

Assurance of learning: what do economics faculty know and what do they believe?

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ABSTRACT

This paper reports on the perceptions of teaching economists of the nature, implementation and result of outcomes assessment / assurance of learning (AOL) in higher education. The results reported in the paper are based on over eight hundred responses to a web-based survey of teaching economists. While there is little consensus among economists about assurance of learning some generalizations may be made.

Economists involved in the assurance of learning process have different perceptions than those uninvolved in the process. For example, more (as a percentage) economists involved in the process indicated assurance of learning has improved student learning than uninvolved economists. However, even among involved economists almost a third disagree with the statement “The OA/AOL process has led to improved student learning at my institution.”

Keywords: assurance of learning, assessment, survey, teaching economists

INTRODUCTION

Assurance of Learning (AOL) is an issue of interest to university and college administrators and faculty. The objective of the AOL process is improvement in student learning. Assurance of learning may be thought of as a subset of the broader movement toward outcomes assessment by colleges and universities. Outcomes assessment may include evaluations of a variety of student services beyond academics. Assurance of learning focuses on what students know.

Outcomes assessment and assurance of learning in particular are a focus of the agencies that accredit colleges, universities and specific programs areas in higher education. While accreditation agencies have been talking about assurance of student learning for years the importance of assurance of student learning in the accreditation process has recently increased. Part of the reason for this is pressure on the accreditation agencies by the federal government.

The Spellings Commission appointed by the Secretary of Education to examine the future of higher education suggested accreditation agencies increase their focus on assurance of learning (U. S. Department of Education, 25, 2006). Assurance of learning was seen by the Commission to be an important part of increasing accountability in higher education. Accreditation agencies are likely to listen to the suggestions of the federal government because of the specter of “No Child Left Behind” legislation aimed at higher education. At the K-12 level “No Child Left Behind” has led to an increase in state mandated testing of students. Accreditation agencies, colleges and universities may have mixed feelings about formal assurance of learning programs but the prospect of government-mandated tests and/or standards are a generally unpalatable alternative.

The potential spread of “No Child Left Behind” to colleges and universities has been noticed by economists. In his Presidential Address to the Midwest Economics Association in 2006 William Becker decried the spread to colleges and universities of a “No Child Left Behind” approach to education (Becker, 2007). To Becker “No Child Left Behind” has manifested itself in the form of educational standards describing what students should know in economics and other disciplines. Becker argues that in higher education students should be aware of the controversies that exist within sciences and that the focus on standards promotes remedial education rather than higher education. If the spread of standards is a problem, William Becker is right to be concerned.

The increased importance of assurance of learning in higher education has encouraged colleges and universities to address what they want their students to learn. A key component in the assurance of learning process is the development of clearly delineated student learning goals and objectives (Martell and Calderon, 2005). If economists are concerned about the nature of these goals and objectives, as Becker clearly is, the assurance of learning process is important. Becker is not alone in his concern. Kilpatrick, Dean and Kilpatrick (2008) expressed direct concern about the effects of assurance of learning requirements by accreditation agencies on what is taught in higher education. As institutions attempt to meet assurance of learning requirements they will be tempted to set learning goals and objectives that are easily assessable rather than ones consistent with liberal arts education.

The basic issues addressed by this paper are: “What do teaching economists believe about assurance of learning in general and the implementation of it at their institution?” and “Is involvement in the assurance of learning process related to differences in beliefs about the nature of assurance of learning and its implementation and results at their institution?” To address these

issues, teaching economists were surveyed about their involvement in the assurance of learning process at their school, the nature of assurance of learning and its implementation and results at their school.

Unlike much of the other literature on the implementation of assurance of learning the focus of this research is on the attitudes and knowledge of individual faculty rather than the approaches implemented by different academic institutions. Research focused on institutional responses to assurance of learning has surveyed deans and department heads rather than individual faculty. Pringle and Michel (2007) and Martell (2007) report the results of surveys of deans of business schools about assurance of learning. Miller, Chamberlain, and Seay (1991) surveyed chairs of marketing departments to ascertain “The Current Status of Outcomes Assessment in Marketing Education” while McCoy, Chamberlain and Seay (1994) surveyed chairs of economics departments to determine “The Status and Perceptions of University Outcomes Assessment in Economics”.

A different approach to examining an institutional implementation of assurance of learning was used by Loughman and Thomson (2006). They surveyed individual faculty members at a single institution as part of an assessment audit. The audit was conducted to determine faculty attitudes toward assurance of learning to facilitate faculty buy-in of the process. Like the Loughman and Thomson article, the focus of this work is on individual faculty but rather than faculty at a single institution this paper is focused on the views of faculty members in a particular discipline. The perceptions and understanding of the assurance of learning process by teaching economists is likely to influence their ability and desire to participate in and affect the process. Given the concerns of Becker and other economists this is important.

THE SAMPLE

Since the focus of this paper is the views of individual faculty members, 8580 teaching economists were surveyed via EFM Continuum, an Internet based surveying tool. Of those surveyed, 1011 responded. Of the 1011 respondents, 882 indicated they were full time faculty members. Over half of the respondents are housed within schools or departments of business at their institutions. The respondents teach at a variety of types of schools. More than 25% are at community colleges while slightly less than 30% are at doctoral granting schools. Almost 40% of the respondents are at schools with more than 10,000 students and over 20% are at schools with fewer than 2,500 students. The survey results reflect the views and experiences of a broad variety of teaching economists.

THE SURVEY

Questions on the survey may be categorized into the following topics: 1) faculty involvement in the assurance of learning process, 2) beliefs about the nature of assurance of learning and 3) beliefs about the implementation and results of the assurance of learning process at their institution. Table 1 lists the survey items by category. Faculty involvement in the assurance of learning process at their institution ranges from being unaware of any activities to committee or administrative work related to the process.

Faculty were queried about the purposes of AOL and the reasons for its increasing importance. Faculty perceptions of the purpose of AOL may influence faculty behavior.

Kathryn Martell believes faculty have some misconceptions about assurance of learning. While faculty may be concerned about the use of assessment data to evaluate their teaching she has “never seen program assessment data used for that purpose.” (Pokharel and Martell, 2007, p. 242). If faculty perceive their teaching effectiveness is being judged by assessment results it creates incentives that may conflict with the stated purpose of assurance of learning: improving student learning. Some faculty may be tempted to manipulate the process to ensure satisfactory student learning is indicated.

The methods of implementation and the results of assurance of learning vary across institutions (Pringle and Michel, 2007). Faculty were asked questions about the implementation and results of assurance of learning at their school. The questions covered beliefs about the role of faculty in the assurance of learning process at their institutions. Faculty were also asked if assurance of learning has resulted in curricular changes and increased student learning at their schools.

RESULTS

Faculty Involvement

Many of the faculty (42.9%) who responded to the survey are involved in the assurance of learning process either through committee or administrative duties. Additional faculty (31.6%) have participated in the process through the use of assurance of learning activities in classes they teach. Other faculty (19.0%) are aware of assurance of learning activities at their school. Only 5.7% of the respondents are unaware of any assurance of learning activities at their school.

Faculty Perceptions of the Nature AOL

Faculty beliefs about the nature of AOL can affect their willingness to engage in AOL and the nature of that engagement. Table 2 contains faculty responses to questions about the nature of AOL. In Tables 2 and 3 the survey results have been re-categorized. The survey responses of strongly agree, agree and somewhat agree have been aggregated into agree; strongly disagree, disagree and somewhat disagree into disagree. The response “Have no opinion/don't know” has been labeled neutral. Most teaching economists who responded to the survey believe assurance of learning is a fad and that it is being pushed by accreditation agencies to avoid additional government regulation.

A plurality of respondents to each of the other questions gave answers consistent with the views of most experts in the assessment field. The extent of that congruence varied across questions. While a plurality of faculty (47%) indicated they disagreed that teaching evaluations completed by students are an important part of the AOL process many faculty (45%) agreed with the statement. Sizeable minorities believe the use of a standardized test is required to assess programs (41%), that the purpose of AOL is to evaluate faculty (39%), that grades are direct evidence of student achievement of learning goals and objectives in the AOL process (35%) and that the use of course based AOL instruments require faculty to dramatically change their existing methods of evaluating student performance (32%).

The strongest consensus among respondents was in regard to the question about the need for student learning goals and objectives in the AOL process. Consistent with experts in the field

economists (82%) recognize the need for clear learning goals and objectives in the AOL process. That many teaching economists have views of AOL that are somewhat to widely different from experts in the field is likely to complicate their participation in the process, make it more difficult for them to influence the process and reduce the effectiveness of their participation.

Table 3 contains means, t-statistics and the disaggregated responses to each statement. The t-statistics are for a test of the hypothesis of the means being equal to zero. The hypothesis was tested using both parametric (Student's t) and nonparametric (Sign test) tests as the data were not normally distributed. Results were very similar (if one was significant, so was the other) and the parametric tests are reported in the table. The Sign test indicated where the preponderance (by count) of the responses lay while the Student's t was influenced by the intensity of the views reported. In each case the null hypothesis can be rejected. The means are consistent with the plurality views of teaching economists shown in Table 2. When the plurality agrees the mean is positive, when the plurality disagree the mean is negative.

Faculty Views on the Implementation of AOL at their Institution

Table 4 contains summaries of the responses of teaching economists to questions about the implementation of AOL at their institutions. While many faculty (54%) did not believe the AOL process at their schools was faculty driven, many (58%) did believe economists had been involved in the development of student learning goals and objectives. According to the respondents AOL has had more of an impact at the course level than the program level. A majority (59%) believe the AOL process has led to changes at the course level while a plurality (49%) believe it has led to changes at the program level.

A plurality of teaching economists (48%) believes their involvement in AOL has led to improved student learning in the courses they teach. The respondents were split evenly over whether or not AOL has led to improved student learning at their institution. A sizeable number of teaching economists (25%) were not sure or had no opinion as to whether or not AOL had improved student learning.

Table 5 contains means, t-statistics and the disaggregated responses to each statement. The t-statistics are tests of the null hypothesis that the true value of the mean response is zero for each of the statements. The null hypothesis of a mean of zero cannot be rejected in two cases; "The OA/AOL process has led to some changes at the program level at my institution." and "My involvement in the OA/AOL process has led to improved student learning in courses I teach." While a plurality of economists believe AOL has led to changes at the program level, when taking into account the intensity of faculty opinions the mean response may be neutral. The same is true for the statement "My involvement in the OA/AOL process has led to improved student learning in courses I teach."

While economists were evenly split between agree and disagree as to whether AOL has led to improved student learning at their institution, the disaggregated responses reveal a difference in intensity of belief. The mean response to the statement is negative and significant. The negative mean is the result of those teaching economists who agree that AOL has led to improved student learning at their institution not being as vehement in their agreement as those who disagree are in their disagreement. The responses in the agree categories are skewed toward somewhat agree while the responses in the disagree categories are evenly distributed.

Faculty Involvement in the AOL Process and Faculty Perceptions of AOL

Many (42%) of the teaching economists who responded to the survey are either on a faculty committee or have administrative duties related to the AOL process. Committee or administrative duties related to AOL may be associated with different perceptions of the nature of the process. Since faculty involvement may be associated with different perceptions of the nature, implementation, and results of the process it is useful to examine the responses based on involvement.

The Perception of Faculty not Involved in the AOL Process

Tables 6 contains the aggregated responses of faculty who are not on AOL committees and do not have administrative responsibilities in the process. Table 7 contains means and t-statistics for tests of the null hypothesis that the true value of the mean of the responses to each statement is zero. The majority of uninvolved faculty believe AOL is a fad while a plurality believe it is being done to avoid government regulation. For both statements the null hypothesis of a mean of zero can be rejected.

For all of the other statements about the nature of AOL the majority or plurality responses of uninvolved faculty are consistent with those of experts in assessment. However, for two of the questions the null hypothesis of a mean of zero cannot be rejected. The true values of the mean responses to the statements student evaluations of faculty are an important component of AOL and that AOL requires the use of a standardized test may be zero.

No response to statements about the implementation and results of the AOL received a majority of responses of uninvolved faculty. While pluralities of uninvolved faculty believe that economists were involved in the development of student learning goals and objectives and that the AOL process has resulted in changes at the course level the null hypothesis of a mean of zero can not be rejected in either case.

The plurality of uninvolved faculty disagreed with all of the other statements and the null hypothesis can be rejected for each. The signs of the means are consistent with the plurality responses to the statements in all but one case. While a slight plurality agrees that AOL has led to improvement in student learning the mean response is negative indicating disagreement with the statement when the intensity of beliefs is considered.

Uninvolved faculty do not believe the AOL process has been faculty driven, led to changes at the programmatic level, or improved student learning in their courses or institution.

The Perception of Faculty Involved in the AOL Process

Table 8 contains aggregated responses of faculty who are either on AOL Committees and/or have administrative responsibilities in the OA/AOL process. Table 7 contains means and the t-statistics for tests of the null hypothesis that the true value of the mean response to each statement is zero.

Faculty involved in the AOL process are split as to whether it is a fad or not. The null hypothesis of a mean of zero cannot be rejected. A majority believe accreditation agencies are pushing AOL to avoid government regulation. The null hypothesis of a mean of zero can be rejected.

For each of the other statements about the nature of AOL the majority of responses are consistent with the views of experts in the assessment field. In each case the null hypothesis of a mean of zero can be rejected.

While majorities of faculty involved in the AOL process believe the process is faculty driven and has improved student learning at their institution in both cases the null hypothesis of a mean of zero cannot be rejected. Even though they doubt whether the process was faculty driven they do believe economists were involved in the development of student learning goals and objectives. Similarly while they may not believe it has improved learning at their institution they do believe it has improved student learning in the courses they teach.

A Comparison of the Views of Involved and Uninvolved Faculty

Table 7 contains the mean of the responses to each statement for economists involved and uninvolved in the AOL process. It also contains f values and levels of significance for tests of identical means between the two groups. The hypotheses were tested using MANOVA to allow adjustment of the results for the number of tests being run. The value of Wilks' lambda indicates we may reject the null hypothesis of no overall effect of involvement in the AOL process on the responses to the statements.

For six of the eight statements about the nature of the AOL process the null hypothesis can be rejected at the 5% level. Economists involved in the process tend to disagree more than those uninvolved in the process that AOL is a fad, that its purpose is to evaluate faculty, that dramatic changes in courses are required to implement course based assessment instruments and that AOL requires a standardized test at the end of a program. They agree more that accreditation agencies are requiring AOL to avoid government regulation and with the need for clear learning goals and objectives in the AOL process.

The mean responses of involved and uninvolved economists differ for all statements about the implementation and results of AOL at their institution. Economists involved in the process disagree less with the statement that the AOL process is faculty driven. They agree more with statements that economists were involved in developing learning goals and objectives, that the AOL process has led to changes at the course and program levels, and that the process has led to improved student learning in their courses and at their institutions.

Learning Goals and Objectives

The teaching economists who responded to the survey are aware of the importance of clear learning goals and objectives in the assurance of learning process. The mean response of 1.49 to the statement about the importance of learning goals and objectives is the largest of all of the means. Both involved and uninvolved faculty in the AOL process believe clear goals and objectives are important. The mean response to the statement about learning goals and objectives is largest for each group of faculty.

While faculty agree clear learning goals and objectives are important they disagree as to whether economists helped develop the goals and objectives at their institution. Those economists involved in the AOL process are much stronger in their agreement with the statement that economists helped developed learning goals and objectives. The difference between the mean responses (1.02) to that statement is the largest of all of the differences between the mean responses of the two groups.

CONCLUSIONS

The survey results are consistent with economists having a wide range of views about AOL. An examination of Tables 3 and 5 reveals relatively few cells with few responses. In most cases the null hypothesis of a mean of zero of the responses can be rejected. However, across all of the tables only two statements have mean responses of greater than one which is consistent with wide dispersion of views among the respondents to the survey.

The small size of mean responses and the dispersion of responses across the cells of Tables 3 and 5 suggest caution should be exercised when making generalizations about the beliefs of economists about AOL. The survey respondents on average agree AOL is a fad but also believe it is being driven by a desire to avoid government regulation. Economists not involved in the process tend to see AOL more as a fad while economists involved in the process see it more as being pushed by accreditation agencies to avoid regulation. While the mean responses to the other statements about the nature of AOL are consistent with the views of experts the small values of the means and dispersion across the cells are consistent with economists holding a variety of views.

Economists involved in the process disagree less with the statement that the process is faculty driven but even for them the null hypothesis of a mean of zero in response to that statement could not be rejected. While economists involved in the AOL process believe economists helped developed the learning goals and objectives at their institutions they do not see the process as faculty driven.

The spread of standards in economic education at colleges and universities is associated with the movement toward assurance of learning. Even if the process is not driven by faculty, those involved in the process believe economists helped shape the learning goals and objectives. Involvement in the process may give economists knowledge of how to influence those goals and objectives. This should be important to economists like William Becker who are concerned with the spread of economic education standards in higher education. If involvement in the AOL process gives economists influence on the learning goals and objectives at their institutions they may be able to develop goals and objectives consistent with their vision of university level education.

One group of economists who could become more involved in the AOL process are the almost one-third (31.6%) of the teaching economists who responded to the survey who are not involved in the AOL process through committee or administrative tasks but have conducted assurance of learning activities in their courses. By increasing their level of participation in the assurance of learning process to committee and/or administrative work they may be able to increase their influence on the development of learning goals and objectives.

FUTURE RESEARCH

The issue of causality has not been addressed in this paper. No attempt has been made to explain why faculty hold the views they expressed in the survey. For example does involvement in AOL cause economists to see it as more effective at influencing student learning or does a belief in the effectiveness of AOL at improving student learning cause faculty to become involved in the process or are these views formed together.

A second issue that is of interest is that of the views of college and university faculty in other disciplines. Academics in other disciplines have also experienced the growth of AOL. Of particular interest is the possibility of differences between faculty in schools of business accredited by AACSB and faculty in disciplines outside of business and business faculty at institutions not accredited by AACSB.

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Table 1
Survey Questions by Topic

I) Faculty Involvement in Assurance of Learning

Which of the following best describes your involvement in Outcomes Assessment/Assurance of Learning at your institution?

1. I am not aware of any Outcomes Assessment/Assurance of Learning activities taking place at my institution.
2. I am aware of Outcomes Assessment/Assurance of Learning activities at my institution but I am not directly involved.
3. My only involvement in the assurance of learning process is to conduct Outcomes Assessment/Assurance of Learning activities in the courses I teach.
4. I am a member of a faculty committee or have administrative duties related to Outcomes Assessment/Assurance of Learning.

Survey participants were asked to: Please select the degree of agreement that most closely reflects your perceptions of Outcomes Assessment/Assurance of Learning (OA/AL) in the statements listed below.

Strongly Agree	Agree	Somewhat Agree	Strongly Disagree	Disagree	Somewhat Disagree	Have no opinion/don't know
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II) The Nature of Assurance of Learning

Brief Statement	Survey Statement
Fad	OA/AOL is a fad in higher education.
Avoid Regulation	One of the reasons accreditation agencies are requiring OA/AOL is to avoid additional government regulation of higher education.
Evaluate Faculty	A purpose of OA/AOL is to evaluate faculty performance.
Grades Not Evidence	In the OA/AOL process course grades are NOT direct evidence that student learning goals and objectives have been achieved.
Teaching Evaluation by Students Important	Faculty teaching evaluations completed by students are an important part of the OA/AOL process.
Dramatic Changes in Course Required	The use of course based OA/AOL instruments require faculty to dramatically change their existing methods of evaluating student performance.
Requires Standardized Test	OA/AOL of a program requires the use of a standardized test (e.g. ETS Major Field Test) for at least a representative sample of students finishing the program.
Requires Clear Learning Goals and Objectives	The OA/AOL process requires clearly delineated student learning goals and objectives.

Table 1 (continued)

III) The Implementation and Results of Assurance of Learning at their Institution

Brief Statement	Survey Statement
Faculty Driven	The OA/AOL process at my institution is faculty driven.
Economists Develop Learning Goals	Teaching economists were involved in developing the student learning goals and objectives used in the OA/AOL process at my school.
Changes at Course Level	The OA/AOL process has led to some changes at the course level at my institution.
Changes at Program Level	The OA/AOL process has led to some changes at the program level at my institution.
Improved Learning at Institution	The OA/AOL process has led to improved student learning at my institution.
Improved Student Learning in My Courses	My involvement in the OA/AOL process has led to improved student learning in courses I teach.



Table 2
Faculty Perceptions of the Nature
of Assurance of Learning
Aggregate Responses

Statement	Agree	Disagree	Neutral
Fad	459 (53%)	351 (41%)	53 (6%)
Avoid Regulation	465 (54%)	185 (21%)	208 (24%)
Evaluate Faculty	336 (39%)	447 (52%)	75 (9%)
Grades Not Evidence	502 (57%)	302 (35%)	60 (7%)
Teaching Evaluation by Students Important	389 (45%)	402 (47%)	71 (8%)
Dramatic Changes in Course Required	275 (32%)	481 (56%)	96 (11%)
Requires Standardized Test	352 (41%)	390 (45%)	122 (14%)
Requires Clear Learning Goals and Objectives	700 (82%)	83 (10%)	71 (8%)

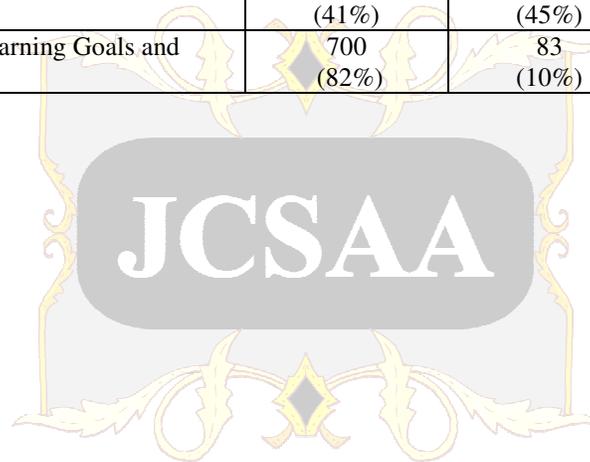


Table 3
Faculty Perceptions of the Nature
of Assurance of Learning
Disaggregate Responses

Variable	Mean (t statistic)	Strongly Disagree	Disagree	Somewhat Disagree	Don't Know/ No Opinion	Somewhat Agree	Agree	Strongly Agree
Fad	.14 (2.10)	103	151	97	53	208	130	121
Avoid Regulation	.60 (10.92)	33	90	62	208	180	188	101
Evaluate Faculty	-.48 (-7.75)	149	168	130	75	203	102	31
Grades Not Evidence	.40 (6.19)	82	112	108	60	200	179	123
Teaching Evaluation by Students Important	-.22 (-3.35)	147	125	130	71	201	132	56
Dramatic Changes in Course Required	-.54 (-9.86)	71	226	184	96	184	66	25
Requires Standardized Test	-.19 (-3.00)	105	156	129	122	155	150	47
Requires Clear Learning Goals and Objectives	1.49 (31.81)	13	29	41	71	184	322	194

Table 4
 Faculty Perceptions of the Implementation
 of Assurance of Learning at their School
 Aggregate Responses

Statement	Agree	Disagree	Neutral
Faculty Driven	132 (37%)	460 (54%)	79 (9%)
Economists Develop Learning Goals	497 (58%)	223 (26%)	36 (16%)
Changes at Course Level	504 (59%)	241 (28%)	112 (13%)
Changes at Program Level	422 (49%)	298 (35%)	135 (16%)
Improved Learning at Institution	316 (37%)	316 (37%)	215 (25%)
Improved Student Learning in My Courses	414 (48%)	288 (33%)	162 (18%)



Table 5
 Faculty Perceptions of the Implementation
 of Assurance of Learning at their School
 Disaggregate Responses

Variable	Mean	Strongly Disagree	Disagree	Somewhat Disagree	Don't Know/ No Opinion	Somewhat Agree	Agree	Strongly Agree
Faculty Driven	-.48 (-7.99)	122	195	143	79	188	100	32
Economists Develop Learning Goals	.59 (9.23)	79	83	61	137	155	213	129
Changes at Course Level	.31 (5.67)	66	90	85	112	311	161	32
Changes at Program Level	.08 (1.35)	72	116	110	135	250	143	29
Improved Learning at Institution	-.22 (-4.08)	103	105	108	215	206	97	13
Improved Student Learning in My Courses	.09 (1.57)	103	102	83	162	207	150	57

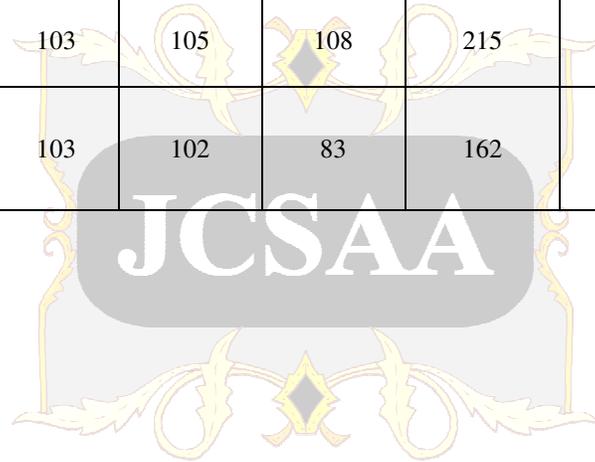


Table 6
The Nature of Assurance of Learning
Perceptions of Faculty Not Involved in Assurance of Learning

Statement	Agree	Disagree	Neutral
Fad	273 (57%)	164 (34%)	42 (9%)
Avoid Regulation	235 (49%)	98 (20%)	146 (30%)
Evaluate Faculty	206 (43%)	209 (44%)	64 (13%)
Grades Not Evidence	262 (54%)	168 (35%)	53 (11%)
Teaching Evaluation by Students Important	215 (45%)	201 (42%)	64 (13%)
Dramatic Changes in Course Required	164 (35%)	240 (51%)	71 (15%)
Requires Standardized Test	197 (41%)	184 (38%)	101 (21%)
Requires Clear Learning Goals and Objectives	302 (63%)	128 (27%)	46 (10%)

Implementation and Results of Assurance of Learning
at their Institution
Perceptions of Faculty Not Involved in Assurance of Learning

Statement	Agree	Disagree	Neutral
Faculty Driven	135 (34%)	185 (47%)	75 (19%)
Economists Develop Learning Goals	211 (44%)	147 (31%)	119 (25%)
Changes at Course Level	236 (49%)	148 (31%)	93 (20%)
Changes at Program Level	178 (37%)	182 (38%)	116 (24%)
Improved Learning at Institution	125 (26%)	199 (42%)	150 (32%)
Improved Student Learning in My Courses	176 (37%)	174 (36%)	130 (27%)

Table 7
Faculty Perceptions of Assurance of Learning
by Their Involvement in the Process

The Nature of Assurance of Learning

	Means and t statistics (null hypothesis $u = 0$) of Responses by Involvement In OA/AOL		F value	Significance
	Involved	Uninvolved		
Fad	-.17 1.63	.39 4.50	14.70	.0001
Avoid Regulation	.71 7.89	.51 7.30	6.14	.0134
Evaluate Faculty	-.85 -8.91	-.18 -2.29	24.48	<.0001
Grades Not Evidence	.56 5.50	.30 3.47	3.25	.0719
Teaching Evaluation by Students Important	-.30 -2.84	-.14 -1.66	1.08	.2983
Dramatic Changes in Course Required	-.76 -9.16	-.37 -5.11	8.51	.0036
Requires Standardized Test	-.35 -3.54	-.05 -.67	4.87	.0276
Requires Clear Learning Goals and Objectives	1.80 27.86	1.27 19.61	27.32	<.0001

Implementation and Results of Assurance of Learning

	Mean and t statistics (null hypothesis $u = 0$) of Responses by Involvement In OA/AOL		F value	Significance
	Involved	Uninvolved		
Faculty Driven.	-.15 -1.58	-.75 -9.78	26.64	<.0001
Economists Develop Learning Goals	1.17 13.10	.15 1.80	64.58	<.0001
Changes at Course Level	.64 8.00	.05 .72	26.13	<.0001
Changes at Program Level.	.44 5.14	-.21 -2.96	31.01	<.0001
Improved Learning at Institution.	.16 1.88	-.52 -7.57	36.73	<.0001
Improved Student Learning in My Courses	.53 5.65	-.24 -3.15	38.51	<.0001

Multivariate Test Results

	Effect	Value	F	Hypothesis Degrees of Freedom	Error Degrees of Freedom	Significant
Multivariate test	Wilkes' λ	0.854	9.43	14	771	<0.0001

Table 8
Perceptions of Faculty Involved in Assurance of Learning
of the Nature of Assurance of Learning

Statement	Agree	Disagree	Neutral
Fad	184 (49%)	184 (49%)	9 (2%)
Avoid Regulation	230 (61%)	87 (23%)	59 (16%)
Evaluate Faculty	130 (35%)	234 (63%)	8 (2%)
Grades Not Evidence	239 (64%)	131 (35%)	4 (1%)
Teaching Evaluation by Students Important	174 (46%)	196 (52%)	4 (1%)
Dramatic Changes in Course Required	110 (29%)	239 (65%)	21 (6%)
Requires Standardized Test	154 (41%)	204 (54%)	17 (5%)
Requires Clear Learning Goals and Objectives	310 (84%)	56 (15%)	5 (1%)

Perceptions of Faculty Not Involved in Assurance of Learning
of the Implementation and Results of Assurance of Learning
at their Institution

Statement	Agree	Disagree	Neutral
Faculty Driven	182 (54%)	151 (45%)	2 (1%)
Economists Develop Learning Goals	284 (76%)	72 (19%)	17 (5%)
Changes at Course Level	265 (71%)	92 (25%)	16 (4%)
Changes at Program Level	242 (65%)	115 (31%)	15 (4%)
Improved Learning at Institution	188 (51%)	116 (32%)	62 (17%)
Improved Student Learning in My Courses	235 (62%)	112 (29%)	30 (8%)