

Applications of Direct Assessment towards Closing the Loop in Higher Education: A Gardner-Webb University Case Study, USA

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Abstract: The accountability imperative in higher education is critically important. In the US, the political climate is impacting the way in which higher education officials do business in terms of academic accountability with more regulations coming from the US Department of Education, CHEA, and regional accrediting bodies. Boards of education and state/provincial legislatures are restricting funding and requiring greater academic accountability. Students, parents, and other academic stakeholders also expect evidence that their higher education experience is worth the forever increasing financial costs. The purpose of this paper is to describe and discuss the direct assessment services that Gardner-Webb University employs as a tool for accreditation, accountability, and learning outcomes measurement in order to close the loop in higher education. We would like to acknowledge contributions by Dr. Anthony N. Negbenebor, Dean of the Godbold School of Business, Gardner-Webb University for supporting this case study.

Introduction: Accreditation and Accountability

Why should academic officials assess learning outcomes? The Accreditation Council for Business Schools and Programs (ACBSP) states in their accreditation standards, “Business schools and programs must have an outcomes assessment program with documentation of the results and evidence that the results are being used for the development and improvement of the institution’s academic programs.” Similar language is used with the International Assembly for Collegiate Business Education (IACBE) and the Association to Advance Collegiate Schools of Business (AACSB) for their programmatic accreditation requirements. US regional accreditation organizations such as SACS (Southern Association of Colleges and Universities) also states:

Accreditation requires institutional commitment to the concept of quality enhancement through continuous assessment and improvement... The institution has [to] develop an acceptable Quality Enhancement Plan (QEP) that includes an institutional process for identifying key issues emerging from institutional assessment and focuses on learning outcomes and/or the environment supporting student learning and accomplishing the mission of the institution.

Learning outcomes assessment is therefore a required aspect for both institutional and programmatic accreditation. Similar trends or outcomes assessment and assurance of learning are required by European accreditation organizations and international higher education associations. Business program accreditation requirements incorporate the business program Common Professional Components (CPC) topics, which are comprised of the following competencies: Accounting, Business Ethics, Business Finance, Business Integration and Strategic Management, Business Leadership, Economics (Macro and Microeconomics), Global Dimensions of Business, Information Management Systems, Management (Operations/Production Management, Human Resource Management, Organizational Behavior), Marketing, Quantitative Techniques/Statistics.

Methodology

Students enrolled in higher education programs take the first CPC-based COMP exam early in their academic program, usually within their first business course. This initial assessment is referred to as the *Inbound Exam*. Students subsequently take the same exam at the end of their program, usually just before graduation within their last course. This final assessment is referred to as the *Outbound Exam*. The comparison in scores between

the Inbound and the Outbound Exams is used for internal benchmarking. The comparison of the Outbound Exam scores with the results from other universities is used for external benchmarking.

Gardner-Webb University (GWU) applied the direct assessment process using the CPC-based COMP Exam provided by Peregrine Academic Services. The exam was administered online to the GWU undergraduate business students. The Inbound Exam was assigned to ACCT-213 Accounting Principles I, as an assignment and was graded as pass/fail, based on completion. The Outbound Exam was assigned to BADM-480 Senior Seminar in Business and was graded with a letter grade worth 10% of the final course grade, graded on a normed scale. A Frequently Asked Questions Guide (FAQ) was provided for students and faculty with instructions on how to self-register for the exam. The course syllabus contained the exam content specific for the assignment. Students self-registered for the exam using the school specific micro-site. Students selected their exam based on their course enrollment and completed the registration process. After selecting the hyperlinked exam key (displayed at the end of the registration and e-mailed to the student), the student selected their program. Student completed the online exam. For GWU, the exam included 120 questions with 10 questions per CPC topic. At the end of the exam, the exam results were displayed and the student downloaded and submitted the completion certificate to the course instructor for their grade/credit.

Results

Some 65 students completed the Inbound Exam (December 2011 and May 2012); another 80 students completed the Outbound Exam (December 2011, April 2012, May 2012, and July 2012). Students were further grouped based on their program of study. The exam scores are reported on a 100-point scale, however they were interpreted in relative terms based on a standardized, normed scale: 80%-100% corresponding to a *Very High* competency level; 70%-79% *High*; 60%-69% *Above Average*; 40%-59% *Average*; 30%-39% *Below Average*; 20%-29% *Low* and 0%-19% *Very Low*.

Comparison Report Results and Analysis: *Internal Benchmarking*

The difference in test results between the Inbound and Outbound exams is the direct measure of student and program level learning for internal benchmarking. Results are shown in Figure 1.

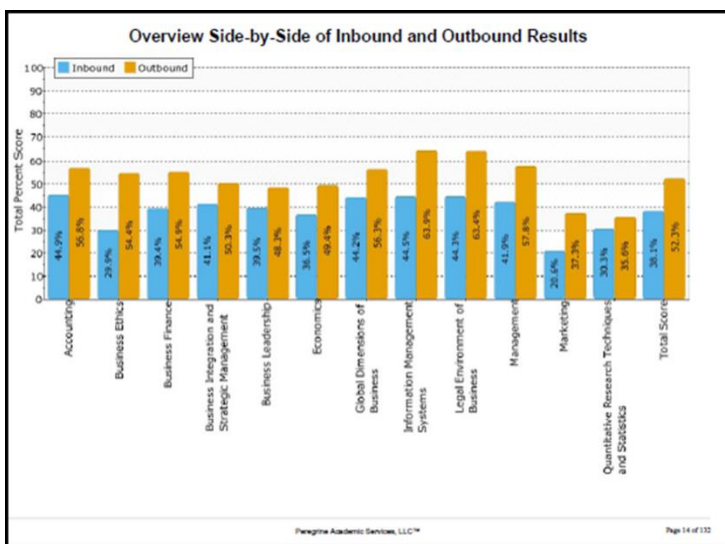


Figure 1. Inbound Exam (n=65) and Outbound Exam (n=80) results for GWU undergraduate business students.

Additional internal benchmarking analyses included an analysis of score distributions using scatterplots, and evaluation of the frequencies of questions missed by topic, sub-topic, and subject areas. The 4-6 subject areas within each CPC topic and subtopic correspond to the GWU learning outcomes. Longitudinal analyses allowed GWU officials to look at two year-groups of students side-by-side.

Comparison Report Results and Analysis: *External Benchmarking*

External Benchmarking is conducted using both the Outbound Exam scores (Figure 2) and the percent change results between Inbound/Outbound exams (Figure 3) compared to various aggregate pools.

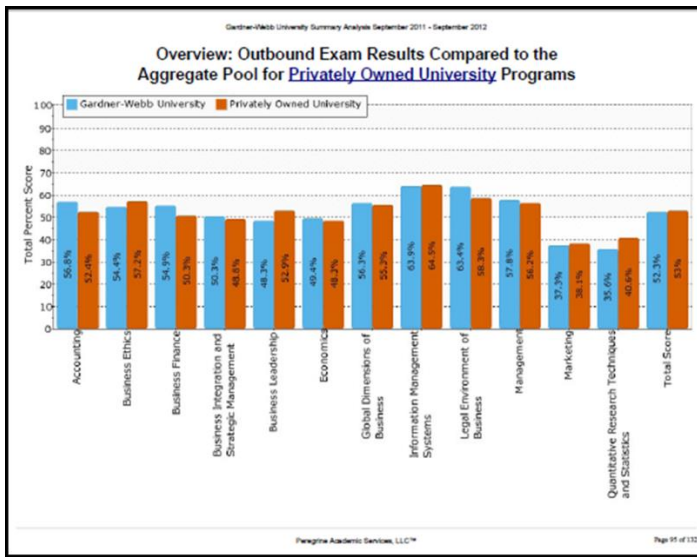


Figure 2. Outbound Exam (n=80) results for GWU undergraduate business students compared to the Privately Owned University Aggregate Pool (similar analysis were conducted for a variety of aggregate pools).

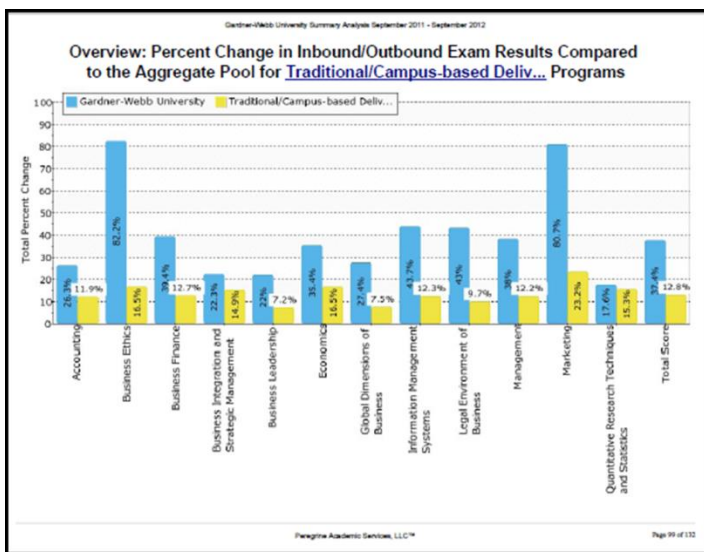


Figure 3. Percent change between Inbound and Outbound Exams for GWU undergraduate business students compared to the Traditional Campus-based Delivery Aggregate Pool (similar analysis were conducted for a variety of aggregate pools).

Conclusions and Recommendations

Analyses Considerations

When reviewing the results, the topic and sub-topic level scores tend to carry more significance in terms of analysis value than the total score. Although most exams include all 12 topics, not all exams will include all 12 topics. Therefore, the total score comparisons are shown for relative benchmarking whereas the topic and sub-topic level score comparison will tend to be more meaningful. If there are topics included on the exam that do not appear to be directly related to your curriculum and/or learning outcomes, we recommend that the institution consider removing these topics from future testing. It is generally best not to test on topics that are not included in the program's curriculum.

An institution should consider the sample size for the exam period before making changes in the program based on the exam results. Lower sample sizes tend to have higher standard deviations. In general, it is best to have a sample of at least 100 exams before the results can be used for program changes. Since the report period is a variable, school officials can go back and include past exam results for future reporting in order to get the sample size high enough for meaningful analysis.

To evaluate the institution's learning outcomes, school officials should consider the table for the frequency of questions correct by each CPC topic. These data are most useful when considering learning outcomes. Not every subject included on the exam will directly correspond to a program's learning outcome because this is a standardized test meant to apply to the widest diversity of programs. Therefore, the score for the topic or subtopic must be taken in the context of the subject-level analysis. For example, a relatively low topic/sub-topic score may be acceptable provided that the subject-level scores are high for those subjects that are directly related to learning outcomes. Conversely, a high topic/sub-topic score may be unacceptable if the questions missed on the exam were high for key learning outcomes.

When it concerns the continuous improvement processes, it is important not to make too many changes in a program at the same time based on one or two exam periods. Instead, it is generally better to make small, incremental changes to the program based on these results and then monitor the results to assess the consequences of the change effort. Specific ideas for continuous improvement include: updating course content to include more case study type instruction that combines CPC topics in the same analysis and including a review of key business topics towards the end of the program (e. g. in the CAPSTONE course) that includes an application exercise that requires a review and understanding of all the CPC topics included within the program.

Conclusions

Assessing student retained knowledge is a valid way to demonstrate learning outcomes' strengths and opportunities for improvement. When analyzing the data, focus first on those topic/subject areas that align with the program-level learning outcomes. Next, focus on course-level learning outcomes.

Recommendations

Application of the results can be applied to both specific business courses and for the overall curriculum and business program. Exam topic selection should be based on program content (courses) and learning outcomes. Alignment of existing exam topics to course content/learning outcomes is done by selecting topics that match the core courses/learning outcomes of the program. Where there is overlap of exam topics, comparisons can be made. The new topics can be created for subject areas where there is no existing test bank of questions.

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