



Improving University Students' Academic Achievement in Psychology through Active Learning Strategies

Grace Adebisi Fayombo (PhD).
The University of the West Indies, Cave Hill Campus, Barbados



Abstract

This Quasi-Experimental study investigated the effectiveness of active learning strategies (video, games, role-play and discussion) in enhancing the academic achievement among a sample of 80 undergraduate psychology students, (18-46 years) at The University of the West Indies (UWI), Cave Hill, Barbados. Findings revealed that students' post-test scores were higher than pre-test scores after intervention.

Introduction

Active learning is crucial to effective mastery of the subject matter in any learning situation. Students do not learn much by just sitting in classes passively, they must discuss what they learn, write, relate it to past experiences, and apply it to their daily lives (Chickering and Gamson 1987). Evidence also suggests that students learn more when active learning strategies such as video clips, role plays, games, and discussions are utilised during the delivery of the lectures (Cruz & Shalini 2006; Fayombo 2012; McKinney, 2004; Poonati & Amadia, 2010).



Purpose of Study

To find out whether there is a statistically significant difference in marks following a teaching intervention utilising video, games, role-play and discussion. It is expected that students' post test scores will be higher than pre test scores.

Methods

Participants: 80 Psychology students; 18 - 46 years.

Measures: 25 items designed to test students' knowledge of cognitive development during childhood stage as propounded by Piaget and Vygotsky



Procedure: Participants answered the questions before lecture for 15 minutes. Video-clips, games, role-play and discussions were utilised during lecture for 1hr 20 minutes. Students answered the questions at the end of the lecture for 15mins.



Data Analysis: Descriptive Statistics and Paired Samples t-test were conducted.

Results

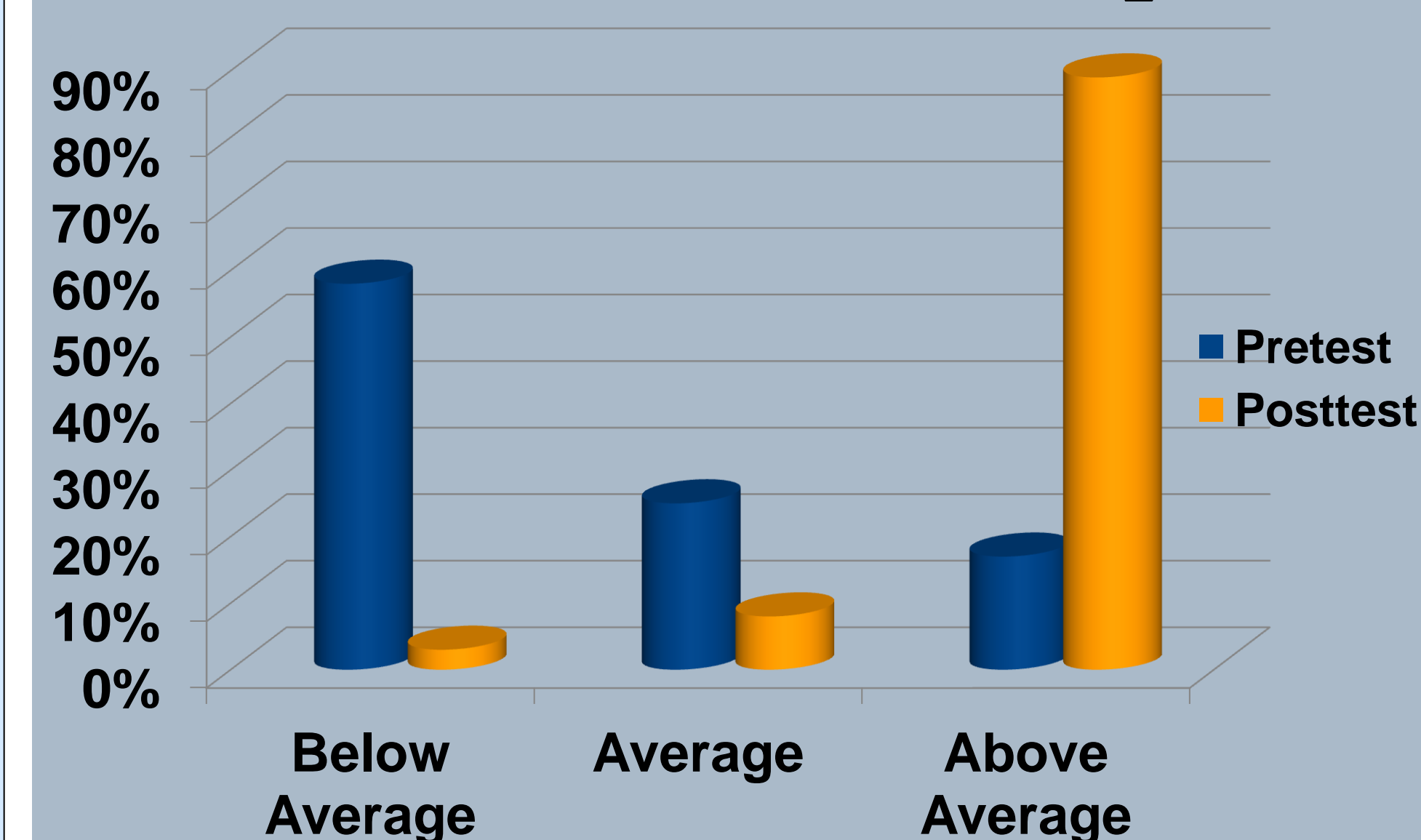
Research Question 1: What are the minimum and maximum scores for pre and post test measures?

Table 1: Descriptive Statistics showing minimum and maximum scores (N= 80)

	N	Min	Max	\bar{x}	SD
Post test	80	11	25	20.76	3.38
Pre test	80	5	20	12.21	3.34

Table 1 reveals the difference between the pre and post test minimum and maximum scores; For post test, 3% of the participants scored below average (11 marks), 8% scored average (13-15 marks), while 89% scored above average (16–25 marks). For pre test, 58% of the participants scored below average (5-12 marks), 25% scored average (13-15 marks), while 17% scored above average (16 – 20 marks). These results, as displayed on Chart 1 show that students improved in their performance after being taught.

Chart 1: Pre test and Post test Average Scores



Research Question 2: Is there a statistically significant difference in marks following the teaching intervention?

Results (cont.)

Table 2: Paired t-test; Pretest and posttest measures after teaching (N=80)

Intervention	Pretest		Posttest		r	t	df	Sig
	M	SD	M	SD				
Videos								
Games	12.21	3.34	20.76	3.38	.57*	24.43	79	0.000
Role-play								
Discussion								

Table 2 displays the significant difference in the pre test (M=12.21) and posttest mean scores (M=20.76) ; $t(8.55)=24.43$, $p=0.000$; i.e., a very small probability of this result occurring by chance, under the null hypothesis of no difference. The null hypothesis is rejected, since $p<0.05$ (in fact $p=0.000$).

Conclusion

In conclusion, there is strong evidence ($t=24.43$, $p=0.000$) that the teaching intervention strategies (video, games, role play and discussion) improves marks in this study, by approximately 8.55 points. This difference in marks is practically important, not just statistically significant.

References

- Chickering, A.W. & Gamson, Z.F. (1987). Seven principles for good practice. *AAHE Bulletin*, 39(7), 3-7
- Cruz, C., Murthy, & Shalini, A. (2006). Breathing life into history: using role-playing to engage students. *Social Studies & the Young Learner*, 18(3), 4-8.
- Fayombo, G.A. (2012). Active learning strategies and student learning outcomes among some university students in Barbados. *J. of Edu and Social Research*, (2)9, 79 – 90.
- Poonati, S. & Amadia, D. M. (2010). Use of popular television to enhance students' understanding of operant conditioning. *Psy. Learning and Teaching*, 9(1), 25-29

Contact Information

Email: grace.fayombo@cavehill.uwi.edu