Our First conference – ICTM2016

August 10-12 about 40 scholars met in Des Plaines, Illinois for our first annual International Conference on Technology Management. The PhD leadership began this effort as a means of increasing our program’s national exposure, while providing stakeholders opportunities to interact. Currently, we have over 90 faculty connected to the program in some way, over 140 graduates, and more than 100 students currently enrolled; this constitutes a strong community. Here are a few challenges I mentioned during my keynote address.

1) A strong need for applied researchers in technology and innovation, but also the need to address the question of how the PhD in Technology Management is a philosophy degree.
2) The way people understand and use the term technology management. It is clear that we need to be more “vocal” regarding our definitions.
3) The consortium model we use. The five consortium partners are very good universities, with outstanding faculty who have agreed working together. There is clearly a desire to make this program work! But we cannot say that we are a consortium, a single entity, yet!
4) The nature of the consortium universities; the cultures of which tend to be undergraduate in nature.
5) Distance delivery and the various realities of working with doctoral students at a distance. We need deeper levels of interaction so that our candidates can be successful in thinking and acting as scholars.

We are approaching our 20 year anniversary. Progress has clearly been made and I am proud of what we have accomplished so far. And I am excited for the future.

Dr. W. Tad Foster, Professor
ISU Campus Coordinator
RECOGNITIONS

Dr. Kirk Smith, an alumnus who received his Ph.D. in Technology Management with a specialization in Human Resource Development in 2010. Unfortunately, Dr. Smith lost his battle to cancer and passed away on July 21st, 2016. He was an Assistant Professor of Human Resources and Leadership at Western Carolina University, had co-authored the second edition of the textbook “Accountability in Human Resource Management: Linking HR With Business Results” with Drs. Jack and Patti Phillips. Dr. Smith was the author of many articles and edited book chapters about accountability in human resources management. Dr. Smith also conducted various workshops and consulting projects on measurement and evaluation in human resources. May his soul rest in peace!

AWARDS

Congratulations to Dr. Carroll Graham, Dr. Szu-Fang Chuang, Dr. Cindy Crowder, and Dr. Barbara Eversole from Indiana State University, who won the Cutting Edge Award for one of their published papers at the AHRD Conference on February 2016. The award recognizes outstanding contribution to the field through the quality of the reporting and the significance of the subject matter that is addressed and/or the theoretical or practical importance of the problem. Their award winning paper based upon the work entitled, "Abused at Home, Disengaged at Work: Conceptualizing the Relationship of the Traumatized Worker and the Imminent Role of Human Resource Development Scholar Practitioners".


Dr. Patrick English specialized in HRD & Industrial Training at his home institution of ISU. He successfully defended his dissertation, “A Comparative Case Study of Online Learning and Bloom’s Taxonomy” in March 2016 and graduated in Spring 2016.

Quality System Specialization

When technology management comes to dealing with quality systems, most quality folks face so many pressures. The complexity of technology and the rapid pace of its change are accelerating at an alarming rate. If flawless execution was an abstract goal, technology management is even more so today. Nevertheless, we can improve performance substantially by safeguarding the strategic decisions and support technology management emphasize the quality. The quality systems in technology management and its backing can be realized by considering customer or user satisfaction, system integration and flexibility. We must do this early on in the decision process reinforcing them throughout system review process.

This newsletter brings you a gift!

An Approach that helps Define Technology Management Quality Systems

0. Reflect Past Experience – Focus on correcting the process that contributed to failures
1. Create a Clear Mission - Define top quality goals and measures
2. Set Specific Objectives – Focus on user satisfaction and key areas problematic to the technology area
3. Develop Simple Strategies – Start with small step to achieve the objectives and stay on the course as strategies progress
4. Design a Small Focused Quality Function - Create quality function with design points that include key aspects such as size, structure, scope, roles and responsibilities, skills and measures
5. Take the Next Steps – Form a team, establish connections, and extend the quality community in the technology area you are undertaking

Digital Communication

Forensics in the Cloud

Privacy and cloud computing continue to be of significant interest in the digital communications arena. Digital Forensics investigators are often asked, how does law enforcement get data from cloud providers and what safeguards are in place for to protect user’s privacy? In this case the user may be a suspect or an unrelated person with data on a shared storage media. Not long ago it would not have been unusual for the whole server to have been seized regardless of the co-mingled data. However, with cloud computing and the associated redundancy, geographical separation and significant co-mingling of data this is no longer common practice.

Today, most cloud providers have a process in place that protects users from excessive requests while also allowing the provider to follow the law. Suppose that the FBI wishes to obtain information on a particular user from a cloud provider. The FBI would first need to show probable cause to a court or magistrate and receive a search warrant. The warrant is then served on the cloud provider. The cloud provider has a screening function that then sorts and prioritizes the warrants. Child safety for instance would receive a higher priority than low level financial fraud. The warrant then goes to the proofer. This person examines the warrant for errors, misidentification or procedural flaws. If there are issues this person sends them back to the originating agency. From here the warrant will go the separator. The person will ensure the warrant is not too broad to capture data that will be conmingled with other users. This person works with the agency to narrow the warrant to prevent 4th amendment issues. From here it goes to the producer, typically an experienced forensics examiner, who generates the data set. This person may also act as a narrower. It is not unusual to ask for “Everything”. Everything often generates data sets far too large to be useful and the narrower works to help the agency get what is actually needed. From here the data is sent to the agency with a certificate of authenticity. If necessary a custodian will travel from the provider to testify to authenticity in court proceedings. This is a typical example. Variations of course do occur and the law is ever changing in this arena. From a digital communications technical managers perspective this is easily something that could be dealt with during a student’s career.
**Human Resource Development & Industrial Training**

HR 2016 Trends

In the rise of technological advancements, the role of HR is constantly changing requiring considerable changes to be made in order to best address the needs of the workforce and organizations. A study was conducted worldwide involving over 60 international HR professionals, the outcome of the study revealed what 2016 holds when it comes to the opportunities and challenges facing global HR. First and foremost, recruitment will become more data driven; in fact, HR will have a much easier access to potential employable profiles thanks to new technologies. The variety of professional network platforms such as LinkedIn, provide a faster and cheaper access to new recruits and talents. Second, in the light of all the changes affecting the business world, it seems pivotal that organizations keep the skills of their workforce up to date. In that regard, companies tend to spend a lot of money on training their employees while they can benefit from their own internal knowledge capital; therefore, organizations should encourage and harness peer-to-peer learning, which is not only cost effective but can also result in increasing the workforce skills especially that it is done by people who understand the organization and its culture. Another aspect to focus on is the development of the human side of the business, where the future requires organizations to move away from processes and structures to encouraging employees to develop the mindset geared towards exploring new ways of performing their job duties with the appropriate autonomy; this has proven over the year to improve performance and increase retention and loyalty among the workforce.

On another note, moving forward, the next years hold other generational challenges for business that have to ensure they remain attractive to Generation Y as the future workforce, therefore, businesses have to take a proactive approach in understanding the needs of the upcoming workforce, and prepare their integration accordingly. Last but not least, performance reviews have to be reinvented, making sure that the standard performance ratings are dropped and newer adaptable methods of performance management are put in place that match the needs of the organization.

**Reference:**


**Manufacturing systems**

“Students here don’t just fly unmanned vehicles, some build them”

Two small teams in a Technology Management class at Indiana State University spent the semester designing and assembling variants of the helicopter: the tri-copter and the quad-copter. They were able to prototype and test their designs with the use of a three-dimensional (3D) printer; the 3D printer uses imported CAD files to print 3D designs in ABS plastic. Alister McLeod, who is a professor of applied engineering and technology management said, "Manufacturers use it as a way to design new parts, to make things like aircraft lighter. They can print components instead of having to machine them and our students are leaving here and entering into a workforce that demands an understanding of these new technologies (Taylor, 2015)." The ability to create relatively cheap prototypes allows the students to iteratively design their concepts and learn from the successes and failures of each build. The students were then able to test their designs at the Wolf Field near highway U.S. 41. The winds were very prevalent that day, and both the tri-copter and the quad-copter crashed after takeoff. Students from the class have used this experience when interviewing for careers at companies such as Rolls-Royce, Raytheon, NASA and General Electric.

**References:**

Construction Management

Role-switch: Challenges of construction project manager

There are notable changes and transformation going on in different industries and in the construction industry in particular. These changes are as a result of changes from traditional project delivery system to more integrated project delivery system occasioned by changes in world economy, regulatory/environmental requirements, changes in construction industry landscape, and changes in customer demand. These changes are unseen centripetal force that determine and control the role that a construction project manager plays in project delivery processes.

Traditionally, the construction project manager is project management task-oriented; to lead the project team (focusing solely on the team responsible for a project, acquisition of resources needed to execute a project, monitoring and control project constraints, and etc.). But with the prevailing changes, the construction project manager’s role is breaking known project role boundaries. According to the Director of Information Systems and Technology Advisory, at Conture Business, “Leaders will need to transform their PMOs [project management offices] or project management teams to focus all efforts around reaching business goals” (Alexander, 2016). What this means is that the role of a project manager changes depending on the compelling circumstances in the time and location for the overall good of the organization.

It is becoming common practice for construction companies to merge the position of construction project manager and project engineer into one title/position. Sometimes the role of regulatory compliant officer is also merged together with project management role or combination of the three into one single position with a new title or an appendage to the construction project manager title. It is not surprising to hear titles like Project Management Engineer or such that requires the project manager to wear different hats culminating into role-switch from time to time.

The role-switch required of construction project manager to meet the project and corporate goals placed on the project manager the task of being versatile in different areas. Some of these burdens require the construction project manager to be versatile not only in cost-benefit analysis, but also to take the role and task of conducting risk-benefit analysis of a project—traditional role of project engineer (Robinson & Dixon, 2007). What this means is that with the current trend and changes, construction industry is concurrently redefining the role of construction project manager. Therefore, institutions and organizations that train and nurture graduates in the construction project management field need to take into account these market changes to get the graduates ready for the challenges ahead.

References:


**Bowling Green State University**

BGSU Accounting Professor Pascal Bizarro has adopted new techniques to enhance the learning experience for his students by “flipping” his traditional classroom into a web-based learning environment. He uses video, photography and green screens to record pre-lectures for his students. His class will watch the lectures and take a quiz before attending the in-person class. This allows the students to come to class well-versed in the material in order to have in-depth discussions about the material. He also uses the technology to project the screen of his mobile tablet device in the classroom. Bizarro learned of the video-recording application (Camtasia Studio by Techsmith) when he attended the College of William and Mary’s Technology in Business School Roundtable as a representative for BGSU. In 2015, Bizarro was awarded the Leadership Council Award from the BGSU College of Business for his new approach to classroom teaching, and he recently presented his ideas at a College of Business workshop with a presentation entitled ‘Demystifying the Flipped Classroom.” Dr. Bizarro finds that using the “flipped” classroom approach may require more upfront work when designing the course, but it provides a unique and interactive lecture experience that allows the student to be more prepared during classroom discussions.

**Reference**

**East Carolina University**

**High School STEM DAY at ECU**

The ECU Department of Construction Management has taken part in the ECU High School STEM Day during the Spring 2016 term (April). The program included a total of over 20 high schools that have taken part in this experience. This event was attended by various faculty members from the Construction Management Department. This opportunity is meant to give the attending high school students a first taste of construction management majors. Some of the activities included steel erection in a High Bay Lab and making and testing concrete samples. This is the fourth edition of this event that the CET has taken part of, and it is a great way to get the future students to have the have experiential learning opportunities before starting college.

**Reference**

**Indiana State University**

**Females In Technology (FIT) Awarded Sycamore Leadership of 2016**

The Females in Technology (FIT) organization was recognized as the 2016 ISU Program of the Year for the annual event FIT for the Future. The Program of the Year award is presented by ISU to the student organization that developed a program that provides opportunities for students to learn about themselves and others; gives students the primary role in planning; includes effective implementation, promotion, and evaluation of the event; promotes a sense of campus community and school spirit; and is well attended and organized. This year 160 high school girls from 12 high schools attended.

**Reference**
North Carolina A&T State University

NC A&T Professor Receives Multiple Engineering Awards

Dr. Salil Desai is an Associate Professor in the Department of Industrial and Systems Engineering (ISE) at NC A&T State University. Dr. Desai received the Chao and Trigger Outstanding Young Manufacturing Engineer Award from the American Society of Mechanical Engineers (ASME) and the Outstanding Mid-Career Teaching Award by the American Society for Engineering Education in the manufacturing engineering division. Dr. Desai expressed his pride to receive such awards, which are aligned with his teaching philosophy to provide students with the best possible teaching and learning opportunities. The awards were given to Dr. Desai for his exceptional class performance, for having the capabilities to disseminate knowledge in his subject area in various methods, for having a growing enthusiasm in his classes, but mostly for continuously trying to find better ways to increase student learning either through classroom learning or other experiential learning opportunities. In addition to the above-received awards, Dr. Desai was also selected in March 2016 to receive the UNC Board of Governor’s 2016 Excellence in Teaching Award for N.C. A&T.

Reference:

University of Central Missouri

A group of student of UCM School of Technology took part of the U.S. Space and Rocket Center at Marshall Space Flight Center in Huntsville, Ala., in order to compete in the NASA Human Exploration Rover Challenge. This is the second edition this group of technology students at UCM have taken part of this challenge. This year, they used the opportunity to improve what they learned from their first experience from last year’s competition. The group of students redesigned their version of the Human Exploration Rover, competing this year with two versions of their new design. They were accompanied to the competition by team advisors Shelby Scott, instructor of innovative technologies and engineering technology, and Troy Ollison, program coordinator for the Engineering technology program. The UCM teach has competed with 40 other teams representing colleges and universities from all over the world. UCM team ranked 10th and 14th during the 2016 Edition.
This type of competition allows students in the Manufacturing Problem Solving course to learn first hand and apply their course materials in real life, providing an excellent experiential learning opportunity. Students involved in this project learned to apply their skills in problem solving and knowledge of varied areas of technology to come up with the initial design, followed by the actual construction of the rover. With this year’s competition, the students’ challenges and learning do not stop here; but they brought home a list of challenges to improve for next year’s competition, with an improved vision and performance of the engine. The students also have to learn to work collaboratively.

Reference:
Dr. Barbara Eversole is an associate professor at Indiana State University. She earned her doctorate in Education and Human Resources with a specialization in Organizational Performance and Change at Colorado State University. She joined ISU in 2008 as an Assistant Professor. Prior to her academic career, Dr. Eversole spent many years in the private sector in Sales and Marketing positions, in both staff and management roles, and as an independent consultant specializing in the Myers-Briggs Type Indicator (MBTI) as a Master Practitioner. Originally from New York, Dr. Eversole has traveled widely and is currently on sabbatical overseas, returning in August 2016. Dr. Eversole’s research interests center around two primary themes, one established and one emergent. Her primary research is around understanding how to make workplaces more friendly to the non-work lives of employees. Her strategy in doing this is through understanding executive and management development of the managers who have the discretion to allow work/life accommodations to occur. Therefore, her work in this arena has also led to an interest in generational theory, and how a concern for work/life accommodations crosses generational lines and is a way to attract talent from all generations in the workforce. Her emergent research interest is around mental disability in the workplace. As a discipline, people are comfortable with positive psychology, bullying, and violence, but have yet to begin to grapple with the employees in the workplace who are now protected by law.

Dr. Eversole spent Fall 2015 and Spring 2016 on sabbatical working on a global research project collecting data on managerial effectiveness. She is correlating this data with an instrument on family-supportive supervisory behaviors. This research would allow her to see if a family-supportive supervisor is substantively the same as an effective manager in terms of behaviors.
GENERAL INFORMATION

The consortium program is offered in cooperation with Bowling Green State University, East Carolina University, Indiana State University, North Carolina A&T State University, and the University of Central Missouri. The doctoral program meets the needs of today’s technical professionals. An academically rigorous program of study, the Doctor of Philosophy Program in Technology Management offers research and scholarship experiences and in-depth study in a specialization selected from the areas of:

- Construction Management
- Digital Communication System
- Human Resource Development and Industrial Training
- Manufacturing Systems
- Quality Systems

For Additional information about the PhD in Technology Management, visit our website at http://technology.indstate.edu/consortphd/
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Ignatius Chukwu, was admitted to the PhD program in Fall 2014. He specializes in Construction Management.