



EDUVENTURES

***Improving Higher Education With the
Help of Learning Outcomes Management:
A Case-Study Approach***



***Improving Higher Education
With the Help of Learning
Outcomes Management***

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June 2007

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For more than a decade, Eduventures has been the most trusted and influential name in education market research, consulting services, and peer networking. Our clients include senior administrators and executives from leading educational institutions and companies serving the K-12, higher education, and corporate learning markets, as well as decision-makers in government agencies and the investment community. Additional information can be found at www.eduventures.com.



INTRODUCTION

Learning outcomes management (LOM) is a topic of increasing importance at all types of higher education institutions. In this paper, Eduventures seeks to clarify the emerging concept and address the following questions:

- What is the current environment of assessment and accountability in higher education?
- What is learning outcomes management?
- Why is it necessary at all types of higher education institutions?
- What information needs could be addressed by implementing an LOM solution?
- What benefits can a higher education institution expect from an effective LOM solution?

Eduventures also presents two case studies demonstrating how two institutions, with significantly different needs, used LOM to solve their challenges in innovative ways.



LEARNING OUTCOMES MANAGEMENT OVERVIEW

“History is littered with examples of industries that, at their peril, failed to respond to – or even notice – changes in the world around them, from railroads to steel manufacturers. Without serious self-examination and reform, institutions of higher education risk falling into the same trap, seeing their market share substantially reduced and their services increasingly characterized by obsolescence.”

– The Secretary of Education’s Commission on the Future of Higher Education, A Test of Leadership: Charting the Future of U.S. Higher Education, September 2006

A Uniform Vision of Higher Education Institutions

An institution that embraces accountability and assessment and can provide evidence of the quality of its education reaps many benefits, including an easier accreditation process, increased demand among prospective students for admission, and overall enhanced brand equity. Furthermore, more prestigious companies are attracted to graduates from institutions that can substantiate the quality of their education. Success of graduates in their careers because of superior education can influence their willingness and ability to make donations and provide large endowments for the institution, which in turn, could fund further improvements for an institution’s educational offerings. By focusing on accountability and assessment, institutions can alleviate regulatory concerns and can actively help to improve the quality of U.S. education and advance the skill sets of U.S. graduates.

The Challenges

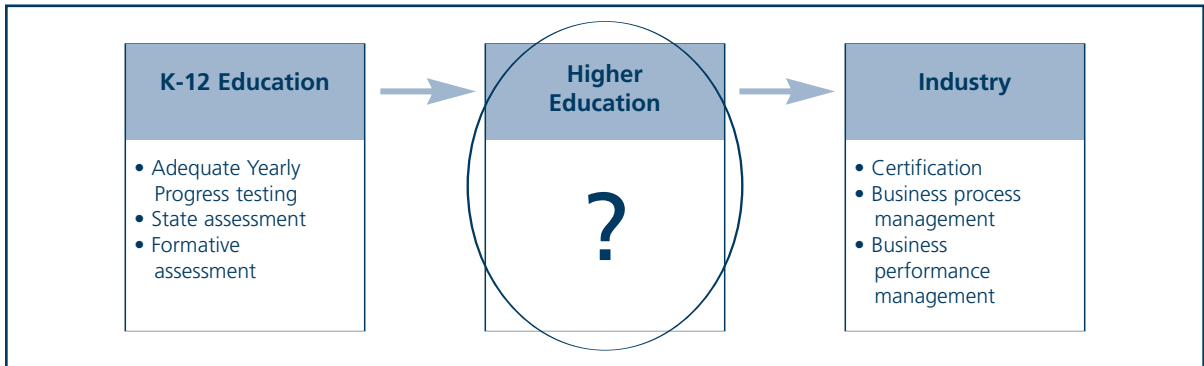
Most higher education institutions realize that some form of assessment is instrumental in furthering a variety of different institutional goals. In reality, however, institutions are encountering many challenges in implementing LOM. Among the most basic problems is that existing structures – for example, decentralized decision-making at each school or program level and/or absence of necessary instruments and channels to collect the required data for analysis – do not allow for implementation of institutionwide assessment.

Beyond some of the operational barriers, the concepts of assessment and accountability initially contradict the essence of higher education – advancing the development of independent thinkers. Furthermore, there is a perception that institutional or program assessment and accountability will create more work for students, faculty, and staff, as well

as add costs to the university. These barriers and misconceptions, as well as others, often discourage institutions from exploring integration of wide-scale assessment into their programs to identify inefficiencies or ineffectiveness and drive improvement.

The result is that institutions are creating an assessment and accountability gap within the overall education/business ecosystem (Figure 1).

FIGURE 1. WIDESPREAD ASSESSMENT WITHIN THE EDUCATION/BUSINESS ECOSYSTEM



From kindergarten until retirement, individuals are constantly evaluated and assessed. Similarly, almost all businesses, organizations, and agencies (for-profit and non-profit), have measures in place to improve internal processes, external competitiveness, and accountability to their stakeholders.

Until recently, it was assumed that higher education institutions had the knowledge to best educate postsecondary students without the need for a system of checks-and-balances. This paradigm is beginning to lose some authority, due to rising tuition rates, decreased international competitiveness, and high dropout rates. Not surprisingly, advocacy groups, associations, accreditation agencies, and the U.S. Department of Education are beginning to insist that institutions begin measuring and reporting their progress on improving the quality of education they provide.

Furthermore, most institutions are focused on developing strategies to stay ahead of the competition, meet the needs of changing student populations, and attract quality faculty. Because of these external and internal pressures, leaders at higher education institutions are beginning to take note and focus more of their attention on gathering, analyzing, and using student information to improve learning outcomes. In response to this, vendors are entering the marketplace to provide learning outcomes management solutions. However, confusion still exists around the definition of LOM and the various benefits it can bring to an institution.

Meeting the Challenge: Learning Outcomes Management

Eduventures defines learning outcomes management (LOM) as solutions that help colleges and universities develop, deliver, report, and manage assessment-related items and activities.

At its core, the concept of LOM is no different than many other processes used on a daily basis to make decisions of all types in organizations. Specifically, the process of LOM focuses on setting target goals, acting to achieve those goals, evaluating the outcome, and making improvements before setting new goals and starting the process over (Figure 2).

FIGURE 2. LEARNING OUTCOMES MANAGEMENT PROCESS



Due to its simplicity, the challenge does not exist in implementing the process itself; instead, the primary challenge is setting clear target goals for student learning outcomes and designing appropriate success metrics. To make the process even more challenging, institutions are often presented with two different types of target goals – longitudinal and benchmark-driven.

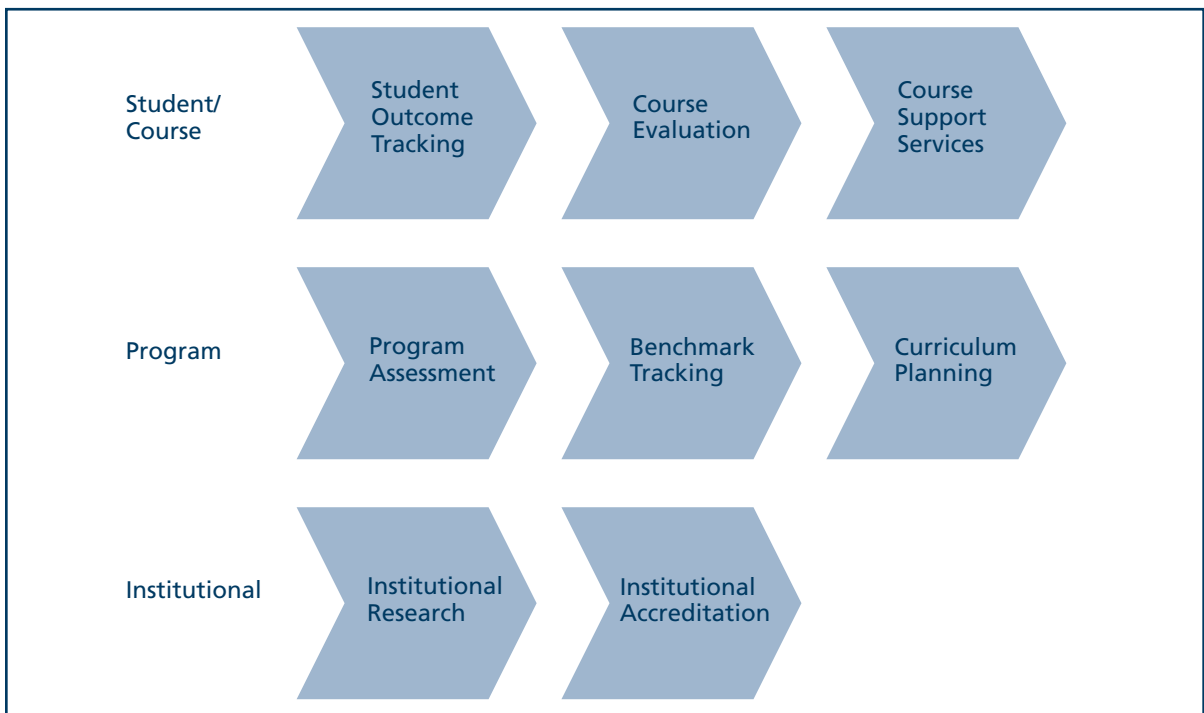
- **Longitudinal Goals** – Targets that measure improvement from students’ matriculation to graduation. Proponents argue that different institutions, even different programs within an institution, serve students with different needs, motivations, and educational backgrounds (e.g., English language learners). As long as universities can prove that they are improving knowledge, skills, and, perhaps, motivation of their students, they have accomplished their mission.
- **Benchmark-Driven Goals** – Targets that measure student performance against previously established criteria. Proponents believe that certain skills (e.g., writing, critical thinking, problem-solving, persuasion, etc.) should be common to all postsecondary graduates. Employers are particularly interested in benchmark-

driven student assessment, which they believe will (1) improve the quality and consistency of entry-level hires, (2) lower training costs, and (3) improve performance and profitability of their companies.

Currently, institutions are employing both methods, with little proof as to which method produces more effective results. Furthermore, vendors are creating different components and capabilities for LOM. Since frequently this leaves institutions discouraged, solution providers are initiating coaching of colleges and universities through this intensive process.

Vendors have yet to establish uniformity in addressing institutional needs. As shown in Figure 3, effective LOM extends across three levels – student/course, programmatic, and institutional, with each level continuously aggregating, analyzing, and reporting the progress and/or achievement of student learning outcomes. Few solution providers have the expertise or the knowledge to appropriately address the entire continuum. Therefore, institutions often select a vendor based on their most pressing need. To stay competitive in the long term, however, institutions should implement a plan that stretches across all three levels of LOM, encompassing the information needs of students, faculty, administrators, and other stakeholders.

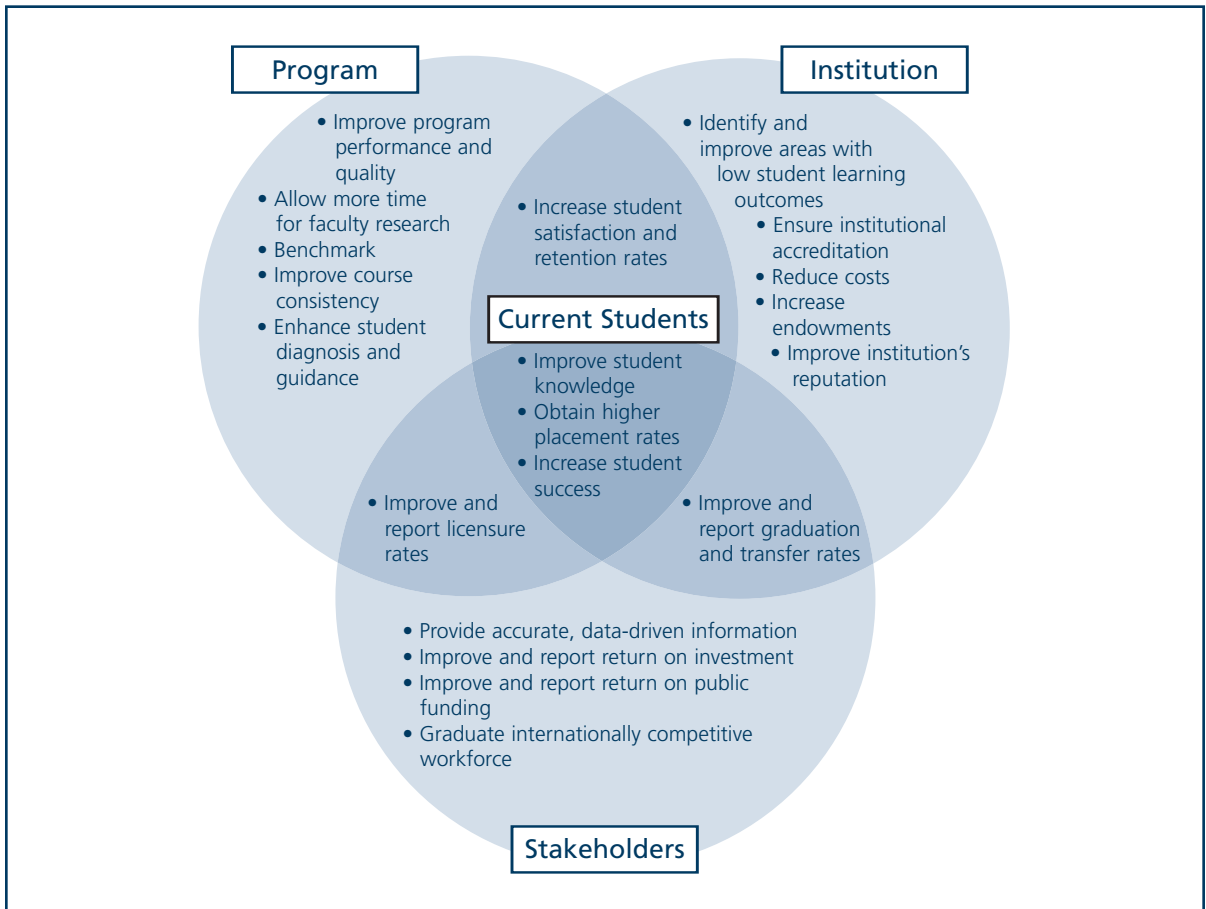
FIGURE 3. LEARNING OUTCOMES MANAGEMENT BUILDING BLOCKS



The Results

LOM addresses a range of needs and provides many benefits for institutions, programs, and a variety of other stakeholders. Not surprisingly, when shared needs of institutions, programs, and stakeholders are tackled, current students stand to benefit the most from increased knowledge, success in their coursework, and satisfaction upon graduation (Figure 4).

FIGURE 4. SELECTED BENEFITS AND BENEFICIARIES OF LOM



As domestic and international competition rises and as stakeholders' information needs become more defined, all institutional types will experience similar challenges and criticisms and, for each one, LOM can provide a fitting solution. Even though LOM is still evolving and contains some inherent uncertainty, it is becoming more evident that institutions that do not embrace gathering and using information to drive improvement will be weakened by competitive and regulatory pressures in the long run.



WEST HILLS COMMUNITY COLLEGE DISTRICT: USING LOM TO INCREASE STUDENT SUCCESS AND RETENTION

Name: West Hills Community College District
Description: Community college with rapidly growing online program located in a largely rural, agricultural area
Main Location: Colianga, CA
Enrollment: 7,900 in 2005-2006
Problem: Need to recruit additional, quality faculty to decrease class sizes in online programs
EduMetry Solution: VirtualTA, a rich feedback service

“We focus on putting our students first and saving time for our faculty,” said Chancellor Frank Gornick about West Hills Community College District, a small community college district in central California. Serving a mostly Hispanic, agricultural population in a region where the college completion rate is below 10%, West Hills has been forced to create innovative ways of addressing its students’ needs. Because 70% of its students are first-generation students, student retention and student success became important concerns of the college. Recognizing that the majority of its students lacked transportation, West Hills began offering many courses online, which has become the fastest growing area of the college. West Hills’ attentiveness to student needs and its creation of innovative programs has been recognized by the MetLife Foundation Community College Excellence Awards. This strategy has also allowed the college to maintain its robust grants program and provide financial aid to students in need (currently, about 80% of students).

However, many of the school’s achievements do not come without certain challenges. Similar to other rural community colleges, West Hills was struggling to recruit quality faculty and, with the online program rapidly growing in demand, course enrollments were growing at the expense of student success. West Hills started investigating ways to hire remote faculty and decrease the class sizes for online courses. Coincidentally, around this time, Frank Gornick heard of EduMetry at a community college conference. Realizing that EduMetry depends on highly educated staff overseas as a backbone of its services, Gornick reached out to the company to see if it could help him recruit adjunct faculty. Gornick notes that, because of the college’s rural setting, “It was not a new concept for us to have faculty teaching our courses who do not live in the area. In this case we would be getting qualified faculty with master’s degrees, just located in India.”

After discussing its faculty shortage with EduMetry, however, West Hills discovered that it could use its current faculty and improve student success and retention by using EduMetry’s

VirtualTA service. The rich feedback service could reduce the extensive time commitment required of online faculty by evaluating selected assignments in their courses.

The biggest concern for the college in terms of student retention was in the gateway mathematics and English courses. These types of courses are pain points for community colleges across the country. Oftentimes, students' success or failure in these courses determines whether or not they stay in or drop out of school. Therefore, West Hills decided to pilot the rich feedback service as a voluntary supplement to online basic mathematics courses.

"Frankly, it was quite amazing," observes Susan Kincade, dean of learning resources, who is in charge of the online learning program at West Hills. "We had instant success. Usually, it is an inverse relationship between class size and student success. With EduMetry's rich feedback, we can accommodate more students and still have a high success rate." By providing embedded, detailed feedback, EduMetry's service helps students understand what they are doing wrong in a particular learning area, enabling them to go back, correct errors, learn from their mistakes, and move to the next level. This one-on-one feedback of learning received positive feedback from students in two different math classes.

The results with EduMetry have been very promising. Figures 5 and 6 display the comparison of student success rates in the same course with the same professor in semesters before EduMetry's rich feedback was implemented and after (2006). Student success appears to increase despite increasing class sizes. "Students feel and are more successful in the course," Kincade comments. At the same time, it may have long-term student retention implications at the college. EduMetry's services help students develop confidence and persistence, which is instrumental to their long-term commitment to the higher education environment.

FIGURE 5. BASIC MATHEMATICS RESULTS

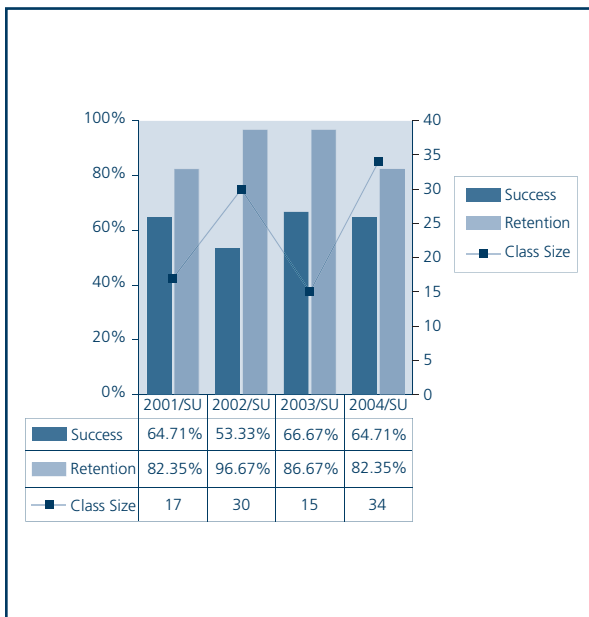
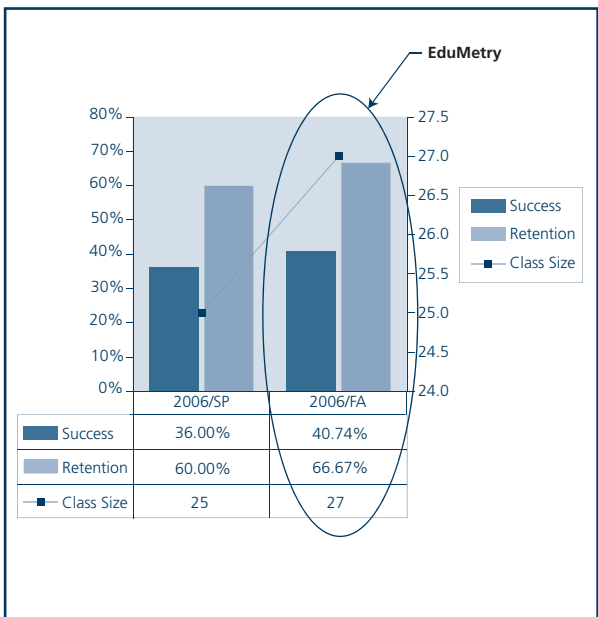


FIGURE 6. INTERMEDIATE ALGEBRA RESULTS



The feedback tool also seems to have beneficial outcomes for teachers. For example, instructors can adjust lesson plans and ultimately invest more time in instruction, which enhances the overall teaching-learning experience. Frank Gornick notes that the school's online instructors are very appreciative and impressed with the detail and quality of the feedback. "There are encouraging words in the feedback. There are motivational incentives," Gornick continues. "Over and over, I hear from my online faculty that they would have never had the time [to provide that much detail]."

Furthermore, what is most important to faculty is that, unlike many other services that aim to improve student outcomes as long as there is alignment with the financial goals of the institution, the EduMetry solution allows the institution to put students at the center of the process. Just like other changes to the process, the decision to purchase EduMetry's services did not occur without controversy. Faculty had concerns that they would have to turn over grading wholly to EduMetry, while the truth is that the course instructor and the TA work together on selective groups of assignments. Once the process was clearly explained and made voluntary, the controversy disappeared.

EduMetry's services are not currently used across the institution. However, Frank Gornick and many others have already observed EduMetry's value to the institution: "We want to show to our communities that we are doing what we say we are doing." By enabling West Hills to get course-level feedback immediately and report it clearly and efficiently, the college is slowly exhibiting that allegiance to its community.

In the future, West Hills anticipates obtaining even more value from EduMetry by expanding the availability of EduMetry's services to more courses and individual students.¹ West Hills is also hoping to use EduMetry's services and expertise to help the college implement a management system that will measure student learning outcomes on a course, program, and institutional level. "We are working from the bottom up," admits Pedro Avila, director of institutional effectiveness, who is working closely on defining and measuring student learning outcomes at West Hills. "And the biggest challenges for us, and institutions like ours, are to not only design a learning outcomes management process, but also to get the faculty buy-in and be able to support and motivate them through the entire cycle." By allowing faculty to get acquainted with EduMetry before implementing a solution on a program or institutional level, West Hills has addressed its immediate concerns of a faculty shortage and declining student success and has set the wheels in motion for continued improvement and long-term success.

¹ To address the writing and mathematics needs of individual students, West Hills will be piloting *WriterAide*, a 24x7 online writing feedback center, and *MyMathAide*, a 24x7 online mathematics assistance center.



BUTLER UNIVERSITY COLLEGE OF BUSINESS ADMINISTRATION: USING LOM TO ASSURE ACCREDITATION AND IMPROVE CURRICULUM

Name: Butler University College of Business Administration
Description: A college within a four-year, private university located in a large, Midwestern city
Main Location: Indianapolis, IN
Enrollment: 650 undergraduate students
Problem: Assessment of student learning to assure accreditation
EduMetry Solution: Learning-Dashboard service, as well as Virtual TA, a rich feedback service

More than four years ago, Butler University College of Business Administration (Butler CBA) set out on a mission to improve undergraduate education; since then schoolwide assessment has become a key focus. Similar to most other postsecondary institutions, schoolwide assessment did not gain importance until an approaching accreditation visit. “We began doing assessment because we had to,” remarks Dr. Terri Friel, associate dean and Baldrige examiner. “We couldn’t let it wait any longer. It is the difference between being accredited and not being accredited.”

Butler University’s business program is very unique in that it focuses on experiential learning and requires two, 300-hour cooperative internships. During the co-ops, the majority of which are completed during the summer, students are required to complete a number of essays, each focusing on a different aspect of the internship. The essays are then compiled into a 150- to 250-page portfolio.

Charged with putting an assessment process in place, Dr. Friel recalls being so frustrated with the lack of vendors willing to implement the powerful solution that Butler CBA required, that she began researching and devising a process on her own. Not long after, she received an e-mail from Butler CBA’s dean suggesting that EduMetry might be able to support the school’s mission through an appropriate LOM plan.

For Butler CBA, a solution that encompasses all aspects of learning outcomes management was a risky investment. “It needed to be simple to minimize resistance and quick to make sure we get accredited,” notes Friel. Also, the local accrediting agency, AACSB, required that institutions evaluate the program and not just individual classes.

The college believed the answer was in evaluating the cooperative internship portfolios. “We noticed that the portfolios that are put together as part of the co-op are very exhaustive and exhibit a lot of the things that we would like to measure,” suggests Friel. Therefore, Butler CBA focused on implementing EduMetry’s Learning-Dashboard service,

a solution that spans the entire LOM process – from helping to design the rubrics to recommending data-driven actions for improvement. EduMetry would facilitate program evaluation by reading and assessing 120 co-op portfolios to compare student performance against the 11 essential skills the college laid out for undergraduates. The college also provided an opportunity for the faculty to implement a VirtualTA service that will improve student learning during the course of their classes.

During the curriculum improvement process, Butler CBA clearly defined learning outcomes that it expects from students and designed appropriate rubrics; EduMetry worked with Butler CBA to promptly generate and analyze data needed for the upcoming accreditation visit. “It was basically two smart people putting their heads together to come up with the best solution,” says Friel.

EduMetry aggregated, analyzed, and reported the results on a five-point scale indicating how well students were achieving the learning outcomes at the program level. Although other uses of data currently are controversial and forbidden by the college, as the process gains more acceptance or if more targeted information will be required, the reports can compare groups of students or showcase individual student strengths and weaknesses, which may allow for remedial instruction and better job placement.

TABLE 1. ESSENTIAL SKILLS FOR UNDERGRADUATES AT BUTLER UNIVERSITY COLLEGE OF BUSINESS ADMINISTRATION

- **Ability to adapt**
- **Collaborative skills**
- **Motivation and confidence**
- **Analytical skills**
- **Ability to integrate information**
- **Communication skills**
- **Global understanding**
- **Understanding of business processes**
- **Character**
- **Leadership skills**
- **Expertise in a functional area**

At the course level, Craig Caldwell, a visiting professor who teaches a senior capstone course, elected to use VirtualTA to evaluate grammar and critical thinking in student essays. Similar to the process underlining program assessment, EduMetry’s staff evaluated the essays. Each paper included comments about the general performance of the student and, Caldwell notes, “feedback from EduMetry was quite good.” Caldwell admitted that he struggled with the process at first. In particular, he still found himself wanting to know how each student performed on the assignment and what specific comments were made by the tutor, causing him to reread many of the returned assignments. Overall, however, he feels that the service introduces a lot more objectivity to grading and, once the process gets smoothed out, frees up time for the instructor.

By employing EduMetry's solutions, Butler CBA has captured more information about student performance, from an objective, third-party source, than it ever had before. This credibility is not only essential for the accreditation process but it also drives curriculum improvement. Dr. Terri Friel notes, "EduMetry probably doesn't save us money, but it saves us opportunity cost. Instead of spending time on grading and assessment, faculty can do other things to better the university."



IN SUMMARY

Almost all transactions done in our society are governed by an implied contract that the product or service that a company sells to us does what it has been promised to do. Higher education is a service that deeply affects people's lives and the overall competitiveness of our nation. However, no one can prove the value of this service, the return on investment, or the ability of each institution to deliver what it has promised to deliver. In fact, when students graduate, companies are finding that they still need to invest time and resources in training or they need to obtain skills from abroad, whether through outsourcing or recruiting.

LOM forces institutions to measure the effectiveness of their education. To implement it most effectively, student learning needs to be addressed at the student level while data analysis and improvement needs to be done at the course, program, and institutional level. It is a laborious, difficult, and costly process when developed in-house, but when outsourced, the process can be cost-effective due to modularization and minimal effort and support requirements from the institution.

When working with a vendor to measure and analyze LOM, a variety of challenges emerge. The most common challenges include faculty pushback, insufficient infrastructure, and/or redefining appropriate learning outcomes. At the same time, some unexpected benefits may change the traditional ways in which institutions operate:

- **Community colleges** can use an LOM service to address student retention, graduation, and persistence.
- **For-profit colleges** can enable instructors to teach more courses due to a decreased burden of evaluating student work.
- **Online programs or institutions** can address faculty attrition, adjunct faculty recruitment, and the need to create a consistent feel for all courses.
- **Traditional institutions** can improve students' success and student knowledge and placement rates, and simplify the accreditation process.

Most importantly, all institutions benefit from being able to prove their value to accreditation agencies, parents, students, and the public through measurable, strategic goals.



SOURCES AND ACKNOWLEDGMENTS

Information for this report was sourced from:

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Eduventures wishes to thank the following representatives of West Hills Community College District and Butler University College of Business Administration for their contributions to this research:

- Dr. Teresa Friel, Associate Dean of Administration, Butler University College of Business Administration
- Karel Updike, Director of Undergraduate Programs, Butler University College of Business Administration
- Mary Ellen Wolfsie, Director of Career Development and Student Services, Butler University College of Business Administration
- Dr. Frank Gornick, Chancellor, West Hills Community College District
- Susan Kincade, Dean of Learning Resources, West Hills Community College District
- Pedro Avila, Director of Institutional Effectiveness and Planning, West Hills Community College District
- Dr. Frieda Ganter, Mathematics Instructor, West Hills Community College District

Finally, Eduventures would like to thank the following partner for funding this research:





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