

Refereed Proceedings - Abstracts

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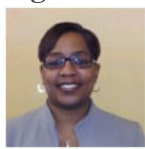


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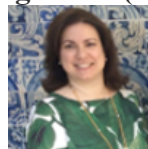
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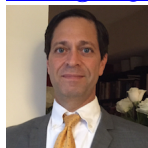
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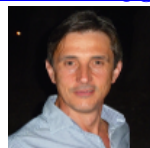
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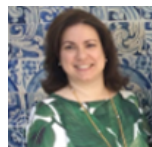


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We would like to thank all the Program Committee (PC) members for their outstanding scholarly reviews and dedicated feedback to the authors!

Knowledge sharing: Together we can do it better

[Workshop]

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Abstract

The workshop will focus on effective complex problem-solving that requires knowledge sharing among team members, and includes two parts: team building and knowledge sharing. The first part will serve as a warm up for the teams, which will include some hands-on collaborative and dynamic team building exercise. Then, the second part of the workshop will allow each group of participants to work as a dynamic team to demonstrate their knowledge, skills, and experiences. The main issues at both parts of the workshop will be a quick and effective analysis of the situation, while working as a dynamic team to set up the plan on how to solve the problems presented to the team. Knowledge sharing and communication among all team members will be vital for the success of the team. This workshop will allow the participants to engage with a group to achieve both parts, while bonding long-term relationships. In order to be successful, participants will need to use a variety of communication skills that will allow them to collaborate and be an effective team member. The workshop will also offer an opportunity for participants to reflect on the success of their group's communication and knowledge sharing channels. At the conclusion, insights, based on the experiences gained by the teams will be discussed.

Keywords: Analysis of the situation, knowledge sharing within a team, collaboration and teamwork, reflective analysis on team building activities.

A balanced scorecard approach for value creation through employees' engagement in the era of knowledge-based economy

[Industry Keynote]

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Abstract

In a knowledge-based economy, the traditional labor force evolves towards human resources (HR). The increasing role of HR and other intangible resources is observed in the capital market. A continuous disparity between market capitalisation of corporations and their book value of tangible assets is noticed. The greater importance of HR as strategic assets leads to a growing demand for methods of HR measurement and valuation. Efforts to present HR value in the balance sheet, termed as the accounting approach, are not convincing. It seems that methods of indirect valuation of HR potential are more appropriate. One of the most promising methods is the Balanced Scorecard and strategy map. The strategy map shows company-specific cause-and-effect relationships connecting investment in HR development, process improvement, customer satisfaction and retention, market share with revenues, costs and profits. It seems promising to combine strategy maps with the concept of employee engagement.

Due to the evolution of the capitalist society into a knowledge-based society, HR became a key factor of the success of the firm. Employee engagement is an important element of fulfilling the HR potential, particularly the engagement of knowledge workers. Unlike the labor force in the capitalistic model, knowledge workers own the means of production, i.e. knowledge. They can take knowledge with themselves whenever and wherever they wish. Balanced Scorecard methodology, especially strategy maps, demonstrates the rationale for investing in building employee engagement. This conclusion is inline with the results of numerous studies conducted in many industries and countries, which show that human resource development initiatives should be treated as investments rather than costs.

Keywords: Human resources as a key driver of value creation, employee engagement, balanced Scorecard and strategy map methodology.

The next generation of knowledge management

[Keynote]

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Abstract

Knowledge management has progressed through various main generations thus far, featuring: Personal Knowledge Management, Collection/Codification, Collaboration/Social Networking, and now Symbiosis with Analytics/AI/Machine Learning/Intuition. This presentation will focus on what we as KM educators and practitioners have done well in the past, and what still needs to be done in the near future to achieve “KM Nirvana”. Special highlights of the presentation will focus on the integration and synergies between KM and intuition-based decision making, AI, Machine Learning, and Analytics. A discussion will ensue on how we can better prepare future “KM’ers” for the marketplace, as well as incorporating more rigor into the KM discipline.

Keywords: Identifying past, present, and future challenges facing KM, preparing the next generation of knowledge management professionals, exploring the synergies between KM, Intuition, Analytics, AI, and Machine Learning.

The Eurozone debt crisis: Possible scenarios of recovery

[Keynote]

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Abstract

According to the Organization for Economic Cooperation and Development (OECD), the Eurozone debt crisis was the greatest threat in 2011. The debt crisis started in 2009 and got worse in 2012. Most of the crisis stemmed from default on debt from Greece, Portugal, Italy, Ireland, and Spain, though they all ended up with bailouts from the European Central Bank. Nonetheless, the crisis still exists and as recently as 2018 new issues such as USA tariffs might add to the crisis. What are the solutions to the Eurozone debt crisis? This keynote provides a detailed analysis of the Eurozone after 20 years of existence and offers potential solutions to the financial crisis of the European Union.

Keywords: Eurozone after 20 years of existence, is debt a permanent issue in the Euroland? Possible scenarios of recovery.

Digital responsibility in action

[Keynote]

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Abstract

Looking at the past few years both in terms of security incidents and public policies we must acknowledge our society is steadily but surely drifting towards a dystopian digital society. People are blissfully enjoying a rampant invasion of their rights aggressively promoted by an industry having no interest in changing their business models, hence a situation of general resilience of people and a form of economic cynicism of the industry. Self-regulation has clearly shown its limits leaving no other choice than involving public policies in order to shape the debate and structure the necessary frameworks supporting a sustainable digital society.

Starting from a brief situation analysis and two examples supporting the argument, this presentation describes a concrete approach to address the issue through the design of an actionable Digital Responsibility approach. We will conclude with the action plan to make it work.

Keywords: How bad can bad be : The story of a dystopia, the Digital Responsibility dimensions and equilibrium, insights and examples, designing Digital Responsibility and making it work.

Theoretical support for knowledge management and information systems research

[Industry Keynote]

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Abstract

On May 23, 2018 shortly after 5:30 AM local time in Nepal, Neal Kushwaha successfully summited Mount Everest. He spent over 35 minutes at the summit (8,848m / 29,029ft) and three nights above Camp IV (8,000m / 26,245ft). Of all the people who have summited Everest (+5,000) and of those that are alive (+3,000), Neal falls in the 0.00004%. Early January 2018, he was offered to climb two +8,000m peaks on the same day, Everest and Lhotse. What happened? What happened days before when he along with three others rescued an injured Sherpa? How did he lose his taste buds? What does it take to get to the top of the world and what do you have to give-up in order to get there? What is the biggest lesson to be learned after over 26 years of climbing? Neal shares his precious photos and videos in high definition when recounting his stories. Neal will discuss the analogy of his 26 years of climbing experience to the cybersecurity domain. Upon discussing a foundational understanding of cyber, he will discuss the need to have more maturity and patience in the cyber domain. Moreover, he will talk about the need for cyber resilience and the ability to know when to move forward and when to pull back, or back track for the sake of humanity. Then, he will discuss the value of raising the maturity of organizations versus the challenges of 'hanging out alone at the top'. He will conclude with the perspective on 'arrogance of being at the top of the capability and maturity model' that can lead to becoming a target with the highest potential energy.

Keywords: Cybersecurity maturity, decision making under stress, knowledge-intensive decisions, capability and maturity model.

Social media privacy concerns and risk beliefs

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Abstract

The purpose of this study was to investigate the link between users' risk beliefs and social media privacy concerns (concerns users express regarding social media sites' practices as to how they collect and use personal information). A Likert-type instrument with seven constructs, six of which described the social media privacy concerns and the seventh construct defined users' risk beliefs, was used to collect data from students who were studying at a university in the southeastern United States. All students ($N = 138$) used Facebook as their major social networking site. Collected data were analyzed via multiple regression analysis. The results indicated that subjects' risk beliefs are influenced by three social media privacy concerns (i.e., collection, error, and awareness). The Findings and their implications are discussed. Recommendations for future research are made.

Keywords: Risk beliefs, social media, privacy concerns, Facebook.

The invisible hole of information on SMB's cybersecurity

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Abstract

Small and Medium Businesses (SMB) use Internet and computer-based tools in their daily processes, sometimes without being aware to the cyber threats, or without knowing how to be prepared in case of a cyber-attack, although they are a major target for cyber-attacks. Specific information about cybersecurity needed by SMBs, in order to cope with cyber threats, is not always available or easily accessible. In this study, a vast search of different types of information about SMBs' cybersecurity was performed, in order to find whether a hole of accessible information exists in this area. This exploratory research covered general mass communication media channels, technological and professional cybersecurity websites, and academic journals, and found that indeed very few studies, articles and news items were published in this matter. Leveraging knowledge and awareness, diminishing the shame for reporting cyber-attacks, and increasing mass communication media interest and public attention, may be activities to cover this "invisible hole".

Keywords: Small Medium Business (SMB), Small and Medium Enterprises (SME), cybersecurity, cyber information, cyber-attack.

Creating gameful experience in the object-oriented programming classroom: A case study Revisiting automated project management in the digital age – a survey of AI approaches

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Abstract

In this decade, remarkable progress has been made in the field of artificial intelligence (AI). Inspired by well-known services of cognitive assistance systems such as IBM Watson, Apple's Siri or Google Duplex, AI concepts and algorithms are widely discussed regarding their automation potentials in business, politics and society. At first glance, project management (PM) seems to be less suitable for automation due to the inherent uniqueness of projects by definition. However, AI is also creating new application possibilities in the PM area, which will be explored in this contribution by involving an extensive literature review as well as real-world examples. The objective of this article is to provide a current overview of AI approaches and available tools that can be used for automating tasks in business project management.

Keywords: Artificial intelligence, project management, automation, machine learning, bot.

How workplace satisfaction affects insider threat detection as a vital variable for the mitigation of malicious cyber insiders

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Abstract

Insider threat mitigation is a growing challenge within organizations. The development of a novel alert visualization dashboard for the identification of potentially malicious cyber insider threats was identified as necessary to alleviate this challenge. This research developed a cyber insider threat dashboard visualization prototype for detecting potentially malicious cyber insider activities QUICK.v™. This study utilized Subject Matter Experts (SMEs) by applying the Delphi Method to identify the most critical cyber visualization variables and ranking. This paper contains the detailed results of a survey based experimental research study that identified the critical cybersecurity variables also referred to as cybersecurity vital signs. The identified vital signs will aid cybersecurity analysts with triage for potentially malicious insider threats. From a total of 45 analytic variables assessed by 42 cybersecurity SMEs, the top six variables were identified using a comprehensive data collection process. The results indicated that workplace satisfaction is one of the top critical cyber visualization variables that should be measured and visualized to aid cybersecurity analysts in the detection of potentially malicious cyber insider threat activities. The process of the data collection to identify and rank critical cyber visualization variables are described.

Keywords: Anomaly detection, cybersecurity, vital signs, intrusion detection, insider threat, visualization.

Blockchain and mortgage lending process: A study of people, process, and technology involved

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Abstract

Blockchain technology is on the rise and considered to be a revolutionary technology. It has been applied to many domains including personal health records, regulatory investigation, and global supply chain. Applications that may potentially benefit from blockchain technology are those, which involve multiple parties across the different organization, each performing a subset of many steps needed to complete a given transaction and involve different technologies. In addition, security and trust is a major concern. Given this, a good candidate for blockchain technology is mortgage lending. The purpose of this paper is to prepare a model that identifies different elements that are needed when applying blockchain technology in the mortgage origination process. This paper uses a popular framework used in customer relationship management (CRM) that combines three constructs: People, Process and Technology to develop the intended model.

Keywords: Blockchain, mortgage origination, Digital Ledger Transaction (DLT).

A measurable approach for risk justification of explicit and tacit knowledge assessment

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Abstract

Knowledge has become a central organizing principle in society to the extent that knowledge management has become a mainstream activity in organizations. Nevertheless, knowledge-related risks remain relatively neglected in the risk management domain. Whilst knowledge reduces uncertainty and the associated risks, the increased knowledge intensity in organizations also represents a risk factor that has to be assessed. The paper describes and validates an organizational risk assessment approach that considers knowledge-related and knowledge management risks in an integrated manner. The approach makes it possible to calculate risk ratings in terms of vulnerability and likelihood for 50 threats to all activities and phases of the knowledge life cycle. These risk ratings are plotted against 24 potential risks in the human, organizational, and technical domains. To impress on management the significance of these knowledge-related risks, the risk ratings are transformed to approximated financial figures. The approach is applied to 10 Slovenian organizations, two of which are discussed in detail in the paper, to demonstrate that it can be successfully used in a wide variety of organizations. It is concluded that the approach offers a way to assess both knowledge-related and knowledge-management-related risks that the costs that individual risks potentially hold can be approximated, and that for a diversity of organizations mitigation strategies can be suggested for the identified risks.

Keywords: Knowledge management system, knowledge management system risks, knowledge risk assessment, knowledge risk classification.

An exploratory study of patient portal adoption and use in multiple clinical specialty departments

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Abstract

A patient portal is an effective vehicle for health information dissemination, a key component of knowledge management. The focus of this exploratory research study was to examine how demographic variables of gender and age as well as clinical specialty grouping affect patient portal adoption and use at a hospital in South Florida. We conducted a semi-structured interview focusing on portal adoption and usage with 768 patients at their scheduled appointments. Results showed that younger participants aged 20 to 30 used the portal significantly less than other age groups in the study. Patients between the ages of 41 and 60 use the portal the most. Findings suggest a need to expand patient portal functionality, portal education, and awareness to increase patient portal use. These preliminary findings will support a broader effort investigating patient portal use and barriers such as eHealth literacy skills.

Keywords: Informatics, eHealth, patient portal, knowledge management.

Integrating information literacy in IT courses: Information technology students' perceptions of embedded librarians

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Abstract

The purpose of this pilot study is to assess undergraduate Information Technology (IT) students' perception of benefits from having an embedded librarian in an online learning management system. The pilot research data were collected through a random sample (n=7) of volunteer focus group members after course completion. Similarly, to the literature methodology, the researcher shadowed a post-course focus group interview session to seek congruent literature themes: perception of comfort in experience, the perception of assignment confidence, and enhanced perception in research abilities. The data were first spiraled down using Quirkos qualitative analysis software and discussed to form a grounded theory. The pilot study concurs with the literature's three main construct: comfort, confidence, and recognition. Additionally, the study recognizes four additional themes: helpful, recognition of embedded librarians, interpersonal growth, and self-efficacy. Finally, the study acknowledges its limitations and recommendations for future research.

Keywords: Embedded librarian, course-integrated instruction, online instruction.

Learning analytics performance improvement design (LAPID) in higher education: Framework and concerns

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Abstract

Learning Analytics Dashboards (LAD) promise to disrupt the Higher Education (HE) teaching practice. Current LAD research portrays a near future of e-teaching, empowered with the ability to predict dropouts, to validate timely pedagogical interventions and to close the instructional design loop. These dashboards utilize machine learning, big data technologies, sophisticated artificial intelligence (AI) algorithms, and interactive visualization techniques. However, alongside with the desired impact, research is raising significant ethical concerns, context-specific limitations and difficulties to design multipurpose solutions. We revisit the practice of managing by the numbers and the theoretical origins of dashboards within management as a call to reevaluate the “datafication” of learning environments. More specifically, we highlight potential risks of using predictive dashboards as black boxes to instrumentalize and reduce learning and teaching to what we call “teaching by the numbers”. Instead, we suggest guidelines for teachers’ LAD design, that support the visual description of actual learning, based on teachers’ prescriptive pedagogical intent. We conclude with a new user-driven framework for future LAD research that supports a Learning Analytics Performance Improvement Design (LAPID).

Keywords: Learning Analytics (LA), Learning Analytics Dashboards (LAD), Learning Analytics Performance Improvement Design (LAPID), performance measures, e-teaching effectiveness, ethics and privacy in learning analytics, pedagogical intent.

Value added knowledge by prosumers in Poland and the UK specifically for service process stages

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Abstract

The purpose of the paper is to advance research on knowledge sharing by prosumers with enterprises and public organizations by examining and better understanding what knowledge about improving services, prosumers currently share and would like to share in future. The paper verifies a proposed theoretical framework by showing those service knowledge items that prosumers can share with enterprises and public organizations. The reported outcomes result from a survey that yielded responses by 171 prosumers from the United Kingdom and 783 from Poland. The research findings describe the differences between prosumers in Poland and the UK, both in their current knowledge sharing experiences and their desired future knowledge sharing. The analysis of the results shows that in general prosumers would like to share knowledge more widely than they are sharing currently. Furthermore, the findings show that Polish prosumers currently share knowledge marginally more than their counterparts in the UK. Should they be given the opportunity Poland-based prosumers would like to share knowledge more widely than their UK-based counterparts. In particular the results reveal that both in Poland and the UK, prosumers want to engage with enterprises in sharing knowledge relevant to the ordering process and the customer services process. This finding is relevant to enterprises that may like to engage prosumers in providing feedback about their service offerings.

Keywords: Consumer knowledge, prosumer, knowledge sharing, services development, Poland, UK.

The next generation of knowledge management: Implications for LIS educators and professionals

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Abstract

Knowledge management (KM) has been an evolving field over the past 35 years. We have seen the field emerge from developing the institutional memory of the organization to increasing innovation to building more internal and external effectiveness. The Library and Information Science (LIS) community has had a great role to play in KM, and as we reflect on the progress of KM over the years, we can learn from our past and project towards the future. The aim of the paper is to present the overview: what is the history, what is the situation now and what is the future of knowledge management in the next five years.

Keywords: Knowledge management (KM), information science, Library and Information Science (LIS), KM, education, KM technology, KM applications, KM policy.

Integrating organisational knowledge and employer brand management: A conceptual framework

[Research-in-Progress]

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Abstract

This article reports the findings of a systematic literature review in the two fields of research: the deep-rooted knowledge management and the steadily growing field of brand management (with particular attention to employer branding), and proposes a conceptual model linking those two areas. The proposed conceptual framework incorporates the two important dimensions of knowledge management, namely knowledge dissemination and learning organisation, and links them with the dimensions of employer brand management and brand performance.

This study brings several practical implications: 1) it enriches the application of traditional knowledge and brand management techniques; 2) it provides a framework for internal brand management in learning organisation; 3) it increases organisational understanding of how to engender aspired employee actions and; 4) it increases the importance of knowledge sharing and dissemination on the organisational brand management benefits that occur as a result of such efforts.

Keywords: Knowledge management, learning organisation, employer brand, brand performance.

How we teach digital literacy in formal education: The gap between teachers' perspectives and actual educational practices in the classroom

[Complete Research]

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Extended Abstract

The education systems are facing the challenge of developing digital literacy (DL) skills of students to prepare them for successful functioning in technology-enhanced environments. This study examines teachers' perceptions and practices for developing DL of students. The data were collected from semi-structured interviews and non-participant observations with 16 elementary school teachers (5th-6th graders), who integrate ICT in either one-on-one computing or whole-class technology model. The analysis was based on two conceptual models: the Five Core Competencies model (5C; Hwang et al., 2015) and Digital Literacy model (Eshet-Alkalai, 2012). The findings expressed four models of teaching DL with a different degree of centrality (Yondler et al., 2018): teacher as (1) a sage on the stage; (2) an opportunity creator; (3) a guide on the side; (4) a learning partner. However, teachers of all these types perceived themselves as innovators and aimed to develop DL of students. Best practices to promote DL were: student involvement in the learning process, collaboration, interpersonal interactions, and "assessment for learning". Among the range of DL suggested by the study frameworks, the data did not contain complex problems solving and real-time thinking skills. Moreover, it was found a gap between teachers' perceptions of their role in developing DL skills on the one hand, and the strategies they use in their classroom on the other hand. We discuss the implications of the findings for educational technology theory and practice.

Keywords: Digital literacy skills, core competencies, teacher perceptions, instructional practices and strategies, elementary school students, one-to-one computing, whole-class technology.

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Online self-regulated learning of ICT leaders in a professional development process

[Complete Research]

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Extended Abstract

Digital technologies provide opportunities for enhancing teaching, learning and professional development (PD) of educators. The growth in PD for educators relies on training courses, some of which can be learned online. E-learning and training require self-regulated learning skills. The revised Self-Regulated Learning Model (RSRLM), defines seven components of learning: 1. Motivation - the learner's inner desire to learn. 2. Engagement - learner's commitment to self-regulated learning process. 3. Forethought - actions such as planning and setting goals. 4. Performance - active usage of strategies required for self-regulated learning. 5. Reflection – retrospective thinking during and after the task. 6. Monitoring- conducting self-assessment throughout learning. 7. Management – organizing actions to ensure the occurrence of self-regulated learning. This study examined a PD course for ICT leaders in which face-to-face meetings were combined with learning in synchronous and/or asynchronous online environments (blended learning), while allowing online courses to be chosen from a course hive. The participants were 172 Israeli ICT school leaders who hold positions in the "Program for Adapting the Education System to the 21st Century". An open questionnaire collected the participants' reflections about themselves as self-regulated learners, and challenges and learning strategies during implementation in classrooms following the PD program. In addition, thirteen semi-structured interviews were conducted to expand understanding of self-regulated learning processes. The findings contained all seven components of the RSRLM model. Participants emphasized the importance of the following parameters relevant to both online and offline PD: time management, motivation, developing diverse learning strategies, creating a sense of commitment and competence, managing and monitoring. The ability to choose learning content met the participants' needs, such as learning from experience and examples, progress at a personal pace, and frequent communication with the lecturer. In addition, the findings showed the importance of the time that passed from the completion of the course to its implementation into the schools. Namely, in later interviews, the ICT leaders reported better integration into the practice of what they had learned during the courses.

Keywords: ICT leaders, self-regulated learning, e-training, professional development, choice in learning, synchronous and asynchronous online learning.

Research agenda to assess cybersecurity preparedness and risk management of Tuscan small to medium businesses

[Research-in-Progress]

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Extended Abstract

Cybersecurity is the mixture of information technology, organizational processes, and employees that enable assured operation to maintain the confidentiality, integrity, and availability of data. While cyber-attacks have been in the news on a daily basis, and are significantly growing, almost exclusively all reported cybersecurity incidents are of large national or multi-national organizations. Very little is known about the current cybersecurity preparedness of small to medium businesses (SMBs) and their current level of risk to cyber-attacks. Moreover, it is evident that owners and key decision makers of SMBs are not able to dedicate significant funds to develop business continuity as well as disaster recovery plan, while not fully understanding the risk associated with cyber-attack nor the impact it can have on their company's survival. Furthermore, majority of the developing countries' economies are driven by small to medium organizations. As a matter of fact, 99.7% of all organizations in the United States (US) are noted as SMBs, with near 50% of the total US Gross Domestic Product (GDP). Moreover, 99.9% of all Italian organizations are considered small to medium companies, while responsible for 58% of the total GDP of Italy. This proposed research study will include three phases to empirically assess cybersecurity preparedness and risk management level at Tuscan small to medium companies, while assessing the impact of training on improvement of current state. The first phase will include development of a mixed methods, quantitative and qualitative, instrument based on prior literature to measure organizational cybersecurity preparedness and risk management, while having it evaluated by a group of subject matter experts for internal and external validity. The second phase of this proposed research study will use a pilot group of Tuscan SMBs to measure their cybersecurity preparedness and risk management level, while adjustments to the mixed methods instrument will be done based on the results of this phase. Finally, the third phase of this research study will include a larger group of Tuscan SMBs where assessment will be done using the mix-method instrument before and few months after cybersecurity training is provided to measure the level of improvements the companies had post-training. Conclusions and recommendations for further research will be provided at the end of the study.

Keywords: Cybersecurity risk management, small companies cyber-attack risk, organizational preparedness, risk management in small to medium organizations.

Using natural language processing techniques to predict perceived achievements in Massive Online Open Courses

[Research-in-Progress]

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Extended Abstract

Massive Online Open Courses (MOOCs) are critiqued for their high dropout rates and low percentage of certificate earners (Reich et al., 2019). Henderikx et al. (2017) and Rabin et al. (2018) questioned the validity of these criteria for evaluating the success of this new form of lifelong learning. They claim that the success of lifelong learning in MOOCs should be evaluated not through traditional instructor-focused assessments, but rather through non-formal learner-centered assessments, such as the learner's self-evaluation. Perceived achievement (PA) is a self-evaluation measure in which learners themselves estimate their level of achievement following a knowledge construction process. It was found to be a reliable and valid self-assessment measure of learning outcomes (Ross, 2006). The goal of this study was to predict the learner-centered outcome measure, namely PA, by analyzing the learning process of the participants. We focus on ten main activities harvested from log files of 445 participants in a MOOC on English for academic purposes. A self-report post-course questionnaire was used to identify the learners' level of PA with a single item ranging from 0 to 10. Each participant was assigned into one of two groups – High PA or Low PA. We then used two natural language processing techniques: keyness and n-gram analyses, to examine the differences between the activities' saliency and sequential characteristics of the two groups. The results suggest that the learning processes of the high-PA group are more predictable and with less dispersion compared to the low-PA group. Those results can help to develop personalized learning environments encouraging students to learn according to their personal knowledge construction.

Keywords: Massive Open Online Course (MOOC), perceived achievements, keyness analysis, n-gram analysis, learning process.

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Using social network sites: Exploring relationship needs in Turkey and Poland samples

[Complete Research]

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Extended Abstract

Social network sites provide a tool to people to interact each other for satisfying their social and psychological needs. The Uses and Gratifications (U&G) Theory proposes that based on needs, wants or expectations communication behavior is goal-directed and purposeful. One of the key assumptions of U&G Theory is that people actively choose media that satisfy their needs. According to this assumption using social network sites (SNS), i.e., Facebook, WhatsApp, YouTube, Messenger, Instagram, etc. to develop a personal relationship is considered a need that is the focus of this research study. To understand the dynamics of the personal relationship, we have focused on the need to belong as a basic personal need, the motives of emotional disclosure and making contact as success factors for establishing a relationship, and the cultural value of collectivism for determining underlying beliefs or presumption of building relationships. With constructing a model that includes variables as the need to belong (independent), emotional disclosure and making contact (mediators respectively), and collectivism (moderator) we have tested a moderated multi-mediation model for determining their effects on using SNS in two different countries. The data were collected from 540 volunteered university students (290 from Turkey, 250 from Poland) with convenience sampling for testing hypothesized relations and interactions between variables. The results showed that emotional disclosure and making contact play as partial mediator roles respectively in the relationship between the need to belong and the intensity of using SNS with the moderator roles of collectivism in high and medium levels. Also, collectivism in medium and low levels play moderator roles in the relationship between the need to belong and the intensity of using SNS. Moreover, the sample from Turkey revealed the relationship between emotional disclosure and intensity of using SNS, and for the sample for Poland revealed the relationship between the need to belong and the intensity of using SNS that were moderated by collectivism.

Keywords: Social Network Sites, Need to Belong, Emotional Disclosure, Making Contact, Turkey, Poland

Individual antecedents of cybersecurity behaviors: An academic sample from Turkey

[Research-in-Progress]

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Extended Abstract

The purpose of this research is to explore the roles of technology knowledge, negative experience and risk awareness on cybersecurity behaviors. The increased accessibility to the Internet and the developments in the information and communication technologies lead to concerns about cybersecurity. The weakest link in the cybersecurity systems is the human factor as the end-user (Schultz, 2005). Therefore, it's critical to understand the antecedents of user's behaviors for decreasing the vast array of cyber threats. We have selected user's technical knowledge, negative experience, and risk awareness as individual beliefs in explaining the security behaviors through utilizing assumptions of Theory of Planned Behavior (Ajzen 1991). We have selected an academicians sample since they increasingly rely on technology-based information systems not only for teaching and learning purposes but also for collecting, following, distributing or storage of the all kind of data and information for the academic purposes. Because they use mainly online information systems as a greater part of their job (online articles, distance teaching, e-mail communication, etc.) they may prone to be a victim of cyber-attacks. Our research question is "What's the roles of technology knowledge, negative experience and risk awareness on cybersecurity behaviors". To answer this question, we have collected online data from 182 (48% female, 52% male) academicians (10% Prof., 17% Assoc. Prof., 31% Asst. Prof., 42% Res. Asst.) from different universities in Turkey. The survey questions have been prepared by authors for testing the individual antecedents of cybersecurity behaviors. Organizing and analyzing data is in progress for answering the research question by using regression analyses. We are expecting that technical knowledge, negative experiences and risk awareness increase the cybersecurity behaviors. Moreover, risk awareness play mediator roles in the relations between technology knowledge-cyber security behaviors and negative experiences-cyber security behaviors. The results will be obtained is significant for the academic environment where the balance must be found between academic freedom and cybersecurity challenges.

Keywords: Cyber security behaviors, Risk awareness, Technology knowledge, Negative experience, Academicians, Turkey

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Enriching audio databases with temporal information hidden in the acoustic signal

[Research-in-Progress]

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Extended Abstract

Audio information retrieval is an emerging field as users' needs for accurate search results are growing (Pradhan & Sharma, 2018), and as Media Assets Management (MAM) systems tackle with a massive amount of audio and video excerpts that need to be indexed. Previous research investigated the use of automatic speech recognition engine to search engine optimization (Silber-Varod, Winer, & Geri, 2016). However, conventional search engines cannot harness a potentially varied temporal information in videos, such as those exist in documentaries, for example. We believe existing techniques can be used to automatically tag a massive amount of cultural heritage videos with no (accurate) metadata concerning their temporal information. In this feasibility study, we investigate the possibility to carbon-dating (i.e., estimate the accurate period) a video, based on its acoustic signal, and by that, to offer an automatic enrichment of video databases, beyond the traditional manual meta-data. For this purpose, we use a collection of web media that combine present-days broadcasting with archive excerpts. For the current proof-of concept study, we chose broadcasts from 2010 that combine speech from 2010 and archive sections (with varied sounds, not necessarily speech) ranging from 1967-1973. The procedure included extraction of acoustic features, and clustering by k-mean methods, usually used for speaker recognition technology (Giannakopoulos and Pikrakis, 2014). We then compared the automatic results to a manual segmentation of the video into "new" or "old" sections. We succeeded in obtaining classification for 96% of video sections, using automatic technique of parsing the videos according to the two periods.

Keywords: Database Management Systems (DMS), Media Assets Management (MAM), metadata Information Retriever, Media archaeology, video, carbon dating.

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The ISO 30401 KMS standard: The promise and pitfalls of consensus based on principles rather than rules

[Research-in-Progress]

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Extended Abstract

Standardization has been a controversy in the knowledge management community since the movement for the certification of KM practitioners in the late 1990s. It took many years of debate and controversy around standardization before sufficient consensus made the ISO 30401 KMS standard of 2018 possible. This standard "sets requirements and provides guidelines for establishing, implementing, maintaining, reviewing and improving an effective management system for knowledge management in organizations" (ISO, 2018). The universal applicability of its requirements claimed by ISO 30401—that its requirements "are applicable to any organization, regardless of its type or size, or the products and services it provides" (ISO, 2018)—was precisely the stumbling block to consensus in the KM community for two decades.

Whilst the controversy did not completely disappear and many critical views remain, at least in the community driving for standardization, a critical mass of agreement has been reached. However, this sufficient consensus came at the price of trading the usual prescriptive "rules" of most ISO standards for "guidelines" and "principles".

This paper considers the promise and pitfalls of the interpretive ambiguity of a mindset guided by principles over rules against the background of the pluralist epistemology that is a defining feature of the field of knowledge management. It is argued that, whilst principles and guidelines promise flexibility and inclusivity that absorbs complexity and diversity better than rules and requirements, the concomitant pitfall is that far greater interpretive skill and contextual knowledge is required. Far from achieving a universal standard, different epistemic communities might diverge under this standards regime.

Furthermore, there is a danger of a double decoupling: Firstly, whilst auditing assumes rules and requirements these are often underspecified, leading to a familiar problem of mere compliance to what can be audited at the cost of a focus on that which really matters, but might be hard to measure. Secondly, a decoupling of the nature of organizational knowledge and the processes by which it is managed, where the ISO requirements and guidelines focus on *knowledge management*, instead of *knowledge* management.

Keywords: KM standard, KM certification, KM principles, KM requirements

References:

ISO (2018) *Knowledge management systems—requirements*—ISO 30401:2018 (Geneva: ISO).

Cooperation and competition in serious games: Is knowledge sharing a road to success?

[Research-in-Progress]

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Extended Abstract

When it comes to knowledge sharing in competitive situations, many people or corporations fear losing their advantage if they disclose their knowledge. As a result, they tend to withdraw from active participation in a group or they stop cooperating with their potential competitors. What happens in this sort of situation is that the positive effects stemming from learning or from the teaching and the sharing of knowledge are neglected. People or corporations focus on negative aspects, such as losing a first-mover position or losing other advantages, and they fail to recognize the pitfalls. The above also applies to the process of learning at a university: everyone takes their own individual courses and gets their own individual grade and degree at the end of the academic program. Students have to take their in-class examinations by themselves without any third party help during the actual examination. However, besides regular examinations, there are different forms of examinations, such as oral presentations and written assignments, which are sometimes undertaken in teams. In the case of a team presentation or team written assignment, cooperation is obviously mandatory. Nevertheless, students can also cooperate and form learning groups in the process of studying and preparing for any form of examination. In the study, the peer group consists of students of Business Administration. These are individuals who are aiming for management positions and who will be in charge of company departments or employees. To analyze whether the students already have a tendency to implement a knowledge-sharing-friendly environment in order to promote a specific knowledge-sharing-oriented corporate culture, or whether they are focusing on competition, including competition between employees is part of the research. As a framework, a specific course of study, which includes a serious competitive game and an oral team examination, is used to analyze the situation and to research students' behavior with regard to knowledge sharing. Do students actually cooperate in a competitive game, especially if there is an incentive for an individual to gain a top position at the end of the game? Only the top players receive an additional bonus for their overall grade of the course. While playing the game, thanks to anonymous game statistics players can see where exactly they are ranked at specific game phases. To verify potential cooperation between players, two sets are used. The first one includes the results of the game, decisions made in the game, the subgroup of the lecture, and the presentation team of students, as well as the presentation marks. These data are combined with the results of an additional empirical survey on the gaming behavior of the players. Besides the information about whether they cooperate or not, it will be determined whether cooperative players are more successful than non-cooperative ones during the game.

Keywords: E-learning, gamification, knowledge sharing, student behavior, decision making

Mobile apps: Privacy attitudes, knowledge, and user practices*[Complete Research]***Brien Twomey**, Texas Christian University, USA, brien.twomey@tcu.edu**Beata Jones**, Texas Christian University, USA, b.jones@tcu.edu**Extended Abstract**

As the world is undergoing a mobile revolution, the collection and sharing of customer personal data is how consumers pay for the use of free applications, when they click “accept” on the terms and conditions page. This study explores mobile app transgressions regarding the collection of users’ personal data and the end-users’ reactions to those transgressions. Specifically, the research examines the privacy attitudes, knowledge, and practices among 385 adult end-users in the U.S., and a possible disconnect between what they value, what they know, and what they do. This disconnect has been studied previously in the social media context and is known as the “privacy paradox.” The study specifically delves into how willing people are to give up their personal information to be able to use mobile applications and if they are even aware that their personal data are collected. The framework for the study uses both the Ajzen and Fishbein Theory of Reasoned Action and the Unified Theory of Acceptance and Use of Technology.

The analysis of the collected data from a convenience sample across various demographic variables identified some existence of disconnects between users’ attitudes, knowledge, and practices regarding their personal information use by mobile applications. The study partially confirmed the existence of the “privacy paradox” within the mobile app context. We found disconnect between attitude and knowledge, and attitude and practice. Those who saw privacy as being important to them did not necessarily agree or disagree with the statement that they know what personally identifiable information about them each of their mobile apps collects. Additionally, while the users valued privacy when using mobile apps, they hardly ever read the privacy policy when downloading the apps or knew how to use privacy controls on their smart phones. We also found that the younger the respondents, the more willing they were to give up privacy of their personal data in exchange for increased convenience and functionality from their downloaded apps, whereas the older the respondents, the more willing they were to pay money for a mobile app in order to remain anonymous while using it. We found no correlation between education level completed nor an educational field in IT and respondents agreeing with the statement “Every time I download a mobile app, I read the privacy policy in its entirety”. This is a bit concerning, as it would follow that those who are more educated, especially in the IT field, would employ this best practice. The study concludes with a discussion of a future research agenda.

Keywords: Mobile app privacy, Privacy attitudes, Privacy knowledge, Privacy practices, Privacy paradox.

Cybersecurity challenges associated with wearable and implantable medical devices: Initial empirical results

[Complete Research]

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Extended Abstract

Wearable and implantable devices, like other “smart” digital devices, can be vulnerable to cybersecurity breaches, potentially impacting the safety and effectiveness of the devices. These devices are small medical appliances embedded inside or attached to the human body. These wearable medical devices are connected to the Internet, hospital networks, and other medical devices. Subsequently, such medical devices enable continuous and automatic management of health condition. Some examples include implantable cardiac pacemaker, attached continuous glucose monitoring (glucose sensor) system, insulin pump, and morphine infusion pump. Incidents of cybersecurity attacks have been documented by the Food and Drug Administration (FDA) since 2013. For example, in 2017 FDA issued an advisory about a cybersecurity vulnerability and flaws in Medtronic implantable cardiac pacemakers. In 2018 the FDA issues a second advisory about cybersecurity vulnerabilities identified in Abbott’s implantable cardiac device pumps. FDA also issued advisory about cybersecurity vulnerabilities about Medtronic MiniMed Paradigm insulin pump. Fortunately as of now, no patients’ death or injuries have been documented. In this innovative research, we are seeking to investigate the awareness of cybersecurity threats, as well as knowledge sharing among stakeholders, including patients, healthcare professionals, and biomedical engineering students working on developing medical devices. Based on feedback collected from 17 Subject Matter Expert (SMEs) using the Delphi technique, we revised the initial instrument. Following the final results from the participants, we plan to analyze and develop a report that will also be shared with the FDA and key device manufacturers.

Keywords: Wearable and implantable medical devices, cybersecurity breach, experts panel.

Uncovering social intelligence: Suggestions for knowledge networks

[Research-in-Progress]

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Extended Abstract

Social networks and the ability for organizational actors to navigate and grow these networks hold much promise for knowledge management applications. Highly connected people may act as boundary-spanners or knowledge-brokers between different groups, organizations, interfaces, but those same individuals can also act as gatekeepers that control flows of knowledge. Thus, the impact of social networks on knowledge flows may vary depending on organizational contexts.

Social network analysis provides conceptual and practical tools for analyzing these networks. Results from this field should temper the expectations held by knowledge management practitioners, because many people hold a hopelessly inaccurate view about their social relations (Bernard, Killworth, & Sailer, 1979). Some scholars used these findings as an opportunity (Kilduff & Krackhardt, 1994) to investigate "social intelligence": the ability to assess one's social relations accurately. People with social intelligence benefit the organization since they help others calibrate their social networks. The challenge is in identifying these individuals.

The paper outlines the theoretical and methodological considerations for knowledge management practitioners to investigate social intelligence in organizations. It describes a step-by-step method for uncovering the informal social relations at an organization that allows the discovering of key holders of social intelligence. A survey captures data about all relevant relations between all members of a focus population (such as a project team). This data requires specific data-processing methods; the paper discusses various options and methods for particular contexts.

The paper outlines the establishment of the criterion network and, thereafter, the described measures and scales for social intelligence and considers possible applications with the help of three cases before concluding with suggestions for practical applications.

Keywords: Social network analysis, social intelligence, boundary-spanning, research methods

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Business leaders' resistance to collaborate with law enforcement agencies in protecting their firms from cyber-attacks

[Research-in-Progress]

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Extended Abstract

Recent security breaches and compelling evidence indicate that the world is in an information age of security and privacy crisis. Government cannot prevent cybersecurity incidents nor can it overcome the immediate cybersecurity threats without strengthening the relations and partnerships with the private sector. Wood (2016) argued that the cybersecurity “game has recently changed and nation states are now actively engaged in cyber-warfare, and both corporations and government agencies are at significant risk” (p. 1). This research study will address the problem of business leaders' resistance and fear to share their knowledge of cyber-attacks with law enforcement agencies. Moreover, the goal is to identify the significance of cybersecurity knowledge sharing to protect not only private industry, but also local, regional, and global governments' data as well as intellectual property.

The main goal of this qualitative phenomenological study is to explore the lived experiences, perceptions, and attitudes of about 30 professionals (i.e., Chief Information Officer, Chief Information Security Officer, US Secret Service, & Federal Bureau of Investigation) working in the area of cybersecurity within the Southeastern region of the United States (US). Applying the Social Norm, Collaboration, Leadership, and Social Exchange theories, this study will investigate and assess the factors perceived to be contributors or barriers to collaborate with law enforcement agencies in the context of cybersecurity in order to protect a firm's intellectual property and data from cyber-attacks. Next, this research-in-progress will conduct a pilot study with a small group representing the target population. The results of the pilot study will ensure the interview questionnaire addresses the expert identified issues and elicits the desired responses before continuing with the data collection.

Keywords: Cybersecurity, knowledge sharing, phenomenology study, perceived risk, psychological risk, cyber-attacks, corporate social responsibility.

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Wood, C. C. (2016, June 8). *Toto, I've got a feeling that we are not in Kansas anymore*. [web log comment] Retrieved from: <http://www.infosecurityinfrastructure.com/blog/2016/6/8/toto-ive-got-a-feeling-that-were-not-in-kansas-anymore>

Information security knowledge in health professionals: Necessary skills among these experts

[Research-in-Progress]

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Extended Abstract

Information security knowledge and awareness in the healthcare sector is an issue of rising importance (Appari & Johnson, 2010). Healthcare students must be skilled in the use and application of information technology (IT), specifically in the basics of information security. Basic courses are necessary not only for students of computer sciences or information system majors, they are also needed in other academic programs that prepare future professionals that will manage sensitive data. There are laws and regulations that expose the responsibility of the privacy and security when managing the information of the patients. An example is the Health Insurance Portability and Accountability Act of 1996, a United States legislation presenting the obligation that health professionals have for the security of the information of the patients. Humaidi and Balakrishnan (2014) stated that “health professionals might have different perceptions towards complying with information security policies, thus, it is important for researchers to dig out more on the issues” (p. 317). This research study will measure the knowledge of information security among a group of health care providers, specifically the dental professionals. A survey based on information security questionnaire will be conducted.

Keywords: Security awareness, information security, health professionals, knowledge, dental professionals

References:

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Measuring the performance of collaborative question-answering services

[Complete Research]

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Extended Abstract

Community question-answering (CQA) platforms are a major source of information on the web. Popular platforms, such as Yahoo! Answers, Quora and Stack Exchange, contain hundreds of millions of questions and answers to a variety of topics in a variety of domains. Despite some differences in their goals and specific mechanisms and design, they all share the same basic model. In all CQA services, users post questions, others provide answers, and both questions and answers comprise the repository. This repository is open for consumption to all users via the platforms' own as well as general-purpose search engines. There is no charge for asking questions and there is no monetary reward for providing answers. CQA quality control is based on a crowd voting mechanism.

Open collaborative knowledge systems such as CQA platforms depend on voluntary user contributions. In recent years, there is evidence that several such systems are experiencing content quantity and quality issues. This includes Wikipedia and two leading CQA platforms: Yahoo! Answers and Stack Exchange – the focus of the present study. Several recent studies show that with time, collaborative knowledge systems encounter issues such as increased bureaucracy, social conflicts, and low-quality content. Sustainability – a major issue for any information system, including open collaborative information platforms – is thus pivotal for the future of CQA platforms. These platforms are relatively recent, use novel contribution and management models and mechanisms, and build on non-monetary motivations. Hence, their ability to sustain contributors and quality contributions is in need of attention and monitoring. Reliable metrics and indices are required to study CQA service performance, dynamics and sustainability. Such metrics, whose development is the goal of the present study, enable both comparative studies across similar services (e.g. different communities within Stack Exchange) and longitudinal research. This paper presents a novel, practical and parsimonious method for building metrics and indices for measuring CQA platforms' various performance aspects. By now, enough data have been gathered to allow for both longitudinal and comparative performance analysis. The proposed method and metrics are validated and demonstrated in five Stack Exchange communities. In the process, this paper provides another contribution by rigorously analyzing the reliability of votes as quality indicators. We find that votes are reliable quality indicators for Stack Exchange.

Keywords: Community question-answering, performance, measurements, votes, churn, survival, stack exchange.

Cyber security development as an enabler for economic development

[Research-in-Progress]

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Extended Abstract

South Africa has a rather unique history that in many ways is different from many countries. While there is a general acknowledgement of the importance of having a cyber security capability, the reality is that the country is still battling with some of the basic needs for its citizens. These are termed the triple challenges: poverty, unemployment and inequality. The triple challenges are government priorities and they make it difficult for the government to give cyber security the necessary attention because it may be seen as a non-essential. It is not part of the service delivery that the government is working towards. The paper will look at what may need to be done to strike a balance between the basic needs of a society and the efforts that have to be put into developing a cyber security capability. This will only be accomplished by determining the necessary balance, then working towards a framework for countries that are within the same category as South Africa. The current frameworks do not cater for the contexts faced by governments in developing or emerging countries given the inherent socio-economic challenges these countries face. The paper will evaluate the current frameworks aimed at these countries like South Africa, and then propose a framework that will incorporate cyber security development as an enabler to solving them together with the triple challenges.

Keywords: Developing country cybersecurity, national cybersecurity framework, home-grown cyber capability.

Family business and information management

[Research-in-Progress]

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Extended Abstract

Family businesses constitute a significant majority of firms in many economies, with China, the US, and India accounting for the largest number of family-owned firms. Given that Information Technology (IT) based information management (IM) has significant beneficial implications for business models, firm strategies, and performance, it is plausible that family businesses differ from other firms in their level of investment in IM. The nature of ownership and top management team are two major sources of diversity among firms. These reflect the desire and ability to impact a firm's strategic behavior respectively. While the nature of firm ownership influences the primary desire underlying strategic decisions, the ability to exercise control over the firm's decisions and actions accrues from participation in the top management team of the firm. Also, family owners present in the top management team can exercise oversight in the investment decisions of the firm. However, the presence of professionals in the top management team can help firms gain access to best practices and lessons learned from across the world. Research has also suggested that top management plays a significant role in IT investment decisions. In addition, chief executive officers who receive a larger proportion of long-term compensation are more likely to invest in IT. However, it is important to examine the combined role of the nature of ownership and top management team in the strategic decision of investment in IM. Thus, this study investigates three research questions: (1) How does family owned business influence IM investment? (2) How does the presence of family owners in the top management team affect this relationship? (3) How does the presence of professionals in the top management team affect this relationship? We use the socioemotional wealth perspective and microfoundations theory to construct the theoretical foundation of this study. We hypothesize that family ownership is negatively associated with investment in IM. Though they differ in their risk-taking propensity and management styles, the presence of family-owners and professionals in the top management team has a similar mitigating effect on this propensity of family-owned firms, albeit through different causal mechanisms. We offer three hypotheses that elaborate upon these arguments. To corroborate our theory, we constructed a unique dataset consisting of secondary data from all publicly listed firms in India. Analysis of our unbalanced panel of more than 2000 firms over a period of 11 years and found support for our primary hypotheses of a negative relationship between family owned firms and IM investment. The family owned business owner's ability, reflected through their presence in the top management team, weakens this relationship. Surprisingly, we found that the presence of professionals in the top management team has no effect on the relationship of family ownership on IM investment.

Keywords: Family entrepreneurship, information management, risk taking, and management styles.

Virtual and augmented reality business case challenge with data visualization and presentation for graduate students

[Research-in-Progress]

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Extended Abstract

The purpose of the presentation is to showcase a unique use of the augmented reality/virtual reality (AR/VR) technology in teaching business case and data analytics to students pursuing masters in business administration (MBA) in the USA. AR/VR is a \$27 billion industry estimated to grow to \$209 billion by 2022. As Big Data becomes the basis of business decision-making, AR/VR technology can increase the limits of human perception and can make complex data more intuitive to understand. Together with the Glimpse Group, a leading company in the AR/VR space in New York City, the authors developed an experience for MBA students to perform multi-dimensional data visualization and mixed-reality presentations. The students in teams were given a business case to represent a marketing department of a small AR/VR firm. Their assignment was first to identify an athlete from an assigned sports league that the students' firm should contract to endorse the company's AR/VR products. The second part of the assignment required the teams to record their findings in a mixed reality presentation to persuade the CEO of the recommended athlete.

The experience combined three unique components to create a singular and multi-faceted MBA experience. First, using a proprietary multi-dimensional DataView analytics platform, students had to cull through a large dataset to identify a stand-out player to recommend to their firm's CEO. Second, students recorded their presentations with their findings in front of green screens and 3D VR cameras. Third, their recordings were used to create a VR science fair which included holograms of the teams, their respective data visualizations, and recordings of their presentations. This component also included a voting mechanism for the business case winning team. This was one of the first implementations of AR/VR in higher education settings that offered students a unique hands-on exposure to the emerging technology, introduction to the industry, multi-dimensional data analysis, immersive visualization techniques, mixed-reality presentation, and virtual voting experience. This initiative also contributed to practice and theory, where it inspired students to infuse AR/VR applications in their workplace and ignited organizational scholars to embrace AR/VR modality as new research methods.

Keywords: Virtual reality, augmented reality, data analytics, data visualization, presentation, business case, sports data, green space, mixed-reality.

Demographic sustainability and knowledge management

[Research-in-Progress]

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Extended Abstract

Being linked to the person, knowledge has an auto-expansion quality. Machinery and information are depended on the human factor. Knowledge management is connected with economic and demographic policies. Regarding this, it is vital to optimize demographic structure. Public governance should provide some framework, persuading the agents to invest into intellectual capital, regarding the objective of a solid increase in welfare.

This paper is aimed to examine the interdependencies between the economic subjects in the context of demographic sustainability. The latter can be defined as the society's ability to support and restore its social structure, regarding a set of significant parameters, including the economic activity level as well as educational, professional and competence training; that optimizes the proportions of intellectual and physical capital, provides intensification of production, and increases the population's welfare.

The knowledge management as an ensuring mechanism for demographic sustainability has not been evaluated yet. The economic policy enabling to induce the intellectual resources in order to provide the institutional background for demographic sustainability and output growth should be defined and performed. Systemic and dialectical methods were used. Stochastic modeling was applied to determine the interconnections between the knowledge characteristics, demographic sustainability, and economic growth. Empirical data was provided by the World Bank, International Monetary Fund (IMF), European Statistical Office, etc. Demographic sustainability optimizes the intellectual-to-physical capital ratio and increases the life quality. The managerial tasks of knowledge formation for economic agents should be set properly in order to maintain the optimal demographic structure and to maximize the output as well. Knowledge should be transformed into a powerful source of endogenous economic growth in the long-run.

Keywords: Demographic sustainability, endogenous economic growth, intellectual resource, human capital, public policy, knowledge management.

The awareness and approach to corporate social responsibility among students from Georgia

[Research-in-Progress]

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Extended Abstract

Corporate Social Responsibility (CSR) is a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis. It includes the economic, legal, ethical, and discretionary expectations that society has of organizations. CSR essentially addresses the set of operations that an organization conducts for the benefit of society. Usually, organizations begin to practice its principles voluntarily to achieve a clear competitive advantage and stimulate creative solutions. The aim of this research was to check the awareness and approach to CSR among students. The research was done from January to March 2019, among 125 students (males & females), who are employed. This research was conducted at the Economics and Law Faculties at the Tbilisi State University, Ilia State University, Georgian Technical University and International Black Sea University in Tbilisi. The survey instrument was translated from English to Georgian language and administered as the sample of convenience. The results of the survey allow measuring the awareness and the attitudes to CSR among currently working students. Future research could develop country-specific indicators for assessing the awareness and approach to CSR. Also, long-term studies are needed to observe how CSR has changed over time in organizations or countries.

Keywords: Corporate Social Responsibility (CSR), millennials, management.