International Journal of Multidisciplinary Education and Research
www.multidisciplinaryjournals.in
ISSN: 2455-4588
Received: 03-02-2024, Accepted: 26-02-2024, Published: 20-03-2024
Volume 9, Issue 1, 2024, Page No. 114-116

A comparative study on the impact of active and passive learning approaches on student academic performance

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Abstract
This paper seeks to examine the existing literature on the effects of active and passive learning approaches on student academic performance, synthesizing findings from empirical studies, theoretical frameworks, and educational practices. By exploring the strengths, limitations, and implications of each approach, this study aims to contribute to ongoing discussions in education and inform evidence-based instructional strategies that promote optimal learning experiences and outcomes for students.

Keywords: Active learning, passive learning, academic performance, optimal learning, student centric learning

Introduction

The argument between active and passive learning methodologies has long been a topic of discussion for academics, researchers, and decision-makers in the field of education. The consequences of these approaches' success for improving student academic performance on curriculum creation, instructional design, and student achievement have drawn a lot of attention. The term "active learning" describes teaching techniques that include students in the process of learning through conversations, cooperative projects, problem-solving exercises, and hands-on activities. It places a strong emphasis on student-centered learning, in which students actively create their conceptual understanding and apply what they have learned to real-world situations. Conversely, passive learning refers to more conventional techniques like lectures, in which teachers primarily impart knowledge to pupils without requiring much engagement or participation [1].

On the other hand, proponents of passive learning assert that it offers a methodical and effective way to impart knowledge to big class sizes. For example, they contend that lectures are a good way for teachers to cover complex subjects or basic knowledge since they allow them to cover a lot of material in a short amount of time. Nevertheless, detractors contend that passive learning can result in rote memorization, superficial comprehension, and student disengagement, all of which can harm students' academic performance and long-term learning objectives [1-2].

There is a complex and subtle relationship between student academic performance and active and passive learning approaches. This relationship is influenced by a number of elements, including subject matter, learning environments, student characteristics, and teaching methodologies. Understanding how new pedagogical techniques affect student learning outcomes is crucial for supporting effective teaching and advancing student achievement as educators continue to experiment with them and adjust to changing educational environments [3].

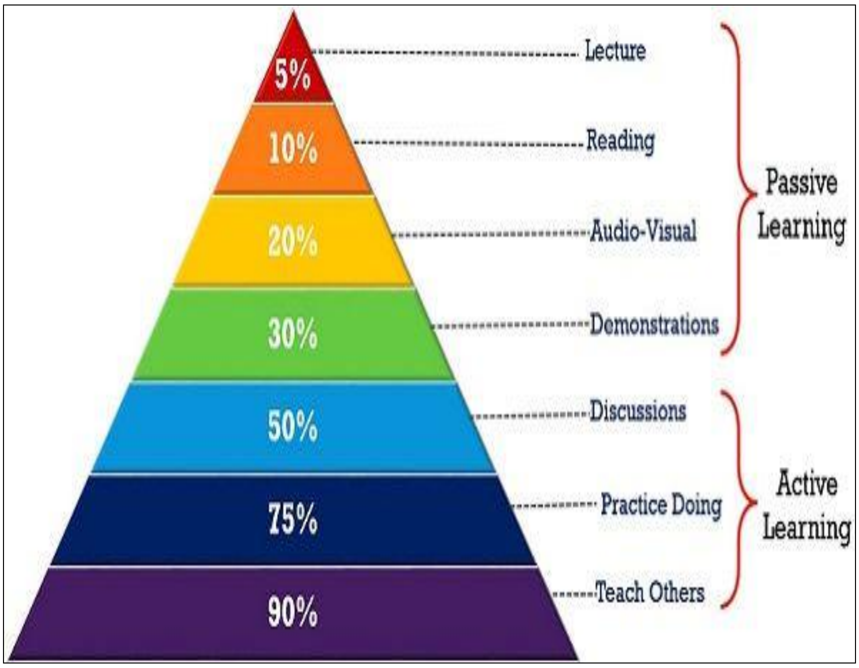

Fig 1: Learning distribution triangle [1, 2]

Literature review

Skills, participation/interaction, emotions, and achievement were shown to be the four consistent characteristics of student engagement at the course level by Handelsman *et al.* [5]. Learning settings that prioritize these aspects are becoming more and more common. Problem-based learning and project-based learning exemplify active-learning pedagogies that foster student engagement [6, 7, 8, 9]. These approaches, categorized as inductive learning [10], emphasize hands-on experiences and collaborative problem-solving, thereby encouraging students to actively participate in their learning process. Ang, K. C *et al*. in their study have discussed an inclined nature from passive learning to active learning. Authors have proposed blended learning and flipped classroom as active learning paradigm. Results shows that academic performance in active learning has improved performance of students [11].

Problem satement

Despite the growing recognition of the benefits of active learning approaches, there remains a prevalent reliance on passive learning methodologies within academic settings. This transition from passive to active learning poses a significant challenge in optimizing student academic performance. While passive learning methods such as lectures provide a structured means of content delivery, they often lead to surface-level understanding and limited student engagement. The lack of active participation and hands-on experiences may hinder students' ability to develop critical thinking skills, problem-solving abilities, and deep conceptual understanding.

Objective

To relook active learning importance to improve academic performance than passive learning

Hypothesis developemnt

H1: Flipped blended learning has a positive influence on students' learning experience.

General methods used in active and passive learning

Here is a breakdown of methods commonly used in both active learning and passive learning:

1. **Active Learning Methods:**
- Problem-Based Learning (PBL)
- Project-Based Learning (PjBL)
- Inquiry-Based Learning (IBL) & Flipped Classroom, Collaborative Learning

2. **Passive Learning**
- Lectures, Reading Assignments
- Demonstrations, Memorization Tasks
- Structured Exercises

Below given figure indicates the change in teaching from passive learning to active learning side. We have found objective and hypothesis for this article. Different research has proved that flipped classroom and blended learning has positive impact on student performance. Both innovative approaches have shown interrelation within themselves also. H1 hypothesis has been proved by [11, 12] articles. Hypothesis was found null.

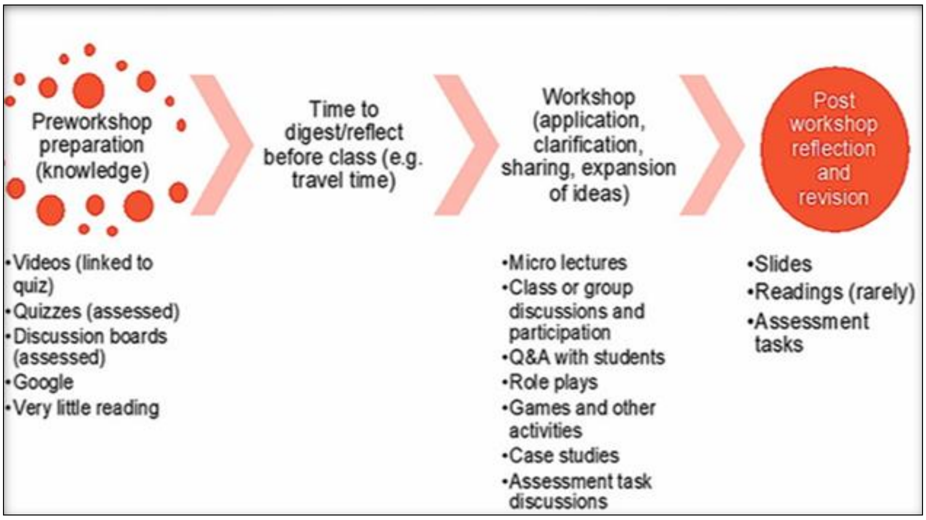

Fig 2: Inclined path from passive learning to active learning [11]

Proposed flipped class room plan
- Analysis of practical problems
- Development of solutions
- Evaluations of solutions in practise
- Development of design principles

Conclusion

Active learning and passive learning have drawn attention among students to improve academic performance. Each approach has its won advantage and disadvantages. But research literature indicates that active learning has capability to improve student academic performance at higher school level and Undergraduate level. Different hypothesis has been proved in time to time to show that blended and flipped classroom learning is the need of current time to improve academic performance of students. There is high future scope of active learning methods.

Reference

1. Suuk D, Wilmot D, Birteeb PT. Comparative study of cooperative-learning and lecture-based-learning in teaching classification of living things among Senior High School students in Tamale. J Educ Res, 2024, 1-8.
2. Pedersen-Randall PJ. The effects of active versus passive teaching methods on university student achievement and satisfaction. University of Minnesota, 1999.

3. Baba K, Cheimanoff N, El Faddouli NE. A comparative study of active and passive learning approaches in hybrid learning, undergraduate, educational programs. In: Intelligent Computing: Proceedings of the 2020 Computing Conference, Springer International Publishing,2020:1:715-725.
4. Stonebraker I. Active or Passive, IT DEPENDS: Evaluating the Comparative Effect on Student Performance of Online Tutorials, 2021.
5. Handelsman MM, Briggs WL, Sullivan N, Towler A. A measure of college student course engagement. J Educ Res,2005:98(3):184-192.
6. Silberman M. Active Learning: 101 Strategies to Teach Any Subject. Prentice-Hall, 1996.
7. Duch B, Groh S, Allen D. The Power of Problem-Based Learning: A Practical 'How To' for Teaching Undergraduate Courses in Any Discipline. Stylus Publishing LLC, 2001.
8. McConnell D, Steers D, Owens K. Assessment and Active Learning Strategies for Introductory Geology Courses. J Geosci Educ, 2003, 51.
9. Prince M. Does Active Learning Work? A Review of Research. J Eng Educ,2004:93:223-231.
10. Prince M, Felder RM. Inductive Teaching and Learning Methods. J Eng Educ,2006:95:123-138.
11. Ang KC, Afzal F, Crawford LH. Transitioning from passive to active learning: Preparing future project leaders. Project Leadership and Society,2021:2:100016.
12. Fisher R, Perényi Á, Birdthistle N. The positive relationship between flipped and blended learning and student engagement, performance and satisfaction. Act Learn High Educ,2021:22(2):97-113. https://doi.org/10.1177/1469787418801702