



# Effectiveness of Educational Programs at the RCCD Nature Reserve

# Previous Research

## *Field trips*

For effective academic field trips, teachers must have...

- Planning
- Purpose
- Participation

## *Outdoor education*

Positive attitudes toward topic and subject increased

Behrendt, M., & Franklin, T. (2014). A review on research on school field trips and their value in education. *International journal of environmental & science education*, 9, 235-245.

Fancovicova, J., & Prokop, P. (2011). Plants have a chance: Outdoor educational programmes alter students' knowledge and attitudes towards plants. *Environmental education research*, 17(4), 537-551.

# Background

**My job...** Assistant educator at nature reserve in my hometown

**My boss...** Undergraduate in Biology, Masters in Education; has worked in a regular classroom, OKC Zoo, and nature reserve

**My observations...** I have seen and taught many educational programs to students of all ages, and I notice that not all students are actively engaged.

# Question

Are these types of outdoor  
educational programs  
effective?

# Participants

Students and teachers who  
attended an educational  
program at the RCCCD  
Nature Reserve in  
Claremore, OK

157 Students  
15 Teachers



# Method

- Questionnaire
- 9 Statements
- Likert scale
- Attitudes, understanding, and applicability

# Results

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I understand the material I have been learning/teaching in my regular science class at school	Students	1%	4%	13%	45%	37%
	Teachers	0%	0%	0%	40%	60%
Before visiting the nature reserve today, I understood the purpose of my visit	Students	3%	8%	14%	42%	32%
	Teachers	0%	0%	0%	47%	53%
Before visiting the nature reserve today, I was excited to come here	Students	1%	2%	22%	37%	38%
	Teachers	0%	0%	0%	7%	93%
I enjoyed my visit to the nature reserve today	Students	1%	1%	8%	35%	55%
	Teachers	0%	0%	0%	7%	93%
I understood the material presented today at the nature reserve	Students	0%	1%	9%	40%	50%
	Teachers	0%	0%	0%	0%	100%
I understand the overall purpose of this nature reserve	Students	0%	0%	6%	43%	51%
	Teachers	0%	0%	0%	0%	100%
I can make connections between what I learned today and what I am learning in my classroom at school	Students	0%	6%	24%	41%	29%
	Teachers	0%	0%	0%	7%	93%
I can apply what I have learned today at the nature reserve to my classroom back at school	Students	0%	6%	23%	39%	32%
	Teachers	0%	0%	0%	13%	87%
I want to return to the nature reserve to learn additional scientific concepts.	Students	0%	1%	15%	34%	50%
	Teachers	0%	0%	0%	20%	80%

# Discussion

## *What do these results mean?*

- Overall, both students and teachers are enjoying their visits and understanding the material presented.
- 100% of teachers are able to make connections to their classrooms and apply what they've learned.
- However, only about 70% of students are making these connections.
- Teachers cannot assume that all students will automatically make connections; they must make explicit connections before and after outdoor educational program.





# Now What?

## *The Problem*

- Pre-service teachers are not instructed on how to conduct field trips, and as a result, field trips are often neglected or not academically beneficial.

## *Proposed Solutions*

- Encourage pre-service teachers to participate in field trips throughout their field experience classes.
- Incorporate a field trip requirement in which pre-service teachers individually plan out a field trip to a specified location, then travel as a pre-service group to the location and discuss strategies, considerations, safety concerns, etc. in order to develop an understanding of how to effectively design an educational field trip.