

# Teaching Science to Students of the Introverted Type

## Background:

I conducted my research with 9<sup>th</sup> grade students in my Foundations of Science class who were identified as having an introverted personality type. I found that many students with an introverted personality struggle to learn in such a highly stimulating environment. I provided these students with a low-stimulation learning environment that was more conducive to their learning.

## Data Collection/ Analysis Methods

### Primary Question:

- How does a low stimulation environment impact the learning of introverted students in my science classroom?

### Secondary Questions:

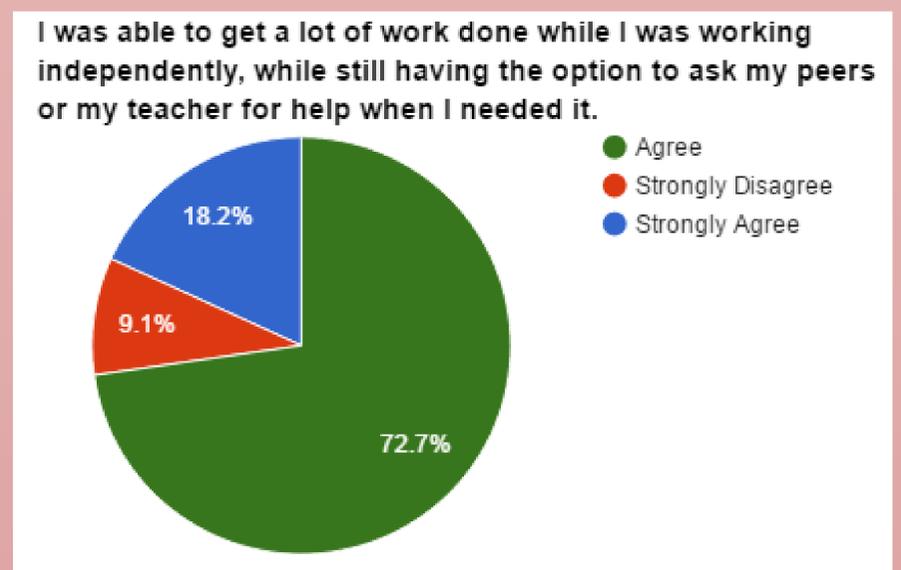
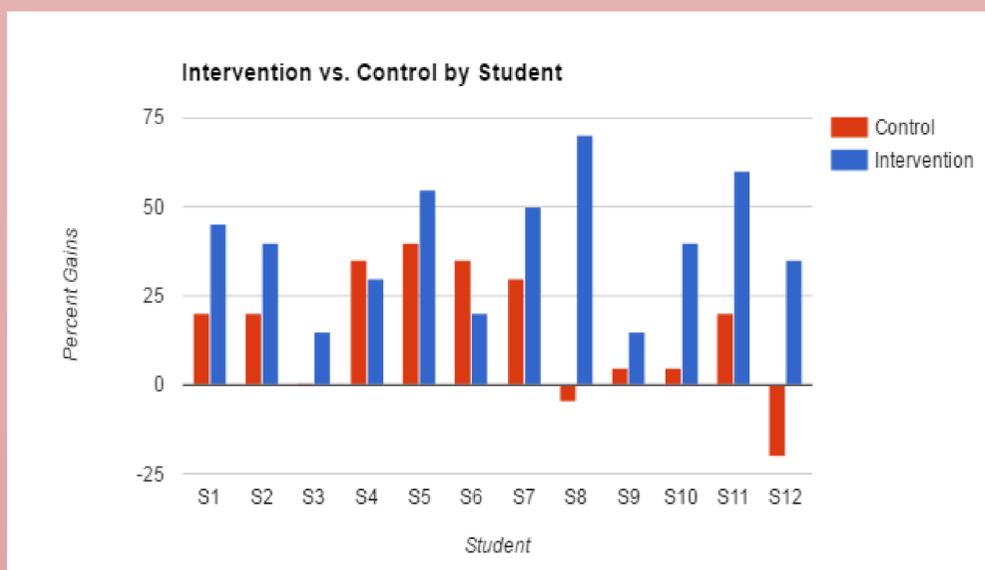
- How do students of the introverted personality type perceive low-stimulation learning environments?
- What is the impact of a low-stimulation learning environment on the productivity of an introverted learner?

Focus Questions	Data Source 1	Data Source 2	Data Source 3
Primary Question	Pre Test	Post Test	Likert Item Survey
Secondary Question 1	Student Interviews	Student Survey	Teacher Reflection
Secondary Question 2	Productivity Checks	Likert Item Survey	Student Interviews

## Treatment:

After using a survey to identify a group of students who are most introverted I will split this group of students in half. While one half of the introverted types receive the intervention, the other half will be educated in a normal collaborative laboratory setting. Over two units of study, each group will be educated normally and with the intervention.

The intervention involved removing the identified introverts from 4 to 6 of the high-stimulation classroom events in each unit to complete alternative tasks in a low-stimulation environment. Here, among only a few of their more introverted peers, the introverted types will complete online simulations and videos with guided questions, note taking from text/video, completion of flashcards and peer quizzing with flashcards, and participation in online discussion with their peers and myself.



## Results:

The results of this action research conclude that students of the introverted type *did* benefit from a low-stimulation learning environment. Not only did the pre- and post-test data demonstrate a clear trend toward higher learning outcomes when introverted students received the intervention, but the majority of introverted students who received the intervention reported enjoying the experience and having an easier time learning. Furthermore, over 90% of participating students reported, when interviewed, being more focused, productive, and even learning more. These results make a great case for considering a low-stimulation learning environment for students who demonstrate the personality and reliability to thrive in such an environment. That said, I believe the importance of taking the education of students on a case-by-case basis is more crucial than ever with this type of intervention.