Youth, Education, & Inspiring the Scientists of Tomorrow

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Standardization & Lack of Autonomy

"It is, in fact, nothing short of a miracle that the modern methods of instruction have not yet entirely strangled the holy curiosity of inquiry; for this delicate little planet, aside from stimulation, stands mainly in need of freedom;" *(Einstein & Schilpp, 1991, p. 17).*

Impact

- Subject becomes something one *has* to do rather than *wants or gets* to do.

- Not having freedom to choose creates negative emotional associations, such as feeling of anxiety, stress, and helplessness.

- Does not inspire a lifelong love of learning due to this association with stress - when really it is the *forced* nature of learning.

Tests & Assessments

"I remember the first time that a grading rubric was attached to a piece of my writing….Suddenly all the joy was taken away. I was writing for a grade — I was no longer exploring for me. I want to get that back. Will I ever get that back?" - Claire, a student in Olson, 2006.

Impact

- Goal becomes to get a good grade instead of to learn
- Encourages memorization over deep learning/understanding.
- Stigmatizes mistakes and failure - results limited risk taking.
- Does not matter skills that really matter - like critical thinking, creativity, and curiosity.
- Quantity (how much you know) over Quality (how well you know it).
- Demotivates children - can make them believe they are not capable of succeeding in a certain field like STEM.

"Education is the kindling of a flame, not the filling of a vessel" - Socrates

2. Interdisciplinary Curriculum

"The greatest scientists are artists as well." — Einstein

- Solutions to problems, including SDGs, need ideas that draw from different disciplines.

- The real world is interdisciplinary, yet subjects in school are all taught in isolation.

Ideas to Inspire Youth in STEM Fields

- Rethink the curriculum
- Different forms of testing
- Instead of teaching, should be creating environments that allow learning to happen.
- Use of technology - benefits of space for all
- Give power to the real experts - teachers.
- Power of organization - GIVE (Global Initiative & Vision for Education).

Thank You