Proceedings
of the
9th International Conference on
Intellectual Capital, Knowledge
Management & Organisational
Learning

The Universidad Del Rosario and the
Universidad Jorge Tadeo Lozano
Bogotá, Colombia

18-19 October 2012

Edited by
Fernando Chaparro
Universidad Del Rosario, Bogotá
Colombia
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Preface

These proceedings represent the work of researchers participating in the 9th International Conference on Intellectual Capital, Knowledge Management & Organisational Learning – ICICKM 2012, which this year is co-hosted by the Universidad del Rosario and the Universidad Jorge Tadeo Lozano, Bogotá, Colombia. The Conference Co Chairs are Dr Cecilia María Vélez White from the Universidad Jorge Tadeo Lozano and Dr Hans Peter Knudsen from the Universidad del Rosario, Bogotá, Colombia. The Conference sessions are being held in the Universidad Jorge Tadeo Lozano and the Conference dinner will be held in the Universidad del Rosario.

The conference will be opened with a keynote from Dr. Roberto D. Sainz, Director of Strategic Management of EMBRAPA in Brazil. Roberto will address the topic of Building a Knowledge Management Model at Brazil’s Embrapa (Brazilian Agricultural Research Corporation): Towards a Knowledge-Based View of Organizations.

The ICICKM Conference constitutes a valuable platform for individuals to present their research findings, display their work in progress and discuss conceptual advances in many different branches of intellectual capital, knowledge management and organisational learning. At the same time, it provides an important opportunity for members of the KM community to come together with peers, share knowledge and exchange ideas. ICICKM has evolved and developed over the past nine years, and the range of papers accepted in this year’s conference ensures an interesting two-day event.

Following an initial submission of 112 abstracts that have undergone a double blind peer review process, 38 research papers, 3 PhD research papers, 1 work-in-progress papers and 3 non-academic papers are published in the ICICKM 2012 Conference Proceedings, representing work from Australia, Brazil, Canada, Chile, Colombia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Indonesia, Iran, New Zealand, North Cyprus, Norway, Romania, Slovakia South Africa, Spain, Turkey and the USA.

I hope that you have an enjoyable conference.
Fernando Chaparro
Programme Chair
October 2012
Conference Committee

Conference Executive

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Cecilia María Vélez White, Universidad Jorge Tadeo Lozano, Colombia
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Mohamed Rabhi, SABIC Technology and Innovation, Riyadh, Saudi Arabia

Conference Committee

The conference programme committee consists of key people in the intellectual capital, knowledge management and organisational learning communities; the list includes leading academics, researchers, and practitioners from around the world. The following people have confirmed their participation:

MohdHelmy Abd Wahab (Universiti Tun Hussein Onn Malaysia, Batu Pahat, Malaysia); Marie-Helene Abel (Compiègne University of Technology, France); Maria-Madela Abrudan (University of Oradea, faculty of Economics, Romania); Bulent Acma (Anadolu University, Turkey); Faisal Ahmed (Associate Director, CUTS International, India); Ruth Alas (Estonian Business School, Tallin, Estonia); Joao Pedro Albino (UNESP, Brazil); Mulhim Al-Doori (American University in Dubai, United Arab Emirates); Tahseen Al-
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Biographies

Conference Co-Chair

Dr Cecilia María Vélez White the new Rector of the Jorge Tadeo Lozano University, is an Economist from Universidad Jorge Tadeo Lozano in Bogotá and Universidad de Antioquia, in Medellín. A former Minister of Education of Colombia, she has proposed new challenges, like aiming at improving quality, coverage and the enhancement of students’ skills. One of her priorities in her new capacity is internationalization. In this field, she believes in the importance of promoting joint research projects with foreign universities and to stimulate the exchange of teachers and students.

Dr Hans-Peter-Knudsen is currently the Rector of the Universidad del Rosario, elected on November 18, 2002. He graduated from the Faculty of Business Administration from Rosario University, where he also completed the Specialization in University Teaching and studied in Renewal of Research Universities in the MIT (Massachusetts Institute of Technology) and University Management at Harvard University Management and the Inter-American Universities Organization (Quebec and Santiago de Chile).

Programme Chair

Dr Fernando Chaparro is the Director of the Knowledge Management and Innovation Center of the University del Rosario in Bogotá, Colombia. He holds an M.A. and Ph.D. degrees in industrial sociology from the University of Princeton (N.J., USA), having done his undergraduate studies (Licence) in rural sociology in the University of Louvain in Belgium. Fernando has been Director General of COLCIENCIAS, Regional Director of IDRC (Canada) for Latin America and the Caribbean, Director of CORPOICA (Colombian Corporation of Agricultural Research) and Executive Secretary of the Global Forum on Agricultural Research (GFAR), based in the FAO Headquarters in Rome, Italy. His research field is in KM in research institutions and as a tool in the context of innovation strategies.
Mini Track Chairs

**Dr Joao Pedro Albino** gained his Ph.D. in Business Administration, Quantitative Methods and Informatics in 1999. He did his Postdoctoral research at FEA-USP (2008) in Innovation and Information Technology Management and a Post-doctorate at the University of Aveiro, Portugal (2006-2007) in Knowledge Management. He is currently Associate Professor in the School of Science, Campus Bauru, UNESP. Has experience in Information Systems and Industrial Engineering, Knowledge Management, specialising in Knowledge intensive business services, Management Information Technology (IT), Management Information Systems and Groupware.

**Dr. Bob Barrett** lives in the United States. He is a professor in the School of Business with the American Public University, and he also teaches for the American Military University. He teaches and does research in the fields of strategic management, online education, disability, intellectual capital and knowledge management. He has been working in the consulting field for the past 20 years by advising clients on strategic and knowledge management practices, as well as offering training and education plans of action and strategies.

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Learning Organisation in Estonian Organisations

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Abstract: The aim of the current article is to explore how implementing the concept of learning organisation (LO) impacted organisations in Estonia. Results indicated that 54% of 204 organisations studied had implemented LO. This group of companies, which had introduced LO, showed differences in employee motivation, information sharing and displayed better results in describing processes. Using LO lead to focusing on the following areas of development: organisational culture, strategic management, public relations, human resource management and innovation.

Keywords: organisational learning, motivation, informing, processes, Estonia

Organizational Knowledge and Organizational Performance: A Dynamic Relationship

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Abstract: The influence of variables related to knowledge (knowledge management, stocks of knowledge, organizational learning) on organizational performance, has been the subject of numerous studies. It has not been the case of the influence of the performance itself on these variables. It should then be asked, if organizational performance is just a result of these variables, or if it, in turn, influences them. If so, how this interaction occurs and what its dynamic behavior is. There are few studies exploring this relationship, although several authors suggest a relationship of mutual interaction between learning and performance, and that has raised the importance of considering performance as an endogenous variable (not just as a dependent one) within models formulated in strategic management research in general, and particularly in organizational learning research. Scarcity of research on the dynamic relationship between learning, knowledge and performance, despite its obvious relevance, could be justified in part by the methodological difficulties that longitudinal studies en-
tail and, partly, by the high complexity involved in developing formal models capable of describing this relationship. To cope with these difficulties, several authors have used simulation models as a methodological proposal that allows, usually based on secondary data, development and verification of theory, and makes it possible the formulation of complex models involving, as in the case of this research, the integration of diverse but complementary theoretical perspectives. Within the existing simulation methods we have chosen the system dynamics approach in part because of the use it makes of the concept of stocks and flows for describing the evolution of strategic assets, as knowledge, and in part because it is the most suitable one for studying the behavior of systems with high dynamic and causal complexity. In this document we formulate a conceptual model that links, dynamically, organizational learning, knowledge and performance and we intend, based on related academic literature, to develop a simulation model that allows the application of a longitudinal study. The model made use of the prospect theory to explain how decision makers determine to increase, maintain or finally get out of investments in intellectual capital, founding these decisions in their perception of financial results as gains or losses, taking their own expectations of what the behavior of these results over time should be (managerial dynamic hypothesis), as the reference point for labeling a result as a gain or as a loss. Investments in intellectual capital determine the level of stocks of knowledge which, in turn, relates to the financial performance through the innovation capability of the firm as the mediator variable. Results of simulations using a simple linear managerial dynamic hypothesis and a more complex non-linear one are shown, and conclusions, based on these results, are formulated.

Keywords: knowledge stocks, organizational performance, system dynamics, organizational knowledge, prospect theory, simulation
On a Methodology for Measuring Innovation in Agricultural Firms

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Abstract: Measuring innovation is a notoriously difficult task. Agricultural firms present additional complications due to the uncertainties linked to the sector. In this paper we propose a methodology for measuring innovation in agricultural firms, based on two main tools. The first one is the Innovation Matrix (IM), an approach to a structured catalogue of the current state of technology in the agricultural subsector under study. IM allows different views, according to diverse organization criteria, such as Oslo Manual, knowledge areas and subjects, agricultural paradigms, etc. IM is built upon an innovation survey and includes information about the quality of innovation, in particular in terms of its place on the technological spectrum of the subsector (technological level). IM appears to be an instrument capable of tracing the diffusion of technologies and innovations across firms, subsectors and territories. This feature will allow us to monitor changes in firm-based innovation processes through time. The second tool is the Innovation Index (II), a single number that combines information about the technological level and frequency of the observed innovations. The basic idea of II is to assign higher values to firms that implement either less frequent or comparatively advanced innovations, relatively to the ones implemented by its competitors within the subsector. Since II is always a real non-negative number, it is possible to use OLS estimation procedures to enquire about the factors driving innovation processes in agricultural firms. In fact, we also present the results of the application of this methodology to four agricultural subsectors in Colombia, focusing on the determination of the factors that drive innovation on each of them. Although in general those factors are subsector-specific, there are still some general stylized facts for the whole agricultural sector. The main consequence of this finding is that innovation policy design for the agricultural sector must take into account the existence of both sectorial (common) and subsector (specific) factors.

Keywords: innovation matrix, innovation index, measure of innovation, agricultural firms, innovation drivers
Organizational Capital: Using Learning to Create Best Practices as a Strategic Tool

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Abstract: While formal and informal learning are evident in many organizations, some companies are starting to recognize the importance of both types of learning in terms of creating and developing more innovative ways and strategies to help both human capital and organizational capital. The Free Library (2011) acknowledged that knowledge held by individuals helps to form what we know as human capital, and social capital is the “collective exchange” of knowledge between people (workers). However, what do organizations really own since they do not own their workers, but rather they hire them to work for them? This leads to yet another area for examination towards learning more about organizations, especially learning organization, and how they use their institutional memory, knowledge, and experiences which are formally or informally learned, shared, or documented as part of their company’s knowledge management. This type of information created, maintained, and stored can be found in the processes, procedures, policies, organizational documents, and other organizational documents that comprise what is called organizational capital. The organizational capital is sometimes that is tangible and owned by the organization and can be helpful to the organization and others. Thus, this leads us to explore and examine how organizations can used organizational capital in a learning organization, whether formally or informally, to best suit their current and future training needs.

Keywords: organizational capital, best practices, strategies, online learning
Challenges and Opportunities: Designing and Delivering a 21st Century Knowledge Management Education Program

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Abstract. In 2001 Kent State University established a graduate level program that granted a Master of Science degree in Information Architecture and Knowledge Management. The Knowledge Management concentration was a cornerstone of that degree program. The Knowledge Management concentration has sustained and thrived over the past ten years, though the path has not always been easy or clear. This case study describes the challenges encountered and the solutions developed over the past ten years. The case study discusses nineteen challenges and their solutions, in hopes that other institutions may benefit from Kent State University’s lessons learned and successes.

Keywords: knowledge management education, knowledge management curriculum, course design, experiential learning, student learning models, knowledge management faculty credentials

The Gordian Knot of the Intellectual Capital of Universities

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Abstract: The purpose of this paper is to demonstrate that the Gordian Knot of the intellectual capital of the universities is the structural capital. This idea comes from a new perspective on the intellectual capital structure and on the relative importance of each component of it, i.e. human capital, structural capital and relational capital. Many authors consider that the human capital is the most important and by far the dominant component of the intellectual capital of the universities. Our research based on the new concept of organizational intellectual capital integrators showed that a university may have a great potential of the intellectual capital
based on the human capital component, and yet not to perform competitively due to the weak integrators and stiff structural capital. In our view, an integrator is a powerful field of forces capable of combining two or more elements into a new entity, based on interdependence and synergy. These elements may have a physical or virtual nature, and they must possess the capacity of interacting in a controlled way. The interdependence property is necessary for combining all elements into a system. The synergy property makes it possible to generate an extra energy or power from the working system. It makes the difference between a linear system and a nonlinear one. The Gordian Knot of the intellectual capital of universities is the structural capital. Only understanding the nature and the complexity of the structural capital we will be able to understand the full potential of the intellectual capital metaphor. Thus, the structural capital is the key component of the university intellectual capital and it is strongly related to the concepts of university governance and university autonomy. This paper is based on a conceptual research and on a solid experience one of the authors has got in the legislation and management of the university system of Romania, as a former General Director for Higher Education in the Ministry of Education and Research.

**Keywords**: intellectual capital, human capital, structural capital, relationship capital, integrators

### The Value of Human Resources in Intellectual Capital and Knowledge Management

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**Abstract**: It is recognised and accepted by business leaders and academic scholars alike that people (human resources) are an organisation’s most critical assets in the contemporary knowledge economy. While this may be true, this rhetoric is often not matched by the reality of employment practices related to this important yet ambiguous resource. In times of bottom line financial pressures, it is this resource that is often the first to be marginalised because of the dominance of the cost as opposed to the value mentality of human resources in conventional financial accounting.
measures. The central issue is that knowledge, ability, and motivation (which are essential components of employee value) and their interrelationships with relational and structural components of intellectual capital are intangible. Therefore, they are difficult to measure in conventional business metric in terms that are readily understood by and acceptable to major external and internal business stakeholders. The purpose of this paper is to review the current situation with respect to the question of people as valuable resources in the intellectual capital and knowledge management paradigms. Our contention is that human resources are a pivot to the success or otherwise of modern business enterprises, irrespective of their size. The empirical basis of this paper is achieved by presenting research data made by the authors on the relationship between psychosocial variables and human resource practices on behaviours associated with intellectual capital and knowledge management (ICKM). A positive relationship has been found between attitudes, subjective norms, and self-efficacy on knowledge sharing behaviour. Besides this, a positive correlation was found between the concept of psychological capital and knowledge sharing. Preliminary results will be also presented on a current research study on the influence of perceived organizational support and knowledge sharing. With respect to human resource practices, the paper includes a review of research undertaken on management’s perception on the importance of measuring human resources, some organisations’ attempts to achieve this, and the current barriers towards the measurement of value. Current research on the relationship of knowledge sharing and human resource practices will also be presented. The paper concludes with a discussion on the authors’ observations of the value of human resources in the current state of the theoretical and practical considerations of intellectual capital and knowledge management, and their suggestions on a way forward in this developing area of ICKM.

**Keywords**: human capital, human resource value measurement, intangible assets, knowledge sharing, psychological capital
The Internationalization of Micro and Small Companies From Knowledge-Management Standpoint: A Multiple Case Study in Brazil

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Abstract: The paper explores the process of internationalization of micro and small companies from the perspective of knowledge. It consists of an investigation of the contributions of a knowledge-based approach to the internationalization process of micro and small sized (MSEs) firms, and how such knowledge manifests itself in the daily life of these firms. Knowledge is considered a strategic factor that promotes both the insertion and permanence of companies in the international market, specially regarding the reality of micro and small enterprises in Brazil. The coherence of this approach lies upon the usually limited resources available to MSEs, urging them to compensate their lack of tangible resources through the use of intangibles resources. Therefore knowledge represents a significant advantage for organizations that operate in the international market, mainly because it takes into account geographic scope, cultural aspects, operational costs and the risks involved in making highly complex decisions. Hence, the study of internationalization from the perspective of knowledge is a timely occurrence, given its potential to generate tangible contributions to the reality of companies and their international operations. Our research is exploratory in nature since it seeks to comprehend the potential roles of knowledge factors on the internationalization process of MSEs. For that purpose, we have conducted multiple case studies within three companies from the clothing segment of the Federal District – Brazil as the basis for applying and testing the knowledge-based model of MSEs’ internationalization, developed and proposed by Mejri and Umemoto (2010). As a result, it was confirmed that in fact there are other knowledge factors, beyond marketing knowledge, that contribute to the effectiveness of results in the internationalization process of MSEs. These factors are associated to a more holistic and integrated perspective of knowledge, where the results are linked to combinations of other kinds, or dimensions, of knowledge. Thus, we observed that different knowledge factors do strengthen, in a complex and integrated fashion, the insertion and permanence of Brazilian MSEs in the international market.

Keywords: internationalization, knowledge, micro & small enterprises, model, application, multiple case study
Theoretical Base for Developing a Holistic Knowledge Management Strategy for Effective Learning in Organizations

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Abstract: Organizations in today’s economy are realizing the importance of knowledge as a strategic resource for competitive advantage thereby necessitating sound knowledge management initiatives. It therefore becomes imperative for organizations to determine a suitable knowledge management initiative that would utilize their resources effectively towards satisfying the demands of the business strategy. Central to this is the determination of the suitable approaches to implement the knowledge management initiative. The newness of knowledge management as a conscious initiative does not give executives examples to learn from. An interpretive approach is used to study, explain and discuss relevant issues. This study therefore begins by discussing the main approaches to implement a knowledge management initiative. The nature and characteristics of knowledge that an organization deals with is found to relate to the type of approach to implement a knowledge management initiative. The essential components for developing a knowledge management initiative are discussed as well as the impact of developing a knowledge management strategy. It was found that the knowledge management strategy and business strategy must drive each other and this is possible only if the two are in perfect alignment. In the light of the need to primarily adopt one approach and use the other approach in a supportive role while recognizing the importance of even indigenous knowledge management also, this study concludes that without necessarily putting a specific ratio, a holistic approach involving codification, personalization and indigenous knowledge management would be of essence towards satisfying organizational learning goals.

Keywords: organizational learning, knowledge management initiatives, indigenous knowledge management, alignment
Organizational Growth: Dynamic Capabilities as a Source of Sustainable Competitive Advantages – Literature Review

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Abstract: Nowadays, it is widely accepted that the determinants of organizational growth are highly related to the intangible assets of organizations. In this context, knowledge and innovation become central elements in organizations in order to obtain competitive advantages to create and wealth capture. The aim of this paper is to improve the understanding about the generation of sustained competitive advantages to promote organizational growth. This objective is approached from the view of the relationship between dynamic capabilities and innovation theories. By a systematic literature review method, a research agenda is developed from the study of articles retrieved from ISI Web of Knowledge and Scopus databases. The review comprises three main phases: the first phase was related to the equation search and identification of information; the second phase, which is related to the coding and processing of the information in the review, and, the third phase is the report of quantitative but mainly qualitative results supported by the review. The quantitative results were based on bibliometrics analysis and the qualitative results are explained from a narrative methodological perspective. The three methodological phases were followed and validated by an expert panel that advised fundamental criteria and parameters used in the review. The results obtained highlight innovation capability as a fundamental construct in the conceptual relationship between dynamic capabilities and innovation, and as the main mechanism to have sustained growth in organizations. Furthermore, a structural approach is used in a framework based on the principal components of innovation capability through the processes for knowledge creation, absorption, integration, and reconfiguration.

Keywords: dynamic capabilities, innovation capability, organizational growth, competitive advantage
Social Capital and Absorptive Capacity in Value Adding Webs: An Empirical Investigation Based on the Case of the Djurs Offshore Wind-Energy Network in Denmark

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Abstracts: Economic business activities are embedded in social relations and structures. Therefore, the organisational units that create added value are not just isolated individual businesses, but also networks of actors. From a relational perspective, networks hold a variety of advantages for their members, such as access to valuable resources as information or knowledge. Empirically this paper is sticking to a network in the Danish offshore-sector. This network will be analysed from the business perspective as a value adding web. We found that trust and a cluster facilitator who is actively analysing the resources of the committed companies and is coordinating common training is a driving force in the process of improving absorptive capacity and social capital on the web level.

Keywords: relational view of the firm, value adding web concept, absorptive capacity, social capital

From Homo Habilis to Information age Hominids: Finding Links Between the Growth of IC and the Evolution of the Architecture of the Mind

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Abstract: This paper assesses the pre-history of Intellectual Capital (IC) over the past million years based on the apparition of knowledge-rich artefacts and events of a social nature. In this way it arrives at an external, “outside of the mind” view on the development of intellectual capital. The paper then goes on to ask: Can we study the growth of intellectual capital
without understanding what is happening inside the mind? Can we explain the growth in intellectual capital over the last million years without understanding how the mind has evolved over that period? Can the advent of those knowledge-rich artefacts and events be explained by changes in the architecture of the human mind? So the second part of this paper presents a model of the evolution of the architecture of the mind based on cognitive anthropology and evolutionary psychology, arriving at an internal, or “inside the mind” view on the development of intellectual capital. Finally, this paper engages in a discussion on how the “outside of the mind” and the “inside of the mind” views of growth of intellectual capital fit with each other, and extract lessons from this confrontation of views. It highlights the role of three factors (i.e., forethought, imagination and language) in getting us to where we are today.

Keywords: intellectual capital, population, knowledge, knowledge management, architecture of the mind, evolution

Innovation in Service Firms: Perspective From Innovative Behavior

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Abstract: The aim of this paper is to present a review of the literature related to innovative behavior and analysis in service firms due to the relevance of the studies and their implication as a line of business research. The methodology of the review is based on a detailed search by keywords related to "innovative behavior" and "innovative behavior" in the databases (ISI, SCOPUS), choosing the subject areas of business and management. The analysis of the review allows deducing that most of the research is empirical and its object of study are manufacturing firms, finding that research in service firms focuses primarily on the activities of the hospitality industry. The development of innovation in services research is growing, and in this way the innovative behavior arises as an unexplored element,
that through the case studies could provide a more complete theory building.

**Keywords:** innovative behavior; employee engagement; innovation, service firms

### Effects of Advances in Technology on Tacit Knowledge Transferability

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**Abstract:** The purpose of this paper is to facilitate understanding of tacit knowledge, the impact of technological advancement on tacit knowledge codification and what organizations should do to improve their use of available tacit knowledge. **Introduction:** The paper addresses the issue of tacit knowledge codification from a new perspective. Tacit knowledge is a crucial resource for any organization’s innovation, competitive advantage and growth. To create economic value from the tacit knowledge available to an organization it has to emphasize on efforts to codify and make it accessible to the organizational workers where necessary. To achieve this goal, organizations need to have a clear understanding of tacit knowledge, its place within organizational knowledge requirement and how to take advantage of this vital resource. The paper reviews tacit knowledge, its link with explicit knowledge and demonstrates the correlational between technological advancement and transmuting potential of tacit knowledge. Deconstructing some of the examples from past knowledge literature, the paper proclaims that many previously considered cases of tacit knowledge can be fully codified to explicit knowledge thanks to new technologies. It also contends that taking in consideration the advent of new technologies organizations should re-evaluate their stance in regards to transferability of many types of tacit knowledge. **Findings:** The author argues that with the advancement of technologies more types of tacit knowledge can be made transferable and accessible to workers across the organization. **Originality/Value:** By exemplifying the possibilities of tacit knowledge codification with emerging technologies the paper contributes to a better understanding of tacit knowledge and its transformability.

**Keywords:** tacit knowledge, organizational knowledge, knowledge codification, knowledge transfer, knowledge growth
Australian Universities and Intellectual Capital Reporting: Case Study of the Group of Eight

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Abstract: Australian universities are the major exporter of higher education in the country. As knowledge producers, they face the challenges of globalization, and the financial resources needed to maintain their competitive advantage. The current funding systems that use traditional resources like students’ fees and government grants are unable to meet these requirements. This could well force Australian universities to improve their structures; aiming for a higher international standard and recognition of a more visible and dynamic competitive system to attract funds. The purpose of this paper is to investigate the level of intellectual capital disclosure and the existence of any standalone intellectual capital report (ICR) by Australian universities. Four universities from the eight leading Australian universities known as the Group of Eight (Go8) have been chosen at random for this study. The universities in the Group of Eight compared to other Australian universities are highly research-concentrated and subsequently, have valued reputations. Findings indicate that sample universities disclose some intellectual capital information via their annual reports. However, there has been no attempt, at the institutional or systems-wide level, to produce a standalone intellectual capital report (ICR) with standard indicators. In fact, a low rate of innovation, poor human resources and a weak relationship with business need a new managerial approach. Accordingly, results suggest a change within the current system. This study strongly recommends Australian universities to utilize a universal framework for measuring, managing and reporting of intellectual capital information to meet the global and competitive challenges ahead. Currently, European universities – as Australian competitors - are required to disclose a standalone intellectual capital report to construct a harmonized national university system. Theoretical implications of this paper assist with the classification and search for appropriate indicators for measurement and disclosure of Intellectual capital in universities. The practical implication of this paper could be of interest to many different parties, such as institutional investors, managers, policy makers and university scholars.

Keywords: intellectual capital, higher-education, Australian universities, intellectual capital reporting
Inter-Sectorial Communication and Knowledge Sharing in Developing a Cross-Border Knowledge Region

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Abstract: Cross-border cooperation has usually focused on topics like mobility of people, employment and environmental problems, leisure and tourism, health and education, business cooperation or infrastructure developments. However, the topic of higher level regional cooperation of border regions and border cities where the focus is on joint development of technological or knowledge transfer (sharing), fostering of communication of universities-enterprises-local authorities, is academically insufficiently covered. Applying Knowledge concepts to cities and regions is a phenomenon of the last twenty years, applying to cross-border regions is rare. In the current article the authors study preconditions and obstacles for creation of a common Knowledge region between Helsinki and Tallinn capital regions under conditions where a special integration enhancing institution NPA Helsinki-Tallinn Euregio is part of the process, with the focus, particularly, on practices of creating, transferring and sharing knowledge in cross-border inter-sectorial communication. In the present paper communication and knowledge sharing enhancing the development process of a cross-border Knowledge region as a target status of integration is analysed and opportunities and difficulties in implementation of a cross-border Knowledge region ideology are illustrated with the cooperation experiences of Helsinki and Tallinn capital regions. This article adopts a mix of secondary evidence and primary research: Questionnaire among Euregio stake-holders and Elite interviews on regional development perspectives. The research showed that the preconditions exist for the development of a Helsinki-Tallinn Knowledge region. The model of traditional and non-traditional factors in developing a cross-border Knowledge region is provided. A limitation for this model is the lack of different layers that is typical for an extremely complicated process like the building of a Knowledge region is. Based on research and literature, practical steps are suggested.

Keywords: inter-sectorial communication, cross-border cooperation, knowledge creation and sharing (transfer), knowledge region (KR), SECI, ba
University-Company Relationship for Knowledge Integration on Biomedical Technologies

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Abstract: The main purpose of this research is to improve the understanding about the articulation of research projects based on integration of technologies. These projects are focused on developing products and solutions oriented to services in the orthopedic medical area. The articulation was achieved through the integration of human capital from research groups from the Universidad Industrial de Santander and the strategic vision of an entrepreneur. We used a case study as a research strategy. We analyzed a research project covering the design, modeling and biomechanical evaluation through simulation of a virtual model of an implant inserted in a bone. In this process, the technologies integrated were the Computer Aided Design (CAD) and the Computer Aided Engineering (CAE). These technologies are typically applied on product development in engineering. The methodological follow up consisted of, firstly the design of the implant geometry according to the ASTM F543 (American Society for Testing Materials) norm established as reference for design to the orthopedics implants. The implant was modeled with computer aided design CAD software tools. Secondly, we built test models to carry out biomechanical analysis by simulation using a computer aided engineering CAE software tools. At this stage, the virtual models were developed using two methods differentiated by the technology employed in each of them. The first method was performed according to the methodology followed by the company, which consisted in the use of CAD/CAE software tools. The second method used advanced application technologies for related to imaging techniques based on the capture of tomographic images, and the use a biologically based system, Bio-CAD, called MIMI’S®, and 3MATIC® two software for medical image processing for 3D bone model creation or reconstruction. Finally, we performed a biomechanical analysis using CAE software as a simulation tool. Through the integration of 3D Bio-CAD and CAE technology, it was possible to apply techniques and methods that allowed us to obtain positive outcomes in the development of high-precision virtual models. The main research results brings an opportunity to manage R&D projects with innovators that contribute to both, knowledge generation and the applica-
tion of this knowledge in the business environment. This contribution supports the dynamic of human capital and reduces the technology gap found in the integration of advanced technologies within the product development processes.

**Keywords:** university - firm cooperation, Bio-CAD/CAE, implants, integration of technologies

**A Technontological Framework to Conversations for KM: Conception and Potential Applications**

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**Abstract:** Since the emergence of knowledge management (KM) as a field of study, the understanding and management of conversations is a quite recent concern. Practical ways in which conversations influence KM remains underexplored. In a comprehensive literature review on roles and rules of face-to-face conversations Mengis and Eppler (2008) proposed a seminal framework for conversational management based upon communication theory. By recognizing, on the one hand, their great contribution to the organization and structuring of a wide array of explicit rules of conversations in KM, and, on the other hand, some critical issues left underexplored by the authors, we attempt to contribute to the advancement of their original framework. Based upon the conception of organizations as networks of commitments (Winograd and Flores,1988), this framework benefits from Mengis and Eppler’s (2008) “key diagnostic questions” and from our own empirical and long experience with intervening into real organizational settings through the combination of three technological dimensions dimensions (or levels) of commitments (Kofman, 2003), and five ontological domains (Hidalgo, 2009). As a result, we have conceived and designed a technontological framework to conversations for KM with key questions that may help with managing conversations for KM in real organ-
izational settings. We move into the description of a preliminary application of the framework in a real organizational setting, and suggest future paths of empirical and theoretical research.

**Keywords**: conversations, knowledge management, technology, ontology, technontology, framework

### Social Network Analysis: A Tool for Organizational Coaching

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**Abstract**: This article shows the application of Social Network Analysis (SNA) as a tool for Organizational Coaching (OC). Following a methodological standard typical of action research, a group was set up with 11 executives from the information technology department of a large financial institution in Brazil, in which SNA was to be conducted, for the purposes of compiling an initial diagnostic of the network of institutional commitments that exists among them. This would then be used as a basis for the individual and organizational coaching that followed. The application of SNA in this group's network of commitments has revealed: (i) its ability to self-organize, given the hectic nature of this field (IT) and the size of the organization; and (ii) the ability to coordinate actions, by group members and by the group as a whole, in terms of its internal and external interfaces within the organization itself. We used metrics that demonstrate the structure of the informal network, the nature of the relationships in / of the group, and its critical players. The article also shows how this diagnostic was subsequently used to optimize the organizational learning and knowledge management processes, led by OC.

**Keywords**: social network analysis, organizational coaching, knowledge management, learning organization
How to Manage Intellectual Capital in Brazil? - Lessons Learned From the First Pilot-Implementations

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Abstract: Experiences from Europe have shown that it is becoming more and more important to develop systematic management procedures for intangible assets for fast growing small and medium-sized enterprises (SMEs) as they are the sound basis for an increasingly knowledge-based economy. Now, intangible assets become a key success factor for sustainable growth in the rapidly emerging Brazilian economy, and especially in the fast advancing city and state of Rio de Janeiro. Thus, the major management goal becomes to keep productivity at a constant high level in a dynamic and fast growing business environment in order to secure individual profits and national welfare at the same time. This goal can only be achieved if the intangible success factors, such as employees’ expertise and motivation, internal communication and management structures as well as external relations, all of which are summarized in the concept of Intellectual Capital (IC), are maintained and developed in a professional and adequate manner, meeting the specific demands of fast growing SMEs. This pent-up demand in management has been the starting signal for the first pilot-project on implementing the management tool “Intellectual Capital Statement” (ICS) in ten pioneer SMEs from Rio de Janeiro. On the basis of the experiences from the German pilot-project “Wissensbilanz – Made in Germany” as well as the European pilot-project “InCaS”, a special implementation procedure for micro and small companies has been designed and tested. The so-called “ICS Factory” aims at ensuring fast practical results in the companies as well as supporting rapid prototyping and an action research approach to be used for the development of an adapted Brazilian version of the ICS. In a two-day workshop concept, with three to five SMEs each represented by two to three senior managers and key people, a complete analysis of the company’s individual IC is produced. The structured self-assessment approach of the European method served as the basis to build on. First intermediate results of the first ten pilot-
implementations are presented in this paper contributing to the improvement of the procedural concept and ensuring sustainable usage of the ICS in the upcoming next generation of pilot-implementation in 60 Brazilian SMEs from the oil and gas sector. Hence, this paper provides a summary of the experiences from the first ten Brazilian ICS pilot-implementations, investigating the crucial role of the “ICS Moderator” who is assigned to each SME in the concept of the ICS Factory, being supported by a clearly structured, software-based implementation procedure. Furthermore, the paper will describe and discuss the challenge of integrating the ICS in a comprehensive strategic change process, taking into account the special circumstances of small, organically grown organizations in the Brazilian business environment. In order to initiate a continuous improvement cycle in the individual company, the ICS has to be used, focusing on practical actions for maintaining and developing its intangible assets to ensure future competition capability. In that way ICS supports sustainable business development in an emerging economy.

**Keywords**: intellectual capital, intangible assets, knowledge economy, Brazil, oil and gas, SMEs

**Enhancing Client Care From the Knowledge Perspective**

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**Abstract**: Knowledge is recognized as the engine of the new economy or knowledge economy. Knowledge-Intensive Business Services (KIBS) base their services in the knowledge they have about their clients. The Information and Communication Technologies (ICT) are the best ally for knowledge sharing and learning. ICT increases the capacity and speed to develop knowledge. In this current knowledge era, organisations work with a lot of information in order to obtain their goals. Some organisations are well structured to deal with this information and have the necessary people who can perform in these matters. Other organisations do it without proper mechanisms. Moreover, organisations have information about their processes, their policies, and others; including one special set of information: The client. This includes their needs, their place in the organisa-
tion, their behaviour, their context, among others. It is about Knowledge on Client (KC). There are organisations that pay great attention to customer care by building extensive customer relationship management systems (CRM). These are useful tools that capture large amounts of knowledge on the client, but this knowledge is of an explicit character. It can be turned back to data in the form of words and figures but it has a big disadvantage. It is missing the human aspect. The story CRM tells is biased and incomplete. Tacit knowledge is missing and the organisation is losing the opportunity to build more enhanced relationships with the client; the trust. We strongly believe that companies, who want to know their clients better and want to serve them well, must work with KC in a systemic way. This article develops a theoretical framework for research on the systemic approach to KC. We will use this framework in our research. Our main research questions are: Do organisations use their capacity to know their client? If not, what obstacles do they face? The theoretical framework is based on current knowledge from literature review and the authors’ experiences and academic work. This article is focussed on the state of the art of KC. Then, the theoretical framework developed in the article presents a general alignment of the definitions of the terms related with KC for broader types of organisations. This framework provides a start-up point to multiple researches in other types of organisations that will enhance the body of knowledge of KC.

**Keywords:** client, knowledge on client, explicit knowledge, tacit knowledge, CRM

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**Modeling Productivity Based on Intellectual Capital in the Public Sector of Educational Administration**

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**Abstract:** The research purpose is to construct a structural model to assess the employees’ productivity in the public sector of educational administration of Iran based on intellectual capital. The population comprised all the employees of the public sector of educational administration, out of which a sample of 382 employees’ was randomly drawn. The research tools con-
sisted of a researcher-made questionnaire on employees’ productivity, this 47-item questionnaire was designed based on the theory of Hersey and Goldsmith (1980) and assesses the underlying factors of ability, clarity, help, incentive, evaluation, validity and environment (α = 0.93), the second questionnaire named Bontis’s (1997) intellectual capital questionnaire which consisted of 50 items with three underlying constructs of human capital, customer capital, and structural capital with Cronbach Alpha of 0.87. The results of path analysis using LISREL software indicated that dimensions of intellectual capital had a direct effect on productivity with the indices of 0.73. The model also showed that the factor of human capital in intellectual capital had the highest direct effect on productivity. It was also concluded that the proposed model showed full fit.

Keywords: productivity, intellectual capital, public sector of educational administration

Knowledge Sharing in Crisis Management Networks-Mock Drills as Inter-Organizational Learning Platforms

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Abstract: Crisis management has in recent years become one of the most important areas in public policy. The increasing number of man-made and natural disasters is compelling governments around the world to improve their contingency plans. Effective crisis management is essential for minimising the effects of disasters. More often these crises cut across traditional boundaries and require network response strategies and approaches. Crisis brings together different organizations and compels them to work collaboratively to resolve situations that affect them all. The type of these inter-organizational relationships (IRs), whether they are networks, consortia or alliances, and differences in social capital are often identified as key factors determining the success or failure of crisis management. An important ingredient to effective crisis management is knowledge sharing among crisis management networks. Training exercises provides a platform for inter-organizational learning and knowledge sharing processes. This paper is based on a case study of a full scale crisis response exercise, in
which leadership, crisis coordination mechanism, coordination approaches, crisis communication and ICT support are explored. The paper concludes that crisis training exercises increases the threshold condition for inter-organizational learning as well as reducing cognitive distances between crisis response agencies.

Keywords: knowledge sharing, crisis communication, crisis network, inter-organizational learning

Intergenerational Learning in Ageing Societies

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Abstract. Statistics show that ageing becomes a new and complex process within world’s population structure. In line with the trends in the world’s population structure, the European Union’s (EU’s) population structure is changing and becoming progressively older. Statistics suggest that the number of people who retire is increasing, and the knowledge loss for many companies associated with this ageing process is also on an ascending slope. Furthermore, as a result of the demographic changes new views and beliefs about working in old age are emerging. Intergenerational learning (IGL) is a complex and interdisciplin ary process of knowledge transfer, knowledge sharing, knowledge creation and knowledge restructuring at the team or organizational levels. The purpose of this paper is to present some results of our research in the field of IGL. In the first part of the paper we deal with IGL as a social process, and one of the possible interventions in organizations to increase knowledge retention when people retire. In the second part of the paper we present results of a qualitative research we performed in some of the most important universities in Romania, with respect to the impact of the new legislation that introduces compulsory retirement for professors being 65 years old and over. This law generated many negative effects in terms of knowledge loss, and universities were unprepared to reduce this loss by using IGL.

Keywords: ageing, knowledge transfer, intergenerational learning,
Abstract: Globalization and the changes in the funding policies at Public Higher Education Institutions –PHEI-, such as decreasing the state economic contribution funds and strategies focused to finance the demand are some of the factors that affect the sustainability of PHEIs. This situation requires the PHEI to manage the resources efficiently and to generate their own resources, reducing dependency on the state. Incorporating knowledge management in the financial management of PHEI contributes to the sustainability of such institutions in the sense that leverages the existing knowledge in the organization to reduce costs, to reduce rework and to identify patterns of useful behavior for decision-making, its help to improve organizational performance. However, there isn’t a framework in the literature reviewed that guides the process of incorporating knowledge management for sustainable financial management in PHEI. This paper presents the theoretical principles based on the approach of soft systems thinking that should have a framework that seeks to incorporate the knowledge management into sustainable financial management in PHEI. This research is developed under in the SUMA project - Towards Sustainable Financial Management of Universities in Latin America, project funded by the European Commission through the ALFA III program. This project is intended as a starting point for future research on how by managing knowledge can contribute to the financial sustainability of public higher education institutions. This paper is organized as follows: first, it presents the theoretical concepts of knowledge management and its effect on financial performance, secondly it exposes the sustainability problem at PHEI and shows how the knowledge management may contribute to the sustainability in these institutions, and finally it presents the conclusions and references. The results of this study provides a basis for future research focused on the development of frameworks, models and method-
ologies to relate the knowledge management with the financial performance in the organizations.

**Keywords:** knowledge management systems, sustainable financial management, institutions of higher education, framework

**Key Factors Influencing the Performance of Healthcare Organizations**

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**Abstract:** The study focuses on the definition of key factors influencing the performance of healthcare organizations. In the last decade, hospital organizations have been facing difficulties and challenges in balancing limited resources and costs to provide their demand for services. In face of these tendencies, many hospitals are under pressure to become more cost efficient. The hospital organizations are working as the complex systems of various inputs, tasks, activities and outputs with complicated interactions between individual segments of an organization. These attributes of hospital organizations are a key factor for the managers whose objective is to effectively manage the organization via defined objectives, with limited sources. In this situation it is essential for managers to process the information and knowledge about an organization. This information and knowledge could be provided by advanced management techniques which have to be adopted by an organization. Unfortunately, the majority of hospital organizations do not use any of advanced management techniques at all. The first part of the paper is focused on an analysis of information sources, which could be used by managers to effectively manage an organization. These sources are provided by advanced techniques such as process management, cost management, balanced scorecard, CRM systems and other managerial tools. The following part of the paper analyses the used techniques and defines the key performance factors used in hospital management. The major objective is to outline a model for effective hospital management based on utilization of key management techniques and definition of key factors for successful organization management.

**Keywords:** hospital management, balanced scorecard, cost management, performance management systems
Modeling the Impact of Social Capital on Intellectual Capital in the Public Sector of Educational Administration

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Abstract: The purpose of the present study was to provide a structural model for intellectual capital in the public sector of educational administration based on social capital in Iran. The population of the research included all employees in the public sector of educational administration in Tehran city. 382 employees were selected using simple random sampling method. The research instruments were two questionnaires which were administered in the public sector of educational administration in Tehran city: Sayyadi’s (2010) social capital questionnaire which consisted of 31 items with seven underlying constructs of trust, networks, cooperation, collective action, empathy, participation and social identity and Cronbach Alpha of 0.90, and Bontis’s (1997) intellectual capital questionnaire which consisted of 50 items with three underlying constructs of human capital, customer capital, and structural capital and Cronbach Alpha of 0.87. The results of path analysis using LISREL software indicated that dimensions of social capital had a direct effect on intellectual capital with the indices of 0.61. The model also showed that the factor of collective action in social capital had the highest direct effect on intellectual capital.

Keywords: social capital, intellectual capital, educational administration
Abstract: The aim of this paper is to present and discuss a partnership pilot experience in building capacities for research use in a diversity of health related organizations in three Colombian cities. The project was a collaborative enterprise made possible by pooling resources from a knowledge and practice network: a research center – ASSALUD, a women’s civil society organization - CASA DE LA MUJER/Women’s House, and a knowledge network - Colombian Health Policy and Systems Research Network, and funding from WHO-AHPSR. A multidisciplinary group of professionals belonging to a mix of local and national public, private and civil society organizations completed a diploma course with curriculum tailored to local needs, based on situation analysis and the application of a self-assessment tool focused on measuring institutional capacity for research use. The application of the self-assessment tool “Is Research Working for You?” developed and validated by Canadian Health Services Research Foundation (CHSRF) provided a foundation for the development of an educational curriculum in the form of a 120-hour diploma course, split into ten modules and offered in Bogota, Cali and Manizales (three of the country’s largest cities). In keeping with participant profiles and the degree of professionalization and specialization of the health workers and others involved in the universe assessed, responses indicate all institutions are well staffed in terms of university professionals, although these professionals lack the proper infrastructure, skills and tools to tackle the goal of promoting informed policy decisions. Agreements were signed with seven prestigious universities that certified the completion of the academic program. A mixture of 17 public and private, national and local health-related institutions and civil society organizations were invited to participate. Sustainability of this experience with its pilot conditions is not realistic. The universities involved can only sustain the commitment in market conditions. But if change in this field is to come about, a larger effort must be made by those in research centers to try to influence the allocation of public funding to this effect. The paper is organized in three sections. First, it offers background information on the conceptual model and the context in which the
Designing a Seminar Programme on Customer Knowledge Management for the Hospitality Industry: A Theoretical Approach

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Abstract: The management of knowledge has become highly important for all organizations. It is particularly vital for the hospitality industry with knowledge management playing a crucial role in achieving customer satisfaction, customer loyalty and ensuring repeat customers. This in turn creates a competitive advantage. The aim of this study has been to increase the awareness of knowledge management in the hospitality industry. The authors propose designing and implementing a seminar programme targeted at informing 5 Star hotel managers in North Cyprus on the necessity and utilization of customer knowledge.

Keywords: knowledge management, customer knowledge management, hospitality industry, 5-star hotels, North Cyprus
Trust in Renewing Human Intellectual Capital: Intangible Assets Creating Vitality and Innovativeness

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Abstract: Trust has become an essential intangible asset in organizations and leadership. Trust promotes social order and cooperation in workplace relationships. It is a resource that creates vitality and enables innovativeness. The paper discusses and examines the highly timely topic of trust from the intellectual human capital (HIC) perspective. More specifically, the focus is on the role trust plays in renewing intellectual capital. In the paper, trust is viewed in a relational context describing the positive expectations of a respectful human behaviour also in situations of risk. Originality of the paper is based on the two ideas of both theoretical and practical significance. First, exploring and conceptualizing trust as intangible asset, resource and skill in organizations. Second, examining trust in leadership as enabler in human intellectual capital renewal. The paper provides a novel view into leading people resources, since trust as intangible resource and skill, and in relation to IC renewal have hardly been examined integrated. The main point highlights trust in enabling and facilitating the growth and utilization of HIC. The paper advocates the idea that, in leading people resources, it is important to increase understanding of intangibles, such as trust, as the value they add to HRM is multiple and still poorly understood. The paper presents also real life case studies of trust building in support of the renewal of HIC containing the sharing of tacit knowledge and co-creation with customers.

Keywords: HRM, human intellectual capital, innovativeness, intangibles, leadership, renewal, trust, vitality
The Academic Institution Quality and Managerial Capability Valuation of University Management

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Abstract: International and national ratings of university institutions are now beginning to play a crucial role in the assessment and valuation of the quality of education and its research facilities. The authors give respect to the quality of universities and the quality of their management, and suggest different approaches to the selection of senior managers of universities in different parts of the world. The question arose of how managers are needed today and what general competences they have in general, relating to science, with an emphasis on their personal characteristics. Detailed discussions have taken place regarding the capability valuation of managers – based on their knowledge IQ, practical skills AQ and social intelligence SQ. They highlight their importance and also why social intelligence comes to the fore. Based on their knowledge to look inside the academic community, they criticize the current methods of selecting university managers which are based on the necessary changes regarding this. They point to somewhere partial or to a strong academic isolated area from the pragmatic business environment - this is especially so when as an opinion of the conservative view of "old colleagues" that are in managerial positions and are more plentiful in numbers than younger academics and authors who have re-considered the need to change their current thinking and attitudes. This article also ensures that specialized centres make a good choice, or if there are any other ways of finding quality managers in the university environment. Ways and means for selecting officials in the academic environment and what can be considered as a good choice or chosen strategy for selection are dealt with here. A correctly chosen strategy of choice regarding the fundamental objective is needed, which is similar to the example of industrial companies, that is to say – to increase the performance of university institutions, in other words, an increase in international and national ratings.

Keywords: managerial capability, valuation, quality, skills, university management
Measuring Human Centered-Assets as the Main Element of Intellectual Capital in a Consulting Firm

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Abstract: Intellectual Capital has been the center of attention in the past 3 decades. In the knowledge economy, having intellectual capital is considered to help companies create more value. Many models and frameworks are presented to assess and measure the intellectual capital, but evidence shows there are many deficiencies in the models applying to the practical cases. In the current article, researchers develop a practical procedure to apply the Technology Broker model to measure the Human aspect of the Intellectual Capital of a consulting firm. Authors discuss the effects of IC on value creation in a scorecard model and focus on the human element as the main effective part of IC in the current case.

Keywords: intellectual capital, technology broker model, human centered-asset, knowledge measurement, knowledge management, consulting firm

Improving Knowledge Transfer Process With Knowledge Engineering Methods

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Abstract: Knowledge transfer is a real challenge for organizations and particularly for those who have based their strategy on knowledge codification using knowledge engineering methods. These organizations are facing one major problem: their knowledge repository is used by few persons. Why? In this article, we identify barriers for transfer and appropriation of codified knowledge referential. We show that codified knowledge transfer should be a specific collaborative process taking into account three aspects: complexity and specificity of codified knowledge, readers’ profiles, and exchange channels. Then, we propose an empirical methodology to optimize continuity between knowledge codification and knowledge transfer. Keywords: knowledge management, knowledge transfer, knowledge capture and codification, knowledge engineering, knowledge sharing,
Understanding and analyzing the difference between transformational and transactional leadership is crucial in getting the whole concept of leadership theories in organizations. Transformational leadership is the most popular theory which has evolved from the elements of leadership such as traits, situational and transactional leadership that focuses on the role of organization and group performance. In transactional leadership, rewards and punishments are contingent upon the performance of the followers. On the other hand, transactional leadership makes clear that what is required and expected from their subordinates. If subordinates perform well, they receive reward. When they don't perform well, a punishment may apply. This method is not very often used in organizations. In this research, first we have compared the transformational and transactional leadership theories and their applicability to the higher education institutions by integrating the characteristics of each model into the single instructor and having him to apply the assigned techniques to the class. Secondly, based on performance-productivity metrics and examination results, we have found that both transformational and transactional leadership techniques have their own strengths and weaknesses. Therefore, in this paper we proposed a hybrid approach which combines the best of each technique, which also provided better performance and productivity results. The findings are also deeply interpreted.

Keywords: transformational and transactional leaders, management of higher education, leadership
The Influences of Intergroup Relations on an Organizational Structure

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Abstract: Organizational structures have been used for centuries. It started from the early days of first age. One man would be given the task of leading the whole group and assigning tasks to each member of his team. Overall, an organizational structure consists of activities such as supervision, allocation and coordination which work for the achievement of organizational aims. Groups in organizations are not just made of a dozen employees. There are subtasks and subunits that really form the group. The way we are defining group and the characteristics we understand has been an ongoing debate for many years. Group can be described as work teams, subpart of departments or any organization members that value the existence of each other. There are two groups available in organizations. They are formal and informal groups. Under formal group, there are two subgroups; permanent and temporary formal, depending on the needs of the organizations where the rules and targets are clearly determined and given in a written format. Informal group consists of a small number of people who actively participate in activities and take active roles in sharing feelings for the purpose of the meeting. Group and intergroup relations have become an important concept for the discipline of social psychology, conflict resolution and group decision making. Most likely, intergroup relations are the ones that are influenced by the social identities and perceptions of groups. Thus, intergroup relations are becoming more problem for organizations. It is also believed that the quality of intergroup relations show the characteristic of the organization. As population increases along with technological advancements and economic volatility, the nature relation between group members can be altered. When intergroup relations are harmonious; members of different groups will be less sensitive about differences between in-groups and out-groups. However, when there is a conflict, identification with one’s group becomes stronger, out-group differences can become more obvious where intergroup conflict increases. The intergroup relations in the universities and within the departments of the universities are crucial. Team and group working influences the educa-
tional efficiency of the department. However, it may yield more ambiguity when this relations shape the organizational structure of the university. In this study, intergroup relations within the universities in Turkey are investigated. A survey is applied to the faculty, staff and students to find the positive and negative effects of the intergroup relations on the university, quality of the education, and faculty performance. Finally, some recommendations are submitted using findings of the survey.

**Keywords:** group influence to the organization, intergroup relations, organizational structure

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**How Business Schools as Learning Organizations Meet new Challenges: A Worldwide Study**

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**Abstract:** Today there are more than 12,000 known business schools (hereinafter BS) across the globe, and the number is increasing every year. This is due to increasing demand from the global student population, people at work who wish to advance their careers and employers of graduates in business and management. BSs today are facing many challenges. Despite the positive impact of BSs on society, the current financial crisis and the eroding of corporate reputations have given rise to strong criticism of BSs and their role in those events. For these reasons, BSs will have to change if they want to keep having positive impact on people, firms and societies. The paper examines the organizational learning rate of BSs worldwide and dependence on various characteristics of the BSs. The authors measured, using a special instrument (questionnaire) elaborated by them, the learning rate of 105 BSs worldwide. The structure of the measuring instrument is based on Watkins’ and Marsick’s learning organization questionnaire DLOQ. The questionnaire comprises three dimensions divided into seven levels, which in turn are divided into 45 characteristics. The paper analyses the dependence of the general learning rate of BSs, as well as the dependence of its individual components (dimensions and levels) on the geographical-cultural region of the school location, ownership form and the international accreditations the school has. The most reliable statistically
was the dependence on school’s ownership form: private capital based BSs are more learning than state or public schools. Less significant is the dependence of learning on geographical-cultural region: BSs in Eastern Europe are slightly more learning than schools in other regions. A significant correlation was missing between the possession of international accreditations and the learning rate. The characteristics that gathered low scores in the questionnaire are addressed separately. Analysis of them enables to identify weaknesses in the organisational learning of BSs, indicating the ways for improving the competitiveness of BSs.

**Keywords:** business school as learning organization, business school learning rate measurement instrument, organizational learning

### Designing a Knowledge Management Syllabus: How Business Administration Students Learn at a Summer School?

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**Abstract:** Teaching knowledge management is one of the most growing interests in today’s universities program. A new syllabus for the bachelor degree (BA) business students at summer school should be covered in five different modules: (1) The knowing process (2) The hierarchy of knowledge (3A) The “knowledge management” definition and related discipline: history and roots (3B) The “knowledge management” definition and related discipline: Interdisciplinary perspectives and KM paradigms (4) KM in organizations: requirements and advantages of models (5) Knowledge mapping techniques and designing a new ‘Knowing Organization’: close session. The syllabus is suitable for creating awareness for the students on knowledge management discipline and practices at the introductory level. The syllabus provides high competitive advantage for the students’ professional career.

**Keywords:** KM syllabus, summer school, BA business students, KM discipline, KM teaching
Teaching Artificial Neural Networks Course: A Draft for Management and Organization Master Programs

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Abstract: This study aims to develop an academic program which offers both theoretical knowledge and application to teach Artificial Neural Nets (ANN) with a different analysis method for the students studying in the fields of management and organization. The study firstly presents basic information on a lesson formed and named “Use of ANN in Organizational Research”, in which the aim of the lesson, output targets, method of measurement and evaluation, references are presented and basic concepts of ANN, bases in literature, characteristics, advantages and disadvantages of ANN types are introduced within a period of 14 weeks. Besides, case studies on determining correlations in organizational research are discussed and the subject-matter lesson plan is completed with an application stage. The lesson introduces practical information on MATLAB, which is proposed as an analysis program in the lesson. Supposing that the ANN method of analysis is new in the field of management and organization and considering its advantages argued in comparative research into various disciplines, it is possible to assert that such a lesson will offer original contributions and advantages to graduate students and potential researchers in the field.

Keywords: organizational studies, designing master programs, knowledge management, artificial neural network
Impact on Organisational Learning in Ecotouristic Community: a Case Study Focusing on Social Technology

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Abstract: Sustainable tourism systems have many variables of significant implications, with poverty being one of the most latent, which in conjunction with hunger will eventually lead to inevitable social chaos. Therefore the aim of this research is to explore modern techniques for the development of sustainable tourism and then work on great ideas to help people to reduce the problem of poverty. It therefore will apply the theory of Planned Behavior, derived from the theory of Reasoned Behavior that created by two scholars, namely Icek Azjen and Marin Fishbein’s, to examine the questions. The study will use the North Shore of Bahia State in Brazil as the study area and the conclusion of this research is that the residents’ practice of the given technologies will maximise the available means from the environment, and will also reduce poverty and improve the quality of life. Therefore this is a plan for socioeconomic transition to sustainability in ecotouristic communities by means of social technologies to reduce poverty.

Keywords: Ecotourism, knowledge, Learning, permaculture, social technology
PHD Papers
Knowledge Management and University: From Foresight Vision; its Experts

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Abstract: This study is an approach to understanding the role of the university in knowledge management aimed at society in general. The approach is based on a two-fold source: information coming from university experts and literature on knowledge management. The results reveal that knowledge in the university is not a homogeneous object; it is rather possible to categorise it under different aspects. This diversity highlights social learning as a preferential way of obtaining it. Knowledge appears closely linked to processes that produce it in the university: knowledge vision, generation of dialogue and context creation. Vision refers to a development guide along with internal normative policies intended to encourage research. Dialogue generation boils down to breaking through an exclusively inner style of communication towards an opening to sectors outside academia. Creating context refers to new flexible organisational arrangements inside as well as outside universities. In order to generate knowledge, the university needs to understand what happens outside and promote changes in its inner culture such as discussing processes and making decisions on various scenarios. Understanding the role of the university in knowledge management highlights its key role in social and economic development through research and points out the complexity of this task. The pursuit of options is linked to the way the university might face this call by making internal as well as external adjustments with social responsibility. The social sector comprises a manifold of entities, as well as a variety of institutions and associations with which the university can establish relationships directed towards its own development and well-being.

Keywords: knowledge management, knowledge production, university
Knowledge Management in Software Process Reference Models - a Review

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Abstract: Knowledge Management is a young discipline that nowadays it is important for many kinds of organizations. For software development organizations (SDO) the effective use of knowledge is a fundamental aspect to improve their processes and obtain sustainable competitive advantages. In this sense, this paper presents a critical review about how the knowledge management has been included in the processes established/defined by several Software Process Reference Models. For this study, five software process reference models, broadly used in Latin-American countries, were selected: the standard ISO/IEC 12207, the Capability Maturity Model Integration for Development (CMMI-DEV), the Brazilian Model for Software Process Improvement (MPS-BR), the Mexican Software Process Model (MoProSoft), and the Latin-American software process improvement model for small and medium enterprises (COMPETISOFT). To obtain the review, the follow three stages were defined: 1) selection of process reference model to analyze; 2) analysis of each process proposed in process reference models, in order to identify the aspects related to knowledge management; 3) mapping the knowledge management aspects in relation to the taxonomy of knowledge management schools proposed by Earl and the classification of organizational capabilities linked to knowledge management, proposed by Gold, Malhotra and Segars. The findings of this study show that in all models there are elements of knowledge management processes, and there are two models, MoProSoft and Competisoft, that have a process area named Knowledge Management. Nevertheless, the knowledge management aspects included in these models is grounded in statements from Earl’s systems and engineering schools. Likewise, in terms of Gold’s knowledge management capabilities, the technology, knowledge acquisition and knowledge conversion capabilities are broadly covered but elements for others capabilities are not included in these reference models. This work constitutes an important ref-
erence for research and practice because presents a synthesis of the knowledge management topics included in software process reference models and helps practitioners, from software development organization, to identify the foundations and the options to implement knowledge management initiatives within their organizations. Likewise, this study helps researchers to identify trends and topics to formulate new research projects about include the different “flavors” of knowledge management in software process reference models or to develop a knowledge management process reference model relevant for software development organizations.

**Keywords:** knowledge management process, software process reference model, knowledge management in software organizations

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**Dynamics Between Trust in Interpersonal Work Relations and Intellectual Capital**

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**Abstract:** Trust as an organizational issue has been widely studied in different fields of science over the last years. However, trust is a complex, multifaceted phenomenon, and different conceptualizations of the nature of trust exist in interpersonal relations. Trust is also embedded in all classifications of intellectual capital as trust building is seen as a leadership skill within human capital; an intangible asset within structural capital; and customer interaction and inter-organizational relationships within relational capital. Trust is a key element in co-operation and communication in organizations contributing to knowledge sharing in different types of relationships between actors. This paper deals with dynamics and development of interpersonal levels of trust. Reciprocal cooperation builds trust and affects positively on the organizational performance by the processes of renewing human capital. Within the organizations, the role of trust is crucial in generating intellectual capital, among other things, by enabling more open interpersonal communication for transferring tacit knowledge. The study focuses on trust in organizational relationships as a basis for collaboration and organizational interactions. The study (aiming to be a doctoral dissertation) adopts an explorative, qualitative approach. It aims
to gain understanding of the perceptions of organizational actors in their own, real life contexts. The empirical data is originated longitudinally and analyzed by narrative method. The data were collected by open-ended face-to-face interviews and participant observations. An additional data was gathered to investigate trust breaches and the process of trust repair. Sensitive topic requires new methodology; therefore, method of empathy-based stories was used. Nevertheless, the current paper is mainly based on the results of the interview data. Several trust theorists have stated that trust develops incrementally over time. Trust is seen as an ongoing process. However, time itself does not make trust to develop, but continuous interaction is needed. The findings of the study indicate that the process of trust development seems to include various cycles and spirals instead of distinctive 'linear' progressing stages. The consequences of trust building appear reciprocity, mutual appreciation, motivation and positive emotions such as safety and boldness which can create the atmosphere more encouraging and foster innovativeness. As managerial implications, the study shows standing with subordinates and giving both responsibility and help are crucial in trust development in leader-follower relationships. From the follower’s perspective, the leader’s support is highly appreciated whereas ability and competence were appreciated by leaders and followers. Superior-subordinate dyads communicate on a regular basis without avoiding disagreeable issues. Furthermore, the dyads have their own sense of humour which is seen in their usage of special words. The findings emphasize the importance of raising the level of awareness of the significance of trust and developing trust building skills in organizations which may remove obstacles in pursuing trusting network relationships. Therefore, it is essential to discover how trust as an intangible asset can be integrated in leadership to facilitate organizational performance.

**Keywords**: trust building, intellectual capital, trust development, interpersonal trust, qualitative methods
Non Academic Papers
Just-in-Time Knowledge as a way of Increasing Quality and Relevance of Ideas in Open Innovation (OI) programs

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Abstract: The concept of just-in-time knowledge management has been around in corporate environments (although not implemented extensively), as a way of solving a crucial dilemma: how to provide the right knowledge to the right people at the right time, just in time, so they can make informed decisions and take action based on that specific knowledge, conveniently “pushed” to their workplace. Coupled with the idea of delivering that same knowledge in small “clips” or “nuggets”, the resulting methodology can have very high impact in decision making at all levels in an organization. Open Innovation, on the other hand, has also been around for some years and is currently gaining momentum in the corporate environment as a mechanism to collect ideas from employees, suppliers, consumers or business partners. Challenges are designed in such a way that they will stimulate the target audience to submit innovations under the correct incentives. The problem, however, is that many times these challenges have difficulty in obtaining relevant or high quality ideas, even if the scope of the challenges is reduced. This paper discusses the use of just-in-time knowledge as a way to increase the relevance and quality of ideas submitted in open innovation programs, avoiding the common pitfalls of this method, due to the fact that participants have heterogeneous levels of knowledge relevant to the idea challenge subject matter: they submit ideas not relevant to the challenges, ideas that “re-invent the wheel”, ideas that are not new or have been implemented by other companies in the same industry, ideas that do not consider market or technology issues relevant to the challenge. Use cases and lessons learned of this approach are presented in the aviation, petrochemicals and construction materials industries in Latin America.

Keywords: just-in-time knowledge, open innovation, knowledge “clips”, innovation management
Paisa Culture: A Potential for Value Creation Based on Knowledge

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Abstract: Even though, in theory, the current era is considered to be the era of knowledge and innovation, many countries, regions, and companies have barely made their way into this era. Therefore, neither models of thought, nor available data, nor management tools are being updated for the new approach. Consistent with the above and based on its vision and mission statements, Bio Gerencia Virtual ®, started the elaboration of The Paisa Culture Prototype, a knowledge management for innovation prototype, applied to a specific culture, which is mainly based in the Antioquia Department of Colombia. The ability of this culture to do business distinguishes it from among other cultures, when one analyzes the Colombian identity. This document was the result of the first attempted use of secondary data, not knowledge-oriented data, to explore the potential for value creation based on knowledge on the part of Colombia and Antioquia. From analysis of environmental variables, signals were deduced that turned into indicators that became the basis for proposing a path of positive evolution. In the second part of the document, the principal contexts were listed, those that could be deduced from the analysis, and one way of understanding this was from the point of view of the intelligent organization as opposed to a traditional one. Although there will be a long way to go, the findings generally showed a game-changing business that is promoted by the government, and that is aimed at increasing competitiveness in Colombia. The plan of the document will provide elements that limited themselves to the Function To Detect inside the learning cycle of companies, proposed by Haeckel and Nolan, which served as a starting point for structuring the prototype. It will also refer to the collective knowledge that was perceived from the analysis. A perspective that promotes the awakening of countries like Colombia to use knowledge in the construction of welfare will be proposed.

Keywords: contextual analysis, value-based on knowledge, competitiveness, innovation, Paisa culture, prototype
How to Utilize a Learning Organization and Reward System to Leverage Employee Self Learning

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Abstract: After Indonesian government issued Law No.5 of 1999 on the Prohibition of Monopoly and Unfair Business Competition Practices in March 1999, Telkom experienced difficult times in terms of expanding its business. In addition, many competitors started to enter Indonesian telecommunication industry. As a result, Telkom revenue was continuously dropped for several years. Telkom employees must have high learning capability that encourages the emergence of innovative ideas as a solution to the problem of industrial dynamics. Telkom innovative products as a competitive advantage are expected to boost Telkom revenue. Telkom believes that learning organization system is able to create employees with high learning capability. Telkom has given best effort in building a learning organization culture and system. Telkom commits to give 1.5% revenue each year for training and development of human capital competency program in order to support the business. Moreover, ELearning facility has been developed to enrich employee knowledge. In addition, Telkom has another self-learning method that can be utilized by all employees, which is called KAMPIUN. This collaboration tool allows employees to acquire and share their knowledge with others online. All programs are perfectly design but are that enough? In fact, only a few employees are interested in Telkom Learning Organization Facility. For example, only a few employees who are consistently utilized eLearning facility. Employees no longer frequently utilize KAMPIUN. Establishment of Community of Practice is not greeted with enthusiasm. The declining number of innovative product, employees performance tend to be flat in the average score, recurring problems on operational activity, and customers are not satisfied with employee assistance in solving issue. Those are happened due to lack of new and updated knowledge. Telkom needs employees with high learning capability, which is eager to learn new things to support their work, to improve performance, to learn from failure to prevent potential problem and always do self-learning continuously. So then, what is required for employees to consciously move to self-learning? Based on the facts above, it can be concluded that the existing Telkom learning organization system has not uni-
formly boost employee self-learning. Utilization of the facilities is carried out based on mandatory and basic needs. Although the benefit of learning is very clear, most employees are not motivated to enrich their knowledge. How to boost self-learning? To cope with the above problems, this paper provides some proposed solutions. It is a contribution of practitioner to the enrichment of human resource management science in the academic world. This paper also shows that it is theoretically possible to do so but it needs many factors to make it success in practice.

**Keywords:** learning organization, knowledge management, employee self learning, eLearning, learning award
Work in Progress Papers
Retired Professors, ¿Still Part Of Higher Education Institution’s Intellectual Capital?

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Abstract: In this paper, we present a proposed methodology, supported by a system of indicators, to characterize the professional activity developed by the retired professors of Higher Education Institutions -HEI-, and some results of applying it in one of the most important institutions of Colombia, this in order to establish whether pensioners may still be taken into account as the Intellectual Capital of HEI after retirement.

Keywords: intellectual capital, intellectual capital at HEI, professor’s life cycle, professor’s scientific career, retired professors, professional activities of retired professors
Abstract Only
KM Business Team of Ecopetrol S.A.; Real Example of the Cross Team Consolidation as a Successful KM Mechanism

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Abstract: ECOPETROL S.A., the Colombian state oil company, is currently ranked at the 12th place among the world major energy companies, according to the PFC Energy 50 of 2012. Since 2004, ECOPETROL S.A. has encouraged through its Knowledge and Technology Management Business Program the behaviors, roles and responsibilities necessary to implement the “Knowledge and Innovation” Principle of the Company’s Integrated Policy. The program includes initiatives focusing on the incorporation, sustainability, transference and assurance of key organizational knowledge, levered in the culture, information technology and methods that optimize the knowledge management and innovation within the Company. One of the mechanisms that leverages the implementation of Knowledge Management within the Company is the Knowledge and Technology Management Business Team, which is an operation scheme created to the development and leadership of KM program’s initiatives, consisting of representatives from the different businesses and activities of ECOPETROL, S.A. Since its very beginning this team has played a key role in the development of guidelines and procedures, establishment of specific goals, report monitoring and consolidation, as well as the methodology standardization to facilitate the KM strategy development in ECOPETROL S.A. Due to latest corporate results on Knowledge Management where the Knowledge and Technology Management Business Team has played a key performance, ECOPETROL S.A. has been recognized within the 50 companies awarded by the Global MAKE Award (Most Admired Knowledge Enterprise Global) in the last two years, also being a reference model at the national and regional levels. This paper explains a practical and real example of the development and operation of a cross and multidisciplinary team as a mechanism for the KM Program implementation in the Company, and will appeal to readers to know the process building, consolidating and overcoming of barriers on this initiative that has led to successful outcomes for the KM strategy of a firm from the energy sector. Paper relevance: This paper explains a practical and real example of the development and operation of a
cross and multidisciplinary team as a mechanism for the Knowledge Pro-
gram implementation in the Company, and will appeal to readers to know
the process building, consolidating and overcoming of barriers on this initi-
ative that has led to successful outcomes for the KM strategy of a firm
from the energy sector.

**Keywords**: mechanisms, knowledge management, ECOPETROL, cross team