Successful Practices for Assessing Core Themes and Student Learning Outcomes for Mission Fulfillment

MARK STEWART AND STASINOS STAVRIANEAS
STEM for ALL: From iScience to STATUS

Our primary focus was on improving STEM education for ALL students (learning experiences for both STEM majors and General Education).

STEM Wordle: sites.google.com/a/cesa5.org/stem/
Important institutional elements that affect learning

- Students
- Faculty
- Facilities
- Administration (Development, Finance, Admissions, etc.)
- Academic Program
Among other things, we learned …

… that the process highlighted the insufficiency of our definition and understanding of the term “underserved students”. We also learned how and why this was significant for the fulfillment of the institutional mission.
The Willamette University mission statement:

“Willamette University provides rigorous education in the liberal arts and selected professional fields. Teaching and learning, strengthened by scholarship and service, flourish in a vibrant campus community. A Willamette education prepares graduates to transform knowledge into action and lead lives of achievement, contribution and meaning.”

(http://willamette.edu/about/mission-motto/index.html)
Is the institutional mission important?

• Yes, since the mission statement communicates the institutional priorities.

• All institutions/organizations have some form of “access and affordability” as part of their mission.

• Every institution must provide evidence of “…the institution’s effectiveness at fulfilling its mission, its ability to monitor and adapt to changing environments, and its potential to continue to fulfill its mission at an acceptable level for the foreseeable future.” (NWCCU Handbook, p.16).
So, what did we do?

- STATUS: STEM Access and Training for Underserved Students.
- Collaborations with local high schools to identify and recruit students.
- Students and their families attended an 8-week summer program.
  - Lab work for students.
  - Involvement of parents (Dennis, Phinney & Chuateco, 2005; University of Massachusetts, 2011).
We certainly faced challenges

• How to identify students?
• How to bring students AND their families to campus?
• How can we make the science curriculum accessible and exciting?
• How can we be of support to the families?
• How can we help them establish attainable educational goals that include a college education?
• What resources are available?
• Lack of institutional indicators for mission fulfillment.
How did STATUS promote mission fulfillment?

- We identified a need to cultivate a greater sense of “belongingness”.
- This sent us back to the literature, not only in science education and mission fulfillment, but importantly to the assessment literature.
Future Directions

• STATUS opened our eyes to how the lack of 4Ps presents an often insurmountable obstacle for students to engage in STEM fields.

• STATUS has informed and transformed our local, regional and national professional work.