



A COMPARATIVE STUDY BETWEEN SELF DIRECTED LEARNING AND LECTURE AS A TEACHING LEARNING METHOD FOR PHASE I MBBS STUDENTS IN NAGAON MEDICAL COLLEGE AND HOSPITAL

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ABSTRACT Self-directed learning (SDL) is an educational approach that places the learner at the center, promoting independence, active involvement, and accountability in the learning process. This study was conducted to compare the effectiveness of SDL with conventional didactic lectures among first-year MBBS students at Nagaon Medical College. A total of 100 students were randomly assigned into two groups: one receiving traditional lectures and the other engaged in SDL. Evaluation was carried out using pre-test and post-test assessments along with student feedback forms. Although both groups exhibited improvement in their post-test scores, the SDL group showed a markedly greater increase (from a mean of 12 to 18) compared to the lecture group (from 11 to 15). The difference was found to be statistically significant ($p < 0.05$). Feedback collected through a Likert scale indicated a high level of student satisfaction, with an average score of 4.01, reflecting strong acceptance of the SDL approach. These results indicate that SDL is more effective in improving knowledge acquisition, critical thinking, and student engagement than traditional lectures. While lectures continue to be valuable for delivering basic concepts, SDL promotes independent learning and better retention over time. Therefore, incorporating SDL into medical education can enhance academic outcomes and encourage lifelong learning.

KEYWORDS : Self-directed learning, Didactic lectures, Medical education, Student performance

INTRODUCTION

Self-directed learning represents a contemporary educational model that emphasizes the significance of learner autonomy, accountability, and active participation in the educational journey. Unlike traditional teacher-led approaches, which typically involve a structured and controlled delivery of information, this method positions the learner at the forefront of their own learning experience. Students are motivated to take charge by establishing their own educational goals, choosing suitable resources, and evaluating their progress. This shift not only enhances engagement but also fosters critical skills such as analytical thinking, effective time management, and independent problem-solving.

At its core, self-directed learning recognizes that each learner is distinct, possessing varying interests, strengths, and comprehension styles. By allowing students the liberty to delve into subjects they find intriguing, this approach cultivates curiosity and intrinsic motivation. Instead of passively absorbing information, learners become proactive participants who enhance their understanding through investigation, exploration, and introspection. Although educators play a crucial role in this process, their responsibilities transition to that of facilitators who provide guidance and resources rather than controlling every aspect of education.

Another significant aspect of self-directed learning is its inherent flexibility. Learners are generally given an overarching framework or objectives within which they can devise their own plans and timelines. This adaptability fosters a sense of responsibility and accountability as students must arrange their tasks and make deliberate choices regarding their learning strategies. It also equips them for real-world scenarios where independence and self-management are vital competencies.

The framework of self-directed learning consists of four primary components: management and monitoring, needs assessment for learning, collaboration, and self-evaluation. These elements are not linear but interrelated; they allow both learners and educators to revisit and refine them throughout the educational journey for enhanced outcomes. Management and monitoring concentrate on planning, organizing, and tracking progress to facilitate effective learning experiences. Assessing learning needs involves recognizing knowledge deficiencies and identifying what must be acquired to achieve specific outcomes. Collaboration highlights the importance of

engaging with others—such as peers or mentors—to gain perspective and deepen understanding. Finally, self-evaluation prompts learners to contemplate their successes, pinpoint areas needing improvement, and implement necessary adjustments.

Self-directed learning signifies a pivotal advancement in education by promoting autonomy, adaptability, and lifelong learning opportunities. By empowering learners to steer their educational paths actively, it not only enhances academic outcomes but also equips them with essential skills for navigating an increasingly dynamic world.

REVIEW OF LITERATURE:

1) SELF DIRECTED LEARNING: Self-directed learning can be defined as the result of creating an experience that allows learners to make decisions about the information they want to become proficient in. Self-directed learning may be seen primarily in the experiential setting, eg, when a patient presents with an unfamiliar disease state and students must find appropriate resources and learn about this information. Second, SDL may also be seen in cocurricular activities as students learn about topics of interest to them. While SDL usually takes place in the experiential or co-curricular setting, the skills and the resources necessary for SDL need to be introduced and developed in the didactic portion of the curriculum.⁽²⁾

2) HISTORY: Though both Greveson and Spencer (2005) and Candy (1990) stress the need of lifelong learning, it is the former who claims that self-direction is a necessary prerequisite. The goal of self-directed learning, as stated by Candy (1990), is to encourage continuous education. On the other hand, one of the key purposes of lifelong learning is to equip individuals with skills and abilities that enable them to study by themselves. This view holds that self-directed study is the goal and essence of continuous education (Candy, 1990). However, Mocker and Spear (1982) argue that self-direction is an aspect of lifelong learning and that it promotes learning in both formal and informal settings. Self-study, as described by Spencer and Jordan (1999), helps set people up for success in continuing their education throughout their lives. According to Brockett and Hiemstra (1991), when analysing self-direction, one must do it from the vantage point of (an appreciation for) lifelong education. This suggests that the ideas of lifelong learning and self-directed learning are intertwined and mutually supportive. Self-directed learning encompasses the entire cycle of conceptualizing, planning, implementing, and evaluating learning experiences, all guided by the learners themselves

(Brookfield, 2009).^[4]

3) USEFULNESS OF SDL APPROACHES: Educators have shown how self directed learning can meet many challenges associated with keeping oneself updated with the latest ongoing knowledge. Self directed learning researchers have challenged the assumption that learning can take place only in presence of accredited teachers. Several researchers have shown that imposing some responsibility on learners which happens in SDL proves beneficial than other approaches.

4) STUDENT'S ROLE IN SDL : Students have to understand that SDL methods will help them in acquiring knowledge and skills which they can apply throughout their lives in their workplaces. It will transform the student professionally and academically.^[1]

5) EDUCATOR'S ROLE IN SDL: The role of an educator is to properly guide his students and act as a mentor , advisor , evaluator. A teacher must be available to offer help at the request of students.^[1]

6) INSTITUTE'S ROLE IN SDL: Institutions play a major role in familiarizing the students with new techniques of learning. Self directed learning environments should be encouraged by institutions.^[1]

7) IMPLEMENTATION OF SDL: Whenever a change occurs, resistance is also expected. There has to be sufficient regulatory norms for its implementation. Training of the faculty is important so that they get familiar with the new method of learning. Also, students who are used to learning by traditional methods may be reluctant to move towards self directed learning.^[3]

8) CHALLENGES OF SDL: Though SDL is found to be better than traditional learning, it is still not widely accepted by teachers and students because there is a shift from dependence to self direction in case of students and facilitate rather to deliver in case of teachers.^[1] Learners may not accept only one educational strategy of SDL. The level of readiness differs from student to student. Faculties who are used to classroom teaching need training to change their roles to mentors and advisors. SDL methods have to be made flexible to learners and educators.^[3] Another imporant drawback is its practice without proper validation. If appropriately applied, the problems with age and learning groups can be addressed.^[1]

9) FUTURE REASEARCH ISSUES: some of the future reasearch issues include incorporation of computer technology in SDL methods, ways of measuring and maintaing quality in self directed learning, most appropriate roles for educators and learners.

AIMSANDOBJECTIVES

- 1) To compare between SDL and didactic Lectures as a Teaching method
- 2) To assess the most acceptable teaching learning method amongst students based on the outcome.

MATERIALSANDMETHODS

STUDY SETTING: Department of Biochemistry, Nagaon Medical College and Hospital

STUDY DURATION: Six months

STUDY DESIGN: Observational Comparative study

STUDY PARTICIPANTS: 1stYear MBBS Students

INCLUSION CRITERIA: First year MBBS students who gave consent for the study.

EXCLUSION CRITERIA: First year MBBS students who did not give consent for the study.

SAMPLING METHOD: Simple random sampling

SAMPLE SIZE: 100 Students

DATA COLLECTION TOOLS: a) Pretest and posttest forms

b) Feedback form

DATA COLLECTION PROCEDURE/METHODOLOGY: The 100 students were divided into 2 groups A and B, each group comprising of 50 students. The selection of students of each group was made randomly by calling out their roll numbers. The topic “ Hemoglobin structure and functions of haem in the body and the processes involved in metabolism with emphasis on jaundice and porphyrias was selected.

The same topic was taught as didactic lecture and self directed learning to Group A and Group B respectively. Material for SDL was prepared by building a case scenario regarding the haemoglobinopathies and porphyrias. Students were directed to bring textbooks. Handouts of powerpoint presentation and reference material were given.

Lectures were conducted with the chalk and board as well as audiovisual aids.

Pretest was conducted.

After completion of the topic both the groups appeared for Post test questions of 20 marks. There were 5 questions carrying 2 marks each and 10 MCQs.

The outcome of the pre test and post test of the 2 groups was evaluated.

Finally a feedback form was given to students and students were asked to fill it up.

RESULTSANDOBSERVATIONS

The marks obtained by the students are tabulated and presented as Mean ± SD. Total marks 20.

Table 1: Pretest and Posttest results of Group A

GROUP A (DIDACTIC LECTURE)		p value (<0.05)
TEST	MARKS (MEAN±SD)	
PRE TEST	11± 1.2	
POST TEST	15±1.4	

Table 2: Pretest and Posttest results of Group B

GROUP B (SELF DIRECTED LEARNING)		p value (<0.05)
TEST	MARKS (MEAN±SD)	
PRE TEST	12±1.1	
POST TEST	18±1.5	

Table 3 : Feedback taken in 5 point likert scale

Strongly disagree (1)	SD
Disagree (2)	D
Neutral (3)	N
Agree (4)	A
Strongly agree (5)	SA

Table 4: Response of each question of the 100 students

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
SD	2	2	2	3	3	3	2	2	2	2
D	5	5	4	5	6	6	4	4	3	5
N	10	10	9	12	12	13	8	8	7	10
A	56	56	55	55	54	53	56	55	55	56
SA	27	27	30	25	25	25	30	31	33	27
Average score	4.01	4.01	4.02	4.00	3.99	3.98	4.03	4.04	4.05	4.01

Average Likert score is 4.01

DISCUSSION

The present study demonstrates a clear improvement in student performance in both teaching methods; however, the gain observed in the self-directed learning (SDL) group was notably higher compared to the didactic lecture group. In Group A (didactic lecture), the mean score increased from 11 in the pre-test to 15 in the post-test, whereas in Group B (self-directed learning), the scores improved from 12 to 18. This greater improvement in the SDL group suggests that self-directed learning is more effective in enhancing knowledge acquisition and academic performance. The statistical significance (p < 0.05) further supports that the observed differences are meaningful and not due to chance.

These findings are consistent with several previous studies. A systematic review reported that self-directed learning is associated with a moderate improvement in knowledge outcomes compared to traditional teaching methods.^[5] Similarly, a study in medical education found that students engaged in self-directed or e-learning approaches achieved higher post-test scores than those exposed to traditional lectures, reinforcing the effectiveness of SDL in improving learning outcomes.^[6] The results of the present study align closely with these findings, as the SDL group showed a larger increase in mean scores compared to the lecture group.

Furthermore, research indicates that self-directed learning enhances

deeper understanding, retention, and learner engagement. A comparative study in adult education highlighted that SDL promotes greater motivation, independent thinking, and problem-solving abilities compared to conventional teaching methods.^[7] This may explain the higher post-test scores observed in the SDL group in the current study, as students who actively participate in their own learning process tend to develop better cognitive skills and retain information more effectively.

Another important aspect of this study is the feedback collected using the Likert scale, where the average score was 4.01, indicating a high level of student agreement and satisfaction with the learning method. This positive perception is supported by previous research, which shows that students exposed to self-directed learning report higher satisfaction and engagement levels compared to traditional methods.^[8] High satisfaction scores suggest that students not only performed better but also found the SDL approach more engaging and beneficial.

Additionally, modern meta-analyses conclude that while didactic lectures provide structure, self-directed learning fosters autonomy, critical thinking, and long-term retention, which are essential for lifelong learning.^[9] The higher improvement seen in the SDL group in this study reflects these advantages and highlights the importance of incorporating learner-centered approaches in education.

However, it is important to note that both teaching methods resulted in improvement, indicating that didactic lectures still play a valuable role, particularly in providing foundational knowledge. The effectiveness of SDL may also depend on factors such as student motivation, prior knowledge, and guidance from instructors.

CONCLUSION

In conclusion, the findings of this study support existing literature in demonstrating that self-directed learning is more effective than traditional didactic lectures in improving academic performance and student satisfaction. The significantly higher post-test scores and positive feedback in the SDL group emphasize the need to integrate self-directed learning strategies into modern educational practices to enhance learning outcomes and promote lifelong learning skills.

Conflict of interest: none

Consent /ethical issue: Ethical clearance was obtained from the Institutional Ethics Committee of Nagaon Medical College and Hospital.

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