-regulated learning and academic motivation among nursing students. The study included 94 students in their fourth semester, divided into two classrooms, with one group randomly assigned to receive lecture-based instruction and the other to participate in Jigsaw learning sessions. Both groups underwent seven instructional sessions, each lasting two hours. Data were collected using a demographic questionnaire, a self-regulated learning inventory, and an academic motivation scale, administered before and after the intervention. Statistical analysis using the Kolmogorov-Smirnov test, paired t-test, and independent t-test revealed no significant difference in pre-intervention scores between the two groups ($p = 0.59$ for self-regulated learning; $p = 0.38$ for academic motivation). However, post-intervention results indicated a statistically significant improvement in both self-regulated learning and academic motivation scores in the Jigsaw group compared to the lecture group ($p = 0.000$). These findings highlight the potential of the Jigsaw teaching strategy as an effective approach to enhance theoretical learning outcomes, particularly in promoting autonomy and motivation among nursing students.[2]

Costouros T. (2019) examined the comparative effectiveness of jigsaw cooperative learning (JCL) and traditional lecture methods in improving student academic performance and learning experiences. The study was conducted in an introductory course on insurance and risk management at a business school, aiming to evaluate how different pedagogical strategies impact student outcomes. The course was divided into eight modules, with half taught through conventional lectures and the other half using the JCL method. Student performance was assessed through quizzes administered after each module, while their perceptions of the learning experience were measured using a validated 15-item questionnaire rated on a five-point Likert scale. Two distinct student groups were studied: a diverse cohort from a traditional university setting and a group of international students from India. The comparative analysis of these groups revealed insights into the differential effectiveness of JCL across diverse learner populations. This study adds to the growing body of literature on active learning techniques in professional education and underscores the potential of JCL as an inclusive and impactful teaching strategy.[3]
A study conducted by **Suvarna P, Shenoy JP, Pallipady A. (2023)** on effectiveness of the jigsaw method as a case-based learning strategy for first-year medical students in applied physiology. The cross-sectional interventional study included 150 first-year medical students who were randomly assigned to four parent groups, each further divided into four subgroups. A designated team leader was appointed in each subgroup to facilitate coordination and time management. Following the intervention, students completed pre- and post-tests across multiple clinical case scenarios. Results showed a statistically significant improvement in post-test scores across all scenarios, with an average knowledge gain of 118% ($p < 0.001$), indicating that the jigsaw approach effectively enhanced conceptual understanding. Furthermore, student feedback strongly supported the method, especially when integrated with traditional teaching. Participants reported that the jigsaw method made learning more engaging, easier to comprehend, and more memorable, thus aiding in better exam preparation. The study concludes that the jigsaw method not only supports active, student-cantered learning but also fosters essential professional skills such as teamwork and communication.[4]

Objectives of the study:

1. To assess the baseline level of understanding of ulcerative colitis among nursing students.
2. To determine the effect of the jigsaw teaching strategy on knowledge of ulcerative colitis among nursing students.
3. To determine the effect of the lecture teaching strategy on knowledge of ulcerative colitis among nursing students.
4. To compare the effect of Jigsaw and lecture teaching strategies on knowledge of ulcerative colitis among nursing students. students selected institute**.**

Research questions:

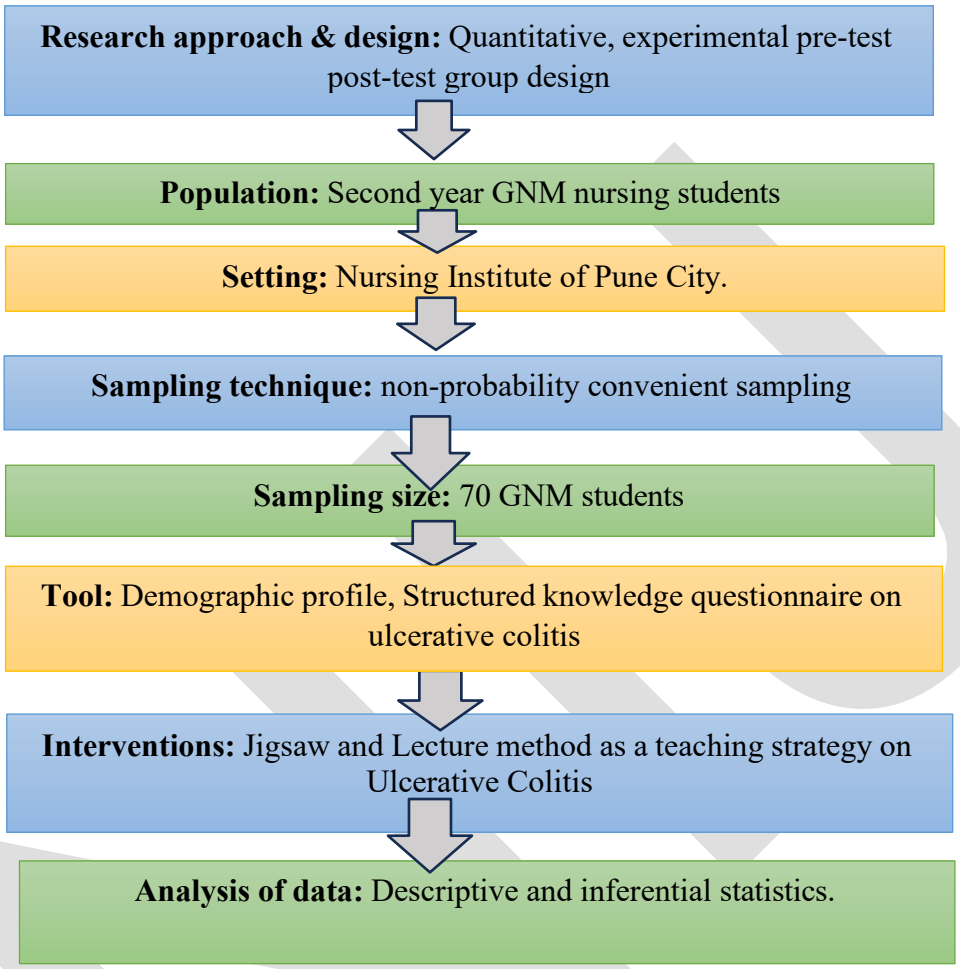
1. Is there an effect of jigsaw teaching strategies on knowledge of ulcerative colitis among nursing students?
2. Is there an effect of lecture teaching strategies on knowledge of ulcerative colitis among nursing students?

Hypotheses:

1. $H0_1$: there is no significant difference between the pre-test and post-test knowledge scores among nursing students using the jigsaw teaching strategy at 0.05 levels of significance.

2. $H0_2$: there is no significant difference between the pre-test and post-test knowledge scores among nursing students using the lecture teaching strategy at 0.05 levels of significance.
3. $H0_3$: there is no significant difference between the jigsaw and lecture teaching strategy among nursing students at 0.05 levels of significance.

II. Methodology: Schematic representation of research-



Data collection commenced on March 10, 2025. Prior to the study, informed consent was obtained from the participants, and necessary approvals were secured from relevant authorities. The participants were then randomly assigned to two experimental groups. The selected topic for the teaching intervention was ulcerative colitis. In the Jigsaw group, students were further divided into six smaller subgroups, and the topic was broken down into six distinct subtopics. Meanwhile, the Lecture group received instruction through a PowerPoint presentation supplemented by audiovisual aids. Participants in both Group A (Jigsaw) and Group B (Lecture) were provided with a digital questionnaire link to complete the pretest assessing their baseline knowledge on ulcerative colitis. After the implementation of the respective teaching methods, post-test data was collected using the same digital questionnaire link to evaluate any changes in knowledge.

III. Result analysis and interpretation of data:

Table No. 1.1: Demographic Variables

N= 70

Sr. No.	Item	Frequency (f)	Percentage (%)
1	**Age in years**		
	20-21	60	86
	22-23	7	10
	24-25	2	3

	26 and above	1	1
2	**Gender**		
	Female	70	100
	Male	0	0
	Others	0	0
3	**Name of the course**		
	2nd yr GNM	70	100

The above table shows the distribution of samples according to age, with 86% of the maximum in the 20-21 years category. All samples were from 100% female students in the second year of the GNM course.

Table 1.2: Pre-and post-knowledge score of the Jigsaw teaching strategy.

$n_1 = 36$

Sr. No.	Knowledge grade	Pretest		Post test	
		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
1	**Satisfactory**	7	19	2	6
2	**Good**	21	58	24	66
3	**Very Good**	8	22	10	28

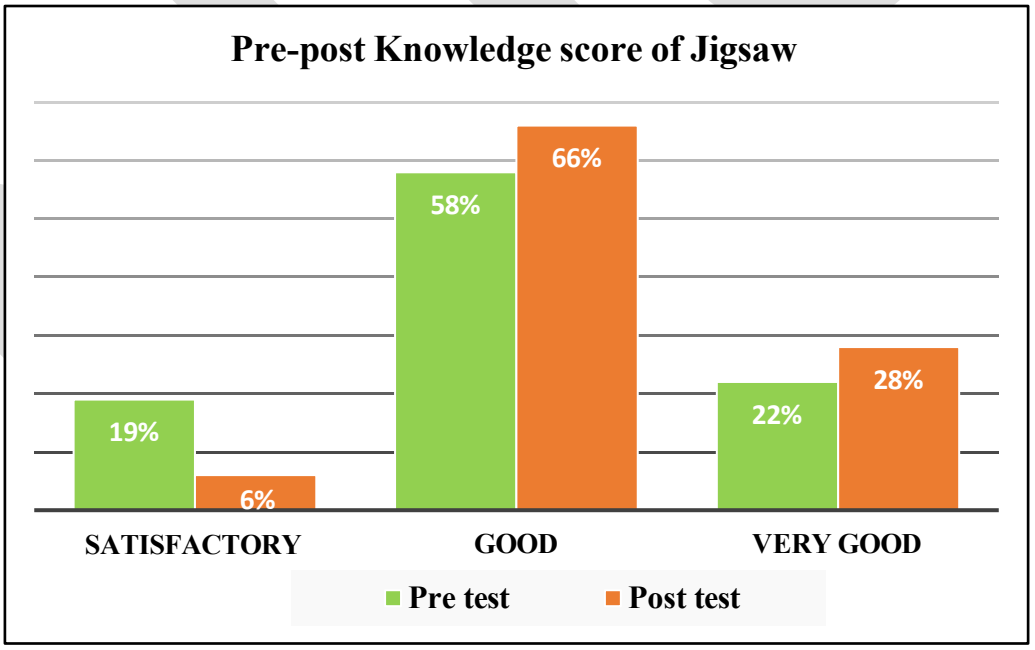


Fig.1 Distribution of knowledge score of Jigsaw method.

The findings presented above illustrate the distribution of knowledge scores before and after the implementation of the Jigsaw teaching method. In the pretest results, 19% of students fell into the satisfactory category, 58% were rated as good, and 22% achieved a very good score. Following the intervention, the post-test scores showed a shift, with 6% categorized as satisfactory, 66% as good, and 28% as very good.

Table 1.3: Pre and Post knowledge score Lecture strategy.

$n_2 = 34$

Sr. No.	*Knowledge* grade	Pretest		Post test	
		Frequency (*f*)	Percentage (%)	Frequency (*f*)	Percentage (%)
1	Satisfactory	7	21	4	12
2	Good	16	47	22	65
3	Very Good	11	32	8	24

The findings mentioned above represent the distribution of knowledge scores obtained in the pretest and post-test assessments using the Lecture teaching strategy. In the pretest, 21% of the participants scored within the satisfactory range, 47% were categorized as having good knowledge, and 32% fell into the very good category. In the post-test results, 12% of the students were in the satisfactory category, 65% achieved scores within the good range, and 24% attained very good scores.

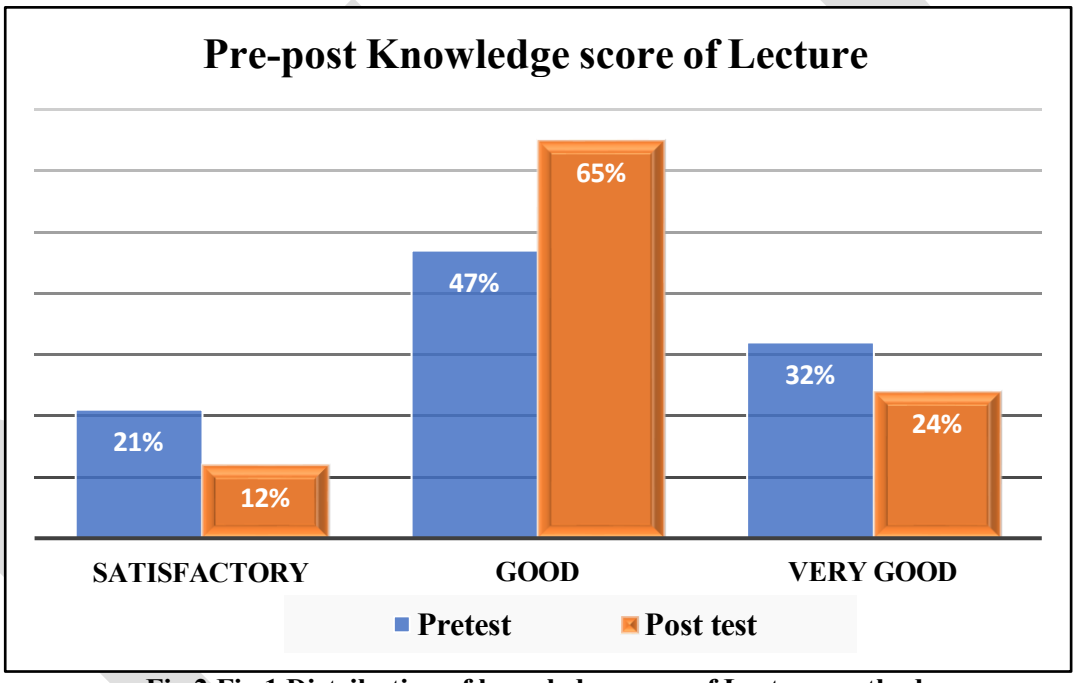


Fig.2 Fig.1 Distribution of knowledge score of Lecture method.

Table 1.4 Paired t test for knowledge score in Jigsaw & lecture strategy.

$n_1 = 36, n_2 = 34$

Group	Jigsaw			Lecture		
	Mean	SD	t' value	Mean	SD	t' value
Pretest	22.1	8.4	0.01	23.8	8.1	0.09
Post test	26.2	6.7		23.6	5.8	

The table above presents the mean, standard deviation (SD), and t-values for both pretest and post-test scores associated with the Jigsaw and Lecture teaching strategies. According to the results of the paired t-test, the Jigsaw group demonstrated

a statistically significant improvement, with a t-value of 0.01 (p = 0.05), indicating a meaningful difference between pre and post-test scores. Therefore, null hypothesis H01 is rejected. In contrast, the Lecture group did not show a significant change, as reflected by a t-value of 0.09 (p = 0.05). These findings suggest that the Jigsaw method effectively enhanced knowledge, whereas the Lecture method did not result in significant knowledge improvement. Consequently, the null hypothesis H01 is accepted.

Table 1.5 Unpaired t-test for comparison of knowledge score on ulcerative colitis in Jigsaw and lecture.

N = 70

Groups	Mean	Mean difference	df	t' value
Jigsaw	26.2	2.7	68	0.04
Lecture	23.5			

The table above presents a comparison between the Jigsaw and Lecture teaching strategies. The mean score for the Jigsaw group was 26.2, while the Lecture group had a mean score of 23.5. The calculated t-value was 0.04, suggesting that the Jigsaw method was more effective than the Lecture method. This result indicates a statistically significant difference between the effectiveness of the Jigsaw and Lecture teaching strategies. Therefore, the null hypothesis H03 is rejected.

IV. Discussion

This research aimed to determine the effect of the Jigsaw and lecture-based methods on knowledge in a nursing institute. The t-test revealed a significant difference between the Jigsaw and lecture teaching strategy and indicates Jigsaw is more effective than the lecture strategy. These results align with previous research by **Sumeet K, Neelam L, Shalini G, Satinder PS. et. all. (2025)** which demonstrated that the jigsaw method led to superior long-term retention compared to traditional lectures. The mixed-effects model revealed individual differences in knowledge retention over time. The decline in retention scores observed in the control group highlights the advantage of active learning over traditional didactic lectures.[5] Similar conclusions were reported by **Darabi F, Karimian Z, Rohban A. (2024)**, who found the JCL method, by engaging students in the teaching-learning process, could cause enhanced knowledge, performance, and satisfaction of the learner, helping them deal with their courses with greater interest.1 **Chauhan A, Mann R, Madaik TS.(2022)** Conducted a study, aimed to determine the effectiveness of the jigsaw method versus traditional lecture methods for the teaching of attitude, communication, and ethics (AETCOM) in Phase I MBBS students and assess the perception of students toward the jigsaw method. The method was a quasi-experimental study that included 104 Phase I MBBS students, who were assigned to the jigsaw group and traditional lecture group. Validated pre-tests, post-tests, and questionnaires were used in the evaluation. Results were on post-test, both groups scored significantly higher than on pre-test, but the scores on pre-test did not differ between them. Post-test scores of the jigsaw group were significantly higher than those of the traditional method group. Jigsaw was rated positively by students for enhancing peer interaction (91%), deeper learning of the subject (90%), and communication skills (89%**).** The study concluded that the jigsaw method is more effective than the traditional teaching method and can be used as a helpful tool for teaching communication skills and teamwork by utilizing cooperative learning strategies.[6]

V. Conclusion

Teaching is an art that involves purposeful activities aimed at bringing about positive changes in learner behaviour. Modified teaching strategies create opportunities for enhanced active learning, knowledge, encouraging student engagement, critical thinking, interest, confidence, and personal development. This study concludes that active learning approaches have a statistically significant impact on student learning compared to traditional methods. The findings highlight that such methods are particularly effective for passive learners, who demonstrated increased participation and improved performance beyond their usual levels.

Ethical Considerations: Ethical committee approval and informed consent were taken before data collection.
Funding: Nil
Conflict of Interest: There is no conflict of interest to declare.

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