DEMONSTRATING PROGRAM QUALITY

LESSONS LEARNED FROM APPLIED BACCALAUREATE DEGREE PATHWAYS

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WHAT IS AN APPLIED BACCALAUREATE (AB) DEGREE?
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- Transfer
- Terminal

Applied Baccalaureate
Definitions of AB degrees vary, our research draws upon these core characteristics:

- applied learning, courses, and degrees
- technical associate courses and degrees, once considered “terminal” or “non-baccalaureate level,” now incorporated into the baccalaureate degree
- providing students with higher-order thinking skills and advanced technical knowledge and skills
- often designed to reach non-traditional and/or underserved students
When we embrace these characteristics, relying on degree designations can muddy the waters.

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Example
AAS in Nuclear Power Technology at Bismarck State College transfers to BAS in Energy Management at Bismarck State College
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**Example**

AAS in Robotics Technology at Baltimore City Community College transfers to BS in Industrial Engineering at Morgan State University
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ABOUT OUR RESEARCH: AB THROUGH THE LENS OF NSF-ATE

- Identify NSF-ATE projects and centers across the U.S. that are affiliated with associate to baccalaureate degree pathways
  - Survey of NSF-ATE Principal Investigators
  - Responses from 231 ATE projects and centers
  - Identified 95 associate to baccalaureate degree pathways (41% of ATE projects and centers)

- Explore curricula associated with identified pathways
  - Search institutional websites of all identified pathways to examine curricular models and to compare similarities and differences among identified curricula

- Gather detailed information on identified AB degree pathways
  - Conduct follow-up surveys and in-depth website reviews to understand pathway structures and communication strategies
Released reports of our national survey results in 2012:

- Of the 51 cases for which we found evidence of the degree pathways in our website search, 69% were confirmed as AB degrees.

- Nearly 10% of all identified cases were in some stage of development, based on data gathered from institutional websites.

- Learn more at: http://occrl.illinois.edu/projects/nsf_applied_baccalaureate/
SEEKING IN-DEPTH UNDERSTANDING OF AB DEGREE PATHWAYS

- Completed case studies examining AB degree pathways affiliated with 6 NSF-ATE projects and centers, examining how the pathways are designed, organized, implemented, experienced, and evaluated. Included more than 20 higher education institutions and related organizations.

- Interviewed degree program administrators and faculty, current students, graduates, advisory board members, and local employers.
UNDERSTANDING PROGRAM QUALITY

- How do *stakeholder groups perceive* program quality?

- What steps are taken to *establish, demonstrate, improve*, and *communicate* program quality?
Assessments, definitions, measures, performance indicators, and tools to identify program or college quality come in many shapes and sizes.

Furthermore, different stakeholder groups – administrators, accreditors, policy makers, students, families – express different preferences for the type of information and quality arguments that they prefer. (Sullivan et al., 2012; Stephan et al., in press)
EXAMPLE PROGRAM QUALITY DIMENSIONS

- Advisory board
  - Industry partners
  - Academic partners

- Resources
  - Facilities
  - Equipment / technology
  - Staff, advisors, tutors, etc.
  - External funding

- Elements of faculty quality
  - Professional development / certifications
  - Involvement on professional boards and organizations
  - Publication and grant awards
  - Faculty and administrator diversity
EXAMPLE PROGRAM QUALITY DIMENSIONS

- Accreditation
  - Departmental
  - Program
  - Regional

- Curriculum mapping
  - Industry certifications
  - Education standards

- Articulation agreements

- Contributions made to the community

- Program review / assessment
  - Enrollment numbers
  - Student demographics / diversity
  - Student / graduate satisfaction

- Collaborations with:
  - Industry
  - NSF-ATE Centers
  - Other higher education institutions
  - Non-profits, research centers, organizations
### Example Program Quality Dimensions

**Outcome**

- Direct measures of student performance
  - Learning outcomes assessments
  - Subsequent coursework / Capstone courses
  - Internships / employment
  - Industry certification exams
  - Regional / national competitions

- Indirect measures of student learning
  - Persistence rates
  - Time to degree
  - Graduation rates
  - Matriculation to four-year degree / graduate school
  - Employment rates
## EXAMPLE PROGRAM QUALITY DIMENSIONS

- **Affordability / accessibility**
- **Professional association recognitions**
EXAMPLE PROGRAM QUALITY DIMENSIONS – SALIENCE EXERCISE

- Mapped to Industry & Education Standards
- Accreditation
- Advisory Board (Industry/Academic)
- Collaborations with Industry
- Assessment of Student Outcomes
- Program Review / Assessment
- Faculty / Institutional Expertise
- Collaborations with Higher Education Institutions
Internal Influences

Example Program Quality Dimensions – Salience Exercise

- Mapped to Industry & Education Standards
- Accreditation
- Advisory Board (Industry/Academic)
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Components across Cases
External Influences

- Mapped to Industry & Education Standards
- Accreditation
- Advisory Board (Industry/Academic)
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EXAMPLE PROGRAM QUALITY DIMENSIONS – SALIENCE EXERCISE

**Data Influences**
- Mapped to Industry & Education Standards
- Assessment of Student Outcomes
- Program Review / Assessment
- Accreditation

**Interpersonal Influences**
- Advisory Board (Industry/Academic)
- Collaborations with Industry
- Faculty / Institutional Expertise
- Collaborations with Higher Education Institutions

**Components across Cases**
- Industry
- Academic
- Faculty
- Institutional

**Advisory Board** (Industry/Academic)

**Collaborations**
- with Industry
- with Higher Education Institutions
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EXAMPLE PROGRAM QUALITY DIMENSIONS – SALIENCE EXERCISE

1. Mapped to Industry & Education Standards
2. Accreditation
3. Assessment of Student Outcomes
4. Program Review / Assessment

Interpersonal Influences

- Advisory Board (Industry/Academic)
- Collaborations with Industry
- Collaborations with Higher Education Institutions
- Faculty / Institutional Expertise

Biotechnology in Ohio

Faculty / Institutional Expertise
- Developed in concert with community college faculty
  - Outcomes driven
  - Forward and backward designed to be transfer-friendly

- Informed by workforce indicators
  - Advisory boards
  - LMI Software

- Aligns with requirements from ABET and AACSB

- Student performance indicators
  - CC transfers often receive awards for top-performing students
  - Students highly desired by area colleges in addition to partner colleges
  - Internship opportunities
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Consider the Dimensions of Program Quality for your academic program(s)

- Which dimensions are particularly salient for you? Which come to mind immediately when you describe the quality of your degree program?

- Which dimensions have you not thought about recently that could enhance your understanding of program quality?

- Which dimensions would you like to know more about, but don’t have access to right now?

- Who are your program stakeholders? How might they respond to these dimensions of program quality?
CHALLENGES TO GATHERING OUTCOMES EVIDENCE

- New programs / Little history / Few graduates
- Limitations of technology systems / resources
  - Inability to track multiple student goals
  - Limited number of staff members in institutional research offices to run special data requests
- Challenges associated with characteristics of community colleges students / culture
  - CC students have multiple intentions and goals – not always certificate or degree completion
  - CC students are often not required to declare a major, making it difficult to identify who is enrolled in the program
  - CC students can swirl between institutions or between school and work
  - Students may finish courses, but transfer early or not file for graduation
  - Graduation fees may be a barrier
- Difficulty tracking students after transfer / graduation
A two-part student outcomes evaluation
- Survey of students and graduates
- Student-level data exploration examining progress to degree using institutional data

Collecting data now.
- Watch our website for these reports to come out this winter!

OR

Join our listserv to receive an email when the new reports are released.
THANK YOU FOR JOINING US!
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