



A Teacher's Autoethnography of Grit and Student Success in a High School Physics Classroom

Education Research Forum
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A little about me

Career Information

- 14 years teaching in the Halifax Regional Centre for Education (HRCE).
- Primarily teaching Physics 11 and 12, and the IB Physics Curriculum.

Education

- Presently in the Inter-University Doctoral Ph.D. program in Education at St. Francis Xavier University.
- Master of Education in Educational Leadership and Administration (St.FX; 2017)
- Master of Education in Curriculum and Instruction (St.FX; 2014)
- Bachelor of Science in Physics and Mathematics (DAL; 2007)

Research Interests

- Autoethnography
- Grit and student success
- Equity, inclusion and breaking barriers for students interested in STEM classes (e.g., physics).



Rationale and Significance of the Study

I have always been **interested** as to why some students are incredibly **successful**.

Brief Literature Review

“Grit is passion and perseverance for long term goals”
(Duckworth, Peterson, Matthews & Kelly, 2007)

Deficit Ideology

- Focuses on what students bring to their schools.
- Examples include, but not limited to, mindsets, personality, attitudes, behaviours and motivation.
- Individual choices and actions are the reason why students do not experience success.

Structural Ideology

- Focuses on the paradigm that exists in which students must live in (systems and structures).
- Examples include, but not limited to, socioeconomic status, race, gender and culture.
- It is these systems and structures that prevent students from succeeding.

Data Collection: Brief Backgrounder

Student #1: Caleb

Caleb was a very behaviourally challenging student.

He came from a poor, single-family household. He initially started class with what appeared to be very few traits related to grit.

However, ended up very successful towards the end.

Student #2: Adhira

Adhira was a first generation Indian-Canadian student.

She initially started with what appeared to be traits that resembled high degrees of grit. These traits continued throughout her time in Grade 11 and 12.

But, her grit changed due to a serious issue that occurred with her family.

Student #3: Violet

Initially started my classes with what appeared to be very few traits related to grit, but slowly became grittier due to small achievable steps in success.

Over time, she continued to excel, acted independently and had self-motivation and self-determination to succeed.

Some Key Findings: Deficit Ideology

“Grit is far more complex than a simple survey suggests” (Ngo, 2023)



Deficit Ideology

- Conscientiousness is deeply tied to grit (Duckworth et al., 2007) but, other FFM (extraversion, agreeableness, openness and neuroticism) are also significant.
- Intrinsic and extrinsic motivation plays significant roles in cultivating grit (Ryan & Deci, 2000).



Solutions

- Reinforcing students' sense of self (reducing neuroticism) via mentorship and nurturing conversations and reflection. Additionally, flexibility in assessment practices was very helpful for Adhira's situation.
- While some students respond to extrinsic motivators, such motivators may be required to get the ball rolling. The key is to have students develop their intrinsic motivation to succeed.

Some Key Findings: Structural Ideology

“In a world of inequity and problems deeply rooted due to unequal power structures, equal opportunity simply does not exist”
(Gorski, 2016; McIntosh, 2005)



Structural Ideology

- Literature from Apple (2010) and Gorski (2016) suggest that social class impacts schools and that schools, through all kinds of practices and expectations, do participate in social reproduction.
- Sense of belonging (Gore et al., 2016; Hannover et al., 2013)
- Adaptability between cultures (Carter, 2008).
- Family income and structures.



Possible Solutions

- Mindfulness, mindfulness, mindfulness. It is important for the teacher to position themselves into the shoes of the student. Ask the question, “What would you want in order to get through your circumstances?”
- Nurturing, caring, and welcoming spaces. A teacher may not be able to 100% solve the structural ideology. But, one can acknowledge it exists, and find ways to reduce or minimize their arms. As an example, I maintained flexibility and pivoted my practice to account for such circumstances.



Major Take Away

“So, we know grit and student success is influenced in these ways. What now?”

- I caution only utilizing grit as a predictor for long term achievement.
- While it appears that much of education has focused on deficit ideology, one must be cognizant of structural factors that impact student achievement.
- As educators (or decision makers), we have the power to institute change. How?

SENSITIVITY

Teacher's conscious awareness of structural barriers

TIME AND SUPPORT

Teachers need time and support for mentorship relationships.

CULTURAL UNDERSTANDING

Educators need to frequently learn and understand the historicity and values of all their students, particularly African Nova Scotian and Indigenous students.



**IT'S SO LOVELY TO MEET
ALL OF YOU!**

Thank you for listening.

