COMMUNICATING LEARNING OUTCOMES AND STUDENT PERFORMANCE THROUGH THE STUDENT TRANSCRIPT

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ABSTRACT

The university accreditation process now puts more emphasis on self-assessment. This change requires universities to identify program objectives, performance indicators, and areas for improvement. Many accrediting institutions are requiring that institutions communicate clearly to constituents: 1) what learning outcomes were achieved by students, and 2) what level of attainment of these outcomes is required to assure the quality of program offerings.   The traditional student transcript does not accomplish this. The proposed structure for academic transcripts clearly states what the learning objectives of the institution and the degree programs are, as well as how the student has met the learning outcomes.

Keywords: university accreditation changes, self-assessment, student transcripts, learning objectives, learning outcomes

INTRODUCTION

A recent change in the accreditation process is the self-assessment aspect. With this change, programs and institutions are to identify the objectives, performance indicators, and options for improvement. The intent of this change was not only to drive improvements in the educational process, but also to facilitate faster feedback on the effectiveness of various programs and support functions to stakeholders in the process. J. Wholey first developed this concept of self-assessment in 1979, calling it "evaluability assessment". Wholey (1979) stated that:

> "Evaluability Assessment explores the objectives, expectations, and information needs of program managers and policy makers; explores program reality; assesses the likelihood that program activities will achieve measurable progress towards program objectives; and assesses the extent to which evaluation information is likely to be used by program management. The products of evaluability assessment are: (1) a set of agreed-on program objectives, side effects, and performance indicators on which the program can realistically be held accountable; and (2) a set of evaluation/management options which represent ways in which management can change program activities, objectives, or uses of information in ways likely to improve program performance."

The Commission on Colleges of the Southern Association of Colleges and Schools (SACS) in its Institutional Effectiveness (2004), Section 2.5, requires, "ongoing, integrated, and institutional wide research-based planning and evaluation processes that incorporate a systematic review of programs and services that (a) results in continuing improvement, and (b) demonstrates that the institution is effectively accomplishing its mission (Institutional Effectiveness)." SACS, as well as other accrediting institutions, typically are not very specific about how to measure assessment. The general principles are that each institution can develop customized assessment processes that match the institution's unique goals.

With respect to learning outcomes, the SACS Principles of Accreditation (2004) lists the following core requirements:

- Section 3.3.1 states that, "the institution identify expected outcomes for its educational programs…assess whether it achieves these outcomes, and provide evidence of improvement based on analysis of those results."
- Section 3.4.1 states that the institution should, "demonstrate that each educational program for which academic credit is awarded…establishes and evaluates program and learning outcomes."
- Section 3.5.1 states that, "the institution identifies college-level competencies within the general education core and provides evidence that graduates have attained those competencies."

As can be seen from these sections, colleges and universities must identify a set of learning outcomes for each program that it offers and provide evidence that students

have mastered the knowledge and skills associated with those outcomes. The Council for Higher Education Accreditation's 2003 statement of mutual responsibilities for student learning outcomes specifies as one of its common expectations that institutions and programs determine and communicate clearly to constituents: 1) what counts as evidence that the learning outcomes were achieved by students, and 2) what level of attainment of these outcomes is required to assure the quality of institutional or program offerings (The Council for Higher Education Accreditation, 2003). The student's academic transcript is one such mechanism for providing (communicating) this evidence. Unfortunately, the traditional formatting of the academic transcript falls short of being able to do that.

In his address to the National Initiative for Leadership and Institutional Effectiveness Conference, George Boggs (1999), president of the American Association of Community Colleges, said that educational institutions must focus on student learning outcomes rather than instruction and those institutions must demonstrate accountability and effectiveness.   The determination of learning objectives is an important precondition for the effective assessments of outcomes and associated program and institutional improvements (Baker, 2002). Equally important, these learning objectives must be achievable and measurable (Popham, 2004).   MacColl and White (1998) stated that, "parents, educators, school board members, and legislators all want to know "What works" and "what doesn't" in terms of educational programs and innovations." Matter (1999) said that, "parents and teachers rarely learn how results are used to improve curriculum, instruction, or individual student learning plans. Assessment offices and school districts have a responsibility to provide them with that information… it is important for everyone affected by the assessment process to be continually informed." There were three purposes of this research:

1. Who do university program coordinators believe to be the stakeholders in assessment?
2. How effective are the current forms of communication to these stakeholders?
3. Should the students' academic transcript be revised to better communicate the program's learning objectives and student mastery of those objectives?

LEARNING OUTCOMES, PERFORMANCE, AND COMMUNICATION

In an effort to answer the three questions posed above, a survey was mailed to assessment coordinators at 99 different colleges and universities. The survey contained eleven questions, each using a seven-point Likert scale to measure the respondent's strength of belief on the question's answer.   Responses were received from 23 coordinators, resulting in a response rate of 23%. Four additional responses were received indicating that these respective institutions were still in the process of determining their learning outcomes and as such had no supporting processes in place for communicating them or the performance against them. The demographics of the 23 respondents with learning outcomes and processes in place are as follows:

Position of Respondent	Count
Executive Administrator	1
Institutional Assessment Coordinator	5
Institutional Assessment Committee Member	2
Dean of College	1
Program Director	5
Faculty	9

As expected, most assessment coordinators were faculty members.

The first question on the survey was, "To whom do you believe that your institution's learning outcomes should be communicated?" A Likert score of 1 indicated that the respondent believed that the named stakeholder should "Absolutely Not" receive information on the institutions learning outcomes. A Likert score of 4 indicated a "Neutral" position, and a score of 7 indicated a belief that the stakeholder getting information on the learning outcomes was "Absolutely Essential." As shown in Table 1 below, it was felt that all of the noted stakeholders should receive some degree of information on the institution's stated learning outcomes, with parents receiving a marginally positive score.

TABLE 1

To Whom Should Institution's Learning Outcomes Be Communicated?

Stakeholder \ Likert Score	1	2	3	4	5	6	7	Mean Score
Accreditation Boards						13%	87%	6.9
Institution's Administration							100%	7.0
Faculty		4%		4%	14%	78%		6.6
Students				4%		9%	87%	6.8
Parents	4%	4%	4%	40%	18%	4%	26%	4.8
Employers				17%	17%	18%	48%	6.0
General Public				26%	35%	17%	22%	5.3

The second question was, "To whom do you believe that student performance against learning outcomes should be published?" The same defined scoring is used to measure the responses. As shown in Table 2, it was felt that all of the noted stakeholders should receive some degree of information on the institution's stated learning outcomes, with parents and the general public receiving only marginally positive scores.

TABLE 2

To Whom Should Student Performance Be Communicated?

Stakeholder\ Likert Score	1	2	3	4	5	6	7	Mean Score
Accreditation Boards	4%				4%	22%	70%	6.4
Institution's Administration						17%	83%	6.8
Faculty	4%					26%	70%	6.5
Students				4%	13%	26%	57%	6.3
Parents	9%	9%	9%	30%	4%	13%	26%	4.6
Employers		4%		26%	17%	22%	30%	5.4
General Public	4%	4%	9%	30%	13%	13%	26%	4.9

The next two questions dealt with how effectively the institution was currently communicating learning outcomes and performance to these stakeholders. With respect to the question of, "How effectively learning outcomes is being communicated to stakeholders", an eight point Likert scale was used. A score of "0" on the scale indicated that learning outcomes were not communicated to the stakeholder, a score of "1" indicated that the communication process was very poor, a score "4" indicated that the communication process was neutral (or average), and a score of "7" indicated that the communication process was very effective.   As shown in Table 3, it was felt that the communication of learning outcomes for four of the seven groups of stakeholders was poor, and the communications to the other three groups was only marginally effective.

TABLE 3

How Effectively Are Learning Outcomes Communicated to Stakeholders?

Stakeholder\ Likert Score	0	1	2	3	4	5	6	7	Mean Score
Accreditation Boards	14%	4%			4%	22%	9%	48%	5.2
Institution's Administration	14%	5%			9%	18%	23%	32%	5.0
Faculty	14%	5%	9%		5%	18%	32%	18%	4.6
Students	18%	5%	9%	23%	9%	23%	9%	5%	3.3
Parents	64%	9%	5%	5%	14%	5%			1.1
Employers	45%	5%	9%	5%	18%	9%	9%		2.2
General Public	41%	14%	5%	5%	18%	9%	9%		2.1

With respect to the question of, "How effectively is performance against the learning outcomes being communicated to stakeholders", Table 4 reveals that it was felt that the communication of performance against learning outcomes for four of the seven groups of stakeholders was poor, and the communications to the other three groups was only marginally effective.

TABLE 4

How Effectively is Performance Against the Learning Outcomes
Communicated to Stakeholders?

Stakeholder\ Likert Score	0	1	2	3	4	5	6	7	Mean Score
Accreditation Boards	9%	9%		4%	4%	13%	22%	39%	5.1
Institution's Administration	9%	13%			4%	22%	30%	22%	4.7
Faculty	9%	13%		4%	4%	35%	17%	17%	4.4
Students	13%	22%	4%	4%	26%	22%	4%	4%	3.1
Parents	30%	13%	13%	9%	30%	4%			2.1
Employers	26%	13%	9%	9%	26%	17%			2.5
General Public	30%	13%	17%	4%	22%	13%			2.1

To determine the effectiveness of the current forms of communication, four questions were asked addressing both current and future potential of various media formats. The first question on formats for the communication of learning outcomes was, "As they are currently structured and managed, how effective are the following methods for communicating your institution's learning outcomes?" An eight point Likert scale was used. A score of "0"on the scale indicated that the noted media format was not utilized, a score of "1" indicated that the noted media format was very poor in communicating learning outcomes, a score "4" indicated that the noted media format was neutral (or average), and a score of "7" indicated that the noted media format was very effective. Table 5 shows the five most common media formats believed to be marginal to poor methods for the communication of an institution's learning outcomes.

TABLE 5

How Effective are the Media Formats for Communicating Learning Outcomes?

Media Format	0	1	2	3	4	5	6	7	Mean Score
Institution's Mission Statement	22%	9%		4%	9%	17%	22%	17%	4.0
Course Catalog	26%	13%		4%	17%	13%	13%	13%	3.3
Hard Copy Reports & Documents	17%	4%	9%	4%		17%	30%	17%	4.3
Internet Documents	22%	9%	4%		4%	26%	13%	22%	4.0
Student Transcripts	30%	17%	9%	9%	22%	13%			2.1

As can be seen in Table 5, the largest percentages indicated all the media formats were ineffective at communicating the learning outcomes.

With respect to the future potential of these media formats being able to communicate an institution's learning outcomes, the following table shows that the respondents were fairly positive.

TABLE 6

Future Potential for Media Formats to Communicate Learning Outcomes?

Media Format	1	2	3	4	5	6	7	Mean Score
Institution's Mission Statement			4%	13%	13%	22%	48%	6.0
Course Catalog				13%	13%	17%	57%	6.2
Hard Copy Reports & Documents			4%	13%	9%	26%	48%	6.0
Internet Documents				9%	9%	13%	70%	6.4
Student Transcripts	9%	4%	13%	30%	17%	9%	17%	4.4

The first question on the ability of the various media to effectively communicate performance against learning outcomes was, "As they are currently structured and managed, how effective are the following methods for communicating performance against learning outcomes?" An eight point Likert scale was used. A score of "0"on the scale indicated that the noted media format was not utilized, a score of "1" indicated that the noted media format was very poor in communicating learning outcomes, a score "4" indicated that the noted media format was neutral (or average), and a score of "7" indicated that the noted media format was very effective. Table 7 shows that the five most common media formats were generally believed to be poor vehicles for the communication of an institution's learning outcomes.

TABLE 7

How Effective are Media Formats for Communicating Performance
Against Learning Outcomes?

Media Format	0	1	2	3	4	5	6	7	Mean Score
Institution's Mission Statement	39%	13%	4%	4%	9%	13%	13%	4%	2.4
Course Catalog	39%	13%	17%		9%	4%	13%	4%	2.1
Hard Copy Reports & Documents	22%	13%			4%	22%	26%	13%	3.9
Internet Documents	35%	9%	4%	4%	4%	4%	26%	13%	3.2
Student Transcripts	52%	22%		4%	13%	9%			1.3

The next question was focused on the ability of the various media to effectively communicate performance against learning outcomes in the future. Table 8 shows that again the respondents were fairly positive on the potential of the various media to be effective tools of communication.

TABLE 8

How Effective Can Media Formats Be for Communicating Performance in the Future?

Media Format	1	2	3	4	5	6	7	Mean Score
Institution's Mission Statement	17%		9%	22%	9%	13%	30%	4.7
Course Catalog	4%			30%	22%	13%	30%	5.3
Hard Copy Reports & Documents				9%	9%	39%	43%	6.2
Internet Documents				4%	4%	26%	65%	6.5
Student Transcripts	9%	17%	4%	26%	9%	22%	13%	4.3

STUDENT TRANSCRIPTS AS A COMMUNICATION TOOL

Universities and colleges that communicate their students' progress through their selected degree programs have traditionally used student transcripts. The usual recipients of this communication are students, parents, other schools, and employers. Figure 1 on the next page illustrates the typical formatting of a student transcript. At the seventh annual Texas A&M University Assessment Conference, Dr. Stephen Spangehl (2007), Director of Academic Quality Improvement at the North Central Association of Colleges and Schools, in a plenary speech stated that the student transcript could be an effective communication tool for universities and college. He further stated that due to the current design of the student transcript, it does not link student activities and courses to learning outcomes. Because of this flaw, the traditionally formatted academic transcript did not effectively communicate whether the university/college was successful in meeting its objectives of having the students learn what was intended for them to learn.

Figure 1: Typical Student College Transcript Format

University Name:	University of USA			Student Name: John Smith	
University Address: 1234 Street, Home Town, State				Student ID Number: 1234567	

Spring Semester 2006

Course Number	Course Name	Grade	Course Hrs	Grade Pts	
BULW-1370-001	Bus Envir & Public Safety	B	3.00	9.00	
PHIL-1370-001	Phil of Knowledge	C	3.00	6.00	
HIST-1301-001	Am. History	A	3.00	12.00	
ENGL-1301-001	English Comp I	B	3.00	9.00	
BIOL-1406-001	Gen Biology	C	4.00	8.00	

	AHRS	EHRS	QHRS	QPTS	GPA
Current	16.00	16.00	16.00	44.00	2.75
Cumulative	16.00	16.00	16.00	44.00	2.75

Fall Semester 2006

Course Number	Course Name	Grade	Course Hrs	Grade Pts	
MATH-1325-001	Elements of Analysis	C	3.00	6.00	
MISY-1373-001	Intro Software Tool Kit	B	3.00	9.00	
HIST-1302-001	Am. History	B	3.00	9.00	
ENGL-1302-001	English Comp II	B	3.00	9.00	
BIOL-1407-001	Gen Biology	C	4.00	8.00	

	AHRS	EHRS	QHRS	QPTS	GPA
Current	16.00	16.00	16.00	41.00	2.56
Cumulative	32.00	32.00	32.00	85.00	2.66

Spring Semester 2007

Course Number	Course Name	Grade	Course Hrs	Grade Pts	
ACCT-2301-001	Principles of Accounting I	A	3.00	12.00	
ENGL-2326-001	Am Literature	B	3.00	9.00	
POLS-2301-001	Intro to Am Government I	A	3.00	12.00	
ECON-2301-001	Macro Economics	B	3.00	9.00	
BCOM-3350-001	Bus & Prof Communication	B	3.00	9.00	

	AHRS	EHRS	QHRS	QPTS	GPA
Current	15.00	15.00	15.00	42.00	2.80
Cumulative	47.00	47.00	47.00	127.00	2.70

Fall Semester 2007

Course Number	Course Name	Grade	Course Hrs	Grade Pts	
ACCT-2302-001	Principles of Accounting II	A	3.00	12.00	

ECON-2302-001	Micro Economics		C	3.00	6.00
POLS-2302-001	Intro to Am Government II		B	3.00	9.00
COMM-1315-001	Public Speaking		A	3.00	12.00
BULW-3340-001	Bus. Ethics		A	3.00	12.00

	AHRS	EHRS	QHRS	QPTS	GPA
Current	15.00	15.00	15.00	51.00	3.40
Cumulative	62.00	62.00	62.00	178.00	2.87

As shown in the survey results, it was generally considered that the student transcript was a very poor format for communicating both learning outcomes and the student's performance against those learning outcomes. In its traditional format, as illustrated in Figure 1, the reader can only see the chronological order of courses taken, the grade and credit hours received for each course, and the student's cumulative grade point average for each semester of work. It is impossible to determine what the learning objectives were for the respective degree program, or how well the student was progressing towards meeting those learning objectives. The major findings and conclusions in any communication with vested stakeholders must be organized so that it is easy to locate and understand (MacColl and White, 1998).

Based on the survey results, the student transcript was considered the least effective tool for the communication of learning outcomes and student performance against those learning outcomes. As such, the student transcription provides the greatest opportunities for the improvement of as a communication tool. In addressing the problems discussed with the traditional transcript, a new transcript formatting is proposed and shown in Figure 2 below and on the next page. In this new formatting, the university's learning objectives are noted, and the applicable course work in listed under each objective. In addition, the required credit hours of course work needed to meet the objective and the minimum grade point averages for that course work are shown for each learning objective. As the student progresses through their chosen field of studies, progress towards each learning objective is shown.

Figure 2: Proposed Student College Transcript Format

DEGREE PROGRAM LEARNING OBJECTIVES							
Major Concentration: BBA in Accounting							
General Knowledge:							
Minimum GPA to Master: 2.50							
Course Number	Course Name		Semester	Grade	Weight	Hrs	GPts
BULW-1370-001	Bus Envir & Public Safety		Spr-06	B	1.00	3.00	9.00
MISY-1373-001	Intro Software Tool Kit		Fall-06	B	1.00	3.00	9.00
	AHRS	EHRS	QHRS	Reqd. HRS	%Comp	QPTS	Cur GPA
Progress:	6.00	6.00	6.00	12.00	100%	18.00	3.00

Legal & Ethical Awareness:

Minimum GPA to Master: 2.50

Course Number	Course Name	Semester	Grade	Weight	Hrs	GPts
BULW-3340-001	Bus Ethics	Fall-07	A	1.00	3.00	12.00

	AHRS	EHRS	QHRS	Reqd. HRS	%Comp	QPTS	Cur GPA
Progress:	3.00	3.00	3.00	6.00	50%	12.00	4.00

Analytical Skills: Minimum GPA to Master: 2.50

Course Number	Course Name	Semester	Grade	Weight	Hrs	GPts
ACCT-2301-001	Principles of Accounting 1	Spr-07	A	1.00	3.00	12.00
ACCT-2302-001	Principles of Accounting 1I	Fall-07	A	1.00	3.00	12.00

	AHRS	EHRS	QHRS	Reqd. HRS	%Comp	QPTS	Cur GPA
Progress:	6.00	6.00	6.00	33.00	0%	24.00	4.00

Qualitative Skills: Minimum GPA to Master: 2.50

Course Number	Course Name	Semester	Grade	Weight	Hrs	GPts

	AHRS	EHRS	QHRS	Reqd. HRS	%Comp	QPTS	Cur GPA
Progress:	0.00	0.00	0.00	15.00	00%	0.00	0.00

DEGREE PROGRAM LEARNING OBJECTIVES
Minor Concentration: None Declared

General Knowledge:

Minimum GPA to Master: 2.50

Course Number	Course Name	Semester	Grade	Weight	Hrs	GPts

	AHRS	EHRS	QHRS	Reqd. HRS	%Comp	QPTS	Cur GPA

Progress:

Legal & Ethical Awareness: Minimum GPA to Master: 2.50

Course Number	Course Name	Semester	Grade	Weight	Hrs	GPts

	AHRS	EHRS	QHRS	Reqd. HRS	%Comp	QPTS	Cur GPA

Progress:

Analytical Skills: Minimum GPA to Master: 2.50

Course Number	Course Name	Semester	Grade	Weight	Hrs	GPts

	AHRS	EHRS	QHRS	Reqd. HRS	%Comp	QPTS	Cur GPA

Progress:

Qualitative Skills: Minimum GPA to Master: 2.50

Course Number	Course Name	Semester	Grade	Weight	Hrs	GPts

	AHRS	EHRS	QHRS	Reqd. HRS	%Comp	QPTS	Cur GPA

Progress:

OVERALL ACADEMIC PERFORMANCE   Minimum GPA to Master: 2.50

	AHRS	EHRS	QHRS	Reqd. HRS	%Comp	QPTS	GPA
	62.00	62.00	62.00	129.00	48%	202.00	3.26

In order to be able to use this new format, universities will first need to identify their learning objectives, both for the core classes and for each degree program. Next,

each course offered by the university is linked to one or more learning objectives. If a course is linked to multiple learning objectives, then the percentage of the course's work that is focused on each objective must be determined. As these linkages are completed, they are stated under the applicable learning objective, along with the relevant percentage of course work focused upon that learning objective. The student's performance on each learning outcome is provided immediately below the summary of course(s) leading to the learning outcome. At the bottom of the transcript, the student's overall performance to date is provided.

With courses linked to learning outcomes, the university, each college, and every department can get printouts of the results for that semester and all previous semesters showing how well students performed with respect to the learning outcomes. This information provides feedback to administrators and faculty on student performance toward the learning outcomes.

CONCLUSIONS

To the many stakeholders in our educational system, the learning outcomes for the institution and the degree program are frequently unknown or unclear.   It is equally unclear what the performance goals are for each of the learning outcomes and how specific course work and other activities are related to those outcomes. The proposed new structure for academic transcripts attempts to resolve these problems by not only clearly stating what the learning objectives of the intitution and a specific degree program are, but by also showing how well the student has performed with respect to the learning outcomes. This proposed structure also provides a mechanism by which the university, its colleges, and the academic departments that are responsible for the delivery of these outcomes can assess their own performance. By adopting this new transcript format, the institution and program can greatly improve their communication abilities and accountability to their stakeholders.

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