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Balancing Teaching and Research in a PBL Context

Enhancing AAU PBL Model

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**WHEN STUDENTS TAKE THE LEAD:
ENHANCING QUALITY AND RELEVANCE OF HIGHER
EDUCATION THROUGH INNOVATION IN STUDENT-CENTRED
PROBLEM-BASED ACTIVE LEARNING**

CONFERENCE PROCEEDINGS

Editors:

**Ralph Dreher, University of Siegen
Colin Simpson, University of Gloucestershire
Olav Jull Sørensen, Aalborg University
Romeo V. Turcan, Aalborg University**

**PBLMD International Conference
27-28 October, 2016
Chisinau, Moldova**



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Conference theme: Student-centred problem-based active learning contributes substantially to the enhancement of students' competitiveness and employability. It also contributes to research, allowing academic staff to engage in research-based teaching, bringing the latest business and scientific developments directly to the students. Student-centred problem-based active learning encourages students to work independently and constructively using academic staff as mentors and supervisors. It is a learning philosophy according to which the learning process is organized in such a way that the students actively engage in finding problems and answers to these problems; student-centred active learning also encourages students to pursue their own learning objectives and paths.

Keynote speakers:



Romeo V. Turcan, Associate Professor, International Business and Entrepreneurship, Aalborg University, Denmark

Balancing Teaching and Research in a PBL Context: Enhancing AAU PBL Model



Olle ten Cate, Professor, Medical Education, Utrecht University, Netherlands

Stimulating Students to Take the Lead: A Theoretical View and Practical Examples from Peer Teaching

Workshop/Seminar:

Sharing PBL-based pedagogical training experience following PBLMD teams visits to EU partner universities: KTH and Siegen

Conference webpage:

<http://www.pblmd.aau.dk/international-conference/>



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TRACK 1: The politics of student-centred problem-based active learning study programme and curriculum change

Track chair: Romeo V. Turcan, Aalborg University

UNIVERSITIES IN SOCIAL ENGAGEMENT

Olav Jull Sørensen, Professor, International Business Centre, Aalborg University

Abstract: Universities are increasingly challenged to redefine their role in society and the financial support to universities is increasingly related to the extent to which universities take upon them these new roles. Universities cannot just accumulate knowledge through research according to a “free research formula” and disseminate it through research publications and graduates. Universities are required to engage in a much wider sense and contribute much more directly to society. Universities have followed different ideas and routes to enhance engagement, reflecting trends in society. Some have advocated an entrepreneurial university; others have adopted a Problem Based Learning (PBL) formula and others again have internationalized to bring synergy between cultures or seen the university as part of the Triple Helix construct. The aim of this article is present the Socially Engaged University (SEU) which secures the virtues of a university (the institution of critical reflection and new knowledge within a learning perspective) with a social engagement. The university will not transform into something different but engage with others offering its competences and capabilities in a synergy with resources and capabilities of others.

Keywords: Social engagement, Socially Engaged University, Triple Helix, Problem Based Learning

CHANGING THE HIGHER EDUCATION PARADIGM IN MOLDOVA: THE STEADY NECESSITY IN TODAY'S WORLD

Irina Dorogaia, Assoc. prof., doctor, Academy of Economic Studies, Republic of Moldova

Abstract: The Problem-Based Learning (PBL) is a conceptually new model of higher education that involves student-centered learning and actively engages students in problem solving. PBL speaks to the current world's challenges and developments and places a student in the center of learning as opposed to a teacher in the traditional higher education. Today, the young people have an access to a large bulk of information and not only can learn but also gain experience by solving different problems they encounter. This article describes the



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background for changing higher education paradigm in the modern world, the PBL's principles and advantages for the current education system and in the future, and the possible challenges arising from the shift from the traditional learning to PBL. In addition, the article discusses the Kurt Lewin's force field theory regarding the shift to PBL in the Moldovan universities as well as the factors that promote the changing process. In conclusion, the article suggests that the changes in the higher education paradigm would help the Moldovan universities to overcome the existing difficulties, move to the new stage of their development, and become more competitive in the international context.

Key words: higher education, traditional model, PBL, force field, changes

SEEKING SOLUTIONS TO ENHANCING COMPETITIVENESS OF MOLDOVAN UNIVERSITIES: IMPLEMENTATION OF PROBLEM-BASED LEARNING

Ala Cotelnic, Academy of Economic Studies of Moldova (ASEM)

Abstract: Higher education institutions are considered to be an institutional resource absolutely indispensable for an economy in the process of building a knowledge society and achieving the objectives of redefining the foundations of competitiveness. During the recent years higher education has undergone multiple changes. The number of students worldwide is steadily decreasing due to demographic decline. Therefore, European universities, and not only, are constantly facing a fierce competition in attracting better, more talented students. Under these conditions, boundaries practically have no importance. In order to cope with competition, but also to face the changes in society, Moldovan universities should implement such learning methods that would allow the development of students' creativity, which would make the able to work in the most complex organizations. We are confident that implementing the student-centered learning methods in the practice of higher education institutions, including problem-based learning, would allow universities to have a better connection with business environment, become competitive in the regional market and may be even the European one.

Key-words: change, student-centred learning, problem-based learning, competitiveness of universities.



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PROBLEM BASED LEARNING AND TRADITIONAL METHODS OF MEDICAL STUDENTS' TRAINING

Angela Babuci, Mihail Gavriiliuc, Igor Cemortan, Victor Vovc, Eugen Melnic, Stela Cojocaru, Silvia Stratulat, Nicolae Testemitanu State University of Medicine and Pharmacy

Abstract: The aim of our study was to perform a benchmarking of traditional teaching and PBL methods of training medical students. The main goal was to identify what are the gaps and priorities of both methods, and to analyze which of those methods is more suitable and sustainable for our curriculum. A benchmarking of the traditional curriculum of training medical students in *Nicolae Testemitanu State University of Medicine and Pharmacy* and PBL curriculum used in Aalborg University was done. Traditional methods of training used for more than seventy years in our University had proved its sustainability, but nevertheless problem based learning was analyzed as a new challenge for gaining sustainable knowledge base attained by collaboration both in projects and self-directed learning, problem solving, communication and dissemination of information, developing clinical and critical thinking at interdisciplinary level and higher employment opportunities for graduates.

Key words: curriculum, traditional methods, PBL

AUTHENTIC LEARNING FOR UNCERTAIN FUTURES: DESIGNING ACTIVE AND PROBLEM-BASED LEARNING TO PREPARE UNDERGRADUATES FOR EMPLOYMENT AND CITIZENSHIP

Dr Kenny Lynch, Reader in Geography, University of Gloucestershire.

Abstract: This paper is based on the author's experience of designing and researching problem-based team learning activities for more than 20 years. It draws on the evidence of research into building effective team skills (Livingstone & Lynch, 2000) and engaging students with 'realworld' problems with the intention of building learner confidence, promoting the development of soft skills and appreciation of the relevance of their knowledge and skills based learning to external community based enterprises (Mason O'Conner et al, 2011; Johnson, 2013). The paper will focus on recent analysis student experiences of community based research working with a range of public, private and third sector organisations. It finds that students initially find these learning activities daunting, but with appropriate support and skills they find that they have knowledge and skills that can be useful to local organisations. This can result in powerful learning opportunities that can raise student confidence and prepare them for future life as an employee and a citizen.

Keywords: Authentic learning, teamwork, problem based learning, community based learning



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TRACK 2: Changing the relationship between the learner, the teacher and stakeholders

Track chair: Olav Jull Sørensen, Aalborg University

PROBLEM BASED LEARNING IN ENTREPRENEURSHIP EDUCATION: OPPORTUNITIES AND CHALLENGES

Angela Solcan, Academy of Economic Studies, Republic of Moldova

Abstract: This article aims to explore the use of Problem-based Learning (PBL) in entrepreneurship education. The Academy of Economic Studies of Moldova (ASEM) is a partner of the project “Introducing Problem Based Learning in Moldova: Toward Enhancing Students` Competitiveness and Employability” (PBLMD), funded by the European Union as a part of the Erasmus + program. One of the goals of this project is to redesign partially or even entirely the syllabus of BSc in Business Administration at ASEM, using PBL and other new student-centred teaching and learning techniques.

An analysis of international experiences allowed determining the opportunities and challenges that can be encountered by students, lecturers or university during the implementation of PBL.

Keywords: Entrepreneurship education, problem-based learning, competence, teamwork, tutor.

EDUCATION BASED ON MEDICAL ISSUES (PROBLEM BASED LEARNING IN MEDICINE): DO WE CANCEL, OVERTURN OR EVOLVE THE EXISTENT EDUCATIONAL PROCESS?

Mihail Gavriiuc, Eugen Melnic, Victor Vovc, Igor Cemortan, Angela Babuci, Nicolae Testemitanu State University of Medicine and Pharmacy

Abstract: Questions asked during the lectures of the students, small conversations and incursions during the conferences with teachers of The Sate University of Medicine and Pharmacy “Nicolae Testemitanu”, a well as conversations held with doctors beginners and with those with experience demonstrated that 95% do not know the principles of problem based learning, while solving situations related to diagnosis establishment and treatment of the patients they do use this method unconsciously. We have analysed the educational programs and the current curriculum for the training of the doctors regarding the Medicine Specialties, Public Medicine, Stomatology and Pharmacy at the State University of Medicine



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and Pharmacy “Nicolae Testemitanu” from the Republic of Moldova, vis-à-vis the history of foundation and development of the university, quantitative results (numbers of graduates) and qualitative (number of graduates employed in medical activities in the country and abroad, implied in the research sector). Our analysis activity of materials at hand revealed the fact, that although the traditional programs and methods had proven their durability and efficiency from 1945 till now, covering completely the training necessities of the doctors and the university’s lecturers in the Republic of Moldova, nowadays we are in need of a reform in order to break this educational deadlock, to contribute to a more intense exploitation of both students’ and teachers staff’s intellectual potential. The problem based learning method seems to be an effective solution for the actual challenge of the new context of superior school of medicine’s existence, when the educational offer should make a 20 years step forward anticipating strategically the necessities of the society that is in a transformation process. The auto appreciation made by the authors of this article confirms the working hypothesis that the professional, didactical and investigation competences of a doctor can be obtained, sustained and developed by the Problem based learning. Most of them keep their social and cognitive dimensions. As a reference to them: solving complicated cases, legal and social activity aspects, communication abilities, permanent professional development.

Keywords: Problem-based learning, medical education, educational programmes, curriculum development

PROBLEM BASED LEARNING AT THE LAW SCHOOLS

Liliana Turcan, Natalia Zamfir, Mihaela Vidaicu, Moldova State University

Abstract: This article aims at providing the approach towards problem based learning at Moldova law schools. Taking into account that current law schools’ curriculum contains several elements of problem based learning, authors of this article provided examples of specific interventions used in teaching several braches of law. In particular, authors described the use of individual research projects for administrative law, a group project for constitutional law and solving a practical issue for environmental law. Authors emphasized the need for problem based approach for other branches of law as well taking into account the specifics of legal studies and the need for including skills based courses in the university curriculum. Moreover, authors came up with a list of recommendations to facilitate introducing of the problem based learning at law schools.

Keywords: law school, students’ learning, individual research project, braches of law, administrative law, constitutional law, environmental law



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PBL AND THE ORGANIZATIONAL CULTURE IN THE EDUCATIONAL INSTITUTIONS

Covaş Lilia, Academy of Economic Studies, Republic of Moldova

Abstract: Problem-based learning (PBL) is an approach that challenges students to learn through engagement in real problems. But it is important to take into consideration that this method assumes changing not only the teaching strategy, but the main beliefs and values from the universities. Thus in order to implement this method at the universities from the Republic of Moldova we should assure that the organizational culture from higher educational system existent now in Moldova is appropriate. The purpose of this article is to explore the concept of current organizational culture at education institutes so the effective management methods will be developed. The analysis of the organizational culture's dimensions allows observing human behavior within the universities and high lighting reality, identifying the strengths and also the weaknesses which have an impact on its functionality and development. In this paper, we try to present some models for assessing organizational culture in universities for the reason of implementing PBL.

Keywords: Problem-Based Learning, university management, organizational culture, competing values framework.



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BOOSTING THE RELATIONSHIP BETWEEN ENTERPRISES AND UNIVERSITIES – IMPORTANT STAKEHOLDERS IN THE EDUCATIONAL PROCESS

Liudmila Stihi, Associate professor, PhD in economy, Academy of Economic Studies of Moldova, BAA Faculty, Management Department

Currently all areas of activity have a dynamic pace of development and constantly changing. To meet the challenges of the present economic environment businesses need qualified specialists not only in terms of knowledge but also in terms of specific skills and competencies. Currently there are significant discrepancies between the level of training of specialists and the employers' expectations, which negatively influence the employment rate of graduates as well as the performance of enterprises. In order to reduce these disparities, a strong cooperation between the key players of the educational system - universities and enterprises is necessary, including motivating employers to adopt a proactive strategy and involvement in the educational process.

Keywords: Entrepreneurial learning, entrepreneurial competence, business environment, education and training methods, business infrastructure, project-based, problem-based learning.

CHANGING THE RELATIONSHIP BETWEEN STUDENT - TEACHER AND THE REAL SECTOR OF ACTIVITY

Andrei Popa, PhD., University Professor; Todos Irina, Associate Professor; Ludmila Roșca - Sadurschi, University Lecturer; Olesia Vulpe, University Lecturer; Slavic Gîrneț, University Lecturer; Ludmila Noni, University Lecturer, Department of Economics and Business Management and Services, Cahul State University

Abstract: The education, the same as other area in the context of globalization, requires a permanent adjustment to the new changes. These changes should be done at the level of teaching, the changing of teacher role and student role in teaching- learning process. Nowadays, it is becoming increasingly important the relationship between student – teacher- and the real sector of activity, relationship that offers a lot of benefits to everyone.

Keywords: higher education, modern teaching methods, relationships: university - students - real sector of activity, Problem-based Learning, university autonomy.



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TRACK 3: Innovating student-centred problem-based active learning

Track chair: Kenny Lynch, University of Gloucestershire

INNOVATING STUDENT-CENTRED PROBLEM-BASED ACTIVE LEARNING AT THE NICOLAE TESTEMITANU STATE UNIVERSITY OF MEDICINE AND PHARMACY: PREVIOUS EXPERIENCE AND ACTUAL CHALLENGES

Victor Vovc, Mihail Gavriliuc, Igor Cemortan, Angela Babuci, Andrei Padure, Eugen Melnic, Rodica Bugaj, Victoria Rotaru, Nicolae Testemitanu State University of Medicine and Pharmacy of the Republic of Moldova, Chisinau

Abstract. The implementation of study method based on problem (clinical case) analysis started at State University of Medicine and Pharmacy "Nicolae Testemitanu" (SUMPh) since 2006. Analysis of this first pilot implementation in terms of contemporary concept of the Problem Based Learning (PBL) denotes that we have implemented only an essential element of PBL method, especially for medical education - CBCR (Case Based Clinical Reasoning). So, during the subsequent implementation of the PBL method at the SUMPh we have faced a number of challenges created by adapting medical study program to the principles of contemporary method of PBL.

Key words: medical curriculum, PBL, CBCR

EMOTIONAL INTELLIGENCE AND TEAM EFFECTIVENESS

Timbaliuc Natalia, Lecturer, Academy of Economic Studies of Moldova

Abstract. Students need to develop a wide range of skills as part of their education. Professional skills are only a part of the abilities required by employers. Other skills like problem solving, communication, collaboration, interpersonal skills, social skills and time management are proven to be useful at the workplace. Employment authorities consistently mention collaboration and teamwork as being a critical skill, essential in almost all working environments. The results of a team are far more superior to the achievements of one individual, as long as the team has harmony, cooperation and is effective. One of the tools used by team leaders or teachers to facilitate group effectiveness is developing a high level of Emotional Intelligence. Emotional intelligence is important among team members to carry out their roles and tasks in a cooperative and collaborative manner. It helps in reducing conflicts and can create a more comfortable and cooperative work environment. Having high levels of Emotional Intelligence facilitates various aspects of the team process including



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effective problem solving, high quality production and performance, trust, commitment, interpersonal relationships, and collaboration.

Keywords: Emotional Intelligence, teamwork skills, effective teams, competencies

USING PBL IN PUBLIC ADMINISTRATION STUDIES

Daniela Pojar, magistru în drept, doctorand, lector universitar la Catedra de drept privat Universitatea de Stat „Alecu Russo” din Bălți

Abstract: The purpose of this article is to briefly describe how PBL and other active learning methods can reinforce student`s understanding of Public Administration studies. This method will help student to achieve the necessary practical experience by focusing on real cases and solving real problems. to have a deep understanding of all the processes that occur at the local and at the central level of public administration. This kind of approach will enhance the development of some fundamental competencies, such as: problem solving skills, better understanding of real projects, critical thinking, team work and team leadership etc. The current model of the study programmes in Public Administration do not correspond to the Labor market requests and sometimes includes disciplines that do not focus on the development of core skills and competencies. The transition from the traditional teaching methods to a new model of student centered learning method will help to strengthen overall management objectives of higher education, opening the way for competitive services, managing to contribute to the transition to the knowledge economy.

Keywords: active learning, teaching methods, skills, competencies, learning outcomes, Public Administration.

THE PROBLEM WITH THE PROBLEM: ON STUDENT ORIENTATION IN AN ADVANCED PROBLEM BASED TEACHING AND LEARNING

Friedhelm Eicker, Christoph Bohne and Gesine Haseloff, University of Siegen

Abstract: Problem based education is not always desirable and does not lead to a good student orientation automatically. Rather, pivotal elements, the quality of the problems and the type of solution of the problems matter. The problems must contain pivotal tasks of prospective activities of the students. The students must be addressed by the problems. In vocational education, the problems must contain pivotal tasks of the prospective vocational activities of the students. The problems must invite the students to acquire a competence, namely shaping competence, by finding a solution more or less on their own and under consideration of possible alternative solutions. This will not only lead to the acquisition of



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information/knowledge/skills. Furthermore, it will not only lead to the ability to more or less skilfully combine information/knowledge/skills. Alone or in a group, the students must learn how to define and solve real problems of their everyday life and of their work life meaningfully and they need to justify the solution on their own. In this respect, the students need guidance and support. This article delineates and justifies an advanced problem based teaching and learning (PBL). Especially the requirements for a problem and the student orientation will be discussed. An adequate learning project will be described and discussed.

Key words: Problem based teaching and learning (PBL), student orientation, shaping competence, learning project, learning task

STUDENT CENTERED LEARNING

Larisa Bugaian, Dr. hab., prof., Technical University of Moldova

Abstract: Student-centred learning is an educational conceptual framework that is currently actively promoted. Today higher education is profoundly different from what it was a few decades ago. The idea of placing the student at the center of the study process brings profound changes in higher education system. Labour market and the globalisation process require a thorough rethinking of the educational process and changing of the learning values. Student becomes an active participant in the learning process. The main aim of such approach is not only to assimilate the curriculum but to develop professional skills that market demands. The students manage independently their own learning. All this leads to a shift paradigm, necessary at the micro level - in teaching, learning and assessment. Adoption of student centred learning changes the roles and responsibilities of the teacher and student. Student centred learning also involves changes in the role and responsibilities of the learners and students, in the program materials delivery and in the learning process itself. Learning becomes personalised, students engage in different ways and in different places. Students benefit from individually paced, targeted learning tasks that formatively assess existing skills and knowledge and that address the student's needs and interests. Learning is based on the outputs of the knowledge and engages students in their own success, students support one another's progress and incorporate their interests and skills into the learning process.

Keywords: student-centred learning, teaching approach, studying, learning process, active learning



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TRACK 4: The impact of ICT on student-centred problem-based learning, teaching and curriculum development

Track chair: Ralph Dreher, University of Siegen

DEVELOPING PBE-ORIENTED CURRICULA IN THE FIELD OF ENGINEERING SCIENCE

Ralph Dreher, Chair of Technical Vocational Didactics, University of Siegen

Abstract: The paper will at first show, that “Engineering” as vocational profession will not only develop new products and services, but also will be a big part of changing possibilities and consequences. So Engineering is in first a technical discipline with roots in natural science, but it has also a part of social responsibility. The main thesis is, looking to this fact, that future engineers must learn in their study courses both parallel: Constructing and designing AND Responsibility and social communication. As benchmark for this type of curriculum was formulated the “Leonardian Oath” and as consequences, it was developed a PBL-based curriculum for engineering science. The core idea of this concept is, that students only can learn responsibility and social communication by REFLECTING their own construction design-work.

Keywords: PBL, PBE. Leonardian Oath, Responsibility, Social Communication

USING VISUAL LEARNING TOOLS FOR TEACHING CRIMINAL LAW

Mihaela Vidaicu, Faculty of Law, Moldova State University

Abstract: This article is focused on the analysis of introducing visual tools in teaching criminal law to second year students. The author of the article underlines the need for changing the approach towards students’ learning and adjusting the teaching tools in order to facilitate the development of legal reasoning skills of future lawyers. In particular this article is focused on analyzing the impact of film clips on students’ learning during criminal law classes. The findings included in this article are based on the authors’ own research conducted during one year through engaging students in various exercises and exposing them to different interactive teaching interventions. The author argued that film clips may help law students to gain legal reasoning skills. As a result the assessment showed that they help students to understand better the context, to identify the facts, to establish the legal



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issue and to apply the appropriate legal norm. In addition, author's research assessed students' attitudes and ways of thinking while solving hypothetical criminal law cases.

Keywords: criminal law, visual learning tools, film clips, legal reasoning skills, interactive teaching interventions

BYPASSING CURRICULA CONSTRAINTS BY MEANS OF ICT

Mihaela Balan, Rostislav Călin and Dumitru Ciorbă, Automation and Information Technologies Department, Technical University of Moldova

Abstract: The education system of Moldova acts by the inertia of a traditional framework, which regards the education as a production process. The production of prepared and disciplined staff is done in accordance with standardized educational processes. This approach probably fits perfectly into a society which undergoes full industrialization, but not into a post-industrial one, which faces big social and economical challenges. The need of changes in the society is entirely reflected in the education, where the curriculum emerges as a transformation of an effort (individual and collective) into *competences the society needs*. What can be done if this transformation function has different economic, social, cultural and political constraints, that diminish the development of responsibility, creativity and critical thinking, but also the ability of *an individual* to work in a team? The goals of any actual program aim for these characteristics, necessary to each employee. But, these being not put into practice, not being part of the *learning model*, by no means can be fully reached. Therefore, a new learning model is imposed: a restructuring of the study program based on interdisciplinarity (attained by real-life problems of the society), flexibility (offered by information technologies) and freedom (to individually choose the problem in accordance with one's abilities and interests).

Keywords: Curriculum, learning model, ICT, PBL

BENEFITS OF USING BUSINESS SIMULATIONS AS AN EXPERIENTIAL LEARNING METHOD

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Abstract: Based on evidence and assertions about the greater efficacy of experiential learning pedagogies over traditional didactic methods, a range of techniques and technologies have been applied in higher education courses e.g. role-plays, scenarios, games, simulations. There has also been considerable discussion in the management



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education literature about the relative benefits of individual vs. cooperative group-working activities and learning; the creation of stimuli for enhanced student experience. One field where these various elements coincide is in the application of simulation-based training [SBT] in management education.

The author posits that PBL and experiential learning be considered as part of a continuum within the context of blended learning pedagogies. This paper focuses on the specific case of business simulation games delivered via an online digital platform. The nature of simulation games as an experiential learning technique is discussed, along with research findings from undergraduate student responses to questionnaires (sample size $n > 500$) and interviews. The findings are reviewed in relation to published work on heuristic principles for successful application of games in higher education, and to the Salas et al (2009) seven-stage model for SBT, originally developed for medical and aviation training, applied to management education. Findings are also compared with reported outcomes and impact from student and staff responses in two UK universities where similar types of business simulation are applied.

Observations are made on benefits and applicability of simulations in undergraduate and/or postgraduate business courses in relation to: blended learning deliveries; flexibility in time and duration of simulations; incorporation into group vs. individual assessments; competitive vs. non-competitive scenarios; learning guided (or not) by tutors; technology as facilitator e.g. in provoking group challenges and dynamics; provision of opportunities for reflective learning, both during and after the simulations.

The paper concludes by proposing some guidelines for why and how to incorporate simulations into business and other university courses – with the aims of having happier, more engaged students (and tutors), as well as better educated ones!

Keywords: Experiential Learning; Blended Learning; Business Simulations; SBT [simulation based training]; Simulation Games; Heuristic Principles; Employability

A NEW DIGITAL LEARNING FRAMEWORK FOR BLENDING ON-CAMPUS CLASSES WITH SYNCHRONOUS AND ASYNCHRONOUS PROVISION

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Abstract: This paper discusses a pilot ‘hybrid’ undergraduate Business Management module, which uses a virtual classroom platform to integrate synchronous contact and bespoke asynchronous material. The pilot aimed to achieve the following: 1) more flexible support for our undergraduate learners; 2) sustainable and reusable learning artefacts; 3) live online collaboration for deeper learning through ‘digital discussions’; 4) a Digital Learning



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Framework embedded within a pedagogical theoretical framework. We offer our experience of 'making the blend', reviewing learner feedback and constructing a Digital Learning Framework which promotes Active Learning pedagogies. Online education has grown in popularity (Barber et al., 2013; Beetham and Sharpe, 2013) and the emergence of MOOC's has afforded a new paradigm and expanded reach for Higher Education Institutions (Zemsky, 2014). This course development responds both to the proliferation of distance learning courses (Knight, 2009) and to recent calls to provide a quality 'hybrid' provision (Conole et al., 2010). In designing this technology-enhanced learning environment, we took into account pertinent examples from the plethora of published material on constructivist learning principles and e-learning theories. The resulting Digital Learning Framework aims to provide a valuable set of guidelines for practitioners who aim to align their use of digital approaches with constructivist pedagogical principles.

Keywords: Hybrid; technology-enhanced learning; digital learning framework; constructivist pedagogies



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