

Student Learning Outcomes Committee
Department/Program Assessment Results Report

Department/Program: IDS / Information Systems

Degree: BSBA – Information Systems

Date Submitted: 5/9/2011

The purpose of this report is to communicate the assessment activities that have taken place during the last academic year, as well as how the results are being used to improve student learning at the **program level**. The report should be kept as brief as possible, while answering the following questions:

I. Working from your assessment report of last year, please discuss some changes made or strategies implemented in response to last year's results.

This section should describe how the results reported in last year's report were used in the past year. Hint: Section V of last year's report should offer a "blueprint" for what was intended.

The 2010 BSBA-IS Assessment report specifically mentioned two "closing the loop" activities that the IS faculty addressed for this assessment period. Generally, both of these activities are related to the desire to give IS students more "hands-on" computer programming and data communication opportunities. Dr. Theo Addo is helping to close this loop by providing more tutors for his programming projects. The department has also worked hard to bolster our programming courses by adding electives such as a Web Programming course. Dr. Bongsik Shin has also helped close the loop on the data communications "hands on" activities by acquiring and configuring state-of-the-art networking hardware and software that he makes available to the data communications students.

A change of IS representatives on the College of Business assessment committee during the 2011 assessment period may have had some impact on the assessment momentum and assessment accomplishments of the IS program. Dr. Theo Addo who had been the IS representative on the committee since inception took sabbatical in Fall 2010. Dr. George Easton assumed the role beginning in Fall 2010 and continues as the IS representative on the College of Business Assessment Committee. This transition is plausibly the reason we did not formally address the University SLO Committee's suggestion, as described in the University's 2010 response to our 2010 BSBA-IS assessment report, to develop a pool of multiple-choice and short answer assessment items. This is one assessment goal that we hope to report as underway in our 2012 assessment report.

Additionally, we are pleased to report that the 2011 BSBA-IS assessment efforts did comply with another earlier suggestion made by the University SLO committee. Specifically, the SLOs were assessed using a rubric with a 4-point scale with clearly articulated descriptions of the meaning of each point on the scale with respect to the SLO.

II. Drawing upon the goals and objectives contained in the department/program student learning assessment plan, what was the focus of the department's student learning assessment for the past academic year?

This section should list the student learning goals and objectives that were the focus for the year.

The IS assessment activities are organized around the calendar year, rather than the academic year. Appendix A displays a table of the IS program's undergraduate assessment schedule as well as the assessment Goals and Student Learning Objectives (SLOs) of the BSBA-IS program. During the 2011 assessment period (2010 calendar year), the BSBA-IS assessment focus was on Goal 6, SLO 6.1 and SLO 6.2.

This year's Information Systems assessment report (the 2011 BSBA-IS Assessment Report) revealed that 87% of the students participating in the assessment of SLO 6.1 achieved a knowledge level of satisfactory or above. 91% of the students achieved the knowledge level of satisfactory or above for SLO 6.2. These results implicitly suggest that modifications to the program are currently unnecessary. However, the IS faculty is extremely mindful of the dynamic nature of the IS discipline and of the importance of maintaining relevant student learning objectives.

For the 2012 assessment year (2011 calendar year), the BSBA-IS focus is on Goal 7, SLO 7.1, 7.2 and 7.3. Dr. Robert Plice is currently assessing these three SLOs in IDS306 this term.

III. What information was collected, how much, and by whom?

This section should briefly describe the methodology used to examine the targeted goals and objectives. Please attach relevant scoring rubrics, surveys, or other materials used to examine student learning.

SLOs 6.1 and 6.2 were both assessed in Dr. Bongsik Shin's IDS492 classes during the assessment period. In Spring 2010 he assessed SLO 6.1 using the questions provided in Appendix B. The legend Dr. Shin used to coding the results of this assessment

activity is provided in Appendix C. In Fall 2010, Dr. Shin assessed SLO 6.2 using the questions shown in Appendix D and coding scheme shown in Appendix E.

IV. What conclusions were drawn on the basis of the information collected?

This section should briefly describe the results (in summary form) in regard to how well students have met the targeted goals and objectives. In other words, what percent of students met the objectives? What areas need improvement? Also describe the implications of the results to the department or program. If data have been collected over multiple years, provide a trend analysis.

The results obtained from the assessment of SLO 6.1 and SLO 6.2 indicates that students generally met the learning goals and objectives we established for our program with respect to Goal 6.

SLO 6.1 focused on the students' ability to analyze information systems management issues. Specifically, Dr. Shin identified four key dimensions of IT management (Table 2) and asked students to respond to two comprehensive test questions for each of the four dimensions of IT management. The results of the test are shown in Table 1.

Dimension	Question	Correct	Wrong	Total	Accuracy (%)
Delivery of business value with IT	1	20	3	23	85
	2	22	1	23	95.6
IT Governance	3	19	4	23	82.6
	4	21	2	23	91.3
IT-enabled business/management innovation	5	7	15	22	31.8
	6	16	6	22	72.7
Development of IT capabilities	7	13	9	22	59.1
	8	17	6	23	73.9

Table 1. Analysis of each knowledge dimension for SLO 6.1

Score	No. of Students (N=23)	% of Students
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4 – Very good (7 or 8 out of 8)	8	34.8%
3 – Good (6 out of 8)	8	34.8%
2 – Satisfactory (5 out of 8)	4	17.4%
1 – Unsatisfactory (less than 5)	3	13%

Table 2: Overall Assessment Results for SLO 6.1

Conclusions drawn from results:

Based on the results of this test, 87% of the students assessed at, or above, the “satisfactory” level of knowledge with respect to SLO 6.1 (Table 2). The overall mean for this SLO was 5.87/8. Generally, students displayed a solid knowledge on the fundamental issues associated with “How IT delivers business value” and “IT governance.” However, student understanding related to “IT-enabled business innovation” and “How firms developing IT capabilities” assessed at a significantly lower level.

Action(s) to be taken based on results obtained (“closing the loop”):

To improve student knowledge in the underperformance areas, Dr. Shin is amending his syllabus to place more emphasis on the issues associated with “How IT can innovate business?” and “How to develop IT capabilities of a firm?” This includes more in-class coverage of associated issues and also the design of a group project that emphasize them as an integral part of requirements.

SLO 6.2 focused on identifying and describing the opportunities and challenges facing information systems executives in today’s global economy. To assess student knowledge relative to this SLO, a 12-question exam (Appendix D) was administered in Fall 2010 to the students in Dr. Shin’s IDS492 class. The questions were designed to measure student knowledge on how information systems executives build effective IT leadership. Specifically,

- What is the changing role of the IT leader?
- What makes a good IT leader? What personal qualities and strengths make a good IT leader?
- What is necessary to develop IT leaders in an organization?
- What are the key elements of the supportive culture for successful IT leadership development?
- What are the principles of professionalism for IT management?

The results of the exam were coded with respect to the scheme shown in Appendix E. The summary of student performance for SLO 6.2 is shown in Table 3.

Score	No. of Students (N=33)	% of Students
4 – Very good (11 or 12 out of 12)	11	33.3%
3 – Good (9 or 10 out of 12)	14	42.4%
2 – Satisfactory (8 out of 12)	5	15.1%
1 – Unsatisfactory (less than 8)	3	9.2%

Table 3: Overall Assessment Results for SLO 6.2

Conclusions drawn from results:

The overall average score of 9.54/12 (Table 3) demonstrates that students had a good understanding of the subject. 91% (30 out of 33) students achieved the knowledge level of satisfactory or beyond.

Action(s) to be taken based on results obtained (“closing the loop”):

The IDS492 capstone class is composed of various learning activities including: 10 different mini-tests plus associated class reviews and discussions; 2 group projects of SWOT analysis (one case study-based and the other based on a real company); and the class discussion of 10 different actual cases throughout the semester. Given the highly encouraging learning outcome, Dr. Shin is planning only minor adjustments to the class pedagogy. Specifically, he seeks to further develop each student’s IT leadership potential by encouraging his/her active role in leading class discussions on a selected topic.

V. How will the information be used to inform decision-making, planning, and improvement?

This section should describe the strategies that will be implemented for program improvement as a result of the conclusions drawn from the assessment activities. This may include curricular revision, faculty development, student services, and/or resource management.

The 2011 BSBA-IS assessment effort revealed some specific opportunities for improvement with respect to Goal 6 of our Student Learning Objectives. Specifically, we are working on shifting some of the emphasis of the IDS492 course content to better cover the topics that assessed relatively low in this assessment cycle. However, because of the encouraging learning outcomes for both SLO 6.1 and 6.2, we also feel that major pedagogical changes to our program are currently unwarranted. The IS faculty will meet in Fall 2011 to update the BSBA-IS Assessment schedule to comply with University’s current assessment cycle and to review the BSBA-IS program’s Assessment Goals and SLOs.

Report completed by _____George Easton_____ Date__5/9/2011__

Appendix A: Goals, SLOs, and Assessment Schedule for BSBA-IS Program

Vision Statement

To develop students who can apply information systems and technologies to add value to organizations.

Undergraduate IS Assessment Schedule

Goals and SLOs	Point(s) of Assessment	Assessment Method	Planned Assessment Date	Assessment Completed (Y/N)
Goal 1: Explain fundamental database concepts and be able to apply it to the design and development of relational databases.				

SLO 1.1 – Design a conceptual relational database in 3 rd Normal Form	IDS 380	Project	Spring 2007	Y
SLO 1.2 – Build a relational database using a common DBMS software package.	IDS 380	Project	Spring 2007	Y
SLO 1.3 – Write SQL statements to query a relational database consisting of at least two tables.	IDS 380	Project	Spring 2007	Y
Goal 2: Learn the major steps pertaining to the planning and analysis phases of the systems development life cycle (SDLC) and demonstrate the ability to produce the associated deliverables.				
SLO 2.1 – Demonstrate ability to estimate and quantify the present value of tangible and intangible costs and benefits (including strategic benefits) arising from an information system investment.	IDS 306	Assignment	Spring 2008	Y
SLO 2.2 – Demonstrate ability to identify information system requirements and model the functionality of a requirements-compliant system.	IDS 306	Assignment	Spring 2008	Y
Goal 3: Learn the major steps pertaining to the design and implementation phases of the system development life cycle (SDLC) and demonstrate ability to produce the associated deliverables.				
SLO 3.1 – Demonstrate ability to create data models to support the functionality of an information system.	IDS 406	Assignment	Spring 2008	Y
SLO 3.2 – Demonstrate ability to create a user-interface and architecture design to support the functionality of an information system.	IDS 406	Assignment and Examination	Spring 2008	Y
SLO 3.3 – Identify and evaluate alternative conversion and migration strategies for implementing an information system in an organization.	IDS 406	Exam question	Spring 2008	Y
Goal 4: Acquire fundamental working ability of a computer programming language, and be able to use it to write programs to solve common business problems.				
SLO 4.1 – Represent program logic in the form of a flowchart or pseudocode.	IDS 315	Project	Fall 2007	Y
SLO 4.2 – Develop a fully functional computer program from given specifications.	IDS 315	Project	Fall 2009	Y
SLO 4.3 – Use the logic of selection (decision) in procedures such as data validation.	IDS 315	Project	Fall 2009	Y
SLO 4.4 – Use the logic of iteration (looping) to process lists and				

arrays.	IDS 315	Project	Fall 2009	Y
Goal 5: Explain fundamental capability (both theoretical and practical) of data communications, computer networking, and related hardware concepts.				
SLO 5.1 – Identify fundamental issues of networking, including networking devices, transmission media, and various interfaces.	IDS 483	Exam question	Spring 2009	Y
SLO 5.2 – Explain standard architectures (TCP/IP, OSI, and Hybrid) in terms of layer functions and PDUs.	IDS 483	Exam question	Spring 2009	Y
SLO 5.3 – Explain the Internet protocol (IP) and transport layer protocols (TCP & UDP) and associated concepts including IP addressing.	IDS 483	Exam question	Spring 2009	Y
SLO 5.4 – Describe Ethernet (802.3) and Wireless (802.11) LAN standards.	IDS 483	Exam question	Spring 2009	Y
Goal 6: Acquire ability of contemporary information systems issues, including the use of information technology for competitive advantage.				
SLO 6.1 – Analyze information systems management issues or information technology trends.	IDS 492	Assignment	Spring 2010	Y
SLO 6.2 – Identify and describe opportunities and challenges facing information systems executives in today’s global economy.	IDS 492	Exam	Fall 2010	Y
SLO 6.3 – Analyze the strategic impact of an organization’s current information systems portfolio vis-à-vis the information systems under development	IDS 492	Exam question	Summer 2006	Y
Goal 7: Demonstrate competence in communicating technical information effectively to both technical and non-technical audiences.				
SLO 7.1 – Create and deliver a structured walkthrough presentation that communicates the results of the analysis and design phases of the SDLC to a non-technical audience.	IDS 306 / IDS 406	Presentation	Spring 2011	
SLO 7.2 – Construct and articulate an appropriate framework for exposing the inter-relationships in the analysis- and design-phase deliverables.	IDS 306 / IDS 406	Presentation	Spring 2011	
SLO 7.3 – Present, explain and defend the analysis- and design-phase deliverables to an audience.	IDS 306 / IDS 406	Presentation	Spring 2011	
SLO 7.4 – Present research findings geared towards a managerial audience on technological issues, including specific technologies and/or technological trends.	IDS 492	Presentation	Spring 2007	Y

Appendix B: SLO 6.1 Assessment instrument

Delivering Value with IT

1. Choose a correct statement:

- A) With the advent of the strategic use of IT in business, it has become even easier to isolate and deliver on the IT value proposition.
- B) Delivering IT value lies with how a value proposition is conceived by the CEO.
- C) The value of IT depends on how a business and its individual managers choose to view IT. *
- D) IT value is a single layered concept.
- E) Delivering value at one level in an organization does not conflict with optimizing value at another level.

2. Choose a correct statement.

- A) Most organizations that link measures of IT input with measures of business performance find great success since the two metrics are so closely linked.
- B) In most firms, technology is not a significant enough of an expense for it not to have influence on the corporate bottom line.
- C) Effective business metrics programs should always be associated with financial measures.
- D) Non-financial measures are predictive of past performance and are not effective predictors for future performance.
- E) What a company measures and the way it measures influence both the mindsets of managers and the way people behave.*

IT Governance

3. Which of the following IT elements ensure that all work done in IT is properly completed, meets all control standards, and can be demonstrated to do so with reasonable assurance?

- A) IT strategic planning, risk assessment, project management
- B) Information architecture, access to data, data administration

- C) Testing and validation, documentation management, quality assurance*
 - D) Risk assessment, new opportunities, IT strategic planning
 - E) Competitive advantage, risk assessment, project management
4. "Information Management" at a corporation has three distinct but related drivers. They are:
- A) compliance, staffing, application and development costs
 - B) capital expenses and tactical expenses, operational effectiveness and efficiency, staffing
 - C) compliance, operational effectiveness and efficiency, and strategy *
 - D) strategy, competitive advantage, operational effectiveness and efficiency
 - E) staffing, application and development costs, operational effectiveness and efficiency

IT-enabled Innovation

5. There are several technology strategies designed to enhance customer experience. Which of these is paired correctly?
- A) Eliminate Dissatisfiers as Top Priority – Facilitate (1) excellent service recovery, (2) customization/flexibility, and (3) spontaneous delight
 - B) Differentiate Transactional and Relational Encounters - If caller identification can be used, an organization can use technology to gain sufficient information by matching this ID with its customer database to enable a customer to skip the first couple of levels within the IVR tree.
 - C) Create Opportunities for "Memorable Satisfying Experiences" - Because transactional encounters are primarily focused on the achievement of a specific transaction, navigation should be direct and convenient; the transaction easy, straightforward, and understandable; and confirmation of the completeness and accuracy of the completed transaction should be automatic.
 - D) Correct the Obvious Problems with IVR Systems - organizations need to make sure that the systems are efficient and focus on reducing "hold time" for customers. *
6. Which of the following is considered a best practice for information delivery?
- A) Data and business functions need to be coupled tightly to achieve greater flexibility in information delivery.
 - B) Approach information delivery as an *all at once* development project.
 - C) Design information delivery from the end user (whether external customer, employee, or supplier) backward to reduce internal in-fighting and focuses attention on what is really important. *

- D) Using middleware should be curtailed when companies use several different packaged systems, each of which containing its own embedded data model.
- E) Internally develop (rather than buying) data models and enhance them. This will save many person-years of effort.

Reinventing IT Capabilities

7. Choose a correct statement:

- A) The IT capability "architecture planning" refers to IT's ability to get the business constructively engaged in IT issues.
- B) The IT capability "business systems thinking" refers to IT's ability to get the business constructively engaged in IT issues.
- C) There is not a direct link between IT capabilities and organizational value.
- D) Leadership as an IT capability involves integrating IT effort with business purpose and activities*
- E) IT capability represents well-defined activities in terms of 'how to' or step-by-step instructions for implementing a process.

8. Choose a correct statement regarding four delivery options for IT functions:

- A) Partnership tend(s) to exist in the lower part of the IT function delivery model because the truly unique tasks of business/systems analysis, planning, data management, and project management tend to be limited to a single organization and its strategy.*
- B) Outsourcing is basically a strategy of leveraging the in-house IT staff.
- C) With insourcing, IT functions are provided by an external organization using its own staff and resources.
- D) Outsourcing can take the form of a joint venture or involve the creation of a separate company.
- E) With partnership, IT personnel are brought into the organization to supplement the existing permanent IT staff to provide the IT function.

Appendix C: Legend of Coding used for SLO 6.1 Assessment

SLO	4: Very Good	3: Good	2: Satisfactory	1: Unsatisfactory
SLO 6.1	Students demonstrate solid understanding of the key management issues of	Students demonstrate significant knowledge of the key management issues of	Students demonstrate satisfactory knowledge of the key management	Students demonstrate minimal or complete lack of knowledge of key management

	information systems in terms of (1) how IT delivers business value; (2) IT governance; (3) Issues of IT-enabled innovation; and (4) development of IT capabilities.	information systems in terms of (1) how IT delivers business value; (2) IT governance; (3) Issues of IT-enabled innovation; and (4) development of IT capabilities.	issues of information systems in terms of (1) how IT delivers business value; (2) IT governance; (3) Issues of IT-enabled innovation; and (4) development of IT capabilities.	issues of information systems in terms of (1) how IT delivers business value; (2) IT governance; (3) Issues of IT-enabled innovation; and (4) development of IT capabilities.
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Appendix D: SLO 6.2 Assessment instrument

1. Using job assignments and budgets to enhance people's capabilities, identifying and developing emergent leaders, and using reward and recognition programs to motivate and encourage staff is an example of which soft skill of an IT leader?
 - A) Business understanding
 - B) Strategic understanding
 - C) Organizational understanding
 - D) Flexibility of approach in problem solving
 - E) Effective use of resources

2. The ability of an IT leader to motivate business executives to lead business transformation is an example of which soft skill?
 - A) Business understanding
 - B) Ability to gain business attention
 - C) Flexibility of approach in problem solving
 - D) Organizational understanding
 - E) Creating a supportive environment

3. By sending clear messages to staff and exhibit positive attitudes about staff behaviors, a senior IT manager can help people feel that they can begin to take some risks and initiative in their work. This form of IT leadership shapes/results in _____ culture. Remember to choose the best answer.
 - A) A climate of trust in IT organization

- B) Well-articulated and instantiated values
- C) Clear and frequent communications
- D) Acceptance of accountability by an IT leader
- E) Effective use of resources

4. Which of these may **NOT** be a practical reason all IT staff are expected to act as leaders:

- A) No IT leadership initiatives within business will be accepted unless IT is consistently able to deliver results (credibility).
- B) Individuals within IT have more opportunities to affect an organization, both positively and negatively, than others at similar levels in the business (impact).
- C) Many IT organizations operate in the largely hierarchical and therefore an effective structure for IT leaders (hierarchy).
- D) Increasingly IT staff and organizations are expected to be responsive to rapidly changing business needs and help the enterprise compete in a highly competitive environment. This situation requires IT staff to have not only the technical skills required to address a variety of needs, but the ability to act in the best interests of the organization wherever opportunities arise (flexibility).
- E) The complexity of the tasks, relationships, knowledge, and their integration in IT mean that IT leadership cannot rest in the hands of one person or a few select people (complexity).

5. An IT professional needs to know how to create a work environment that is characterized by trust, empowerment, and accountability. This requires clear communication of objectives, setting the rules of engagement, and providing a structure to manage risks and resolve issues. This is an example of which soft skill of an IT leader?

- A) Business understanding
- B) Strategic understanding
- C) Organizational understanding
- D) Creating a supportive environment
- E) Effective use of resources

6. Motivation, team building, collaboration, communication, risk assessment, problem solving, and coaching, are all examples of:

- A) Mentoring skills
- B) Leadership skills
- C) Personal mastery skills
- D) Organizational understanding
- E) Vision

7. Which of the following methods of promoting professionalism among IT workers clarifies expectations and develop group values around the expectations at a particular company?
- A) Articulate IT's business values
 - B) Get consensus on the meaning of professionalism
 - C) Provide resources to support professionalism
 - D) Weed out people whose attitudes are destructive
 - E) Offer intensive mentoring for staff who are willing to change
8. IT managers/executives can help augment the professionalism among IT workers through following measures **EXCEPT**:
- A) Identifying corporate values and live them
 - B) Measuring and rewarding what managers/executives value
 - C) Modeling professionalism for their IT staff
 - D) Providing mentoring and training in professional attitudes and behavior
 - E) Showing respect to human resource programs and daily working environment
9. Below is a set of behaviors that are indicative of IT professionalism. Choose the **LEAST** relevant item or statement:
- A) One's appearance and manners on the job, generally labeled as comportsment
 - B) The distinguishing feature of a true IT professional is his/her skill and subsequently attitude.
 - C) Having not only the technical skills to do a job, but also a good understanding of the business context in which IT work is taking place.
 - D) Communication skills (ex. writing, responsiveness, listening skills, managing commitment) are fundamental to professionalism.
 - E) Being honest about the implications of a decision, stating concerns and objections, listening to the other points of view, and negotiating a direction forward.
10. Which of the following methods of promoting professionalism helps IT staff to make effective judgments?
- A) Articulate values, especially when they differ from other more generic corporate values
 - B) Get consensus on the meaning of professionalism
 - C) Provide resources to support professionalism
 - D) Weed out people whose attitudes are destructive
 - E) Offer intensive mentoring for staff who are willing to change
11. Choose an **ADEQUATE** statement:
- A) Organizational citizenship behavior (OCB) of an employee is generally conceived irrelevant to professionalism.
 - B) Professionalism of an employee is picked up through observation and interaction with others more than by rigorous training.
 - C) IT management is generally NOT responsible for unprofessional behaviors at work.

- D) Other parts of an organization such as human resources are irrelevant to the shaping of professionalism among IT workers.
- E) When an IT worker cares (ex. doing a job to the best of his/her ability), takes a ‘can do’ mentality, and ‘goes the extra mile’, the person displays positive *judgment* as an IT professional.

12. _____ is defined as an employee's willingness to go above and beyond the roles that he or she has been assigned at an organization.

- A) Professionalism
- B) Teamwork
- C) Partnership
- D) Accountability
- E) Organizational citizenship behavior

Appendix E: Legend of Coding for SLO 6.2 Assessment

SLO	4: Very Good	3: Good	2: Satisfactory	1: Unsatisfactory
SLO 6.2	Students demonstrate solid understanding of the key issues of IT leadership including the changing role of the IT leader, what makes a good IT leader, how to build better IT leaders, and the principles of professionalism for IT management.	Students demonstrate significant knowledge of the key issues of IT leadership including the changing role of the IT leader, what makes a good IT leader, how to build better IT leaders, and the principles of professionalism for IT management.	Students demonstrate satisfactory knowledge of the key issues of IT leadership including the changing role of the IT leader, what makes a good IT leader, how to build better IT leaders, and the principles of professionalism for IT management.	Students demonstrate minimal or complete lack of the key issues of IT leadership including the changing role of the IT leader, what makes a good IT leader, how to build better IT leaders, and the principles of professionalism for IT management.