Implementing Human Rights Education in STEM Curriculum

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Fundamental Questions...

1) Why STEM courses are significantly improved if HRE is implemented in classroom?
Why should HRE be introduced in STEM Curriculum when ...

- ... course content has already been established by articulation between CSU’s, UC’s, and CC’s? In these contracts ...
- ... the amount of course content delivered is at the limit, forcing ...
- ... professors to cherry-pick “selected” topics to fulfill contract with the state.
Why should HRE be introduced in Science Curriculum? It improves student learning by

- establishing strong connection between students and course materials containing elements of HRE
- helping students retaining facts, rates, and figures
- allowing students to think globally and perceive science as a viable tool to solve real world situations
- integrating apparently disconnected academic areas, creating a fertile field for students develop themselves as real college educated human beings
Fundamental Questions

1) Why STEM courses are significantly improved if HRE is implemented in classroom? Because it improves student Learning
Fundamental Questions

2) Which driving force takes students out of a science laboratory and inspires them to explore different areas of knowledge?

Empathy
Any Emotional Response?
Fundamental Questions

1) Why STEM courses are significantly improved if HRE is implemented in classroom? **Because it improves students learning**

2) Which driving force takes students out of a science laboratory and inspires them to explore different areas of knowledge? **Empathy is the force**

3) How does student’s empathy arise in the classroom? **With abundant use of images, news media, and little or no effort by the professor to implement**
Implementation of HRE – The Plan

- First Day of Class (2 hours): UDHR, EPA Regional Impacts of Climate Change, Selection of Region affected and HR article
- During the regular semester: Group discussion during lecture hours, flash emails, student presentation about natural disasters on the news, use of lab time if lab work is completed earlier
- End of semester (3 hours): poster organization, discussion of issues presented in posters, class presentation
- Last day: civil engagement
Final Outcome
Global Warming Effects

Hurricane Weather!!!

Hurricanes Statistics!!!

Rio Del Muerte’s Struggles

Human Rights has a part

Human

I.age

Warming

Effects

I.age

Hurricane

Heat

Hurricanes

Statistics

Rio Del Muerte

Struggles

Human

Rights has a part
Lesson Plan I – Climate Change

- Course content delivers list of greenhouse gases, annual release of CO2/CH4, anthropogenically driven Global Warming, etc...
- Students’ empathy given them passion and emotional motives to explore regional Impacts on Africa, Asia, America, Australia, Europe, Polar Regions, and small islands
Final Assessment: Poster Divided in Three Sections:

- Regions affected by Climate Change, and physical science processes responsible for impacting low income community
- Human Rights Violated? Which articles, etc...
- Actions that must be in place to restore human dignity in affected areas
Did you know?

62 million people were affected by climate disasters in 2020, more than 98% of them in developing countries.
Lesson Plan II – Earth Resources

- Course content already includes: mineral classification and properties, industrial application of key minerals, and typical landscape in which they are found.
- Students’ empathy gives them passion to identify abuses of HR in mining areas where minerals are collected.
2014-2015 Expansion of HRE - Astronomy

- Stellar Ethnicity
- Women and minorities in Astronomy and science
- Should funds currently supporting astronomical projects and space exploration be allocated to improve education?
2014-2015 Expansion of HRE – Algebra-Based General Physics

- Energy production and Human Rights
- Food calorie and obesity in the world
- Ocean thermal expansion and see level rise impacting coastal communities