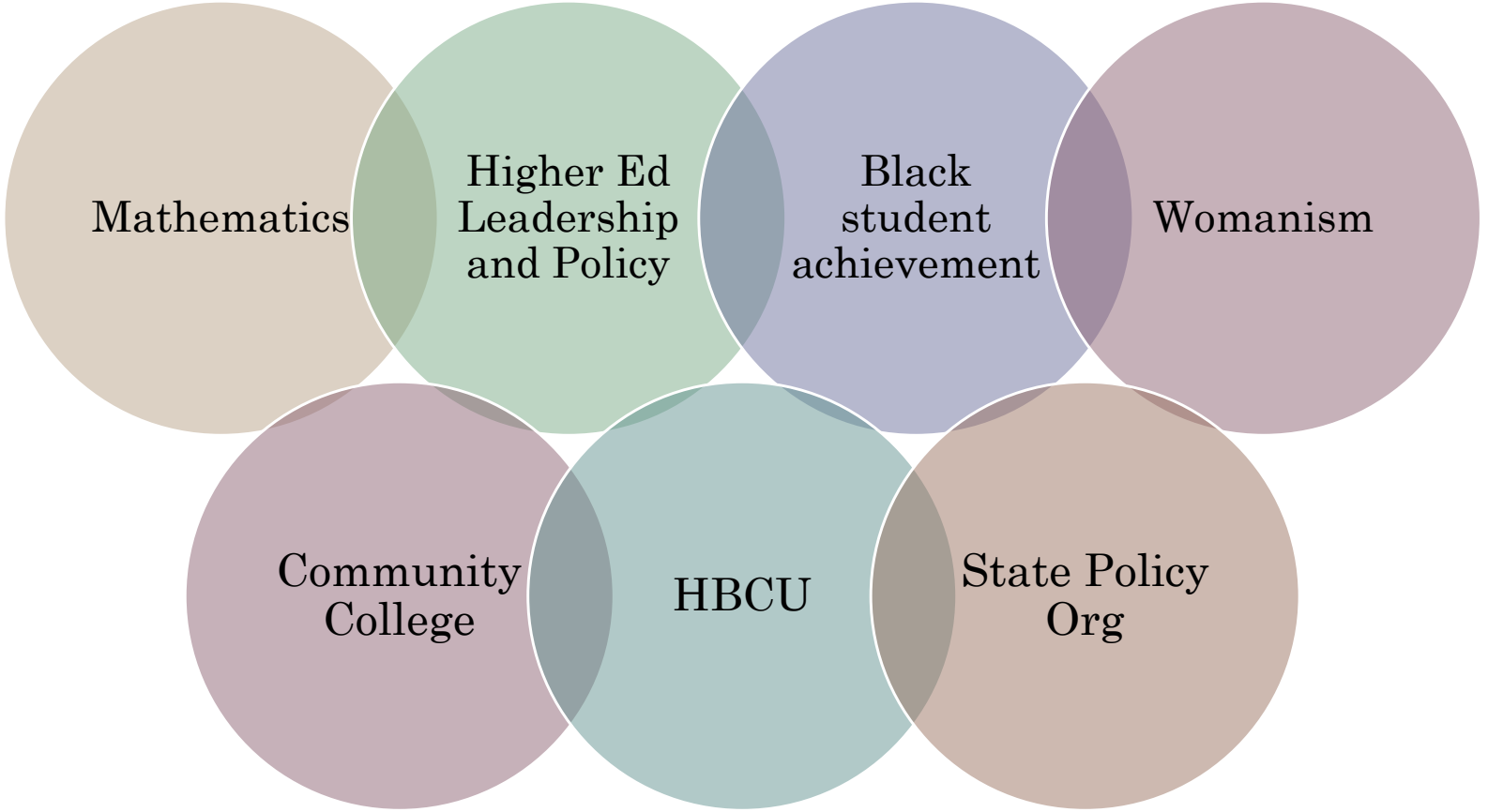
Teaching to Transgress:

Mathematics as the Practice of Freedom

Brittany L. Mosby, Ed.D.

My Intersectionalities



We learned early that our ***devotion to learning***, to a life of the mind, was a counter-hegemonic act, a fundamental way to ***resist every strategy of white, racist colonization***. Though they did not define or articulate these practices in theoretical terms, my teachers [black women] were enacting ***a revolutionary pedagogy of resistance*** that was profoundly anticolonial.

- bell hooks, *Teaching to Transgress*

Education either functions as an instrument which is used to facilitate the integration of the younger generation into the logic of the present system and bring about conformity or it becomes ***the practice of freedom***, the means by which men and women deal ***critically and creatively with reality and discover how to participate in the transformation of their world***.

- Paulo Freire, *Pedagogy of the Oppressed*

What is Liberatory Education?

Liberatory education is education as the practice of freedom. It is:

- Transgressive, disruptive of the status quo
- Care for the livelihood, the souls of students
- Community- and dialogue-centered
- A belief that education is more than the imparting of knowledge, it is "sharing in the intellectual and spiritual growth" of our students.

The ultimate goal of liberatory education is to change society, not create employable workers.

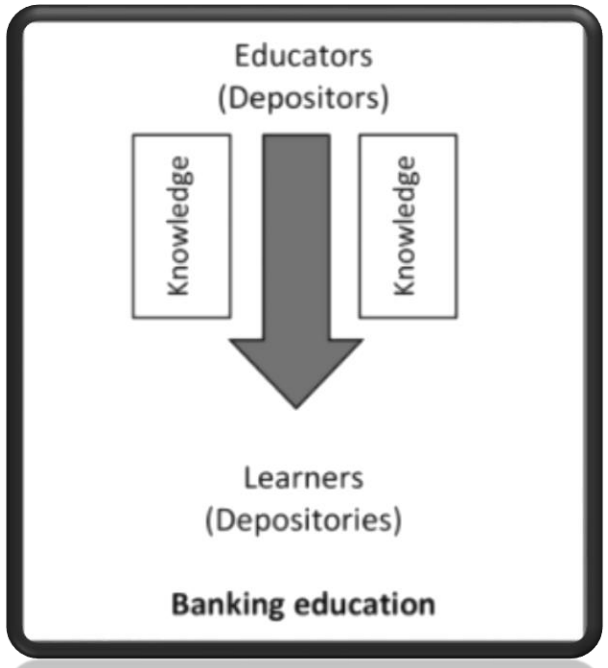
Anti-oppressive

Humanizing

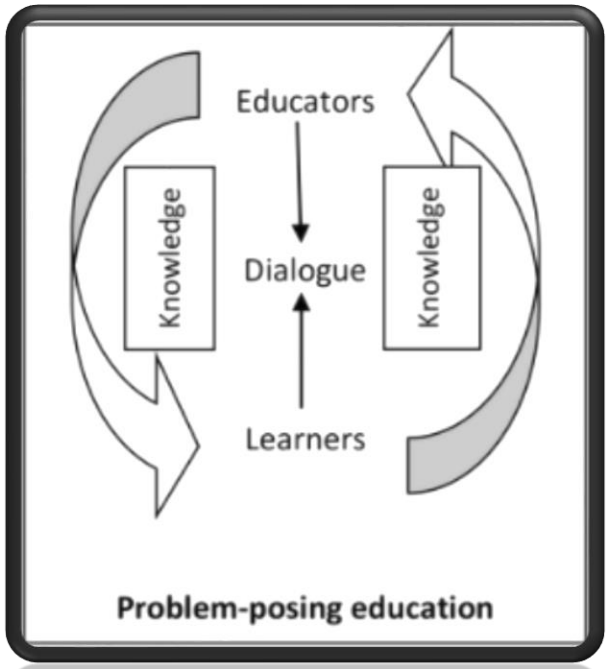
Social practice

Liberatory Education is…

Banking Method



Problem-Posing Method



In *Pedagogy of the Oppressed* (1970) Freire asserts there are two, contradictory methods of teaching. One that *dehumanizes and oppresses,* the other *humanizes and liberates* students.

We must reframe mathematics education as a practice of freedom.

Mathematics as the *practice of Freedom*

- Mathematics classrooms are uniquely positioned to be a liberating experience for students
- Opportunity to unlearn oppressive banking method techniques
- Gatekeeper vs. Gateway to higher education
- Breaking the correlation of marginalized students and low performance in mathematics

How do we hold space in our classrooms for liberation?

Recognizing we are part of a larger system– curriculum requirements, general education distribution, grading schemes, administrator and legislature oversight…

Probing questions for teachers to consider:

Would you describe your approach as student-centered? Do students have input on course parameters?

Are your end-of-course evaluations the only chance for students to provide feedback on the course?

Do you have a really good answer for the questions, “why do we need to know this?” and “when will we use this?”

How do you acknowledge student cultures and foster community in the classroom?

The Atlantic

SCIENCE

In Defense of Flat Earthers

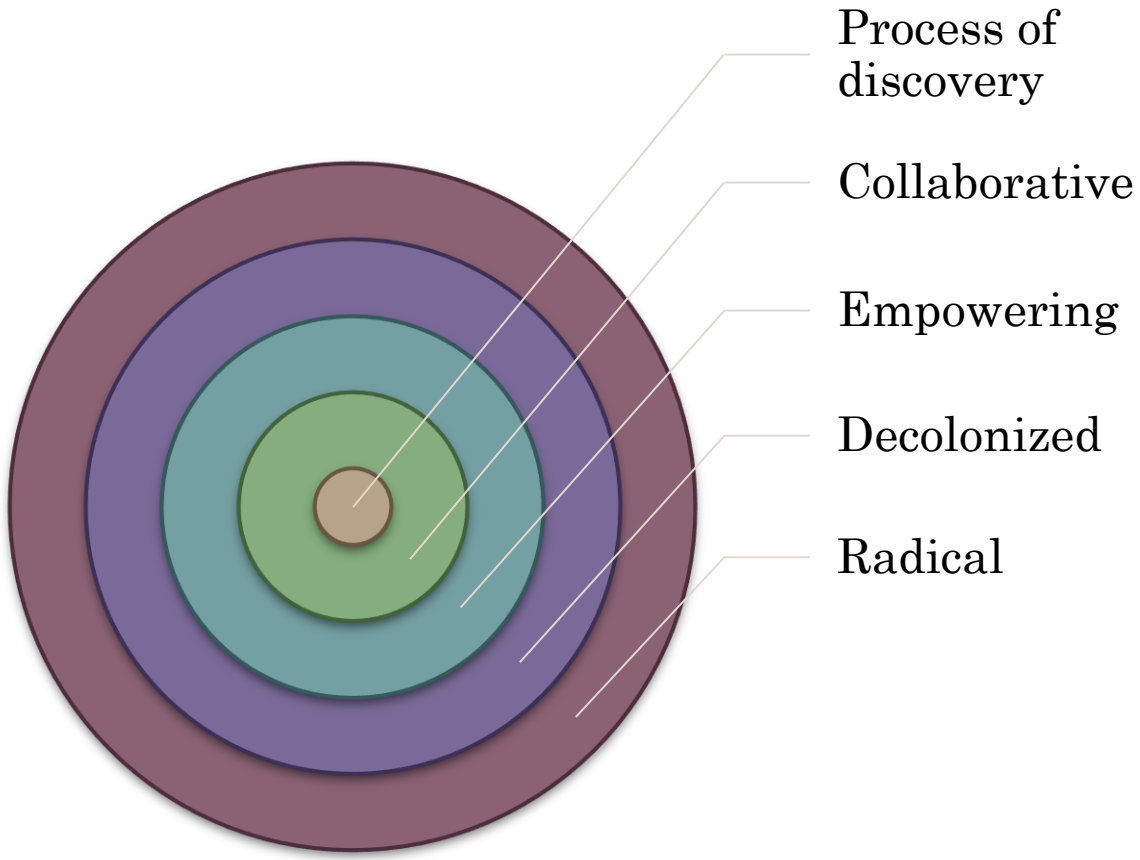
Rapper B.o.B's theory may be ridiculous, but he's motivated by the same questing spirit that gave us science.

By Lizzie Wade

Take a look especially at the tweet that started it all: "The cities in the background are approx. 16 miles apart … where is the curve? please explain this." There's something touchingly genuine about this to me, some deep seated desire to work through confusion and toward truth. This isn't a man who never learned science, or who has some fundamentalist objection to examining empirical evidence about the world. This is a man who has looked at the world around him and decided that mainstream science isn't doing a good job at explaining what he sees. So he's collecting evidence, seeking out literature by well-versed "experts," and working out a better theory on his own.

Envisioning a liberated mathematics classroom

- Affirms students' existing cultural knowledge and mathematical intuition
- Highlights the utility of mathematics as a language to understand problems across multiple fields
- Encourages metacognition and agency in the learning process
- Does not rely solely on lecturing to impart knowledge
- Balances rote, single-skill practice with complex, contextualized, and multi-step problems



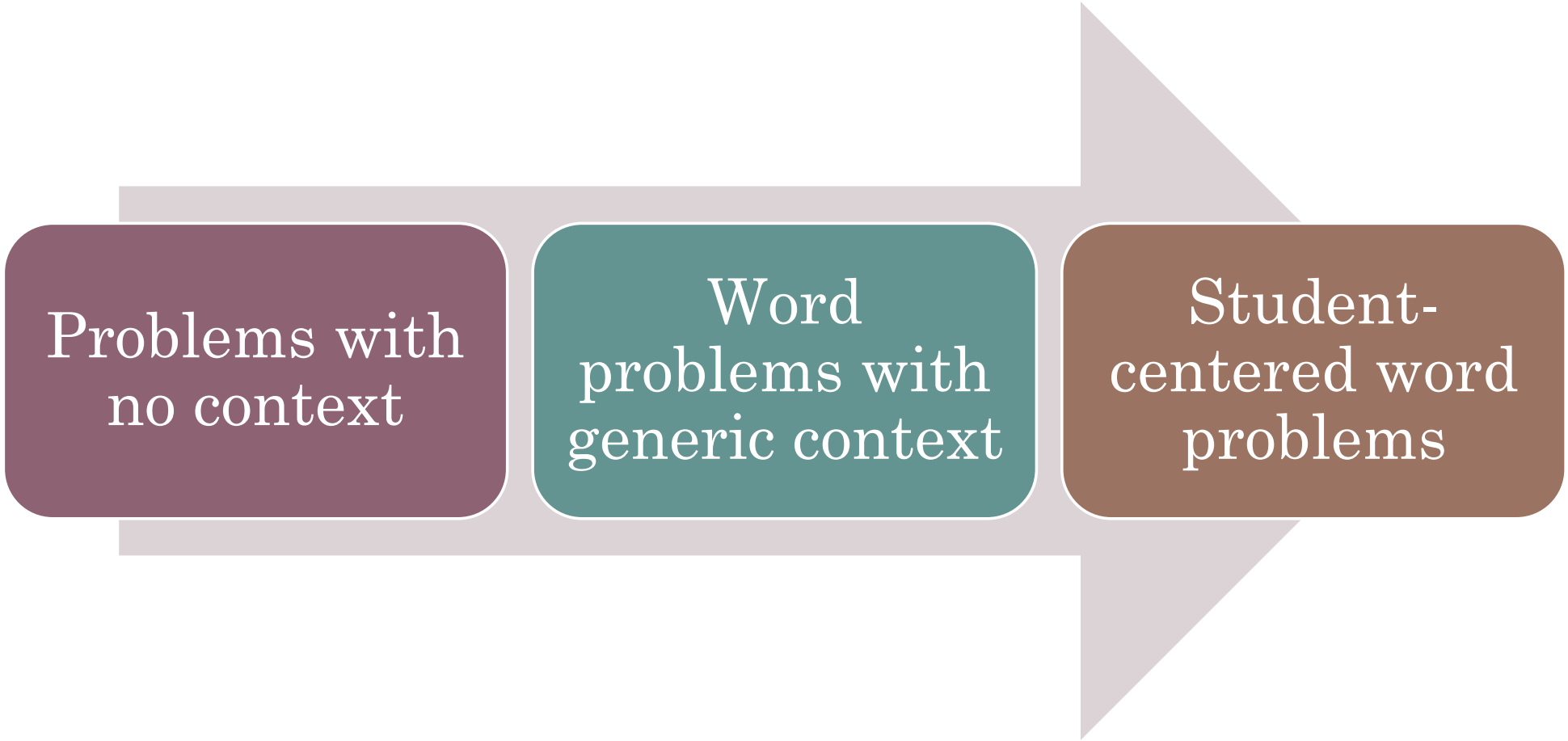
Mathematics as the practice of Freedom

Connecting the dots: towards liberation

Excerpted from *Pedagogy of the Oppressed (1970).*

Students, as they are increasingly posed with **problems relating to themselves in the world and with the world**, will feel increasingly challenged and **obliged to respond to that challenge**.

Because they apprehend the challenges as **interrelated to other problems within a total context**, not as a theoretical question, the resulting comprehension tends to be increasingly critical and **thus constantly less alienated**.



Connecting the dots: towards liberation

Black folks* have a cultural tradition of focusing on the village.

*As do many other communities of color/traditionally marginalized groups (particularly those who were/are colonized or enslaved).

Just over half of HBCU students selected a major in the social sciences

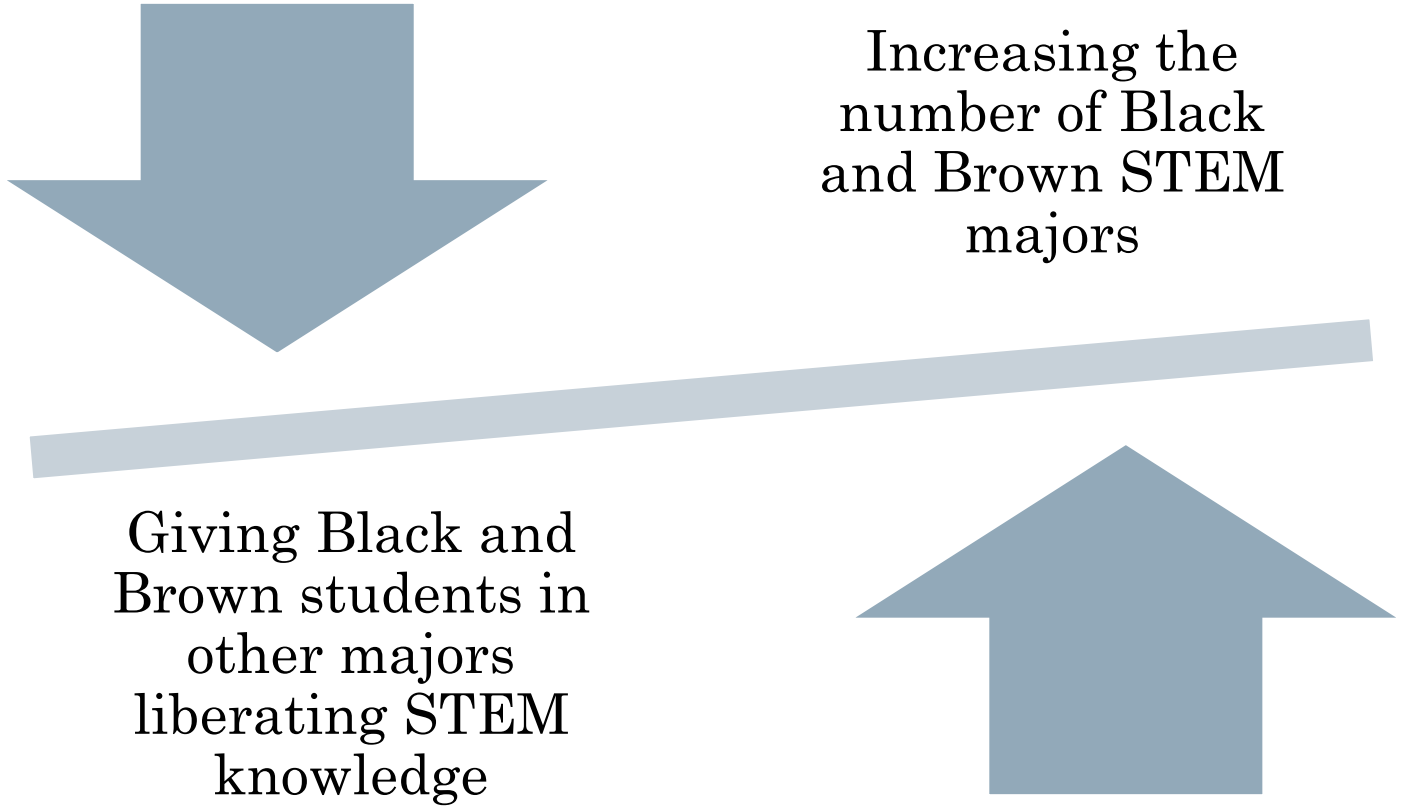
Increases to two-thirds when including religion, philosophy

Most commonly cited reason for study: "to help people/my community"

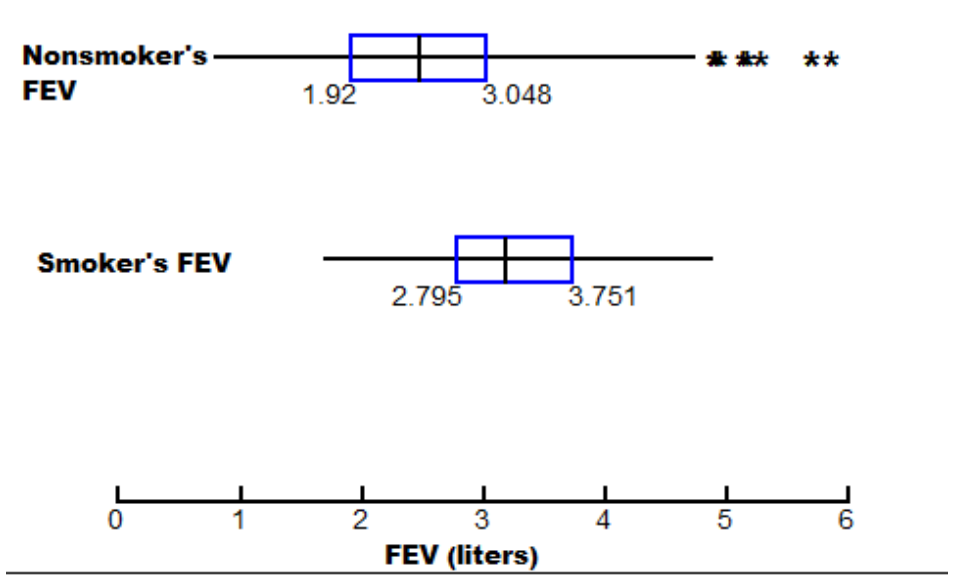
Student-Centered: Listening to our students

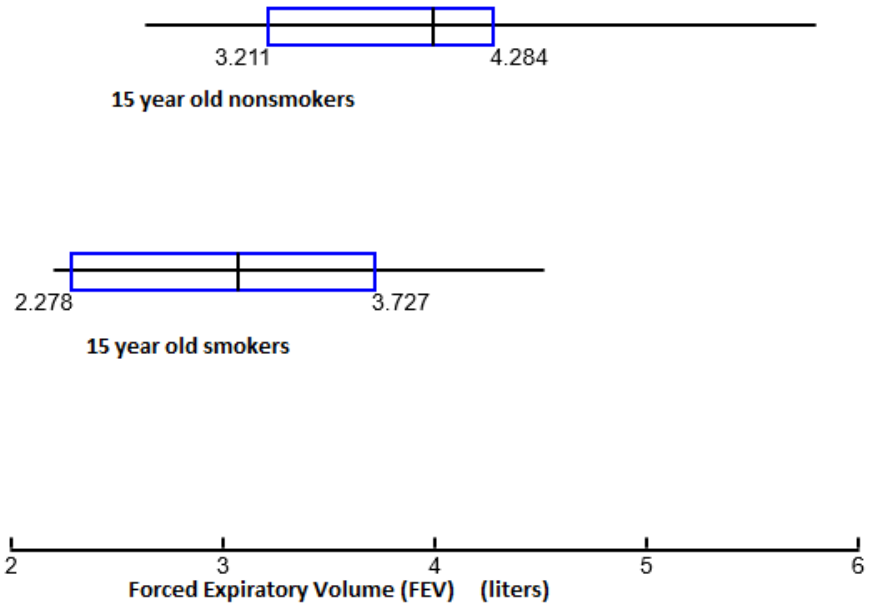
Mathematics as a **practice of freedom** then, also requires tearing down disciplinary silos, and allowing students the freedom to lean into their cultural motivation for learning.

Mathematics as the practice of Freedom



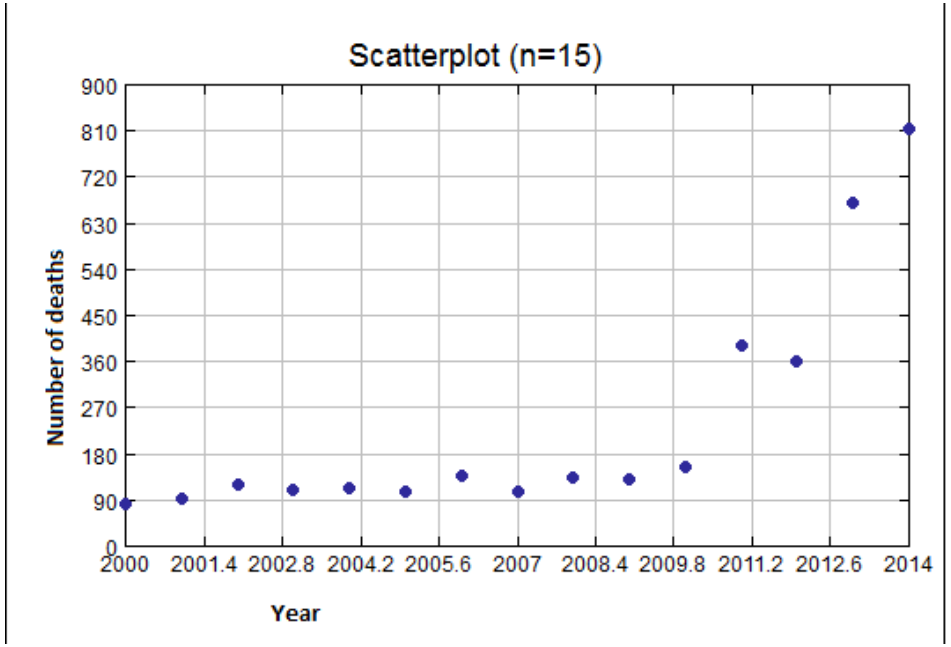
Effects of Youth Smoking





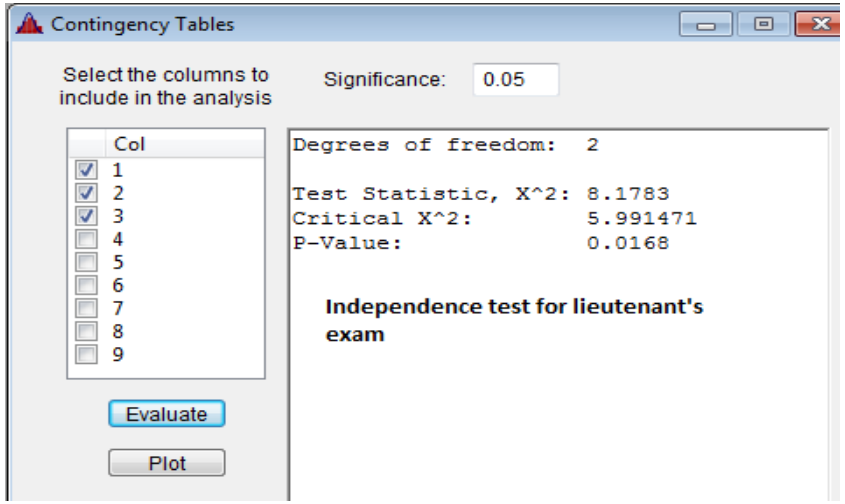
Police Involved Deaths, 2000-2014

Year	Number of police involved deaths
2000	83
2001	94
2002	120
2003	110
2004	114
2005	105
2006	138
2007	105
2008	134
2009	132
2010	156
2011	391
2012	359
2013	669
2014	815



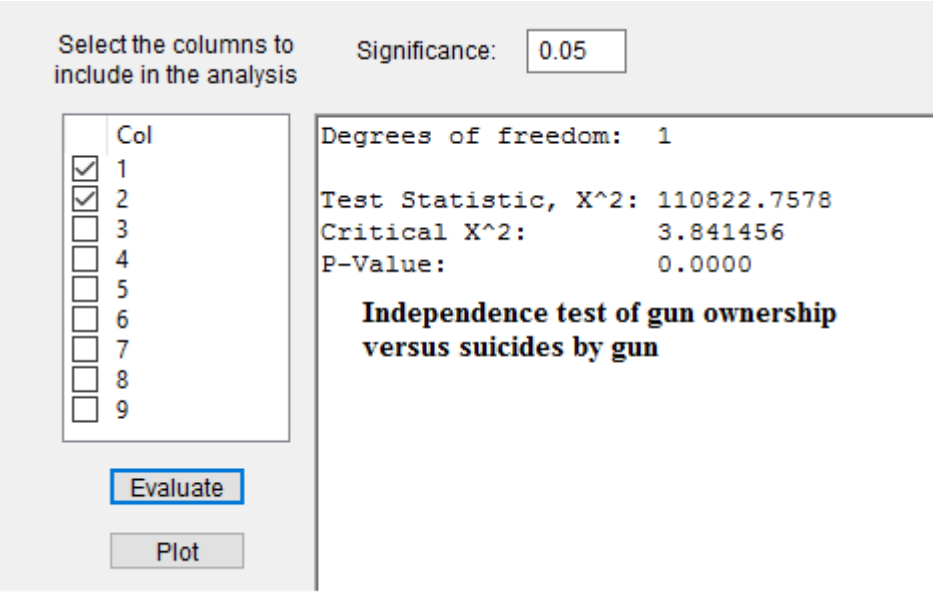
Ricci v. DeStefano US Supreme Court case

	Black	Hispanic	White
Pass	6	3	25
Fail	13	12	18

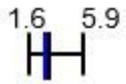


Gun Ownership

	Gun ownership ≤ 22.4 per 100	Gun ownership > 22.4 per 100
# suicides by gun	5223	90310
# suicides by another method	353210	203285



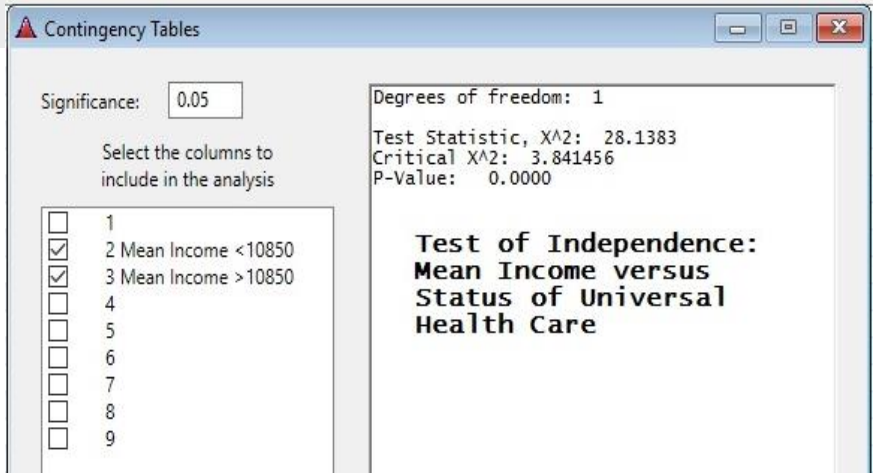
Infant Mortality



Infant Mortality for Countries with annual per capita health expenditures > $1059

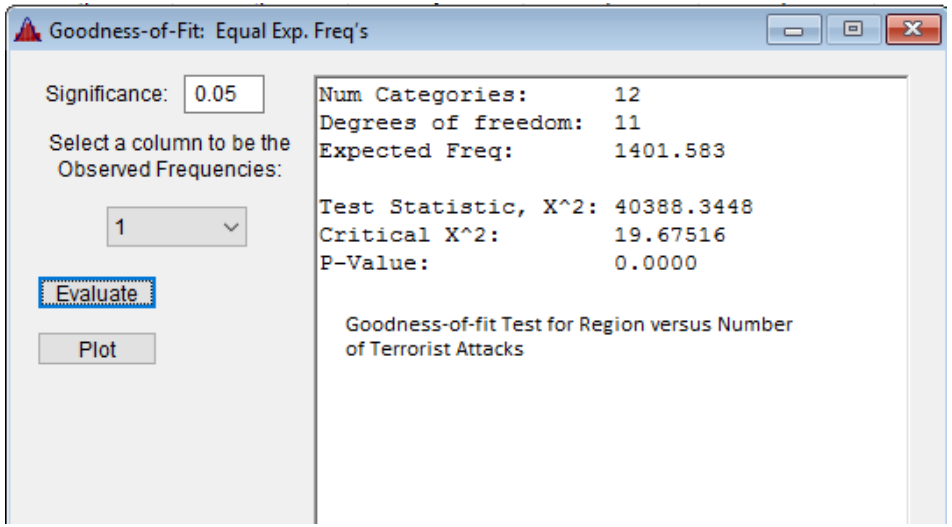
Universal Health Care

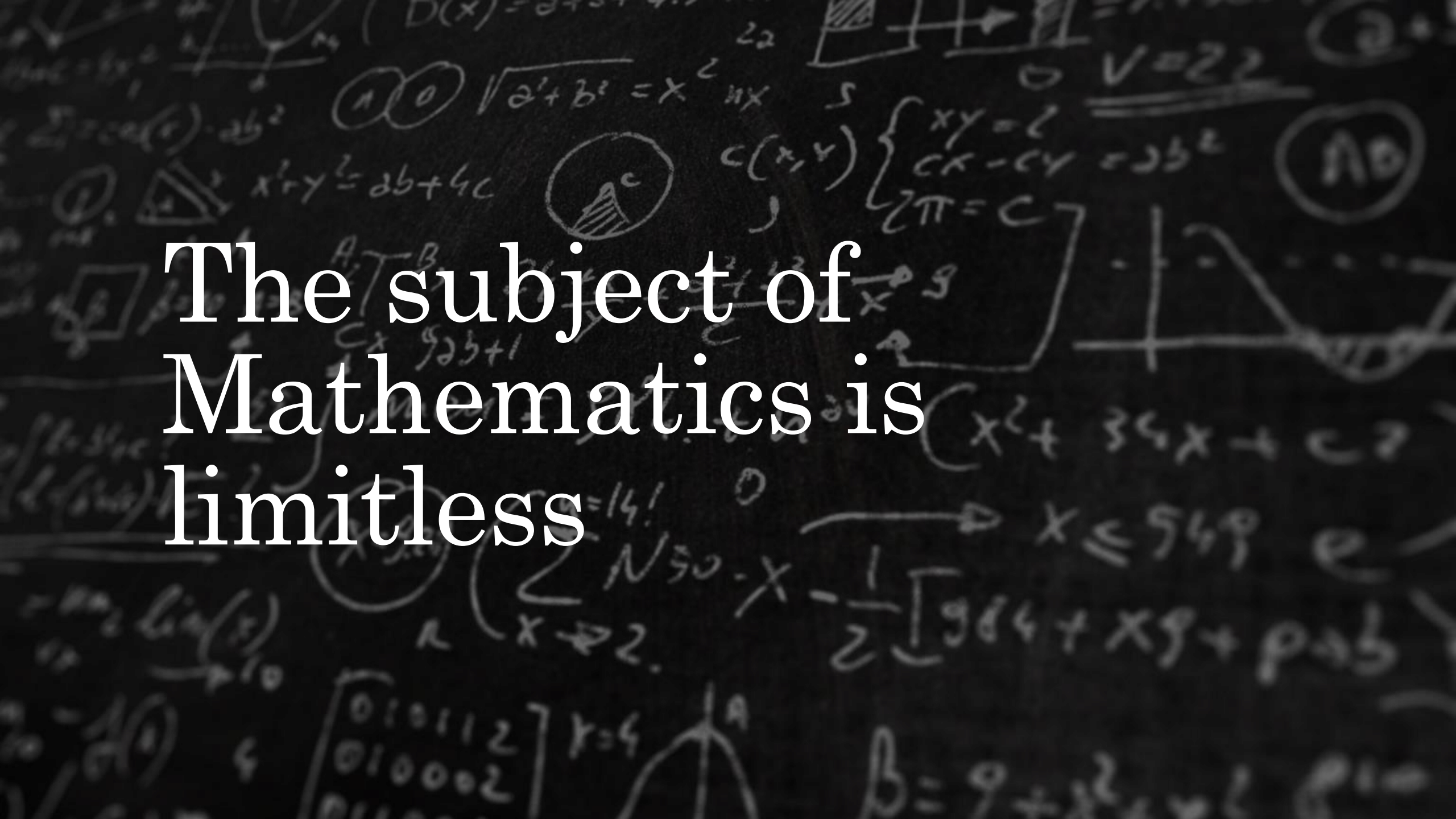
	Average Income per capita ≤ $10850 (the global average)	Average Income per capita > $10850
Has Universal Health Care	1	25
No Universal Health Care	16	4



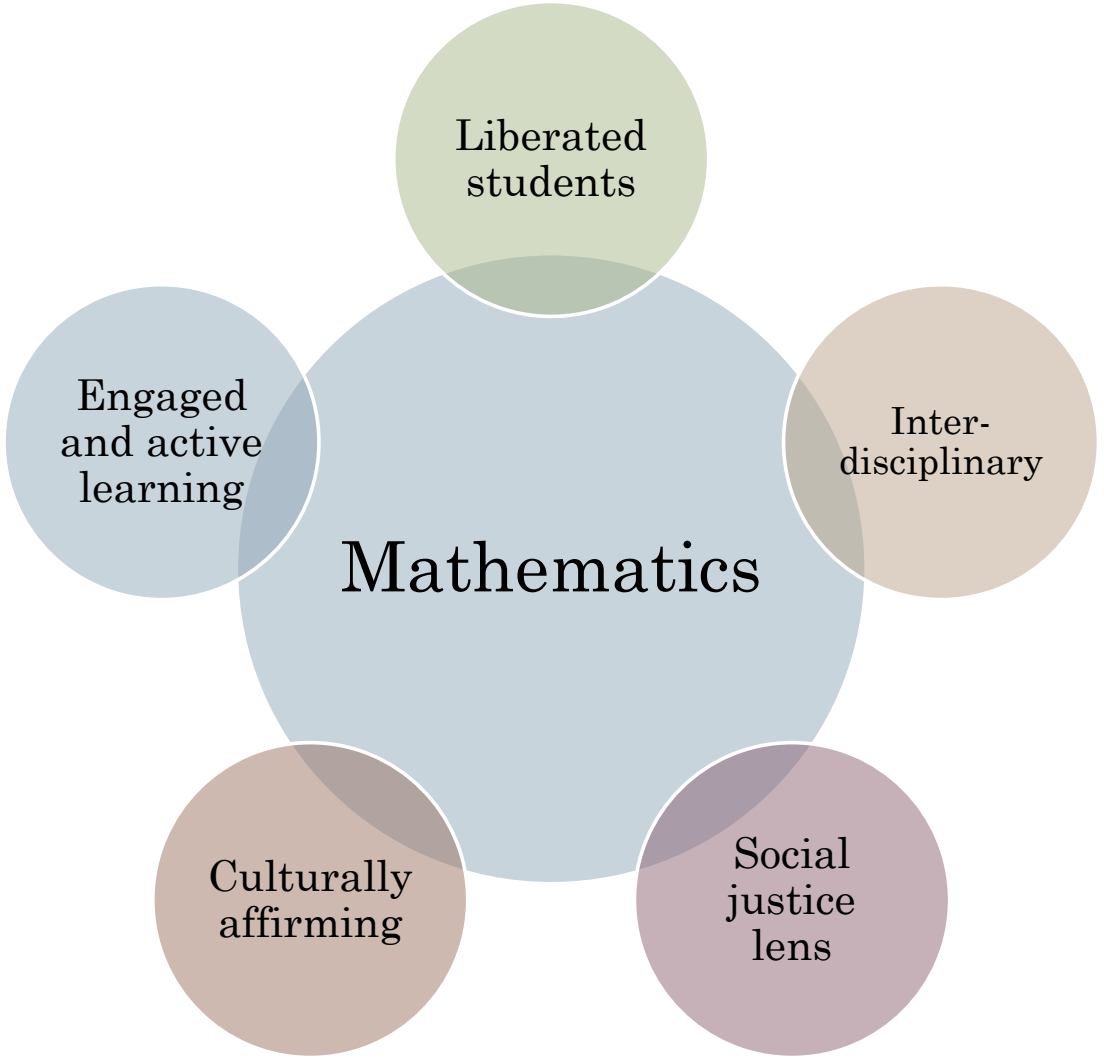
Global Terrorism

Region	Number of terrorist incidents
Australia/Oceania	8
Central America	5
Central Asia	9
East Asia	42
Eastern Europe	954
Middle East/North Africa	6914
North America	26
South America	280
South Asia	4987
Southeast Asia	1076
Sub-Saharan Africa	2305
Western Europe	213




The subject of Mathematics is limitless

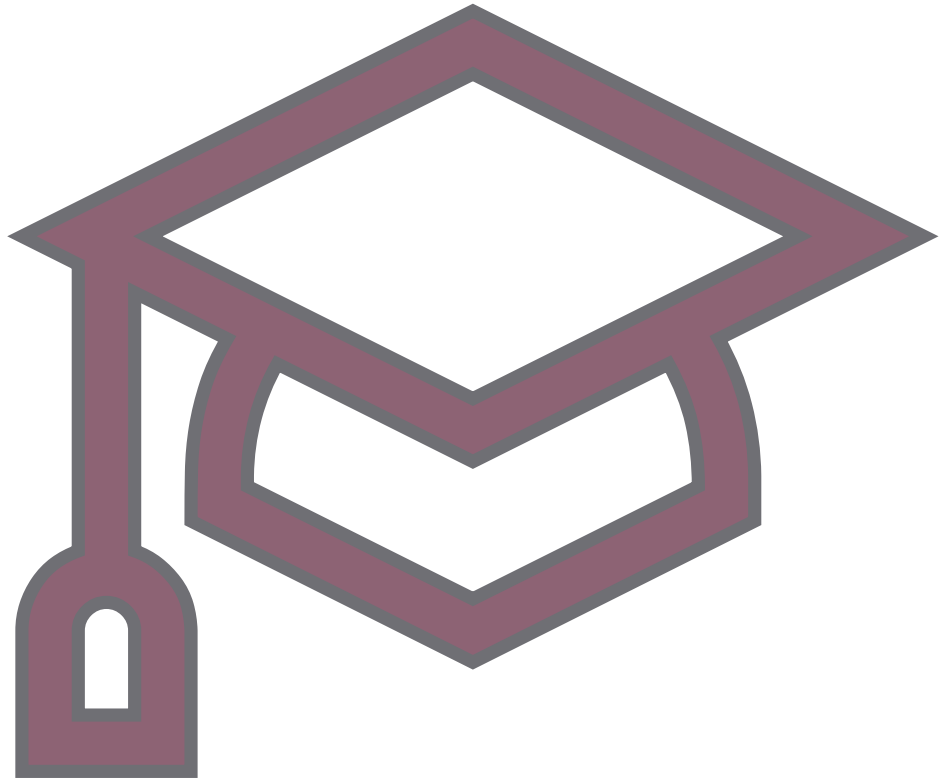
Mathematics as the Practice of Freedom



Liberatory Education

It's not just a bunch of tools. It's about you understanding the importance of valuing students' culture and communities, and then you finding meaningful ways to connect that your classroom and your students.

Dr. Raedell Cannie, Director of Network for Edwork



“Get free, get free y’all.”

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Escapism (Gettin’ Free)
Reachin’ (a new refutation of time and space)
Digable Planets