Fourth COB Faculty Research Colloquium
April 27th, 2012

Colloquium Program
Fourth Faculty Research Colloquium
College of Business
University of Mary Washington

Colloquium Program
April 27th, 2012
Stafford Campus - North Building - Room 252

Welcome note and Introductions........................................................................................................1.00 - 1:05 pm

Session I.................................................................................................................................................1.05 – 1:45 pm

Paper I
Change Management for Higher Education Learning Management Systems Transitions
John St. Clair and Louis Martinette

Paper II
Robust Optimization Models for Volunteer Scheduling
Christopher J. Garcia

Session II............................................................................................................................................... 2:00 pm - 3:00 pm

Paper III
A Systems Model for Teaching Human Resource (People) Management
Bob Greene and Margaret A. Mi

Paper IV
Building a Sustainable Competitive Advantage
Mukesh Srivastava and Lou Martinette

Paper V
WISE Fraud Case
Gladys Gomez

On Going Research Collaboration Projects of the Faculty

Adjourn
Change Management for Higher Education Learning Management Systems Transitions

John St. Clair and Lou Martinette

ABSTRACT

The learning management system (LMS) has become an integral, if not mission critical, software application used in all types of organizations. In colleges and universities the LMS is used to support instruction in traditional classes as well as those with an online component. Because the LMS is used by many, if not most, faculty and students and because it inter-operates with other enterprise resource planning (ERP) applications such as the student information system (SIS), any change in LMS needs to be carefully managed.

There exists an extensive body of knowledge in both scholarly journals and trade publications about the management of the change process. This research will consider the practical challenges of organizational change by reviewing the management and organizational behavior literature related to change management, show how this knowledge applies in changes in LMS in higher education. The paper will also provide recommendations based on the literature and also the authors’ experience in managing an LMS and teaching using an LMS in higher education.

Robust Optimization Models for Volunteer Scheduling

Christopher J. Garcia

ABSTRACT

We consider a defense-related multiproduct sourcing problem where each finished product must meet explicit reliability requirements. The critical reliability of each product is determined by its components, and the objective is to source the components at a minimum cost from a combination of new and used sources while ensuring each product meets its critical reliability requirement. We develop two models to determine optimal sourcing policies: an exact model that uses mixed integer nonlinear programming, and an approximate model that uses integer linear programming. We perform computational tests on a large number of benchmark problems having varying characteristics and compare the solution quality and computational time of each model. We find that the approximation model provides near-optimal solutions across all problem characteristics in very small amounts of time, while the exact model requires significant amounts of time for modest-sized problems. From the computational experiments we also characterize the circumstances in which large cost savings may be realized by using a combination of new and used sources versus new sources alone.
A Systems Model for Teaching Human Resource (People) Management

Margaret A. Mi and George Greene

ABSTRACT
This article presents and discusses a systems approach model for teaching human resource (“people”) management processes, and the important inter-relationships within that process. The model contains a unique component related to one of the key sub-processes (“incentives management”) not seen elsewhere in the literature.

The model has been applied in effectively teaching a comprehensive and meaningful understanding of the human resource management process in various educational and executive training settings in corporate and academic venues over the past 25 years.

The authors have not seen a similar model using a systems thinking paradigm in any textbook, journal article, business publication, or other literature addressing the topic. In that sense, the authors believe the model is a unique new contribution to the leadership and management literature.

Building a Sustainable Competitive Advantage

Mukesh Srivastava and Lou Martinette

ABSTRACT
In this age of hyper competition, firms need to create and sustain a competitive advantage. To achieve this, firm’s need to constantly focus on the identification of differential product strategies, building or reshaping core competencies, acquiring unique technologies and accumulation of intellectual property all of which can all be harnessed to make the company successful in a highly competitive marketplace. Identification of what actually constitutes as a core competence has been a subject of debate over the past 20 years and much literature has been dedicated to this problem. This problem has become even more complex in recent years with the advent of globalization and the birth of the information super highway which has given access to more competitive, environmental or technology information than ever before. One key model was developed in the 1980’s to describe core competencies as unique resources and capabilities. It was known as the resource based view of the firm. Therefore, using this model as a foundation, it is the intent of this research is to analyze (i) which key organizational levers influence the competitive advantage(s) of a firm, (ii) to propose recommendations how 21st century high technology firms can strategically manage their resources and capabilities for a sustained competitive position and (iii) validate and quantify the general perception of the relative importance of these organizational resources and capabilities using an online survey and statistical analysis techniques.

This research study focuses on the cross-industrial best practices in the context of the resource based competitive advantage model of the firm. It identifies managerial levers, tools and systems which all collectively combine to influence a firm’s ability to sustain its core competences and therefore its competitive advantage. Specifically, contemporary techniques are discussed that provide credible, accountable leadership, high performance recruitment, & employee rewards, retention of creative people, building a more engaged workforce, improved strategy definition and more balanced execution tools.

Overall, it is concluded that it is necessary that 21st century firms adopt a more agile and customer centric approach to identifying new markets and future products. To achieve this requires firms require a new level of
employee engagement, improved market viability and also an investment in the necessary infrastructure to secure a deeper level of mutual trust with the firm's key customers. Firms will need to take a longer term perspective in building resources and capabilities that provide the highest entry barriers for competitors. Once attained, these higher levels of trust and differential technology can open up opportunities of maintaining a higher margin business and so securing a sustained competitive advantage.

**WISE Fraud Case**

Gladys Gomez

**ABSTRACT**

This case was original developed and presented by David Cotton at the CPE Day held in October 2011 by the Battlefield Chapter of the Virginia Society of CPAs. I modified it with Mr. Cotton’s permission for the classroom environment. The modifications I made were focused on transitioning the 1.5 hour continuing professional education presentation to an undergraduate/graduate Auditing course environment. The WISE Fraud Case and Live Panel that I created is now spread out over 4 separate classroom meetings and has 3 separate written group assignments. The students formed themselves into “Audit Teams” of 3 - 5 students which simulated the SAS #99 process. Students needed to become familiar with SAS #99, perform a risk assessment based on review of background information on the WISE company, a not-for-profit company, including financial data, develop questions and draw conclusions. The deliverables were 3 written assignments and 1 interview assignment. This case culminated with a "Live Panel" of WISE company Role Players acted by 6 UMW Alumni (MBA and BPS) and 1 invited guest from the business community. This group case illustrated several key concepts that are covered in the first half of the Auditing course.