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# THE ASSESSMENT PLAN IN ACTION: BUSINESS COMMUNICATION, A CORE COURSE

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#### **ABSTRACT**

Accrediting agencies and state legislatures frequently require universities to provide methods of assessing student performance. Continuous improvement for accreditation drives the assessment movement. This paper describes a six-semester study conducted at a regional university accredited by the Southern Association of Colleges and Schools (SACS) and the Association to Advance Collegiate Schools of Business (AACSB). The study conducted from Fall 2006 to Spring 2009 encompassed six objectives related to communication mandated by the Texas Higher Education Coordinating Board. The study involved 2,562 students in 87 sections of the business communication course. Embedded questions and assignment review were the methods of assessment used. The findings showed clear improvement in some areas and additional improvement needed in others.

#### INTRODUCTION

Assessment at every level of education has become ubiquitous. Increasingly, educational institutions from grades K-12 in public schools, community colleges, and universities are required by federal mandate, state law, or an accreditation entity to develop methods of assessment not only to gain or maintain accreditation but to also receive needed funding. Historically, assessment and accountability has been relegated to K-12 education, but now the requirement for accountability has been extended to higher education as well. As a result, administrators are confronted with developing effective assessment programs. To illustrate this point, according to a Google search conducted during spring 2009, about 24,300,000 sites exist that pertain to assessment in higher education.

As a result of the call for greater accountability in higher education, in 1997, the 75<sup>th</sup> Texas Legislature enacted Senate Bill (SB) 148 that "requires the Texas Higher Education Coordinating Board to adopt rules that include 'a statement of the content, component areas, and objectives of the core curriculum,' which each institution is to fulfill by its own selection of specific courses" (Core curriculum: Assumptions and defining characteristics, 1999, para. 1). As a result of this legislation, the Texas Higher Education Coordinating Board developed rules to implement the statute. To help institutions comply with the statute, assistance was provided to refine core curricula. The resulting work of the Advisory

Committee on Core Curriculum (1997-98) was based on the 1989 Report of the Subcommittee on Core Curriculum convened as a result of House Bill 2187 of the 70<sup>th</sup> Legislature. House Bill 2187 "required all institutions to adopt, evaluate, and report on an undergraduate core curriculum" (Core curriculum: Assumptions and defining characteristics, 1999, para. 1).

At the regional state university in this study, one of the core courses, Business Communication (BCM 247), was designated to assess communication, one of the core components and related exemplary educational objectives outlined in the Core curriculum: Assumptions and defining characteristics (1999, para. 19) document. The exemplary educational objectives related to the communication component of a core curriculum were:

- 1. To understand and demonstrate writing and speaking processes through invention, organization, drafting, revision, editing, and presentation.
- 2. To understand the importance of specifying audience and purpose and to select appropriate communication choices.
- 3. To understand and appropriately apply modes of expression, i.e., descriptive, expositive, narrative, scientific, and self-expressive, in written, visual, and oral communication.
- 4. To participate effectively in groups with emphasis on listening, critical and reflective thinking, and responding.
- 5. To understand and apply basic principles of critical thinking, problem solving, and technical proficiency in the development of exposition and argument.
- 6. To develop the ability to research and write a documented paper and/or to give an oral presentation.

These objectives were used to develop an assessment schedule to comply with the state mandate.

#### **REVIEW OF LITERATURE**

#### Accreditation

The regional state university in this study is accredited by the Southern Association of Colleges and Schools (SACS) and the Association to Advance Collegiate Schools of Business (AACSB). According to the SACS "Principles of Accreditation: Foundations for Quality Enhancement" (Principles of ..., 2008, p. 1):

Accreditation by the Commission on Colleges signifies that the institution (1) has a mission appropriate to higher education, (2) has resources, programs, and services sufficient to accomplish and sustain that mission, and (3)maintains clearly specified educational objectives that are consistent with its mission and appropriate to the degrees it offers, and that indicate whether it is successful in achieving its stated objectives.

In examining the criteria cited for AACSB, the following similar description is used:

Accreditation focuses on the quality of education. Standards set demanding but realistic thresholds, challenge educators to pursue continuous improvement, and guide improvement in educational programs. It is important to note that accreditation does not create quality learning experiences. Academic quality is created by the educational standards implemented by individual faculty members in interactions with students. A high quality degree program is created when students interact with a cadre of faculty in a systematic program supported by an institution. Accreditation observes, recognizes, and sometimes motivates educational quality created within the institution. (Eligibility procedures..., 2008, p. 1).

Institutions of higher learning are continually striving to maintain and increase enrollment as well as to retain and produce graduates who will become productive citizens and successful leaders. By gaining and maintaining accreditation, institutions assure prospective students that they meet exacting standards. Therefore, it is imperative that educational institutions develop and administer assessment programs to ensure accreditation requirements are met.

Like most accreditation agencies, both SACS and AACSB, require that universities identify competencies within the general education core and then provide evidence that graduates have attained those competencies or have achieved specified learning goals. Through assessment, accomplishment of the intended goals may more easily be quantified for review, validation, and reporting.

#### Assessment

Assessing students' ability to communicate is an area of interest to researchers. The Core Curriculum: Assumptions and Defining Characteristics (1999) communication objective is to enable the student to communicate effectively in clear and correct prose in a style appropriate to the subject, occasion, and audience. Different assessment modalities are required to assess the understanding and demonstration of writing and speaking processes, of specifying audience and purpose, of selecting appropriate mode of expression, of effectively participating in groups, of applying basic principles of critical thinking, and to research and write a documented paper.

The National Center for Education Statistics affirms that: "an effective and meaningful evaluation of postsecondary writing assessments is predicated upon a comprehensive understanding of the definition of writing competency" (NPEC sourcebook..., 2000, p. 45). Therefore, in order to appropriately assess students' writing samples, the definition of the competencies to be assessed must be clearly outlined. At a minimum, all students should receive adequate instruction to produce a writing sample with acceptable results in content, mechanics, and format. When learning goals and outcomes have been determined, then the learning environment can be structured to ensure student learning and sufficient practice of the objectives. "Just by defining their learning objectives and deciding where and when these will be covered, faculty improves their curriculum delivery because they will ensure that essential skills are introduced and practiced in a variety of settings" (Banta, 2005, p. 36).

Fraser, Harich, Norby, Brzovic, Rizkallah, & Loewy (2005) list multiple resources of how researchers define effective assessment in business writing and business communication in the context of institutional standards. Other standards borrowed from management strategies of resource-based review (RBV) and knowledge management may be applied to further quantify the importance that communication plays not only in the success of the educational institution, but also in success for employers as well as their employees to help produce competitive advantage (Barth, 2002; New paradigm..., n.d.).

#### **Assessment Methods**

# **Writing Assessment**

Writing assessors may employ many varying assessment methods. Some methods may work better than others depending on the intended result gained from the assessment. Some types of methods include formative assessment, essay evaluation, and portfolio production to meet assessment mandates.

#### Formative assessment.

Formative assessment is continuous assessment using software to assess students' understanding of key concepts where teachers have an opportunity to adjust their instruction or to prescribe additional learning opportunities for students who need it (Pierce, 2005). This instructional management option does not lend itself to assessing writing skills but rather is effective for periodic, standards-based assessment of state standards.

#### **Essay evaluation**.

In this method students write essays that are then evaluated according to a set of criteria. This method is less objective than some other forms of assessment in that graders examine the writing through the window of their own expectations which leads to a more subjective process of evaluation.

# Portfolio production.

The portfolio approach opens up a host of constraining factors such as who will decide what is included, who will be responsible for collecting and verifying the materials, what kind of scoring is practically available, how upper-level assessment can be made fair to students coming from majors requiring varying amounts of writing, whether the original instructor's grades and comments should remain on the submissions, and what are the most appropriate methods are for demonstrating reliability and validity (NPEC sourcebook..., 2000).

The most objective of these methods is the formative assessment. Although harder to grade because of subjectivity, essays and portfolios may be evaluated more objectively by using rubrics designed to quantify various writing aspects.

Scoring methods include holistic, analytic, and computerized writing assessments. Holistic scoring scales are believed by proponents of a global definition of writing ability to capture the overall essence or quality of the writing (NPEC sourcebook..., 2000). Holistic scores produce one general numerical rating of the overall quality of a writing product. Analytic scoring looks at the writing sample broken down into components to be scored separately. This includes a rater's judgment of categories such as content, mechanics, and format. Computerized writing assessments are not used extensively but several testing companies such as ACT provide viable choices to objectively score a student's writing ability. Of all the methods available, however, analytical scoring can help to focus on specific aspects related to the quality of the students' writing (Huot, 1990; Roid, 1994).

# **Critical Thinking Assessment**

According to Cummings, Maddux, and Richmond (2008), assessment should be integrated with instruction to measure students' higher level thinking and problem-solving abilities. This curriculum-embedded performance assessment has the advantage of actively involving students in the assessment process as part of the regular course requirements thereby relieving faculty from additional data collection time.

Embedded questions to assess objectives can be developed by the faculty involved and implemented in quizzes or exams that are part of the course. Faculty should be able to extract the specific questions as well as the individual student performance from the exams they administer.

#### **PURPOSE**

The purpose of the study was to use the six objectives created for a core communication course by the Texas Higher Education Coordinating Board to assess student performance in the business communication course.

#### **PROCEDURES**

Business Communication (BCM 247) is a sophomore level course. The course is a required part of the business core, an option for the university general education core, and an option for General Business minors. Some of the non-business majors such as Nursing majors are required to take the course. Other students choose the course as an elective. Students in the business communication course are involved in writing reports, memos, good news messages, bad news messages, and persuasive messages. The last writing assignment of the semester is usually the persuasive message.

The business communication faculty wrote an assessment plan for 2006-2009 which involved six semesters of evaluation. Each of the six objectives created by the Texas Higher Education Coordinating Board for communication was evaluated twice with two objectives evaluated for each semester (see Appendix).

While the university suggested three types of measures for evaluation, the faculty chose two of those measures: embedded test questions and assignment review. The faculty of each core course was encouraged to establish an assessment criteria based on estimated success rate. As this was a new venture, it was realized that the assessment criteria would be arbitrary and might have to be adjusted to a higher or lower rate in future semesters as data was collected. A passing grade of 60% for the course was required for students to count the course for graduation. The Business Communication faculty felt that 60% was too low for an assessment target and opted for higher targets for this assessment cycle with the understanding that the assessment criteria might be adjusted in the future.

# **Embedded Test Questions**

The faculty decided to use embedded questions to measure Objective 2 (to understand the importance of specifying audience and purpose and to select appropriate communication choices) and Objective 4 (to participate effectively in groups with emphasis on listening, critical and reflective thinking, and responding). Five questions were written to measure each objective. All faculty agreed upon the questions chosen. Each faculty member embedded the questions in an exam format which was distributed to all students who took the exam. The assessment criteria for these objectives was set at 70%.

## **Assignment Review**

The faculty decided to evaluate two different assignments in order to meet the goals of the remaining four objectives. For Objective 3 (to understand and appropriately apply modes of expression, i.e. descriptive, expositive, narrative, scientific, and self-expressive, in written, visual, and oral communication) and Objective 5 (to understand and apply basic principles of critical thinking, problem solving, and technical proficiency in the development of exposition and argument), the faculty decided that the written persuasive message would be the best example to use. Analytic scoring was used through a faculty-developed rubric that measured specific areas of the objective (see Appendix). A faculty sub-committee randomly selected three students from each section resulting in approximately ten percent of the assignments being assessed. Faculty then provided the unevaluated persuasive messages that the selected students wrote. Two other faculty members then assessed the writings with the approved rubric. A faculty sub-committee of three members reviewed any cases where the two faculty members disagreed by more than two points and determined the appropriate rankings. The assessment criteria for these objectives was set at 75%.

The second type of assignment the faculty chose for review was the analytical report. This assignment was used to measure Objectives 1 (to understand writing and speaking processes through invention, organization, drafting, revision, editing, and presentation) and 6 (to develop the ability to research and write a documented paper and/or give an oral presentation). Again, an analytical scoring rubric was developed to measure the objectives (see Appendix). A faculty sub-committee randomly selected one student from each section. The team report written by that student was evaluated. With most team sizes at 3 to 5 students, approximately 15% of the students were represented. Each report was assessed by two faculty members and a sub-committee of three faculty members was used to judge disagreements in rankings of more than two points. The assessment criteria for these objectives was set at 75%.

### **FINDINGS**

The six-semester assessment plan conducted from Fall 2006 to Spring 2009 involved 2,562 students in 87 sections of the course offered in Fall or Spring semesters. Courses offered in the summer sessions were not used in the assessment process. For each term all sections of the course were used and all faculty including full-time and part-time faculty were involved. Table 1 indicates the number of students and faculty per semester.

Table 1: Students Involved in Assessment Process, 2006-2009

			Percent	Number of Faculty
Semester	Number Enrolled	Number Assessed	Assessed	Involved
				_
Fall 2006	459	44	9.59%	7
Spring 2007	395	*327	82.8%	8
Fall 2007	431	65	15.1%	8
Spring 2008	399	*367	92.0%	7
Fall 2008	461	44	9.54%	8
Spring 2009	417	In progress		8
Total	2,562			

<sup>\*</sup>Number students who took exams with embedded questions.

During the spring semesters of 2007 and 2008 embedded questions were used to measure Objectives 2 and 4 as shown in Table 2. Of the five questions asked relating to Objective 2, 100% of the students met the assessment goal of scoring 70% or higher on these questions in both semesters. Responses by students to questions relating to Objective 4 were more problematic. In 2007, 80% of the students met the goal of scoring 70% or higher. While the students did well on four questions, they had difficulty with one question. By Spring 2008 a different textbook was in use and 60% of the students met the goal of scoring 70% or higher. While students did well on three questions, two of the questions caused problems.

Table 2: Assessment Analysis of Educational Objectives for BCM 247 Business Communication Embedded Questions

Objectives	Goal	Date	First Measurement	Date	Second Measurement
To understand the importance of specifying audience and purpose and to select appropriate communication choices.	70%	Spring 2007	*Five questions 100%	Spring 2008	*Five questions 100%
To participate effectively in groups with emphasis on listening, critical, and reflective thinking, and responding.	70%	Spring 2007	*Overall 80% *Four questions at 100% *One question at 65.4%	Spring 2008	*Overall 60%  *Three questions at 100%  *Two questions (54.6% and 48.4%)

<sup>\*</sup>Percent of students who achieved the assessment goal

In using an analytic scoring rubric for assignment review of persuasive messages, students in Fall 2008 had higher ratings than those in Fall 2006 (see Table 3). In Fall 2008, 79.8% of the students met the objective of 75% or higher while in Fall 2006, 73.5% met the goal of 75% or higher. After the measurement of 2006, the faculty decided that the rubric really needed to define the content category more carefully. A revised rubric added a section on persuasive argument to clarify that objective for the Fall 2008 measurement.

Table 3: Assessment Analysis of Educational Objectives for BCM 247 Business Communication Persuasive Writing Sample

Objectives	Goal	Date	First Measurement		Date	Second Measurement	
3	75%	Fall	*Overall	73.5%	Fall	*Overall	79.8%
To understand and		2006	*Content	65.9%	2008	*Persuasive	
appropriately apply modes of			*Mechanics	69.3%		Argument	76.1%
expression, i.e., descriptive,			*Format	96.6%		*Content	71.6%
expositive, narrative, scientific,						*Mechanics	79.5%
and self-expressive, in written,						*Format	92.0%
visual, and oral							
communication.							

5 To understand and apply basic principles of critical thinking, problem solving, and technical proficiency in the development of exposition and argument.

In assessing Objectives 1 and 6, the analytical report was used. As shown in Table 4, 61% of the students met the assessment goal of 75% or higher. The second measurement is being conducted in the Spring 2009 semester.

Table 4: : Assessment Analysis of Educational Objectives for BCM 247 Business Communication Report Writing Sample

Objectives	Goal	Date	First Measurement		Date	Second Measurement
1	75%	Fall	*Overall	61.0%	Spring	In progress
Requires students to		2007	*Research	53.0%	2009	
understand writing and			*Mechanics	63.3%		
speaking processes through			*Analytical	66.7%		
invention, organization,			Approach			
drafting, revision, editing, and						
presentation.						

6
Requires students to develop
the ability to research and
write a documented paper
and/or give an oral
presentation.

#### **CONCLUSIONS**

While differences in universities include such issues as student demographics, student admission requirements, teaching strategies, and accreditation requirements, a large-scale study at one university may provide general guidelines for another school. The undergraduate student enrollment for Stephen F. Austin State University in Nacogdoches, Texas, was 9,980 in Fall 2006; 9,964, in Fall 2007; and 10,284 in Fall 2008, the time period of this study involving undergraduate students. The number of undergraduate Business majors was 1,774 in Fall 2006; 1,834 in Fall 2007; and 1,898 in Fall 2008. The ethnic composition of the student body has changed from 71.9% white/nonhispanic in Fall 2006 to 66.9% white/nonhispanic in Fall 2008. This change is in line with the state of Texas' plan to bring more diversity into higher education. The largest ethnic increase has been in African American students which has increased from 16.6% in Fall 2006 to 20.2% in Fall 2008. The top five counties from which students attend Stephen F. Austin State University are Harris County (Houston), 21.4%; Nacogdoches County, 16.7%; Dallas County (Dallas), 11.3%; Angelina County (Lufkin), 9.2%; and Tarrant County (Ft. Worth),

<sup>\*</sup>Percent of students who achieved the assessment goal

<sup>\*</sup>Percent of students who achieved the assessment goal

6.6%. (Fall 2008 Fact Book, 2008). This mix of rural and urban students creates a unique teaching/learning environment.

One of the issues in assessment is called "closing the loop". This occurs after the assessment measure is completed. For example, what is done with the results? What changes are made to promote continuous improvement? For this study, after each semester the faculty met to discuss the results and to see what changes should take place to result in an improved measure in subsequent semesters.

# Embedded Questions - Objectives 2 and 4

In both measures Objective 2 resulted in 100% of the students answering this question at 70% or higher. It is clear that faculty are achieving this objective effectively. In fact, this may be an objective that needs to have a higher assessment goal in the future.

Objective 4 is more problematic. In the first measure 4 of the 5 questions were answered at the goal level or higher. On the second measure 3 of the 5 questions were answered at the goal level or higher. As a new textbook was used during the second measure, different questions were used for each of these objectives on the two different measures. The faculty need to focus more on Objective 4 to improve the response to this measure.

#### Assignment Review – Persuasive Written Message – Objectives 3 and 5

This assignment was the most effective over time. In Fall 2005 a pilot study was conducted on analytical scoring of the persuasive message. The faculty felt the most experienced and comfortable with this measure. The ratings improved in all areas except format on the second measure (Fall 2008) as compared to the first measure (Fall 2006). After the 96 percent result on format in the first measure, the faculty decided that the other areas of the message were perhaps more important and agreed to also focus more on those items which did result in improvements.

#### Assignment Review – Analytical Written Report – Objectives 1 and 6

The first measure on this assignment was in Fall 2007 with the second measure currently in progress during Spring 2009. On the first measure only 61% of the students met the goal of 75% or higher. The faculty had hoped for a higher percentage.

What was discovered on the first measure of the analytical report was not so much a difficulty with students as it was with a disagreement among faculty on what should be included in an analytical report. Some faculty did not include research in the final team report. Some faculty included both primary and secondary research while others only included secondary research. As a result of the first scores, the faculty met to establish requirements for the analytical report so that students would be asked to supply the same information in the report across all sections. It is hoped that a clearer understanding of expectations on the part of the faculty will provide better results from the assessed students in Spring 2009.

#### **IMPLICATIONS**

#### **For Faculty**

As a result of the assessment plan, the faculty is more cohesive and willing to improve the course than before the assessment plan began. The reason for this success was early buy-in and involvement of business communication faculty at all levels including tenure track and adjunct teachers. Part of the result of the buy-in was that faculty understood that student performance would not be linked to individual faculty members. In fact, results were sent to the college and university level with anonymous faculty and student information. The rubrics and embedded questions were designed and approved by all faculty. Meetings to discuss the procedures were held before and after each measurement.

Spring 2009 will conclude the first six semesters of assessing six objectives in the business communication course. A new plan will be developed in future. Some of the factors that will be considered are:

- 1. Are the assessment criteria appropriate? An arbitrary range of 70% (embedded questions) and 75% (assignment review) were used for the first six-semester plan. How should these be adjusted in future?
- 2. Should the same type of assignment review and embedded questions be used in the future?

# For Policymakers

As accrediting agencies, coordinating boards, and legislatures all favor assessment as a measure for continuous improvement, each university must decide the plan that will work the best. A key element of success is commitment to assessment on the part of deans, department chairs, and faculty. Assessment may require additional resources such as software programs to keep track of results, released time for individuals involved in collecting and processing data, and faculty development in the area of assessment.

The collected data from assessment is of no value by itself. Success in assessment is the result of using that data to see how changes can be made to more effectively meet the goals of instruction. The ultimate goal of any university is to produce graduates who are equipped to be successful in their chosen careers. Assessment plays in integral part in the process that effectively prepares students for the world of work.

#### REFERENCES

- Banta, Trudy. W. (September/October 2005). "How Much Have We Learned?" *BizEd*, Volume 4, Number 6, 35 38.
- "Core Curriculum: Assumptions and Defining Characteristics." (1999). Academic Affairs, Stephen F. Austin State University. Retrieved March 7, 2009 from http://www.sfasu.edu/acadaffairs/core.asp
- Barth, Steve. (2002, June 19). "Defining Knowledge Management". Retrieved January 19, 2006 from http://www.destinationkm.com/print/default.asp?ArticleID=949.
- Cummings, Rhoda; Maddux, Cleborne D.; & Richmond, Aaron (2008). "Curriculum-embedded Performance Assessment in Higher Education: Maximum Efficiency and Minimum Disruption." Assessment & Evaluation in Higher Education, Volume 33, Number 6, 599 — 605. Retrieved March 7, 2009 from Academic Search Complete Database
- "Eligibility Procedures and Accreditation Standards for Business Accreditation." (2008, January 31).

  \*\*Association to Advance Collegiate Schools of Business (AACSB International). Retrieved March 7, 2009, from http://www.aacsb.edu/accreditation/process/documents/AACSB\_STANDARDS\_Revised\_Jan08. pdf
- Fall 2008 Fact Book. (2008). Stephen F. Austin State University. Retrieved on March 17, 2009, from <a href="https://www.sfasu.edu/research">www.sfasu.edu/research</a>
- Fraser, Linda; Harich, Katrin; Norby, Joni; Brzovic, Kathy; Rizkallah, Teeanna; & Loewy, Dana. (September, 2005). "Diagnostic and Value-Added Assessment of Business Writing." *Business Communication Quarterly*, Volume 68, Number 3, 290-305.
- Huot, Brian. (1990). "The Literature of Direct Writing Assessment: Major Concerns and Prevailing Trends." *Review of Educational Research*, Volume 60, Number 2, 237-263.
- New Paradigm: Resource-Based Theory. (n.d.). *eCoach*. Retrieved January 19, 2006 from http://www.1000ventures.com/business\_guide/mgmt\_stategic\_resource-based.html.
- "NPEC Sourcebook on Assessment, Volume 1: Definitions and Assessment Methods for Critical Thinking, Problem Solving, and Writing." (2000, July). *National Center for Education Statistics* (*NCES*). Retrieved March 9, 2009 from <a href="http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2000195">http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2000195</a>
- Pierce, Dennis. (2005, February 14). "Formative Assessment Rates High at FETC 2005". Retrieved February 15, 2009 from <a href="http://www.eschoolnews.com/resources/math-solutions/math-solutions-articles/index.cfm?rc=1&i=36208">http://www.eschoolnews.com/resources/math-solutions/math-solutions-articles/index.cfm?rc=1&i=36208</a>.
- "Principles of Accreditation: Foundations for Quality Enhancement." (2008). *Commission on Colleges Southern Association of Colleges and Schools (SACS)*. Retrieved, March 7, 2009 from http://www.sacscoc.org/pdf/2008PrinciplesofAccreditation.pdf.
- Roid, Gale. H. (1994). "Patterns of Writing Skills Derived From Cluster Analysis of Direct-Writing Assessments. *Applied Measurement in Education*, Volume 7, Number 2, 159-170.