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CONTENTS

A Comparison of AACSB, ACBSP, and IACBE Accredited U.S. Business Programs: An Institutional Resource Perspective	1
Kyle E. Brink & Clair A. Smith	
Assessment of Business Programs: A Review of Two Models	17
Nathan Garrett, Joan Marques & Satinder Dhiman	
Internships and the Assessment of Student Learning	27
William Templeton, Karel Updyke & Robert B. Bennett, Jr.	
What Motivates Students in Graduate School? An Empirical Study	39
Niall Hegarty, Robert Brasco & Fang Lih Lu	
Teaching Supply Chain Management Students About Using Actual Motor Carrier Freight Rates in Purchase Lot-Sizing Models	49
Michael Godfrey & Andrew Manikas	
Partnering with Practice for Accounting Education: Evidence from the Pacific	61
Shiro Shivani Devi, Rashika Saroshma Kumar & Sherlin Krishna Raju	
The Teacher Turnover Crisis. Evidence from South Africa	73
PM Mampane	
Factors that Influence Canadian Students' Choice of Higher Education Institutions in the United States	85
Erin E. McCarthy, Arup K. Sen & Bonnie Fox Garrity	
A Robust and Cost-Effective Database Approach to Managing and Reporting Assessment Data	97
Lee Revere & Phillip Decker	
An Architecture for Dynamic E-Learning Environments Based on Student Activity and Learning Styles	113
John A. Kaliski, Queen E. Booker & Paul L. Schumann	

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A COMPARISON OF AACSB, ACBSP, AND IACBE ACCREDITED U.S. BUSINESS PROGRAMS: AN INSTITUTIONAL RESOURCE PERSPECTIVE

Kyle E. Brink, Western Michigan University
Clair A. Smith, St. John Fisher College

ABSTRACT

Accreditation is a means by which business programs can assure accountability and quality to their stakeholders. However, attaining and maintaining accreditation can be a costly endeavor. The Accreditation Council for Business Schools and Programs (ACBSP), the Association to Advance Collegiate Schools of Business (AACSB), and the International Assembly for Collegiate Business Education (IACBE) differ with respect to the cost of accreditation and the rigidity and rigor of their accreditation guidelines. Therefore, we hypothesize that institutional resources may be a determining factor in the choice of accreditor. Our results provide compelling evidence to support our hypothesis. Public institutions are more likely to have AACSB-accredited business programs, whereas private institutions are more likely to have ACBSP- or IACBE-accredited business programs. Research institutions are more likely to have AACSB-accredited business programs, whereas master's and baccalaureate institutions are more likely to have ACBSP- or IACBE-accredited business programs. Institutions with AACSB-accredited business programs have the most assets and equipment, generate the most revenue overall and from all revenue sources examined except tuition and fees, expend the most on instruction, pay the highest professor salaries (at all ranks), and they have the most personnel (both total staff and instruction/research and public service staff) and students.

JEL: I20; I21

KEYWORDS: Higher Education; Business Education; Accreditation; AACSB; ACBSP; IACBE

INTRODUCTION

Business education and higher education in general face criticism on several fronts and are subject to increasing scrutiny. Enrollment and tuition are up, yet the benefits of higher education are suspect. Pringle and Michel (2007) advised that “state legislators, parents, taxpayers, and donors want universities to justify their investments by providing evidence of student learning” (p. 202). This justification seems warranted given Arum and Roksa’s (2011) compelling evidence demonstrating that undergraduate students are learning little, partly because of the lack of rigor at institutions of higher education. In addition, possessing an MBA degree and the mastery of MBA subject matter (i.e., grade point average) are uncorrelated with career success (Pfeffer & Fong, 2002). Business schools are at a crossroads and it is time to seriously rethink or redesign business education (Datar, Garvin, & Cullen, 2010). The *Wall Street Journal* recently reported that corporate recruiters are questioning the value of the undergraduate business degree and “they’re looking for candidates with a broader academic background” (Korn, 2012).

In light of these criticisms, it would be prudent for business schools to assure their stakeholders of quality and accountability. Accreditation is one method of holding a program or institution accountable and demonstrating that the program/institution meets at least a minimum quality threshold. The Council for Higher Education Accreditation (CHEA) defines accreditation as “a process of external quality review created and used by higher education to scrutinize colleges, universities and programs for quality assurance and quality improvement” (Eaton, 2011, p. 1). Accreditation serves several roles, two of which

ASSESSMENT OF BUSINESS PROGRAMS: A REVIEW OF TWO MODELS

Nathan Garrett, Woodbury University
Joan Marques, Woodbury University
Satinder Dhiman, Woodbury University

ABSTRACT

This article presents two contrasting assessment programs implemented at a small School of Business in the Los Angeles area. The program for the undergraduate degree, which includes four majors, relies upon tight coordination and a centralized assessment group, while the graduate program, an MBA, relies upon individual courses as the key building blocks of the assessment program. This article shows ways in which pre- and post-tests, nationally normed instruments, longitudinal tracking, and cross-sectional analysis can be used to demonstrate effective assessment of learning in each program. Lastly, the article concludes by discussing ways to continually continuously improve a curriculum.

JEL: M00 Business General

KEYWORDS: Assessment, Assurance of Learning, Business Accreditation, AACSB

INTRODUCTION

Assessment is a critical issue in higher education today. Colleges and universities are moving to a more formal process of quality improvement that relies upon the entire faculty to decide issues of quality and content (Zemsky, 2011). However, in the transition from individual decision-makers to rigorous systems, the wide range of methods available (University of Wisconsin-Madison, 2011) can be overwhelming. While a great deal of literature is available, it can be difficult to locate models that compare and contrast the techniques. This paper reviews the implementation of two assessment models that successfully coexist in one small business school. In the graduate MBA program, individual faculty coordinate and assess each learning outcome, and the results compiled and evaluated at the program level. The undergraduate program (a consolidation of four majors) utilizes a core assessment committee and more tightly coordinated learning activities. This paper's goal is to help programs evaluate approaches to assessment through a close examination of a single case study. We begin with a literature review discussing the role of assessment in higher education. This paper then presents an overview of the three techniques used in the graduate assessment program: faculty rubrics, co-teaching with writing faculty, and an externally validated simulation. We then present an overview of the undergraduate program, and discuss how it uses a committee analysis and longitudinal processes to assess learning. The paper then ends by summarizing major lessons learned, study implications, and limitations of our analysis.

LITERATURE REVIEW

Higher Education is continually being called upon to justify its value. Groups such as the Spellings' Commission (Zemsky, 2011) have been highly critical of colleges' and universities' ability to educate students. Changing landscapes in higher education, such as declining public support and increasing costs (Staley & Trinkle 2011) are forcing colleges to move from a system of *trust* to a system of *evidence*. Assessment is a tool for moving beyond anecdotes and into a rigorous and verifiable system of education. A wide variety of techniques, surveys, and validated tools exist to measure learning (University of Wisconsin-Madison 2011). These include qualitative measures relying on faculty and student self-assessments, such as the AAC&U LEAP Project's standardized rubrics (Miller & Morgaine, 2009). More

INTERNSHIPS AND THE ASSESSMENT OF STUDENT LEARNING

William Templeton, Butler University
Karel Updyke, Butler University
Robert B. Bennett, Jr., Butler University

ABSTRACT

The use of internships is a powerful learning tool that allow business students to make connections between their classroom experience and the world of work. If designed appropriately and positioned correctly in the curriculum, they can also be an ideal opportunity to conduct assurance of learning activities related to business school accreditation. This study reports on survey results relating to business schools' use of internships in their assurance of learning efforts and describes one school's successful attempt to use internships as the key platform for its well-developed assurance of learning program.

JEL: M10

KEYWORDS: assessment, internships, student learning, experiential learning, business education

INTRODUCTION

A significant body of literature suggests that people learn most effectively through active learning, when they do something with their knowledge [e.g. Bonwell & Eison, 1991]. Observers both outside and inside the academy have criticized business schools' for providing so few active, practical learning experiences. For example, the Accounting Education Change Commission [1990], and Pearce [1999], both criticize the lack of relevance in business education, especially the lack of practical experiences such as those provided by internships. As we discuss in a later section, internships are an effective, active learning tool in the business disciplines. In addition to the practical experience, internships provide an opportunity to incorporate academic assignments in which students connect their internships to their classroom business curriculum. This linking of theory and work experience can enhance the total business education for students helping to ensure that students see the relevance of their classroom learning. Despite the criticism offered by outsiders and the apparent benefits of internships as an educational tool, research suggests that very few business schools require all students to complete internships [Updyke & Sander, 2005].

In addition to being a relevant and effective educational practice, internships and their attendant academic assignments provide an effective platform on which to conduct assessment activities (called "assurance of learning" or "AOL" in business schools). Revisions to the Accreditation Standards for Business Accreditation from the AACSB International (AACSB) have generated unprecedented interest in AOL activities and nearly all business schools are seeking better methods for demonstrating that their students are, indeed, learning what they intend for them to learn. Students successfully drawing on concepts and skills learned in previous academic experiences and applying them to an actual work situation are more powerful indications of learning than AOL attached to the classroom course in which students first learn those concepts and skills. As outlined in the 1992 American Association for Higher Education Assessment Forum's Nine Principles of Good Practice for Assessing Student Learning [American Association for Higher Education, 1992], schools need to assess not only what students learn at a particular time in a particular course, but also what they can do with what they know through later performance. In other words, AOL should involve evaluating the effects of an entire program on student learning and students' ability to integrate and apply what they have learned. A well-developed AOL

WHAT MOTIVATES STUDENTS IN GRADUATE SCHOOL? AN EMPIRICAL STUDY

Niall Hegarty, St. John's University
Robert Brasco, St. John's University
Fang Lih Lu, St. John's University

ABSTRACT

Knowledge of motivation levels of students in programs is insightful information for educators. At the graduate level there exists an even greater need to understand the motivation behind the desire to pursue a master's degree. However, the lack of research on motivation of graduate students makes it difficult to develop a comprehensive understanding of this student population. This study employs the Academic Motivation Scale to measure the motivation of 70 graduate business students and 43 liberal arts students. Comparisons are made between the two student populations and recommendations are offered in the assessment of these student populations.

JEL: I21, I23, M10.

KEYWORDS: Graduate Students, Intrinsic, Extrinsic, Academic Motivation Scale.

INTRODUCTION

A few short years ago these authors embarked upon understanding graduate student motivation in an effort to better assist program developers to design programs which satisfy industry requirements. An initial discovery was that while there was limited information on graduate students in general, there was an even greater deficiency in the measurement of graduate student motivation. Although information was existent on undergraduate and adult learner populations there was a dearth of information directly related to graduate students. And while there exists a multitude of reasons for returning to graduate school, there was not concrete research that returned quantitative information describing the motivation of this population. Consequently, this research sought to simply measure the strength of motivation of students in graduate programs, and to identify predominant motivations as being either intrinsic or extrinsic in nature. It is hoped this research will advise educators and program developers on the motivational background of graduate students, and result in programs which cater to the learning goals of this population. This study therefore seeks to advance the literature and knowledge base pertaining to graduate student motivation through the application of the Academic Motivation Scale (AMS) as a measurement tool of motivation.

Insight into an individual's motivation provides us with an indication of his/her work ethic and commitment to completing an advanced degree. While it is generally accepted that a graduate degree takes two years to complete on a full time basis and three to four years on a part time basis, motivation then becomes a factor in sustaining an individual throughout the length of a program. In the absence of an instrument that specifically measures graduate student motivation, the Academic Motivation Scale (Vallerand et al, 1992) is an obvious selection as an appropriate measurement for this population. Developed to measure motivation levels of college students, the AMS has as its foundation the tenets of Self Determination Theory (Deci & Ryan, 1985) which identifies motivation as being either intrinsic or extrinsic. The existence of these forms of motivation is not dichotomous; that is, an individual is not either intrinsically motivated or extrinsically motivated, but rather can possess both in varying amounts depending upon the subject matter. The AMS evaluates the strength of each type of motivation present and therefore was chosen for this study for the detail it provides. It also builds upon the research of the

TEACHING SUPPLY CHAIN MANAGEMENT STUDENTS ABOUT USING ACTUAL MOTOR CARRIER FREIGHT RATES IN PURCHASE LOT-SIZING MODELS

Michael Godfrey, University of Wisconsin Oshkosh
Andrew Manikas, University of Wisconsin Oshkosh

ABSTRACT

In this paper, we analyze a purchase lot-sizing decision that includes transport cost using actual motor carrier freight rates. Lot-sizing models in the literature either estimate motor carrier freight rates with a continuous function or simplify less-than-truckload freight rates unrealistically by using too few weight-break ranges. We present an Excel Solver model that we use in a supply chain management class to teach students the following principles: how to look up less-than-truckload freight rates using a carrier's software, how to calculate less-than-truckload and truckload freight rates, to decide whether to over-declare (artificially inflate) the weight of a less-than-truckload shipment to lower the freight charge, and how to find the purchase lot size that minimizes annual logistics cost. We assume that all-units purchase quantity discounts are offered by the supplier and the product is shipped Free On Board (FOB) Origin, Freight Collect. We discuss how to solve this model with Excel's GRG Nonlinear Solver.

JEL: A22, C61, C88, N72

KEYWORDS: Excel Solver, linear programming, logistics, purchase lot-sizing

INTRODUCTION

Total annual logistics cost models were been discussed in the literature around 1970 (e.g., Baumol and Vinod, 1970). These “inventory-theoretic” models add transportation costs to the economic order quantity (EOQ) model, resulting in a model that combines transport, order, holding, and purchase costs. The inventory theoretic model in this paper has been used in an exercise in our supply chain management courses. We have used this model to teach students how to perform the following: (a) to look up less-than-truckload (LTL) freight rates using software from an LTL carrier; (b) to calculate LTL and truckload (TL) freight rates; (c) to decide whether to over-declare the weight of an LTL shipment to lower the total freight charge, and (d) to find the purchase lot size that minimizes annual logistics cost. Annual logistics cost equals the total of annual order cost, annual warehouse holding cost, annual in-transit holding cost, annual transportation cost, and annual purchase cost. In the next section, we review the literature discussing inventory-theoretic models. Next, we present the methodology: the data and the Excel spreadsheet and Solver model. Next, we report and discuss the results from this exercise. The last section is the conclusion section.

LITERATURE REVIEW

Baumol and Vinod (1970) introduced the inventory-theoretic model. Later, other researchers (e.g., Carter & Ferrin, 1996; Gaither, 1982; Langley, 1980; Larson, 1988; Tyworth, 1991b; Wehrman, 1984) demonstrated adding actual motor carrier freight rates to the purchase lot-sizing decision by using enumeration techniques. Other researchers, e.g., Burwell, Dave, Fitzpatrick, & Roy, 1997; Hwan, Moon, & Shin, 1990; Lee, 1986; Madadi, Kurz, & Ashayeri, 2010; Ramasesh, 1993; Russell & Krajewski, 1991; Tersine & Barman, 1991; Tersine, Larson, & Barman, 1989, created complex algorithms to add actual freight rates into the purchase lot-sizing decision. More recently, Mendoza and Ventura (2008) presented

PARTNERING WITH PRACTICE FOR ACCOUNTING EDUCATION: EVIDENCE FROM THE PACIFIC

Shiro Shivani Devi, The University of the South Pacific
Rashika Saroshma Kumar, The University of the South Pacific
Sherlin Krishna Raju, The University of the South Pacific

ABSTRACT

The Partnering with Practice (PWP) approach to teaching accounting is a relatively new and an under-researched phenomenon. This approach requires partners from chartered accounting (CA) firms to work in collaboration with academics in the delivery of accounting courses or a designated module in a course at tertiary institutions. This paper seeks to discuss the viability of the PWP approach to teaching accounting in the School of Accounting and Finance (SOAF) at the University of the South Pacific (USP). The paper explores the existence of an expectation gap in the accounting curriculum that could be fulfilled via the PWP approach. To gather data for this study, we carried out in-depth interviews of two stakeholder groups, namely, the partners of the big four CA firms operating in Fiji and the senior academics of SOAF. The results revealed that the PWP approach had its share of perceived benefits and limitations. The results also showed that both stakeholders were willing to collaborate in this teaching approach should SOAF decide to pursue this approach in future. This paper has practical implications for the field of accounting education.

JEL: M4; M41; M49

KEYWORDS: Partnering with Practice (PWP), teaching approach, chartered accountants

INTRODUCTION

Globalization of businesses, the increasing complexities of business transactions and advances in information technology that are facilitating electronic commerce and communication are challenging the relevance and usefulness of traditional accounting education (AlHashim, 2004). Added to this, is the increasing demand for accounting courses and shortages of qualified accounting academics around the world. Kirk and Spector (2009) state that the shortage of qualified business faculty, especially in accounting, has resulted in competition for scarce academic and professionally qualified faculty. Accounting salaries have become increasingly competitive and therefore are scoring past the budgetary means of some schools. One solution to the dual problem of faculty shortages and rising salaries has been to increase the number of part-time (adjunct) faculty. Research carried out by Geary, Kutcher and Porco (2010) highlighted formidable staffing challenges currently faced by the accounting departments.

Mohidin, Jaidi, Sang and Osman (2009) state that since accounting is a professional subject, it is crucial to have someone who is equipped with all the knowledge and skills to teach this subject. Their study found that lecturer characteristics also play an important role in determining the effectiveness of teaching particularly in accounting subjects. Kinney (2003) states that if one wants to improve education for professionals, what better way than to have better professors who can develop and adapt curricula for professionals from a rich and broad basis of an understanding of the concepts underlying individual and social accounting choices?

Musselwhite (2006), Chiou (2008), and Grenzke (1998) have discussed various other teaching approaches such as the use of electronic learning tools, distance and flexible approaches to teaching and many more

THE TEACHER TURNOVER CRISIS. EVIDENCE FROM SOUTH AFRICA

PM Mampane, Tshwane University of Technology

ABSTRACT

In spite of numerous strategic interventions by the department of basic education to retain educators in the profession, there continues to be a high number of educators leaving the profession. This attrition of skilled personnel has had an adverse effect on the capacity of the state to realize its millennium development goals. These goals include achieving universal primary education by 2014. A key focus of the South African government strategic objective is to ensure the country has skilled expertise in various fields i.e. commerce, education, industry, science and technology etc. This goal can only be achieved in an environment of sustained investment in human capital development by the government. In the arena of education a significant contribution of the country's focus has been directed to teacher development. Despite these gargantuan efforts on the part of government, there continues to be a brain drain with high educator turnover. A tacit indication of this massive investment in education is the fact that of the R165 billion budgeted for education, R2.7 billion has been earmarked for teacher development. This clearly points out to the strategic importance of leadership and human capital development as critical areas for broad human resource development goals of the state.

JEL: A2

KEYWORDS: Teacher Turnover, South Africa

INTRODUCTION

This article examines the crisis of teacher turnover in South Africa, by providing a brief overview of the available literature on the subject and outlining causal factors leading to the problem. The table below gives an indication of the magnitude of the problem particularly since the post apartheid era.

The Cape Professional Teachers Association is an employee body that looks after the conditions of service of educators argued that up to twenty thousand teachers leave the profession every year (IOL News: 2008). In a reply to a parliamentary question, the Minister of Basic Education indicated that “between 2005 and 2008, 24,750 teachers left the profession”. She further said that “South Africa is only producing 8000 teachers annually when about 20 000 teacher graduates are needed” (IOL News, 2010). A significant number of these teachers are poached by overseas countries with promises of better working conditions and in particular better salaries. Of concern is the fact that South Africa is losing the best teachers in scarce skill areas such as mathematics, science, technology and languages. One teacher Dudley Stuurman who is qualified to teach mathematics up to Grade 12 pointed out that he is leaving the country to teach in Bahrain in view of the fact that “the R6500.00 I get after tax is not enough for me to pay for a bond and a car”.

The existing literature on leadership, power and influence processes provides a theoretical basis for understanding the leadership process in formal organizations (Jacobs, 1970:1). Literature supporting leadership and effective leadership in particular is ever increasing. This implies the success of any institution, or any group within an institution, depends largely on the quality of its leadership. In general it is critically important that individuals are positively influenced towards the achievement of goals for the success of the institution. The relevance of this statement lies in the fact that in order to achieve the goals of quality education in South Africa, it is a *sine qua non* that educators be treated as professionals, with

FACTORS THAT INFLUENCE CANADIAN STUDENTS' CHOICE OF HIGHER EDUCATION INSTITUTIONS IN THE UNITED STATES

Erin E. McCarthy, D'Youville College, Buffalo, New York
Arup K. Sen, D'Youville College, Buffalo, New York
Bonnie Fox Garrity, D'Youville College, Buffalo, New York

ABSTRACT

This study seeks to explain the factors influencing Canadian students' motivation for studying in the United States. The United States has continuously been the leader in international students, but is now facing increasing competition from other nations around the world. As one of the top senders of international students to the United States, Canada is of special interest to institutions of higher education in the United States due to the close social, economic, and political ties. International student mobility is influenced by push-pull factors that influence a student's decision to study abroad, and ultimately pull factors from host nations that student's find favorable. To understand Canadian students' motivation for studying in the United States, a study was conducted with a sample of 411 Canadian students at a small private college in Buffalo, New York. The study found statistically significant differences in the importance placed on reasons for not remaining in Canada for higher education, the factors that influence the selection of the United States as a study destination, and student preferences for institutions of higher education in the United States. The study concluded that there are separate push-pull factors influencing Canadian higher education students on the Canada-U.S. border, and that Canadian students are their own distinct group that are neither truly like international nor domestic students.

JEL: 051

KEYWORDS: International education, Canadian students, higher education.

INTRODUCTION

Student mobility trends in the past decades have led to an increased number of students participating in international education. Today, more students are studying abroad than ever and there has been an ever increasing competition for international students. The United States has been leading the way as a destination for international students in higher education with 22% of the international student market (Verbik & Lasanowski, 2007). While the United States has always been a leader in international student enrollment, the nation is now facing increasing competition from other well positioned nations like UK (13%), Australia (8%), Germany (7%), and France (9%). To maintain their competitive advantage educators and administrators in the United States must understand their international student markets and develop appropriate strategies to attract and maintain students. One of the largest segments of international students in the United States comes from Canada. In 2009/2010, the number of international students studying in the United States reached 690,923 students, of which 28,145 students were from Canada (Open Doors, 2010). Canada sends more of their students to the United States than to any other country, and has been continuously one of the United State's top ten source countries for international students. With our close cultural, economic, and geographical ties, why is the United States a destination for so many Canadian students? The answer to this question has critical implications for educators on both sides of the border.

A ROBUST AND COST-EFFECTIVE DATABASE APPROACH TO MANAGING AND REPORTING ASSESSMENT DATA

Lee Revere, University of Houston – Clear Lake
Phillip Decker, University of Houston – Clear Lake

ABSTRACT

Schools of Business are diverse in their approach to meeting the Association to Advance Collegiate Schools of Business (AACSB) standards for assurance of learning. Developing a comprehensive assessment plan that includes a process for managing, collecting, analyzing, and reporting student-level assessment data is a daunting task. Assuring the process is faculty driven is even more difficult. Through the creation and evolution of a relatively simple Microsoft Access database, this University was able to develop, implement and manage an assessment plan that meets the AACSB assurance of learning standards, engages the majority of faculty, facilitates the data collection process, generates real-time student-outcome data and trends curriculum improvements over time.

JEL: C44, C81, C88, D78, M00, M10, Y1

KEYWORDS: Accreditation, Assessment, Assurance of Learning, Outcomes Data

INTRODUCTION

Continuous quality improvement has been at the forefront of businesses for decades. Business leaders track industry trends, organizational outcomes, customer preferences, financial indicators and more, in search of information demonstrating organization performance and identifying improvement opportunities. Historically, academia has been removed from such self-analysis; that is, until the recent decade when accrediting bodies began to change their focus from process based data to outcome based data (Gardiner, et al., 2010).

In 2005, the Association to Advance Collegiate Schools of Business (AACSB), in accrediting colleges of business, required schools of business to demonstrate student learning. These ‘assurance of learning’ (AOL) standards are comprised of two primary objectives. The first objective includes defining and measuring outcome goals for each degree program offered by the school. To meet these requirements the use of direct measures, such as course-embedded assignments, projects, and exam questions, is required (AACSB, 2011a). Course-embedded measures, because of their ease and usefulness, ranked very highly among department chairs (Miles et al., 2004) and are one of the top knowledge acquisition assessments reported being used by colleges of business (Pringle & Michel, 2007). “CEA (course embedded assessment) investigations provide one of the most specific, targeted methods of assessing student learning, and the results can lead to changes in course materials, presentations, assignments, pedagogies, examination questions, required prerequisites, reading materials, or course structure” (McConnell, Hoover & Miller, 2008).

The second objective of the AOL standards includes the identification and continuous improvement of the learning process. Establishing a culture of continuous improvement of learning is as a top issue facing academic professionals (Campbell, Olinger, & Colleagues, 2007). AACSB refers to this process as ‘closing the loop’. Betters-Reed et al. (2008) have argued that closing the loop is one of the biggest problems in institutionalizing AACSB AOL programs. They discuss the need for faculty work collectively and frequently to review and react to the assessment outcomes. LaFleur et. al. (2009) describe

AN ARCHITECTURE FOR DYNAMIC E-LEARNING ENVIRONMENTS BASED ON STUDENT ACTIVITY AND LEARNING STYLES

John A. Kaliski, Minnesota State University Mankato
Queen E. Booker, Minnesota State University Mankato
Paul L. Schumann, Minnesota State University Mankato

ABSTRACT

Using e-learning systems, computer assisted technologies, or learning management systems to supplement or replace the classroom experience is becoming more common in education. The use of these technologies generates a large volume of transactional data that record how each student progressed through the learning materials in the e-learning system. This data, which is currently underutilized, could be used to understand student learning behaviors, and to help both the instructor and the student benefit more from the course content. This paper describes an architecture using business intelligence methodology for using the data captured by e-learning systems to understand what students are doing (or not doing) in the e-learning system, and thereby to make changes that enhance student learning.

JEL: C88, I21, M00, M19, Z00

KEYWORDS: E-learning, Learning Management Systems, Business Intelligence, Business Education, Business Education Research

INTRODUCTION

Learning technologies encompass a broad range of communication, information, and related technologies that can be used to support learning, teaching, and assessment. Learning technologies are common in the education industry as parents, students, and teachers use the technologies to try to promote and improve learning. The use of learning technologies in higher education has grown significantly over the years, ostensibly because the use of learning technologies, particularly learning management systems (LMSs), provides opportunities for instructors to have a flexible learning environment for students. LMSs provide an opportunity for instructors to allow students to access course content 24-7; this content can range from quizzes and exams to online lectures to a wide variety of learning experiences limited only by the technology and the instructor's creativity.

According to U.S. Department of Education, National Center for Education Statistics 2008 (2011), 97 percent of public 2-year universities offered web-based learning programs, followed by public 4-year institutions at 89 percent. The majority of the students enrolled in online learning courses was students with some type of personal responsibility such as a spouse or child, were older, employed, or had mobile disabilities. The students were more likely to access the learning system during non-traditional hours such as after 5PM or before 8AM when people, including faculty, typically work. While the flexibility in the online access provides opportunities for students to complete a class at any time, the challenge is that the instructor is not always available to help them when they might need it most. Thus, there needs to be a support system that can be available to the student whenever they might choose to engage in the learning system.

A yet underutilized component of the LMS is the transactional data captured through the use of the system. The use of LMSs to manage course content allows for the capture of student behaviors such as accessing reading materials and teaching notes, when students start online assignments, how long students

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