

BACKGROUND

This research was conducted at DEPU Foreign Language School, located in Chongqing, PR China. The 5E Learning Cycle is an effective teaching strategy that enhances students' understanding and achievement. Recognizing the importance of 5E Learning Cycle and increasing interest level of students led me to the focus of my study. The purpose of this research was to determine whether the 5E Learning Cycle or traditional teaching methods were more effective in improving student achievement, interest, and engagement in a high school physics classroom.

METHODOLOGY

- This action research was conducted on 50 students from two advanced subsidiary (AS) 11th grade physics classes.
- There were 25 students in each class and they learnt two units from high school physics for two weeks.
- Each class learnt one unit through 5E Learning Cycle and one unit through traditional teaching methods. While one class was learning one unit through the 5E Learning Cycle, the other class learnt the same unit through traditional teaching methods.

DATA COLLECTION INSTRUMENTS

Quantitative and Qualitative Data Collection Tools

Research Questions	Data Collection Instruments		
	Data Source #1	Data Source #2	Data Source #3
1. Which strategy produces a higher achievement rate?	Comparison of pre- and post-test results (5E and non-5E)	Lab-based performance assessment results (5E and non-5E)	Comparison of pre- and post-unit oral tests (5E and non-5E)
2. Which strategy do the students prefer?	Attitude Scales	Student Survey	Student Interviews
3. Which strategy produces a higher percent of engagement?	Peer Observations	Engagement Tally Chart	Teacher Video Recording Observations

DATA ANALYSIS

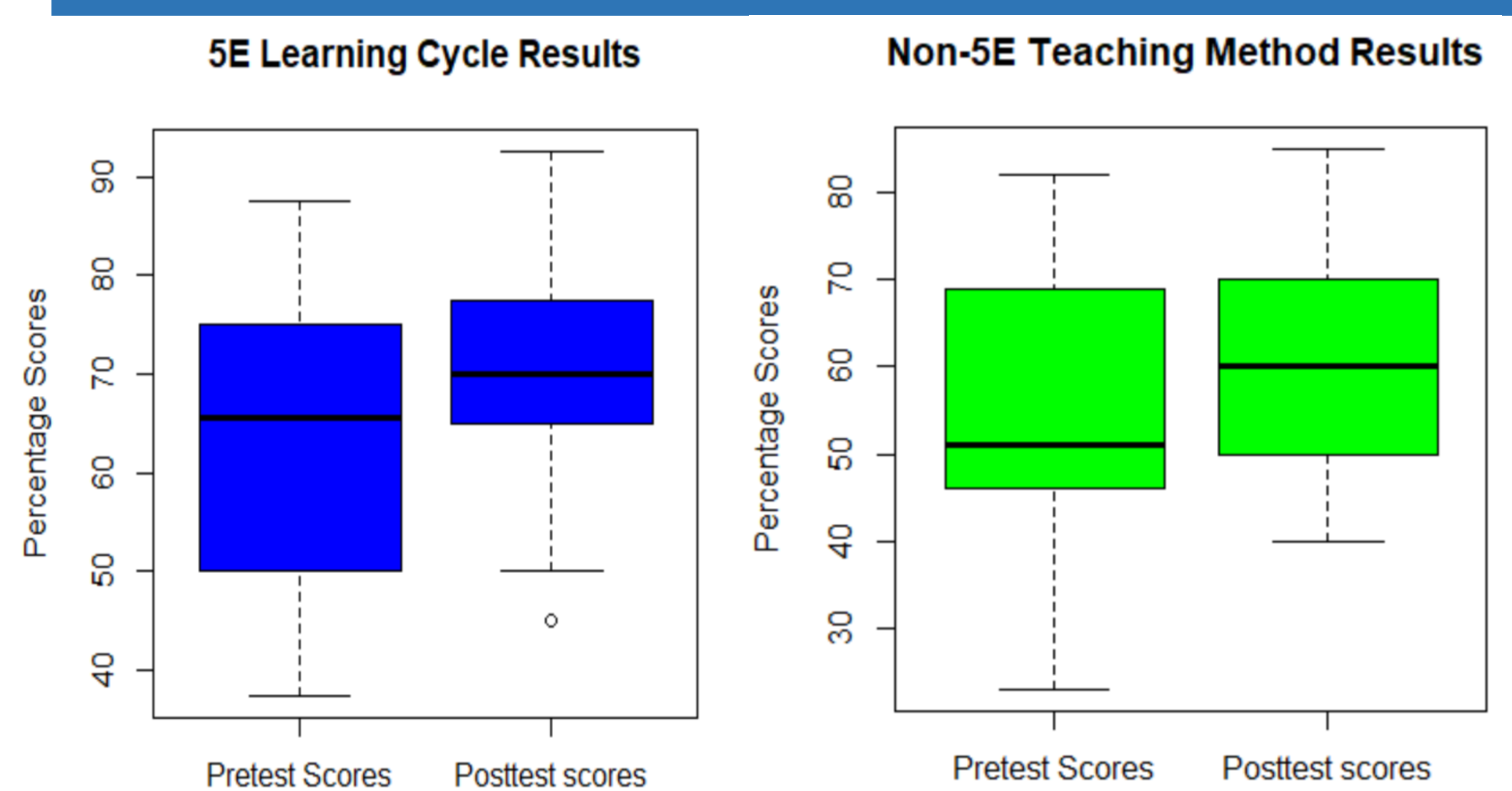


Fig. 1. Pretest and post-test results for 5E and Non-5E Learning Cycle method.

Attitude Scale Results-Energy Unit

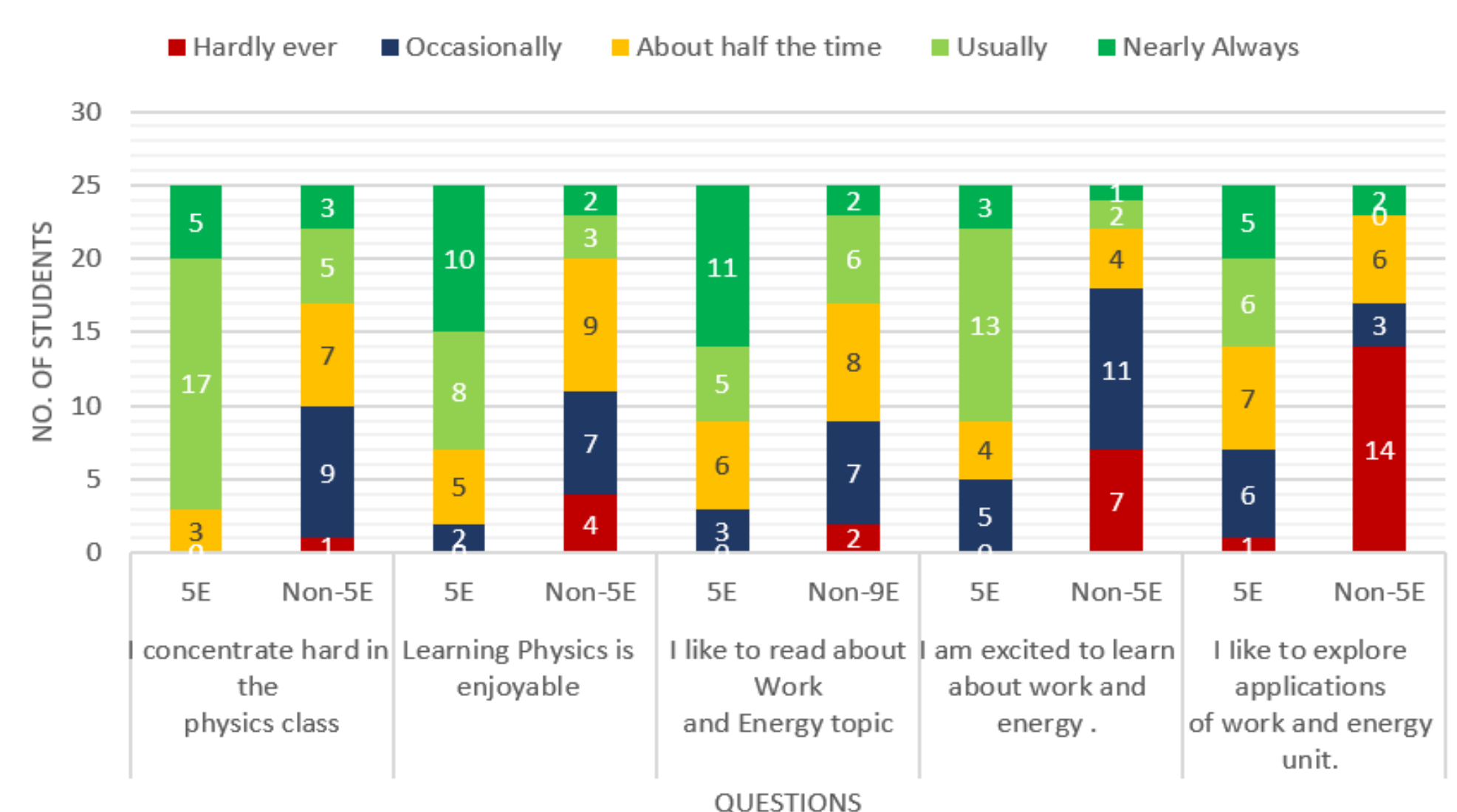


Fig. 2. Work and energy attitude scale results, (N = 50).

Off-task Behaviour Incidents

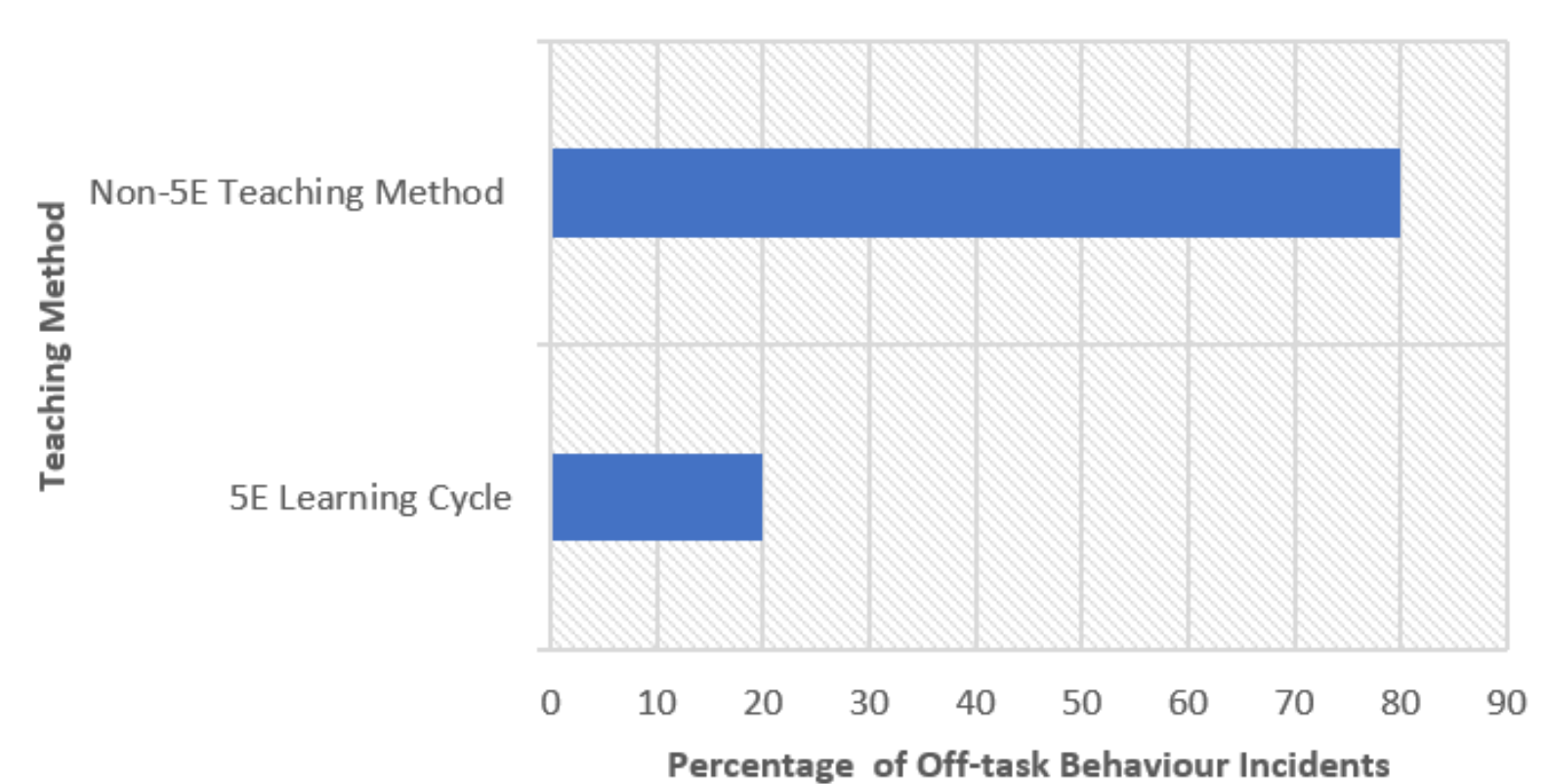


Fig. 3. Off-task behavior incidents, (N = 50)

CONCLUSION

Through this research project as shown in the above figures, I found that 5E Learning Cycle stimulated curiosity of students and promoted positive attitude towards learning which lead to a higher achievement rate, more interest and better engagement in a high school physics classroom.