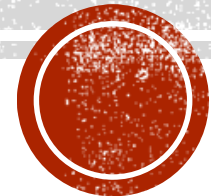


ENGAGING AFRICAN AMERICAN YOUTH IN AG+STEM PROGRAMMING USING CULTURE AS CONTEXT

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WORKSHOP OBJECTIVES

1. Highlight two types of Culturally Relevant Pedagogical practices.
 - A. Culturally Responsive Teaching
 - B. Funds of Knowledge

2. Identify strategies on how to engage African American youth in Ag+STEM programming efforts using Culturally Relevant Pedagogical practices.



HISTORICAL CONTEXT

- Agriculture not viewed favorably by URMIs, especially African Americans.
- Less likely to view as a viable career choice due to negative perceptions and stereotypes:
 - Farming
 - Boring
 - Stressful
 - Labor-intensive
 - Low pay
 - Predominately White & rural
 - Few minority role models
 - Narrow career options



PROGRAMMATIC INITIATIVES & GOALS

- Exposure experiences
 - Summer residential programs
 - Summer Institutes
 - Outreach programs
 - Governor's schools
 - 4-H programming
 - Urban Ag programs
 - Urban and community garden efforts
 - Ag+STEM initiatives
- Goal is to create positive images, increase awareness and change perceptions.
- Expand views of the diversity of educational and career options.



ACTIVITIES & EXPERIENCES

- Experiential learning (i.e., “hands-on”)
- Innovative curriculum
- Integration or ‘elevation’ of STEM
- Parental involvement
- Integration of leadership opportunities
- Career exploration
- Field & lab experiences
- Research projects
- Peer mentoring

Something is missing...



GROUP ACTIVITY

- What strategies have you used to develop programming content that is informed by the cultural background of your minority participants?



CULTURE AS CONTEXT

- Using culture as a context to engage African American youth in Ag+STEM programming efforts has not received much attention.
- Culture is central to learning.
 - Plays a role not only in communicating and receiving information, but also in shaping the thinking process of groups and individuals.
- Pedagogy that acknowledges, responds to, and celebrates fundamental cultures offers full, equitable access to education for students from all cultures.



CULTURALLY RELEVANT PEDAGOGICAL PRACTICES

- **Culturally Responsive Teaching**
- **Funds of Knowledge**



CULTURALLY RESPONSIVE TEACHING

<https://www.youtube.com/watch?v=hmAZjNRmali>



CULTURALLY RESPONSIVE TEACHING

- A pedagogy that recognizes the importance of including students' cultural references in all aspects of learning (**Ladson-Billings, 1994**).
- Three criteria of culturally responsive teaching practices:
 1. Develop students academically.
 2. Nurture and support students' cultural competence.
 3. Develop students' critical competence.



CULTURALLY RESPONSIVE TEACHING

- Teachers create a bridge between students' home and school lives.
- Utilizes the backgrounds, knowledge, and experiences of the students to inform the teacher's instructional methods.
- Culturally responsive teachers utilize student culture as a vehicle for learning (**Ladson-Billings, 1995**).



CULTURALLY RESPONSIVE TEACHING

- Teaching from a Eurocentric point of view results in a failure to include approaches that connect curriculum, instruction, and assessment to the experiences, cultures, and traditions of racial and ethnic minority students.
- Incorporating culturally responsive teaching into science, mathematics, and agricultural science instruction has a positive impact* on African American students.
 - Attracting students to STEM programs.*
 - Increase students' interest and success in STEM.*



FUNDS OF KNOWLEDGE

<https://www.youtube.com/watch?v=aWS0YBpGkkE>



FUNDS OF KNOWLEDGE

- Students' backgrounds and/or experiences can inform their understanding of STEM concepts (Verdin, Godwin, & Capobianco, 2016).
- Students from different cultures bring “funds of knowledge” from their homes and communities that can serve as intellectual resources in class (STEM Smart Brief, 2011).
- Historically accumulated and culturally developed bodies of knowledge and skills essential for households or individual functioning and well-being (Moll, Amanti, Neff, & Gonzalez, 1992).
- Household knowledge was a diverse collection of information, including material and scientific knowledge, **agriculture**, mining, economics, household management, religion, medicine, or knowledge about construction to name a few (Moll, Amanti, Neff, & Gonzalez, 1992).



FUNDS OF KNOWLEDGE

- Students' households contained abundant cultural and cognitive resources, which had potential for use in classroom instruction to connect their cultural understanding with traditional STEM learning.
- Aligning student's home experiences with their school-related experiences required the research team to solicit students' background and knowledge to develop participatory pedagogy.
- Tapping into students' experiences helped legitimize their current knowledge as valid knowledge within classroom practices to enhance learning in science, mathematics, and other content areas.

(Moll, Amanti, Neff, & Gonzalez, 1992)



NSF-ITEST PROJECT

Enhancing Minority Middle School Student Knowledge, Literacy and Motivation in STEM Using Contextualized Agricultural Life Science Learning Experiences

- **STEM learning experiences are grounded in the principles of culturally-relevant pedagogy and contextualized-inquiry.**
- **Develop four open-ended, real-world learning activities (Health, Energy, Environment, and Food), Modeling-Eliciting Activities (MEAs), which connect students to their community through agricultural life science contexts.**



EXAMPLES OF CULTURALLY RELEVANT PEDAGOGICAL STRATEGIES

- Handout #1
- Handout #2
- Handout #3



QUESTIONS?

