Positionality Matters: Understanding Culture and Context from the Perspective of Key Stakeholders

Moderator:
Alyssa Na'im

NSF ITEST Learning Resource Center

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Today's Webinar

Overview
- Alyssa Na'im, Education Development Center, Inc.

  ITEST Learning Resource Center

ITEST Project presentations
- Araceli Martinez Ortiz, Sustainable Future, Inc

  Science, Engineering, and Technology for Students, Educators, and Parents

- Pam Van Dyk, Evaluation Resources, LLC

  Photonics Leaders II

- Karen Yanowitz, Arkansas State University

  CSI: Creating Student Investigators

Discussant
- Angelicque Tucker Blackmon, Innovative Learning Concepts, LLC

  Tri-Regional Information Technology (Tri-IT) Program

Q&A/Discussion
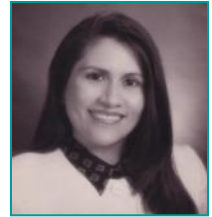
What is ITEST?

- The ITEST experience – including 176 projects across 40 states – helps young people and teachers build the skills and knowledge needed to succeed in a technologically rich society.

- Starting in 2003, through a $140 million federal investment from NSF, ITEST impacts more than:
  - 189,800 students, grades K–12
  - 6,800 teachers
  - 2,000 parents and caregivers

- NSF ITEST Learning Resource Center at the Education Development Center (http://itestlrc.edc.org/)

ITEST Portfolio

Mathematics includes the use of algebra, geometry, calculus, and other mathematical principles to solve real world problems
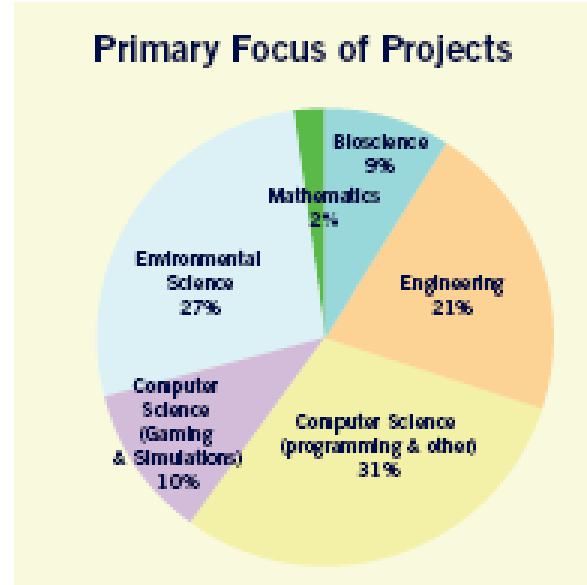

Environmental Science includes GIS/GPS, remote sensing technology, climate modeling, and ecological research and analysis

Computer Science includes: programming; web development; multimedia – audio, video and animation; computer hardware; general skills and mathematics

Primary Focus of Projects

Bioscience 9%
Mathematics 2%
Environmental Science 27%
Engineering 21%
Computer Science (Gaming & Simulations) 10%
Computer Science (programming & other) 31%

Computer Science – Gaming & Simulations includes use and creation of gaming and simulations in formal & informal education

Bioscience includes bioinformatics, biotechnology, DNA analysis/sequencing, and biomedicine

Engineering includes aerospace, design, robotics and nanotechnology

Defining Culture

a **:** the integrated pattern of human knowledge, belief, and behavior that depends upon the capacity for learning and transmitting knowledge to succeeding generations

b **:** the customary beliefs, social forms, and material traits of a racial, religious, or social group; *also* **:** the characteristic features of everyday existence (as diversions or a way of life) shared by people in a place or time <popular *culture*> <southern *culture*>

c **:** the set of shared attitudes, values, goals, and practices that characterizes an institution or organization <a corporate *culture* focused on the bottom line>

d **:** the set of values, conventions, or social practices associated with a particular field, activity, or societal characteristic <studying the effect of computers on print *culture*> <changing the *culture* of materialism will take time — Peggy O'Mara>

Source: Merriam-Webster Dictionary

Defining Stakeholders

- For the purpose of this discussion we will discuss 3 stakeholder groups (Cronbach et al., 1980)

    – Decision makers

    – Implementers

    – Recipients

POSITIONALITY *MATTERS*: UNDERSTANDING CULTURE AND CONTEXT FROM THE PERSPECTIVE OF KEY STAKEHOLDERS

Presented by:
Araceli M. Ortiz

February 2011 Webinar

Science, Engineering, and Technology for Students, Educators, and Parents (SETSEP)

ChiS&E — Chicago Pre-College Science and Engineering Program

- The Science, Engineering, and Technology for Students, Educators, and Parents (SETSEP) program received an NSF ITEST grant in 2009. This program is operated by the Chicago Pre-College Science and Engineering Program (ChiS&E) nonprofit organization.

- CHIS&E operates in partnership with Chicago Public Schools and is further supported by local foundations, corporations, universities, museums, and other nonprofit organizations.

- The SETSEP program serves K-3rd grade students and their parents, who participate in two 4-week Saturday sessions. The initial program began with 60 Kindergarten children and their parents. Each year additional parents and students are added.

- In addition, unique curriculum is developed and teachers receive professional development each summer.

	Yr 1	Yr 2	Yr 3
Students	60	120	380
Parents	60	120	380
Teachers	8	16	44

SETSEP: Program Goals

Pre-Engineering Design Experiences

- Provide hands-on, activity-based instruction in science and engineering to parents and students in Grades K-3

- Expose parents and students to science and engineering facilities in their communities via field trips and instructional classes in these facilities

- Provide parents and students opportunities to meet African American, Latino, and other scientists and engineers

Family Support

- Provide parents opportunities to meet parents who have supported their children in obtaining science and engineering degrees

- Provide a family support system for parents that will include information on health, educational opportunities, child psychology, and assistance with working with governmental agencies.

Curriculum & Professional Development

- Provide teacher training on the K-3 pre-engineering curriculum

Stakeholders/ Roles

- Decision makers (multiple-funders)
  - Summative concerns
  - Immediate impact in community vs. sustainability
  - Recognition

- Implementers (program staff)
  - Program improvement
  - Program element priorities

- Receivers (students/ parents/ teachers)
  - Knowledge transfer
  - Change agents

Research / Resources

- **Border Crossings: Collaboration Struggles in Education** (Magolda, 2001)
  - Strategies and opportunities for collaboration must be planned
  - Discourse must extend beyond techniques for evaluation
  - Cultural differences must be addressed

- **International Perspectives of School, Family, and Community Partnerships** (Sanders & Epstein, 1998)
  - Importance of partnerships in educational reform and excellence
  - Support for the teacher–parent relationship to foster positive and productive home–school connections.
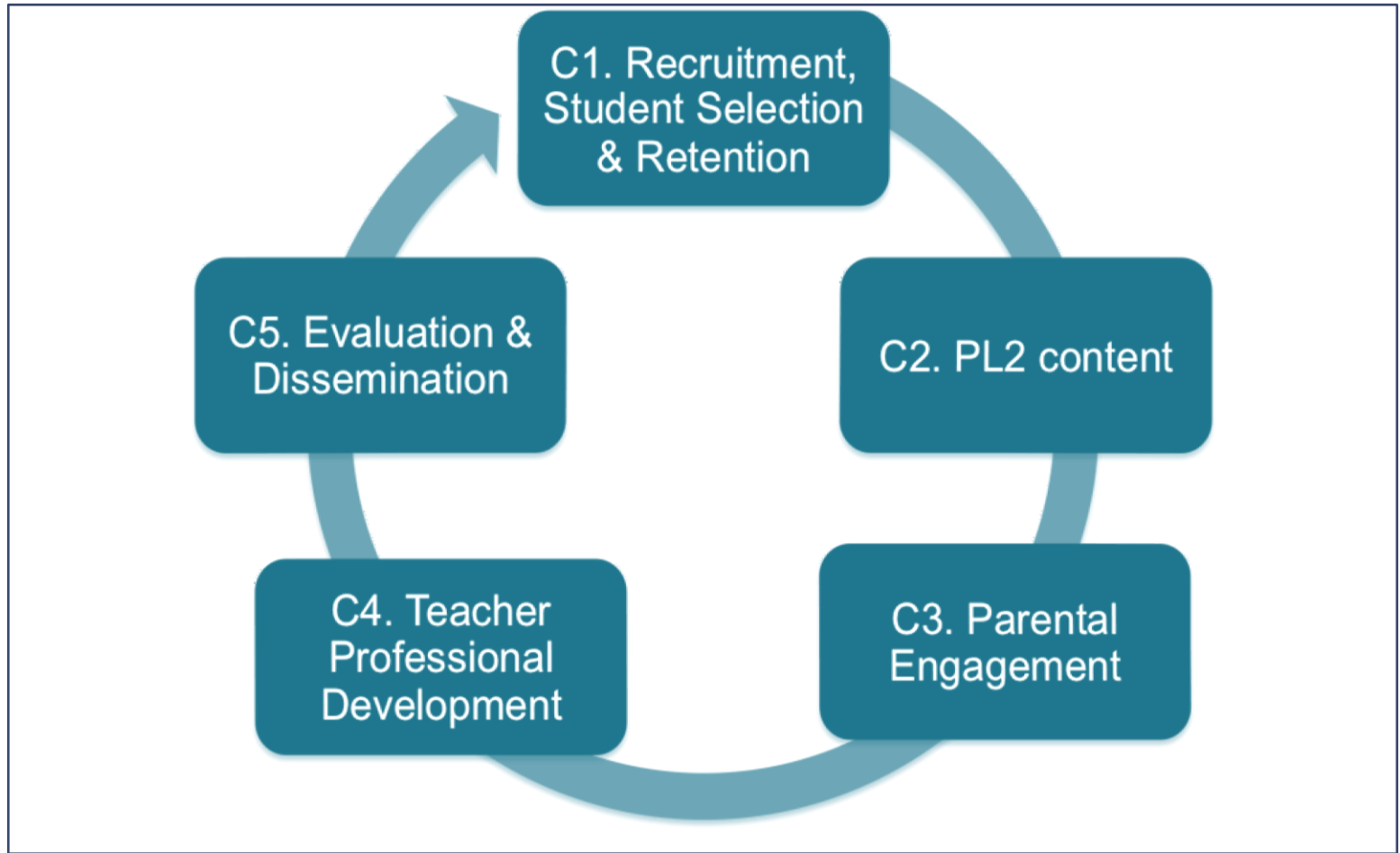
North Carolina State University The Science House Photonics Leaders II

- Hybrid science and technology program
- Students – 164 hours annually
- Teachers – 45 hours annually

PL2 Program Model

C1. Recruitment, Student Selection & Retention

C2. PL2 content

C3. Parental Engagement

C4. Teacher Professional Development

C5. Evaluation & Dissemination

NC STATE UNIVERSITY

THE SCIENCE H·O·U·S·E

Theoretical Framework-Utilization Focused Evaluation Theory (Patton)

Addressing Stakeholder Concerns

- Decision makers (funder)
  - Summative concerns
- Implementers (program staff)
  - Program improvement
- Receivers (teachers/students)
  - Knowledge transfer

Culture and Context Issues

- Important to create a complete "picture" of program impact for decision-makers
- Provide formative feedback tools for program administrators and instructors (implementers)
- Addressing culture and context when helping implementers with program refinement
- Identifying how culture and context influence measurement
- Culture and context guide the ways in which information is delivered.

CSI: Creating Student Investigators

Karen L. Yanowitz
Arkansas State University

CSI: Creating Student Investigators

- ➢ **High interest in the field.**

- ➢ **Integration of multiple science domains.**

- ➢ **Forensic science inherently problem-based.**

The Institute:

- **Week 1: Teacher training by grant personnel**
- **Week 2 :Teachers training students**

Forensic investigations of "crimes" –multiple STEM areas.

Evaluation components:

- Attitude scales
- Current practices
- Intended changes
- "Snap-shot" reports during academic year
- Classroom observations
- Mixed measures, but approached from quantitative perspective

Stakeholder(s) & their Role(s)

- *Teachers:* **Recipients** of training AND **implementers** of programming.

- (Others: Grant personnel, granting agency, recipients).

Issues/Challenges/Lessons Learned

- **Teachers used to authority role; clearly felt challenged by evaluation process.**
  - ➢ **Hard to get them to complete *INDIVIDUALLY.***
  - ➢ **Argued with items/content.**

- **However, efforts to give program authority sometimes back-fired.**
  - ➢ **Perceived the program as disorganized.**
  - ➢ **Wanted to be told exactly what to do.**

Issues/Challenges/Lessons Learned

- **Classroom visits; ultimately not helpful for evaluation process; important to teachers.**

- **Time spent on reason/process of evaluation invaluable.**
  - **More "buy-in" to process.**
  - **Evaluation not capturing their stories; group decided on longer, qualitative narratives.**
  - **However, some "good participant" bias seen.**

Discussant

Angelicque Tucker Blackmon

Tri-Regional Information Technology (Tri-IT) Program

Tri-Regional
Information Technology (Tri-IT) Program

- The Principal Investigator for Tri-IT is Dr. LaDonna Morris;
- After school and summer Information Technology program for 9th and 10th grade girls living in either urban communities or who come from families with low SES in Florida;
- Partnership between Florida State College-Jacksonville, Florida A&M University, and Seminole State College;
- Engages 167 girls in IT activities. The project is designed to provide IT opportunities for 360 girls;
- Teacher professional development and parent engagement components;
- Curricula activities include Robotics, Animation, Web-design, and Green Design;
- Research based ITEST project that has a treatment and control group of students.

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Discussion

- Does your evaluation approach frame the way you think about and engage your stakeholders? If yes, can you describe the connection between your approach to your evaluations and the perceptions that you hold of your stakeholders?

- Do you reflect on your evaluation approach and think about how it might impact the way you engage your stakeholders?

- How might a discussion about your stakeholders' perspectives inform your practice?

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Discussion/Q&A

Resources

- Bryson, J. M., Patton, M., & Bowman, R. A. (2011). Working with Evaluation Stakeholders: A Rationale, Step-Wise Approach and Toolkit. *Evaluation and Program Planning*, 34(1), 1-12.
- Chen, H.T. & Rossi, P. H. (1980). The Multi-Goal, Theory-Driven Approach to Evaluation: A Model Linking Basic and Applied Social Science. *Social Forces*, 59(1), 106-122.
- Magolda, P. (2001). Border Crossings: Collaboration Struggles in Education. *Journal of Educational Research*, 94(6), 346.
- Sanders, M. G., & Epstein, J. L. (1998). International Perspectives on School-Family-Community Partnerships. *Childhood Education*, 74(6), 340-41.
- Hopson, R. (March 7, 2010) Rodney Hopson on Culturally Responsive Evaluation. AEA365: A Tip-a-Day by and for Evaluators. http://aea365.org/blog/?p=247

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Thank You!

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