
Unleashing the Potential of ChatGPT: Empowering Enhanced Active Learning in the Classroom Compared to Conventional Passive Learning



Peixing Jiang

Exercise Science, Valparaiso University, Valparaiso, IN, USA

The importance of active learning in the classroom is supported by numerous educational research studies. Incorporating ChatGPT into classroom learning will encourage students' self-directed learning and empower them to explore topics of interest, seek answers to their questions, and be considered as an active learning style. The objective of this project is to utilize ChatGPT as an interactive interface to enhance active learning among students in the classroom. This study compares two separate instances of the course "Exercise Physiology" conducted in different semesters to evaluate the effectiveness of different learning methods. A total of 20 students participated in the study, with 10 in each class. In traditional passive learning (Class One), after a conventional lecture on a particular topic, students then prepared and participated in an oral testing session where they explained their understanding of the topic. For the second class, after the instructor provided a specific topic to the students and tasked them with using ChatGPT to independently research and find the answer. Students engaged in self-guided study, followed by a brief lecture from the instructor, and then conducted an oral testing. A total of three oral tests have been conducted for both classes. By comparing the outcomes and student performance between the two classes, the results showed a statistically significant improvement for class two ($p < 0.05$). Therefore, by incorporating ChatGPT active learning strategies in the classroom, a dynamic learning environment can be created, promoting active learning, and improving student performance.

Biography:

Dr. Peixing Jiang possesses extensive teaching experience in the field of Kinesiology (Exercise Science), specifically in subjects such as Exercise Physiology, Kinesiology/Biomechanics, Strength and Conditioning, Assessment and Prescription in Health and Fitness, and Advanced Personal Trainer. He has successfully prepared students for certifications as Advanced Personal Trainers, Exercise Specialists, and Strength and Conditioning Specialists.

Professor Jiang's research primarily revolves around biomechanical analysis of human movement, including areas such as gait and sports skill. Additionally, he specializes in the development of strength training systems and the design of periodization programs for athletes. He is an active member of the American College of Sports Medicine association and the National Council of Strength and Fitness.