Industry Advisory Boards in Engineering Technology

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BYU

Abstract
It is standard practice for Engineering and Engineering Technology programs to have an Industry Advisory Board (IAB). These boards or councils meet regularly with the faculty and staff of the academic program and interact with them in a variety of ways. An important question is how effective are these boards?

In 2007, Genheimer and Shehab1 published a study of IABs in engineering education with a model and a case study. Two years later, the same authors extended their study2 by reaching out to many large research institutions with engineering programs.

These authors and others formulated objectives for IABs which include advocacy, recruitment and placement, support for research, curriculum review, fundraising and similar goals. Research studies have attempted to evaluate how effectively institutions and IABs are meeting these objectives. Much of the previous work has focused on Engineering programs.

This study extends the research of IABs into engineering technology (ET) education. A survey instrument examines the responses of multiple Engineering Technology programs and analyzes them by discipline as well as overall results.

Introduction
Industry Advisory Board (IAB) or Industry Advisory Council (IAC) or other similar industrial advisory groups are industry representatives that meet with technical academic programs. These boards meet regularly with the faculty and staff of the academic program to discuss ways in which the program needs to be and can be improved. In many institutions, such boards or councils have been in place for decades5. These groups take a variety of forms and use a variety of structures. They will all be referred to in this paper as IABs for all variants.

The ABET EC20003 initiative greatly increased the use of IABs, in engineering programs in the USA4. Similar ABET initiatives encouraged their use in Engineering Technology (ET) programs. As wide as the use of IABs has been in ET education, we were not aware of a study of the effectiveness and best practices for IABs in ET. The desire to fill this knowledge gap is the motivating factor of this study.

Procedure
As mentioned in the abstract, this study extends the Genheimer & Shehab reports by studying programs in engineering technology. In their model, Genheimer & Shehab identify eight objectives of an IAB. In a related study,6 Rooney and Puerzer identify eleven objectives, which overlap those of Genheimer & Shehab but have more emphasis on recruiting both students and new faculty and stronger emphasis on research. They make the cogent point that the role of IABs is strictly advisory, and they have no policy-making power. They also comment that the roles of IABs change depending on the size of the institution. Our study largely follows that of Genheimer & Shehab but with modifications influenced by other related studies such as that of Rooney and Puerzer (ibid), Zhang and Wang7 and Gerdes and Tilley8.

We created a survey instrument designed to address the objectives of IABs. One hundred ABET accredited ET programs were identified, and were included in this study. We experienced...
a 27% return rate; 26 of these surveys were sufficiently complete to be usable. The questions we used were informed by those used in the referenced report, with modifications as needed for this study.

The returns were from Electrical/Electronics ET (7), Manufacturing ET (5), Mechanical ET (4), Civil ET (6), Electronics and Industrial ET (2), Electrical and Computer ET (1), and Nuclear and Electronics ET (1). All the programs that participated in the study had an IAB.

The full wording of all the questions is found in the Appendix.

**Results**

The first question had to do with how often the program meets with their IAB. Table 1 summarizes the results. As with the authors’ own experience, one or two meetings per year seems to be the most common use of IABs.

The second question addressed the existence of subcommittees. Seven of the participating programs (26.9%) did have subcommittees that met separately. The remaining 19 programs (73.1%) did not. The separate subcommittees listed by the programs included fund raising, recruitment, alumni relations, assessment, curriculum, executive, and subcommittees for each of the ET disciplines at that particular institution.

The third question addressed the size of the typical IAB, not including the faculty. This went along with the fourth question, which was how many IAB members typically attend the meetings. Table 2 summarizes these results. We can see that the most IABs have 11-20 members, with 6-10 attending meetings. This suggests that most IABs have irregular attendance, of the order of 50%. This is not surprising as later questions indicate that the reward for IAB members are intangible, and they have little direct motivation for attending.

One of the subcommittees mentioned above was recruitment. The fifth and sixth questions had to do with the extent to which IABs helped recruit new undergraduate and graduate students to the respective program. This information is summarized in Table 3. We can see that the vast majority of the IABs for the participating programs had occasional or incidental involvement in recruiting undergraduate students to these programs, but most of the IABs were not at all involved in recruiting graduate students.

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### Table 1: Frequency of meetings with IABs

<table>
<thead>
<tr>
<th>Frequency</th>
<th># Reporting</th>
<th>% Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once per year</td>
<td>11</td>
<td>42.3%</td>
</tr>
<tr>
<td>Twice per year</td>
<td>12</td>
<td>46.2%</td>
</tr>
<tr>
<td>3-5 times per year</td>
<td>3</td>
<td>11.5%</td>
</tr>
<tr>
<td>6-12 times per year</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>&gt;12 times per year</td>
<td>0</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

### Table 2: Size and attendance at IAB meetings, not including faculty.

<table>
<thead>
<tr>
<th>Typical IAB Size</th>
<th># Reporting</th>
<th>% Reporting</th>
<th>Typical # Attending</th>
<th># Reporting</th>
<th>% Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5</td>
<td>0</td>
<td>0.0%</td>
<td>1-5</td>
<td>3</td>
<td>11.5%</td>
</tr>
<tr>
<td>6-10</td>
<td>7</td>
<td>26.9%</td>
<td>6-10</td>
<td>15</td>
<td>57.7%</td>
</tr>
<tr>
<td>11-20</td>
<td>14</td>
<td>53.8%</td>
<td>11-20</td>
<td>7</td>
<td>26.9%</td>
</tr>
<tr>
<td>&gt;20</td>
<td>5</td>
<td>&gt;20</td>
<td>&gt;20</td>
<td>1</td>
<td>3.8%</td>
</tr>
</tbody>
</table>

### Table 3: Degree of IAB involvement in recruiting undergraduate and graduate students.

<table>
<thead>
<tr>
<th>Degree of Involvement, Recruiting Undergrads</th>
<th># Reporting</th>
<th>% Reporting</th>
<th>Degree of Involvement, Recruiting Grad Students</th>
<th># Reporting</th>
<th>% Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>2</td>
<td>7.7%</td>
<td>None</td>
<td>16</td>
<td>66.7%</td>
</tr>
</tbody>
</table>
The next five questions had to do with the extent to which IABs were involved in placement, providing internships, promoting the program, and maintaining contact with alumni. These results are summarized in Table 4. We find it very encouraging that the majority of the IABs in the participating programs were involved to some degree in all of these efforts to help the program.

Table 4: Degree of involvement in placement, providing internships, promoting the program, and maintaining contact with alumni.

<table>
<thead>
<tr>
<th>Type of Involvement</th>
<th>None</th>
<th>Occasional or Incident</th>
<th>Ongoing</th>
<th>Organized Program or Subcommittee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placement in permanent positions</td>
<td>0 (0.0%)</td>
<td>16 (61.5%)</td>
<td>9 (34.6%)</td>
<td>1 (3.8%)</td>
</tr>
<tr>
<td>Providing internships</td>
<td>0 (0.0%)</td>
<td>14 (53.8%)</td>
<td>10 (38.5%)</td>
<td>2 (7.7%)</td>
</tr>
<tr>
<td>Promoting the program</td>
<td>1 (3.8%)</td>
<td>10 (38.5%)</td>
<td>15 (57.7%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>Promoting the program with students</td>
<td>2 (7.7%)</td>
<td>18 (69.2%)</td>
<td>6 (23.1%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>Maintaining contact with alumni</td>
<td>5 (19.2%)</td>
<td>14 (53.8%)</td>
<td>6 (23.1%)</td>
<td>1 (3.8%)</td>
</tr>
</tbody>
</table>

The next eight questions dealt with the IAB involvement in directing the program (vision, mission statements), curriculum, student feedback, providing technical seminars, presentations, seminars or workshops, facilitating capstone projects, and classroom projects. These results are summarized in Table 5. It should be noted here that the results in this section were not complete for all programs, so the numbers do not always add up to 26 responses. Again in this table, we see that most of these participating programs had IABs that were quite involved in the programs, many with ongoing or even formal scheduled processes.

Table 5: Degree of IAB involvement in curricular issues.
Facilitating capstone project topics 1 (4.2%) 13 (54.2%) 9 (37.5%) 1 (4.2%)
Facilitating classroom project topics 4 (17.4%) 17 (73.9%) 2 (8.7%) 0 (0.0%)

Another question on IAB involvement in capstone projects is the extent to which the IAB members are involved in evaluating student capstone projects. This is summarized in Table 6. Here is seen a wide divergence in IAB involvement, ranging fully across all four levels of involvement.

<table>
<thead>
<tr>
<th>Description of Involvement</th>
<th>Degree of Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Evaluating student capstone projects</td>
<td>4 (16.7%)</td>
</tr>
</tbody>
</table>

Table 7 summarizes the IAB involvement in recommending topics or projects for research in a given year. Here the majority is clear: most IABs do not get involved in recommending projects or topics for research.

<table>
<thead>
<tr>
<th>Description of Involvement</th>
<th>Degree of Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Recommending research projects or topics</td>
<td>17 (70.8%)</td>
</tr>
</tbody>
</table>

Another set of questions addressed the degree to which IAB members provide financial or other material support for the programs. These results are summarized in Table 8. While it is clear from this table that the majority of the IABs in the study do not provide any kind of funding for the program, it is very insightful to see that a few IABs do.

<table>
<thead>
<tr>
<th>Type of Involvement</th>
<th>Degree of Financial Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Providing funding for research</td>
<td>18 (78.3%)</td>
</tr>
<tr>
<td>IAB membership fee</td>
<td>20 (87.0%)</td>
</tr>
<tr>
<td>IAB donations or grants</td>
<td>14 (60.9%)</td>
</tr>
<tr>
<td>Student scholarships</td>
<td>16 (69.6%)</td>
</tr>
<tr>
<td>Equipment donations</td>
<td>15 (62.5%)</td>
</tr>
</tbody>
</table>
The next three questions had to do with IAB involvement in technology transfer, patenting, research, and external funding. These three questions are presented in Table 9. In no programs was there a formal, scheduled process for this type of involvement.

Table 9: IAB involvement in research, patents, and raising external funds.

<table>
<thead>
<tr>
<th>Type of Involvement</th>
<th>Degree of Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Advising on technology transfer, patenting of research, and related topics</td>
<td>16 (66.7%)</td>
</tr>
<tr>
<td>Evaluating research proposed by faculty members</td>
<td>17 (70.8%)</td>
</tr>
<tr>
<td>Supporting raising of external funding</td>
<td>14 (58.3%)</td>
</tr>
</tbody>
</table>

It has been the authors’ experience that IAB members generally participate in these regular meetings because of their desire to help the program out in any reasonable way they can. This is borne out by the findings in Table 10, which show that IAB members, with only a few exceptions, serve *pro bono*, which service is greatly appreciated by all the programs they serve.

Table 10: IAB financial rewards for participation.

<table>
<thead>
<tr>
<th>Type of Financial Reward</th>
<th>Degree of Financial Reward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are IAB members rewarded financially?</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>22 (91.7%)</td>
</tr>
</tbody>
</table>

Academic institutions are not noted for their ability to reward participants financially, but they do have other valuable assets. These include tickets to sporting events, performances, tours, etc. Table 11 summarizes the degree to which these rewards are used to express gratitude to IAB members for their participation. Again we see that most IAB members serve with no expectation of any type of external reward.

Table 11: Frequency of providing other perks for IAB members.

<table>
<thead>
<tr>
<th>Providing Other Perks for Participation</th>
<th>Degree of Financial Reward</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Do IAB members receive other perks?</td>
<td>17 (70.8%)</td>
</tr>
</tbody>
</table>

Another type of reward that academic institutions can offer IAB members for their participation is preferential treatment when it comes to recruiting students from the program.
Table 12 summarizes how often this inducement is used, and again we see that it is not a very significant inducement.

**Table 12: IAB Preferential access to recruiting students from program.**

<table>
<thead>
<tr>
<th>IAB Preferential access to program students</th>
<th>Degree of Preferential Access</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Do IAB members have privileged access for recruiting students?</td>
<td>16 (69.6%)</td>
</tr>
</tbody>
</table>

The next five questions probe the intrinsic motives that move IAB members to take the time and energy to participate regularly in these meetings. Interestingly, the desire to meet ABET requirements, and to help the program develop their curriculum, are the strongest other reasons for IAB members to be involved.

**Table 13: Other reasons for IAB member participation.**

<table>
<thead>
<tr>
<th>Reason for IAB Participation</th>
<th>Degree of Intrinsic Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
</tr>
<tr>
<td>IAB participation is an ABET expectation</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>IAB can help develop the program curriculum</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>IAB members can help place students</td>
<td>2 (8.3%)</td>
</tr>
<tr>
<td>IAB members can help provide material support for the program</td>
<td>11 (45.8%)</td>
</tr>
<tr>
<td>IAB members can provide projects and/or funding for research</td>
<td>11 (45.8%)</td>
</tr>
</tbody>
</table>

The final two questions were open-ended questions, inviting survey participants to share their most successful example of IAB participation, and their most significant frustrations or challenges in making IAB meetings useful and meaningful. The responses to these questions are listed below; the number in parentheses is the number of times this comment occurred.

Successful examples included:
1. Creation and continued funding of ET scholarships.
2. Program feedback for continued curriculum improvement. (10)
3. Capstone projects. Many of our grads and most of our advisors return to Senior Projects to reconnect. Many connections are made and jobs have changed because of our IAB. Just this year I had one grad come back and leave with a new job. They love it, we love it and everyone benefits.
5. Identifying new trends in the relevant industries.
6. Identifying areas for cross-linking to other programs.
7. Students are able to work on industry projects for their senior capstone projects.
8. Internship Fair – Raises money for the program and places students.
9. Closer relationship to local industries and related job opportunities.
10. They have provided adjunct faculty to teach courses.
11. Political support for our program to upper administration and ABET.
12. One of the IAB members helped us put together telecom applications in one of our labs.

Examples of challenges included:
1. Explaining the academic structure and positions.
2. Scheduling meetings that fit everyone’s schedule. (7)
3. Getting the president to attend. The president could probably get us some bling, but he can’t fit it into his schedule.
4. Too many program alumni that don’t want significant changes.
5. Sometimes dominated by equipment vendors.
6. Legacy membership. (2)
7. No desire to change the structure of the IAB to take on fund raising.
8. Keeping the meetings relevant. Some years there is lots going on with lots to discuss.
   Some years we are just talking about the same ol’. IAB members will show up if we keep
   the meeting relevant, they won't if we don't.
9. Distance for face-to-face meetings. (2)
10. Getting influential members to be on it. (2)
11. Keeping the IAB members engaged without burdening them.

Conclusions
In summary it appears that most IABs see themselves as advisory adjuncts to the relevant
programs. They are interested in helping the program meet their academic goals by involvement
in ABET requirements and curriculum advising. They also have an interest in hiring students in
different ways, as evidenced by the high participation in these activities. They provide direction
and feedback for the program, and a significant number (37%) facilitate student capstone
projects, while a larger percentage (83.3%) evaluate capstone projects, including formally
evaluating them (37.5%).

In material terms most IABs neither receive nor provide support for the programs. A
percentage (37.5%) provide equipment donations (less than $10K), several provide scholarships
(a few in the $5K-$10K range) and a few provide donations or research funding (< $10K).
Research does not appear to be a major issue for ET programs as far as their IAB is concerned.
Involvement in funding and tech transfer is low.

The open feedback reflects that overall this type of involvement meets the program’s
expectations. Frustrations expressed largely reflect practical issues (EG scheduling).

This suggests that overall ET programs are content with the status quo in the use of their
IABs. Only occasional remarks indicate that some would like to see a greater involvement in
fundraising. For this to change there would need to be a vision and model developed to
demonstrate how the IAB could play a greater role.

Interestingly, in comparing the findings of this research to the findings of Genheimer and
Shehab for engineering programs, no significant differences were found.

Future Research
This study was based on responses from ET program leaders. The study could be
extended by getting responses from IAB members to explore what they would like to see. That
could be further extended by contacting senior technical management in industry to find out what
they would like to see in industry-academia relationships with reference to Engineering
technology. Further studies could address the concerns of other ET faculty (not program chairs) with a stronger interest in getting research or other help from the IAB.

References

Appendix
Following are the questions as included in the survey.

Thank you for taking a few minutes to complete this survey about Industrial Advisory boards for Technology and related programs.
The survey takes 10 minutes or less to complete.
1. Do you represent one or more 4-year Engineering Technology or Technology Programs? (if no, skip to end of survey)
2. Does the program have an Industrial Advisory Board (IAB) or Industrial Advisory Council (IAC), (or other body performing similar functions)? (if no, skip to end of survey)
3. Which discipline does your program represent?
   If you are responsible for more than one discipline, please take the survey once for each discipline. If multiple programs share the same IAB please list the programs that are served under “Other” below)
   • Electrical/Electronics Engineering Technology
   • Computer/Information Engineering Technology
   • Manufacturing Engineering Technology
   • Mechanical Engineering Technology
   • Civil Engineering Technology
   • Other Technology or Engineering Technology (please Specify)
4. How frequently does your IAB meet in an organized meeting? (in a typical year)?
   • Once per year
   • Twice per year
   • Three to five times per year
   • Six to twelve times per year
   • More frequently than twelve times per year
5. Does your IAB have sub-committees that meet separately?
6. If yes, please list the IAB sub-committees:
7. How many members are included in your IAB (Not including program faculty members)?
   • one to five
   • six to ten
   • eleven to twenty
   • more than twenty
8. How many IAB members typically attend your organized IAB meetings (Not including program faculty members)?
   - one to five
   - six to ten
   - eleven to twenty
   - more than twenty
9. To what extent does your IAB help recruit new Undergraduate students?
   - None
   - Occasional or incidental
   - On-going recruiting efforts
   - Organized program or subcommittee for recruiting
10. To what extent does your IAB help recruit new Graduate (Research) students?
    - None
    - Occasional or incidental
    - On-going recruiting efforts
    - Organized program or subcommittee for recruiting
11. To what extent does your IAB help place your students in permanent professional positions?
    - None
    - Occasional or incidental
    - On-going recruiting efforts
    - Organized program or subcommittee for placement
12. To what extent does your IAB help provide internships for your students?
    - None
    - Occasional or incidental
    - On-going recruiting efforts
    - Organized program or subcommittee for internships
13. To what extent does your IAB help to promote your program?
    - None
    - Occasional or incidental
    - On-going promotion of the program
    - Organized system or subcommittee for promotion
14. To what extent does your IAB help to maintain contact with alumni?
    - None
    - Occasional or incidental
    - On-going alumni activities with the IAB
    - Organized system or subcommittee for promotion
15. To what extent does your IAB Work with students to promote the program?
    - None
    - Occasional or incidental
    - On-going student/IAB promotions
    - Organized system or subcommittee for IAB/student promotion
16. To what extent does the IAB recommend fundamental directions for the program (vision, mission statements)?
    - None
    - Ad-hoc or occasional
    - On-going feedback on faculty proposals
    - Formal scheduled process
17. To what extent does the IAB recommend new curriculum topics or removal of less-desirable topics?
   - None
   - Ad-hoc or occasional
   - On-going feedback on faculty proposals
   - Formal scheduled process

18. To what extent does the IAB Providing feedback on curriculum changes proposed by the academic unit?
   - None
   - Ad-hoc or occasional
   - On-going feedback on faculty proposals
   - Formal scheduled process

19. To what extent does the IAB get feedback from students on the program?
   - None
   - Ad-hoc or occasional
   - On-going feedback on faculty proposals
   - Formal scheduled process

20. To what extent does the IAB provide technical seminars or presentations to students (either requested or offered)?
   - None
   - Ad-hoc or occasional
   - On-going feedback on faculty proposals
   - Formal scheduled process

21. To what extent does the IAB provide professional seminars or workshops (eg. Resume reviews, mock job interviews etc.) to students (either requested or offered)?
   - None
   - Ad-hoc or occasional
   - On-going feedback on faculty proposals
   - Formal scheduled process

22. To what extent does the IAB offer or facilitate capstone project topics for students?
   - None
   - Ad-hoc or occasional
   - On-going feedback on faculty proposals
   - Formal scheduled process

23. To what extent is the IAB involved in evaluating student capstone projects?
   - None
   - Provide feedback comments as informal advice
   - Provide formal feedback – but is not part of student grade
   - Provide formal feedback – is part of student grade

24. To what extent does the IAB offer or facilitate classroom (not capstone) project topics for students?
   - None
   - Ad-hoc or occasional
   - On-going feedback on faculty proposals
   - Formal scheduled process

25. To what extent does the IAB recommend topics/projects for research in a typical year?
   - Zero projects
   - 1-3 projects/year
   - 4-6 projects/year
26. To what extent does the IAB provide funding for research in a typical year? (formal research projects or student wages, equipment, etc.)?
   - $0
   - $1-$1000/year
   - $1000-$5,000/year
   - $1000-$10,000/year
   - $10,000-$50,000/year
   - More than $50,000/year

27. To what extent does the IAB advise on tech transfer, patenting of research and related topics?
   - None
   - Ad-hoc or occasional
   - On-going feedback on faculty proposals
   - Formal scheduled process

28. To what extent does the IAB evaluate research proposed by faculty members?
   - None
   - Ad-hoc or occasional
   - On-going feedback on faculty proposals
   - Formal scheduled process

29. What, if any, fees do IAB members contribute in a typical year to be on the IAB? [total for the whole IAB]
   - $0
   - $1-$1000/year
   - $1000-$5,000/year
   - $5,000-$10,000/year
   - $10,000-$50,000/year
   - More than $50,000/year

30. To what extent does the IAB provide financial support in the form of donations or grants in a typical year (excluding research)? [total for the whole IAB]
   - $0
   - $1-$1000/year
   - $1000-$5,000/year
   - $5,000-$10,000/year
   - $10,000-$50,000/year
   - More than $50,000/year

31. To what extent does the IAB provide financial support in the form of student scholarships?
   - $0
   - $1-$1000/year
   - $1000-$5,000/year
   - $5,000-$10,000/year
   - $10,000-$50,000/year
   - More than $50,000/year

32. To what extent does the IAB provide financial support in the form of equipment for labs etc. in a typical year (excluding research)? [total for the whole IAB]
   - $0
   - $1-$1000/year
   - $1000-$5,000/year
   - $5,000-$10,000/year
33. To what extent does the IAB provide help or support in raising external funding for the program?
   - None
   - Ad-hoc or occasional
   - On-going feedback on faculty proposals
   - Formal scheduled process

34. Do IAB members receive any financial reward for participating? (SELECT ALL THAT APPLY)
   - None
   - Incidental expenses for attending
   - Travel expenses to attend meetings
   - Honorarium

35. Please estimate the total $$ benefit per member per year and enter it here.

36. Do IAB members receive benefits (perks), such as tickets to sporting events, tours of new facilities, etc.
   - None
   - Rarely or minor benefits (1-2 per year)
   - Most or every IAB meeting
   - Multiple times per year, not limited to IAB meetings

37. Do IAB members have privileged access for recruiting students
   - None
   - Ad-hoc or occasional
   - Formal process

38. The IAB benefits the institution because it is an ABET expectation
   - No benefit
   - Slight benefit
   - Strong benefit
   - Very strong benefit

39. The IAB benefits the institution because they help develop our curriculum
   - No benefit
   - Slight benefit
   - Strong benefit
   - Very strong benefit

40. The IAB benefits the institution because they help place our students
   - No benefit
   - Slight benefit
   - Strong benefit
   - Very strong benefit

41. The IAB benefits the institution because they provide material support for our program
   - No benefit
   - Slight benefit
   - Strong benefit
   - Very strong benefit

42. The IAB benefits the institution because they provide projects and/or funding for research
   - No benefit
   - Slight benefit
   - Strong benefit
• Very strong benefit

43. What has been the most successful example(s) of how your IAB has benefited your program?

44. What have been the biggest challenge(s) in having an IAB?