Use Of Industry Advisory Boards In The Accreditation Process

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What Are College Level IABs?

Top management professionals from industry, government, and academia dedicated to the creative development of a college who can:

- Encourage excellence in and provide overall guidance for teaching and research
- Provide for the recognition of the faculty, students, and alumni
- Raise funds for endowed positions, scholarships and fellowships, program, and faculty development
- Raise public awareness of programs
What Are Dept. Level IABs?

- Middle management and small company CEOs and presidents - professionals from industry, government, and academia who can:
  - Promote excellence in teaching at undergraduate and graduate levels
  - Promote excellence in graduate student and faculty research
  - Advise faculty and students of professional skills expected of BS, MS, and PhD graduates
  - Assist in faculty recruitment
  - Assist in student recruitment and placement
  - Assist department in interactions with the dean and the university administration, fund-raising, and promotional activities, and
  - Assist the department in providing public service
What Does ABET Say Regarding IABs?

- **EAC (as of 2003-04)**
  - Old criteria - IAB required in Manufacturing Engineering programs only
  - New criteria - implicit in Criterion 2 as one of the “programs’ various constituencies” which help determine and periodically evaluate program objectives and in Criterion 3 providing feedback on achieving outcomes

- **TAC (as of 2003-04)**
  - Old criteria - “1.J.1. Each accredited program must have an industrial advisory committee ...”
  - Old program criteria for Automotive, Environmental, and Mining - members have full spectrum knowledge of fields
  - New criteria - explicit in Criterion 5 Program Advisement
What Does ABET Say Regarding IABs?

- CAC (as of 2003-04) - Implicit in Criterion 1
- ASAC (as of 2003-04) - Implicit in Criterion 2
- EAC evaluation forms, matrix, guidance, and lessons learned - IABs implicit in evaluation and assessment process
How Are IABs Structured?

- **Membership**
  - **College level**
    - CEOs and presidents of major corporations, agency heads, provosts/deans from academia - alumni preferred
    - Recommended by dean with approval by president and regents/trustees
    - Up to 70 for larger colleges
  - **Department level**
    - Middle management in large corporations, CEOs and presidents of smaller companies, agency unit directors, deans/chairs from academia - alumni preferred
    - Recommended by chair with approval by dean
    - Typically 12 to 25 depending on department
  - **Generally 3-yr terms**
How Are IABs Organized?

- **Organization**
  - **Variable**
    - College and department level IABs may have no members or one or more member in common
    - Department boards may be subcommittees of college board
  - **Officers**
    - Chair and vice chair of board are board members
    - Dean/chair may be secretary or ex officio of board
  - **Committees**
    - Corporate contributions and endowments
    - Academic and research programs
How Do IABs Function?

- Meeting frequency
  - Once or twice a year for college and department
  - Coordination of one meeting per year

- Meeting duration and agenda
  - 1 to 2 1/2 days
  - College agenda - updates from dean (and perhaps president) and faculty, focus on particular issues in breakout sessions with reports to whole group, development of action items
  - Department agenda - updates from dean, chair, and faculty, focus on particular issues in breakout sessions with reports to whole group, development of action items, meetings with students
How Can IABs Help With Accreditation?

College Boards

- Resource for accreditation
  - Provide advice about programs to emphasize, add, or modify
  - Help college obtain adequate institutional support and external financial resources to support programs
  - Suggestions for departmental boards
  - Help faculty become professionally proficient through industrial experience

- Provide feedback
  - Assist with Criteria 2 and 3 industrial feedback to programs
  - Best practices for process improvement
How Can IABs Help With Accreditation?

- **Department Boards**
  - Review program objectives
    - In ABET’s slow cycle loop on left
    - Review educational objectives each two years
  - Review curriculum
    - In ABET’s fast cycle loop on right
    - Review some portion of curriculum each year
  - Review student performance
    - Communication
    - Design projects
    - Outcomes
  - Best practices for process improvement

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How Can IABs Help With Accreditation?

Cautions

- Employers are represented on IABs, but the members are CEOs, not the managers usually supervising your graduates. Their knowledge of graduates’ performance may not be complete.
- Alumni are represented on IABs, but they are not recent graduates and their memory of programs is probably old.
- Student feedback to IAB may be blunt - be prepared to respond.
The Two-Loop Process

- Determine educational objectives
- Determine Outcomes Required to Achieve Objectives
- Input from Constituencies
- Formal Instruction
  - Student Activities
- Assess Outcomes
  - Evaluate Objectives
- Establish Indicators for Outcomes to lead to Achievement of Objectives
- Determine How Outcomes will be Achieved
- Determine How Outcomes will be Assessed
- IABs

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Assessment for Continuous Improvement

Institutional Mission (Criterion 2a)

Engineering Criteria 2000 (Criterion 2a)

Constituents (Criterion 2b)

ABET

IAB

Engineering Educational Goals/Objectives (Criteria 2a&b)

Performance Specifications (Criteria 2a&b)

Program Outcomes

Educational Practices/Strategies (Criterion 2c)

Feedback for Continuous Improvement (Criterion 2d)

Evaluation: Interpretation of Evidence (Criteria 1, 2d&3)

Assessment: Collection of Evidence (Criteria 1, 2d&3)

Source: Gloria Rogers - Rose-Hulman Institute of Technology
Jump Starting Your IAB

- Do Set Up IABs
  - Set up IABs at program level, i.e., departments
  - Focus IABs attention primarily on program objectives, curriculum, outcome definition, and student evaluation
  - Consider other ways for them to contribute to your
  - Insure IAB is proactive and self-managed program as well
  - Insure faculty-IAB interaction
Jump Starting Your IAB

- **Membership**
  - Get alumni preferably or others who want to give back to their alma mater and will make the commitment to participate
  - Clear departmental members with dean and clear college level members with president and regents/trustees
  - Insure a diverse and balanced membership
Jump Starting Your IAB

IAB Activities

- Give IABs specific charges and expectations for accreditation involvement that match the needs and characteristics of the department/college
- Invite their help with process improvement and assessment methodologies
- Have them help with getting feedback from industry
- Have them assess student work through interactions during meetings, portfolio and design project review, participation as practitioners in capstone courses
- Help them document their findings
Sustaining Your IAB

- Tell them often that you value their participation and feedback
- Show how you are incorporating their input to improve your programs
- Give those rotating off a token of your appreciation