

Motivations, costs and results of AOL: Perceptions of accounting and economics faculty

Mark J. Eschenfelder
Robert Morris University

Lois D. Bryan
Robert Morris University

Tanya M. Lee
Valdosta State University

ABSTRACT

The emphasis of the Association to Advance Collegiate Schools of Business (AACSB) on improving student learning through Assurance of Learning (AOL) makes faculty involvement in the process at AACSB accredited schools important. This study examines the attitudes of accounting and economics faculty at AACSB accredited institutions toward the AOL process. Using survey data we report on faculty perceptions of the motivations, costs, methods and results of AOL. We find considerable progress has been made in regard to faculty understanding of the role of learning goals and objectives in the AOL process, some progress in building faculty knowledge of the methods of AOL, and that faculty doubt the AOL process has led to improved student learning. The views of faculty are consistent with closing the assessment loop still being a work in progress at many AACSB accredited schools.

Keywords: AACSB, assessment, assessment methods, assurance of learning

INTRODUCTION

The Association to Advance Collegiate Schools of Business (AACSB) has made Assurance of Learning (AOL), previously often referred to as outcomes assessment, a focus in its accreditation process. Outcomes Assessment has come to mean evaluation of the efficacy of a variety of university activities with AOL as a subset that focuses on student learning. The purpose of AOL is to improve student learning through assessing student attainment of learning goals and objectives and then making changes in courses and programs as a result of the knowledge gained through the assessment process. The emphasis on AOL is clear in the AACSB's (2007) white paper on assessment. According to "AACSB Assurance of Learning Standards: An Interpretation," schools facing peer review teams by 2007-2008 were expected to show the *impact* of assurance of learning activities on curriculum. To require assurance of learning activities to have influenced curricular decisions indicates an expectation that the process should be fully operational.

This level of emphasis on AOL is a change by the AACSB. Previous to this change, less attention was paid to AOL. McCoy, Chamberlain and Seay (1994) reported economics departments in AACSB accredited schools were even less likely than schools unaccredited by the AACSB to have explicit outcomes assessment programs. They cited the AACSB's focus on research output as a possible explanation for this relative lack of outcomes assessment programs. The increased focus on AOL by the AACSB has important implications for faculty. Pringle and Michel note "(f)aculty must be involved to a far greater extent than they were before 2003" (2007, p.203). The need for a greater role for faculty in AOL makes faculty views and understanding of AOL important. Faculty views on AOL are likely to affect their willingness and ability to play a meaningful role in the AOL process.

This paper reports on a survey of college and university accounting and economics faculty regarding AOL. (Additional information about this survey can be found in Eschfelder, Bryan and Lee (2010) which focused on the perceptions of teaching economists of the nature, implementation and results of AOL in higher education.) Of the 700 accounting faculty who responded eighty percent were at AACSB accredited schools (or schools seeking AACSB accreditation), and of the 1,011 economics faculty who responded twenty-four percent were in business schools that are AACSB accredited (or seeking AACSB accreditation). Only economists who indicated they are housed in the school of business at their institution were included in this research. The increased focus of AACSB on AOL makes the views of faculty at AACSB accredited schools of particular interest.

The focus of this study on views of individual faculty differentiates it from the previous literature on AOL. Previous work on the implementation of AOL at AACSB accredited schools and business programs in general has relied on surveys of administrators. See Pringle and Michel (2007) and Martel and Calderon (2005) for examples of the results of surveys of deans of AACSB accredited schools and Mayo and Thomas-Haysbert (2008), McCoy, Chamberlain and Seay (1994) and Miller, Chamberlain and Seay (1991) for surveys of department chairs of hospitality management, marketing and economics respectively.

THE SURVEY

Faculty views of three broad areas of interest were covered by the survey: a) the motivations for and costs of AOL, b) the methods used in AOL, and c) the results of AOL. The

costs of AOL addressed by the survey include things that faculty may feel would make their jobs more difficult or more onerous.

Motivations for and Costs of AOL

Faculty acceptance of AOL may be associated with their views of the motivations for and costs of AOL. Pringle and Michel (2007) reported seventy percent of administrators who believed faculty resistance to AOL was due to faculty fear that AOL would be used in faculty performance evaluations, and sixty percent of the respondents who indicated that the inconvenience of assessment caused faculty resistance to AOL, indicated significant or some faculty resistance to AOL at their institutions.

Student learning goals and objectives are a crucial component of AOL. It is the responsibility of faculty to develop the appropriate learning goals and objectives for degree programs (Pringle and Michel, 2007). If this is not supported at a university, this could be viewed by faculty as a cost, i.e. a lack of freedom to conduct the classes as they feel is most appropriate. Given the critical roles of faculty in regard to learning goals and objectives; faculty views of this are of interest.

If faculty perceive their performance is being judged through AOL, it may also create incentives that conflict with the stated purpose of AOL, improving student learning. Some faculty may be tempted to manipulate the process to insure student learning is indicated. While faculty may be concerned about the use of assessment data to evaluate their teaching, Kathryn Martell, a leader in promoting assurance of learning at business schools through her work with AACSB has “never seen program assessment data used for that purpose” (Pokharel and Martell, 2007, p. 242).

Methods of AOL

Several items on the survey address issues where there may be faculty confusion about what the AACSB considers appropriate in regard to the methods of the AOL process. Faculty confusion about the expectations of the AACSB about AOL may make it less likely that they will be able to conduct assessments in a way that leads to improved student learning. Martell believes faculty have a better understanding of the methods of AOL today. She stated in a 2008 AACSB publication: “Faculty said, ‘We do student surveys. We’re doing great.’ Now they know that those surveys are not appropriate evidence for the purpose of assessment” (Bisoux, 2008, p.22). While some faculty may now know student surveys, such as teaching evaluations, are not appropriate evidence of learning, there may be others who do not.

A second area of possible conflict between the expectations of the AACSB and faculty is the role of grades in AOL. The extent to which faculty accept Linda Suskie’s (of the Middle States Commission on Higher Education) statement that “grades alone are usually insufficient evidence of student learning” is important (Suskie, 2004, p 6). If faculty view student grades as a direct measure of student learning for assurance of learning purposes, their view conflicts with those of experts in the AOL field. This possible conflict is relevant given the emphasis placed on direct measures of student learning by AACSB. In the AOL process AACSB expects the use of direct measures and views student surveys and grades as indirect measures of student attainment of specific learning objectives.

Three other areas where faculty perceptions of the appropriate methods of AOL may differ from the leaders in the field are the use of 1) standardized tests, 2) subjective measures and 3) group projects. The AACSB does not require the use of standardized tests to measure student learning. Schools may opt for the use of a standardized test, but it is not required. Subjective measures of student learning are acceptable if they are evaluated through the use of rubrics. The use of group projects to assess the learning of individual students is inappropriate unless the objective being assessed relates to group activity (such as communication skills).

Results of AOL

The final area of the survey addressed faculty perceptions of the closing of the AOL loop at their school. Closing the loop refers to the use of assessment data to improve student learning. Faculty were asked if AOL has led to changes in their courses or the degree programs at their school and if AOL has resulted in improved student learning in their courses or at their institution. As in Pringle and Michel (2007), survey respondents were given an opportunity to address the degree of curricular changes.

THE SAMPLE

College and university accounting and economics faculty were surveyed using a web-based instrument. The names and email addresses of the accounting faculty were obtained from Hasselback's 2008-2009 Accounting Faculty Directory, 13/e. The directory contains information about accounting faculty at hundreds of schools around the world. The survey was limited to schools in the United States. The names and email addresses of the economics faculty were obtained from a publisher as support for a conference focused on teaching economics.

Five thousand five hundred and fifty-seven accounting faculty were surveyed and seven hundred responded. Of the seven hundred respondents five hundred sixty-two indicated they were at AACSB accredited schools or at schools seeking AACSB accreditation. Eight thousand five hundred and eighty economics faculty were surveyed and one thousand eleven responded. The responses of two hundred forty-three economists who indicated the economics faculty are part of the business school and that the business school is accredited or is seeking AACSB accreditation are used in this study. Only the responses of fulltime accounting and economics faculty at schools with or seeking AACSB accreditation are included in this research.

The schools of the respondents vary in size and nature. Seventy-one percent of the respondents were at schools with more than 7,500 students, eleven percent were at schools with between 5,000-7,500 students and eighteen percent were at schools with less than 5,000 students. Fifty-two percent were at doctoral granting institutions, forty-three percent at masters granting institutions and six percent at institutions where the highest degree granted is a baccalaureate.

Almost half (49.8%) of the survey respondents were members of faculty committees or had administrative duties related to AOL. An additional third of the faculty had conducted AOL activities in the courses they teach. Less than three percent of the faculty indicated they were not aware of any AOL activities taking place at their institutions.

RESULTS

Faculty Views of the Motivations for and Costs of AOL

Table 1 (Appendix) contains means, t-statistics and the cumulative percentages of responses to each statement about the purpose and cost of AOL. To compute the means, strongly agree, agree, somewhat agree, have/no opinion, somewhat disagree, disagree and strongly disagree were coded as 3, 2, 1, 0, -1, -2, and -3 respectively. The percentage of responses at the “somewhat” level are added to the percentage at the agree or disagree level to provide a cumulative percentage to that point. This is then added to the percentage at the strongly level to provide a picture of the relative level of responses on both sides of the don’t know/no opinion. The t-statistics are for a test of the hypothesis of the mean being zero. A negative mean response for a statement indicates on average that faculty disagree with a statement, a positive mean indicates agreement with a statement. The larger the absolute value the stronger the intensity of the agreement or disagreement. A mean of zero indicates faculty responses are evenly divided between agreement and disagreement or faculty do not know or have no opinion about the statement. The bold entries in the responses Table 1 (Appendix) indicate the direction of the statistically significant results for each question.

Motivations for AOL

With respect to the first statement in Table 1 (Appendix), “OA/AOL is a fad in higher education,” the null hypothesis of a mean of zero cannot be rejected. With less than four percent of the responses in the do not know/ have no opinion category, faculty are relatively evenly divided between agreement and disagreement and those with a strong position on it are 29% of the total. While faculty are split on whether AOL is a fad, there is some agreement that it is being pushed by accreditation agencies and/or universities to avoid government regulation.

Fear of the use of AOL to evaluate faculty has been reported as a cause of faculty resistance to AOL (Pringle and Michel, 2007) but it does not appear to be a significant issue for the faculty surveyed in this study. When interpreting the mean responses to the statements, it is important to note the distribution of responses across the cells. The statement with the largest mean response in absolute value in the Motivations for AOL section in Table 1 (Appendix) (-.98) is “A purpose of OA/AOL is to evaluate faculty performance.” While the mean response is negative, indicating disagreement on average, over one fourth of the respondents indicated at least some agreement with the statement. With over a fourth of the respondents agreeing with the statement, fear of AOL being used to evaluate faculty may be a factor in faculty resistance to AOL. To the extent faculty at AACSB schools do not believe AOL will be used to evaluate their performance there may be less faculty resistance to AOL and more useful information generated in the AOL process.

Costs of AOL

One possible cost to faculty would be if significant changes are required in courses that are driven by AOL. If faculty believe that such changes are needed, they may resist engaging in the AOL process. This belief was cited by administrators of AACSB accredited schools as a reason for faculty resistance to AOL (Pringle and Michel, 2007).

For the proponents of AOL at AACSB schools the mean response to the statement “The use of course based OA/AOL instruments require faculty to dramatically change their existing methods of evaluating student performance” provides some encouragement. As can be seen in Table 1 (Appendix) the mean response to this statement is significantly negative. The results indicate that over two-thirds of the faculty surveyed do not feel that dramatic changes are required. However, 26% of respondents agree to some extent with the statement. If faculty believe AOL instruments can be integrated into their courses without significant costs, they may be less resistant to the use of AOL.

The first step in the AOL process is developing student learning goals and objectives. The Costs of AOL section of Table 1 (Appendix) contains means, t-statistics and the responses to three statements about the learning goals and objectives. The null hypothesis of a mean of zero can be rejected for the mean responses to all three statements. The mean responses are all greater than one indicating agreement that clear goals are needed, that the goals at the faculty members’ institutions are clear and that these goals are developed by faculty.

The responses of faculty to the statements about learning goals and objectives are consistent with AACSB accredited schools having made significant progress toward implementing the AOL process. Not only do faculty know learning goals and objectives are important but they believe their business school has them and that faculty were involved in their development. Over eighty percent of the faculty agree to some degree with each of the statements about learning goals and objectives.

Faculty Views of the Methods of AOL: Do Faculty Generally Understand What is Desired?

Faculty knowledge of the methods of AOL may influence their ability and willingness to constructively participate in the process. Table 2 (Appendix) contains means, t-statistics and cumulative percentages of responses, across choices ranging from strongly disagree (-3) to strongly agree (3), to several statements about the methods of AOL. The null hypothesis of a mean of zero can be rejected for five of the six statements. In each case where the null hypothesis can be rejected the sign of the mean is consistent with views of experts in AOL. The bold entries in the responses Table 2 (Appendix) indicate the direction of the statistically significant results for each question.

Faculty generally disagree with statements that faculty evaluations completed by students are an important part of the AOL process, that accreditation agencies focus on indirect measures of student learning and that AOL requires the use of a standardized test for at least some students upon completion of a program. Faculty generally agree that grades are not direct evidence that students have achieved learning goals and objectives and that the use of written assignments in the AOL process requires the use of rubrics. However, the level of faculty agreement/disagreement with the statements varies with means ranging in absolute value from 1.23 to .19. While advocates of AOL can be encouraged by the signs and significance of the mean responses, the mix of responses and the magnitudes of the means may be less encouraging.

For two of the statements in Table 2 (Appendix), faculty responses are fairly consistently in agreement with the views of the AACSB. Faculty agreement is strongest with the statement indicating the necessity of using rubrics when evaluating written assignments for AOL purposes. If faculty recognize the importance of rubrics in the AOL process, their use of course based assessment instruments is likely to be both more efficient and effective. Faculty agree nearly as consistently with the statement that grades are not direct evidence of student attainment of

learning goals. The average view of faculty on the use of student surveys, such as teaching evaluations, is consistent with Kathryn Martel's statement that faculty know "that those surveys are not appropriate evidence for the purpose of assessment" (Bisoux, 2008, p.22). The size of the mean response and the distribution of faculty responses to the statement about the role of student surveys in AOL indicate some faculty may not know surveys are not appropriate evidence. The distributions of responses for these two statements are shown in Chart 1 (Appendix).

For the remaining four statements, although enough responses are concentrated on one side of neutral to render the overall results significant for all but one, there are noticeable clusters of responses on both sides of neutral. While faculty on average believe accreditation agencies do not focus on indirect measures of student learning, the intensity of the agreement is relatively low. If some faculty are unaware of the AACSB's and other accreditation agencies emphasis on direct evidence of student learning, it may make the development and implementation of acceptable AOL programs more difficult. Similarly, while faculty on average agree that grades are not direct evidence of student attainment of learning goals and objectives the magnitude of the mean is small although significant. This and the distribution of responses to the statement about grades not being direct evidence indicate many faculty believe grades are direct evidence of student achievement of learning goals and objectives. That some faculty believe grades are direct evidence of student attainment of learning goals and objectives complicates the AOL process. A comparison of the distribution of responses for Grades Not Evidence and Indirect Measures is provided in Chart 2 (Appendix).

One way a misunderstanding of the issue of grades not being direct evidence of student learning is the incentive it may cause faculty to perceive. There is a negative correlation (-.12) between the responses to the statements "In the OA/AOL process course grades are NOT direct evidence that student learning goals and objectives have been achieved" and "A purpose of OA/AOL is to evaluate faculty performance." While the correlation is small, the null hypothesis of no correlation can be rejected. If faculty believe AOL is being used to evaluate their performance and that grades are evidence in the AOL process, there may be an incentive for faculty to inflate grades.

The AACSB does not require the use of a standardized test in the AOL process. The mean response to the survey statement about a standardized test being required in the AOL process is consistent with the AACSB's not requiring a standardized test. However as can be seen in Chart 3 (Appendix), the distribution of responses indicates a sizeable level of misunderstanding. The sole statement for which the null hypothesis can not be rejected is for the mean of the responses to the statement "Group projects are NOT an acceptable way to assess individual student learning." Faculty are split on the appropriateness of using group projects to judge individual student learning. Faculty who believe group projects are an acceptable way of assessing individual student learning may resent being told by those leading the AOL process the method of assessment they wish to use (a group project) is inappropriate and may resist suggestions to use other assessment tools.

Faculty Views on the Results of AOL: Closing the Loop

The survey statements about the results of AOL address closing the loop, that is making curricular and/or program changes to improve student learning. To Kathryn Martell, "[c]losing the loop is not just the final step in AOL; it is the *raison d'être* for assessing student learning"

(Martell, 2007, p. 192). While faculty responses to the statements about learning goals and objectives indicate progress by AACSB schools in implementing AOL, the responses to the statements about closing the loop indicate there is still a considerable distance to travel.

Table 3 (Appendix) contains means, t-statistics and the cumulative distribution of responses to each statement about the results of AOL. The null hypothesis of a mean of zero can be rejected for the mean responses to five of the six statements. On average faculty do not believe that AOL has resulted in significant changes at the course or program levels. However, over twenty-five percent of the faculty do agree there were significant changes at each of the course and program levels. While on average faculty believe some changes have occurred at the course level because of AOL, almost thirty percent disagree that AOL has led to even some changes, let alone significant changes, at the course level.

The null hypothesis of a mean of zero cannot be rejected for the mean of the responses to the statement “The OA/AOL process has led to some changes at the program level at my institution.” Thirty-seven percent of the respondents disagreed (to varying degrees) with the statement while fifty-three percent agreed (to varying degrees) with it.

Given faculty views of whether AOL led to curricular changes, it is not surprising they do not believe AOL has resulted in improved learning at the course or institution level. The mean responses to the statements “The OA/AOL process has led to improved student learning at my institution” and “My involvement in the OA/AOL process has led to improved student learning in courses I teach” are negative, indicating disagreement on average.

Cronbach’s alpha for the responses to the six statements pertaining to closing the loop is .89. Given the magnitude of alpha, the six statements can be interpreted as measuring the same underlying construct. Faculty who believe there has been curricular change believe student learning has improved as a result of AOL. Faculty who do not believe that curriculum has changed do not believe student learning has increased. The fact that faculty who believe AOL has resulted in curricular changes also believe it has increased student learning is encouraging.

CONCLUSIONS

The results of the survey of accounting and economics faculty at AACSB accredited schools (and schools seeking AACSB accreditation) provide insight into faculty views of the purpose of AOL and the current level of achievement in the implementation of AOL at AACSB schools. Faculty are divided whether or not it is a fad in higher education. On average they believe it is being pushed by accreditation agencies to avoid government regulation and disagree that its purpose is to evaluate faculty.

The faculty responses to statements about the importance, presence, and development of learning goals indicate considerable progress has been made toward the first step in the AOL process, the development of learning goals and objectives. Some progress has been made in helping faculty understand the methods of AOL. Faculty on average agree with experts on assessment in regard to a number of the methods of AOL, for example on the importance of student evaluations and grades as direct evidence of student achievement of learning goals and objectives. However, the extent of that agreement (as measured by the size of the means and the distribution of responses) is not as strong as it is for the views on learning goals and objectives.

The survey results are consistent with schools not yet having completed the implementation of AOL. On average faculty do not believe AOL has led to significant curricular changes or improved student learning at the course or program level. The goal of AOL has not

been achieved until it leads to improved student learning. Faculty on average have not seen the loop closed. One cannot reject the possibility, with respect to closing the loop, that there may well be courses and programs where faculty have already addressed the issues the AOL process is meant to disclose and may already have well developed curricula that have been adjusted regularly over time to keep them relevant to student learning. If this is the case, the results in Table 3 (Appendix) would be less indicative of possible problems with curricula and student learning than they appear.

Average responses hide some information about the perceptions of faculty. While on average faculty may agree with the experts on AOL on the methods of AOL, there are many faculty who have opinions at odds with the experts. For example while on average faculty disagreed with the statement "Faculty teaching evaluations completed by students are an important part of the OA/AOL process" over thirty percent of the faculty indicated they agreed (at least to some extent) with it.

This is also true for interpreting the average responses to the statements about closing the loop. While on average faculty do not believe that changes have been made and that student learning has not increased due to AOL, there are faculty who believe changes have been made and that student learning has improved. Thirty-five percent of the faculty agree with the statement "The OA/AOL process has led to improved student learning at my institution."

FUTURE RESEARCH

This research focused on the views of faculty in two areas, accounting and economics. A broader study looking at the views of faculty in other areas in business would be a step forward. If similar sampling techniques are used to generate the samples across areas, it may be possible to see if there are systematic differences in the views of faculty in different business areas. Surveying faculty so as to be able to compare the views on AOL of faculty at AACSB accredited schools with those of faculty at unaccredited (by AACSB) schools of business is also of interest.

What affects faculty views of, and participation in AOL? Does participation in AOL drive faculty views, do faculty views of AOL drive faculty participation, or are they determined together by other forces? Knowing answers to these questions may help schools of business implement AOL and improve their courses and programs and, consequently, student learning outcomes.

Another area that could be addressed is why faculty do not believe AOL has affected courses and programs. Do they feel their curricula were already reacting regularly to student learning needs? Do they feel that AOL is not the best means for generating ideas about curricular change? Do they feel that whatever they find is beyond the control of the faculty surveyed and that the relevant faculty resist change (lack of math skills, lack of written communication skills)?

This study has focused on what accounting and economics faculty believe about AOL. From this work, it is evident that the implementation of AOL may not yet be complete at AACSB accredited schools. Many faculty still have misconceptions about the methods of AOL and have yet to see AOL result in improved student learning.

REFERENCES

- AACSB (2007). AACSB Assurance of Learning Standards: An Interpretation. Retrieved March 11, 2008 from: <http://www.aacsb.edu/accreditation/Papers/AOLPaper-final-11-20-07> pdf.
- Bisoux, T. (2008). Measures of success. *BizEd*, AACSB International March/April, 22-30.
- Eschenfelder, M. J., Bryan, L. D. & Lee, T. (September 2010). Assurance of learning: what do economics faculty know and what do they believe? *Journal of Case Studies in Accreditation and Assessment Vol. 1*.
- Martell, K. (2007). Assessing student learning: are business schools making the grade? *Journal of Education for Business*, 82(4), 89-195.
- Martell, K. & Calderon, T. (2005). Assessment in business schools: What it is, where we are, and where we need to go now. In K. Martell, & Calderon, T. (Eds.), *Assessment of student learning in business schools: Best practices each step of the way* (pp.1-26). Tallahassee, FL: Association for Institutional Research.
- Mayo, C. & Thomas-Haysbert, C. (2008). Assurance of learning of hospitality and tourism management programs: A pilot test. *The Consortium Journal*, 12(1), 25-36.
- McCoy, J. R., Chamberlain, D., & Seay, R. (1994). The status and perceptions of university outcomes assessment in economics. *Journal of Economic Education*, 25, 358-366.
- Miller, F., Chamberlain, D., & Seay, R. (1991). The current status of outcomes assessment in marketing education. *Journal of the Academy of Marketing Science*, 19, 353-362.
- Pokharel, A. & Martell, K. (2007). Interview with Kathryn Martell, assurance of learning (AoL) methods just have to be good enough. *Journal of Education for Business*, 82(4), 241-243.
- Pringle, C. & Michel, M. (2007). Assessment practices in AACSB-accredited business schools. *Journal of Education for Business*, 82(n4), 202-211.
- Suskie, L. A. (2004). *Assessing student learning: A common sense guide*. Boston, Mass., Anker Publishing Company, Inc.

APPENDIX

Table 1: Faculty Perceptions of the Motivations and Costs of Assurance of Learning

Responses: Cumulative Percentages from Somewhat to Strongly on Each Side of Neutral

Motivations for AOL								
Variable	Mean (t statistic)	Strongly Disagree	Disagree	Somewhat Disagree	Don't Know/ No Opinion	Somewhat Agree	Agree	Strongly Agree
Fad	.11 (1.45)	42%	28%	9%	4%	24%	40%	55%
Avoid Regulation	-.30 (4.90)	28%	21%	7%	24%	23%	38%	49%
Evaluate Faculty	-.98 (-15.33)	64%	38%	14%	6%	20%	28%	30%
Costs (Personal Impact) of AOL								
Dramatic Changes in Course Required	-.92 (-15.92)	69%	55%	22%	6%	17%	23%	26%
Requires Clear Learning Goals and Objectives	1.62 (32.86)	9%	7%	4%	6%	19%	58%	85%
Clear Goals at My Institution	1.41 (25.83)	14%	11%	7%	5%	22%	55%	81%
Faculty Develop Learning Goals	1.43 (25.33)	12%	8%	4%	7%	19%	56%	81%

Table 2: Faculty Perceptions of the Methods of Assurance of Learning

Responses: Cumulative Percentages from Somewhat to Strongly on Each Side of Neutral

Variable	Mean (t statistic)	Strongly Disagree	Disagree	Somewhat Disagree	Don't Know/ No Opinion	Somewhat Agree	Agree	Strongly Agree
Teaching Evaluation by Students Important	-.94 (-14.06)	63%	35%	14%	5%	18%	29%	31%
Indirect Measures	-.19 (-3.26)	40%	29%	13%	23%	20%	35%	38%
Grades Not Evidence	.55 (7.57)	35%	26%	11%	3%	18%	42%	61%
Requires Standardized Test	-.34 (-4.99)	49%	32%	14%	10%	18%	36%	41%
Rubrics Needed	1.23 (23.78)	13%	11%	5%	10%	22%	60%	76%
Group Projects Not To Evaluate Individual Learning	.05 (.77)	46%	36%	18%	7%	16%	34%	47%

Table 3: Faculty Perceptions of the Results of Assurance of Learning

Responses: Cumulative Percentages from Somewhat to Strongly on Each Side of Neutral

Variable	Mean (t statistic)	Strongly Disagree	Disagree	Somewhat Disagree	Don't Know/ No Opinion	Somewhat Agree	Agree	Strongly Agree
Some Changes at Course Level	.38 6.37	28%	20%	9%	9%	38%	58%	63%
Significant Changes at Course Level	-.86 -15.39	65%	49%	24%	9%	19%	25%	26%
Some Changes at Program Level	.07 1.10	37%	28%	12%	10%	32%	48%	53%
Significant Changes at Program Level	-.85 -14.82	64%	47%	22%	10%	19%	24%	27%
Improved Learning at Institution	-.43 -7.26	44%	28%	13%	20%	25%	35%	36%
Improved Student Learning in My Courses	-.14 -2.21	40%	25%	11%	15%	24%	39%	45%

