

6th Higher Education Institutions Conference

27 – 28 September 2018, Dubrovnik, Croatia

Quality & Governance in Higher Education: Opening new frontiers

PROCEEDINGS

Double-Blind Peer Reviewed

Edited by: Karmela Aleksić-Maslač and Philip Vranešić



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6th Higher Education Institutions Conference

September 27-28, 2018, Dubrovnik, Croatia

**QUALITY & GOVERNANCE IN HIGHER EDUCATION:
OPENING NEW FRONTIERS**

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Content

Message from the Dean	iii
Organizing Committee	iv
Program Committee	v
Panel Session	1
Innovative Financial Models	1
Empowering Learning Through Technology	2
Redefining the Role of HEI in a Transforming World	4
Innovation, Quality Assurance and Governance in HE	6
From skills to behaviours - how can Higher Education Institutions respond to the need to develop students with the behaviours required by 21st century organisations?	7
<i>David Laughton</i>	
Changing University Governance Dynamics through Interplays and Convergences with Corporate Governance	14
<i>Shab Hundal, Anne Eskola and Asta Wahlgren</i>	
Innovation by Immersion projects for valorization of the role of Higher Education institutions in the economic development	23
<i>Nada Souđi</i>	
New Developments in the Funding Model of Finnish Universities of Applied Sciences - A Critique	32
<i>Anne Eskola, Shab Hundal and Jukka Turpeinen</i>	
Fundraising perspective of private higher education institutions in Croatia: an empirical study	40
<i>Dina Vasić, Đuro Njavro and Zoran Barac</i>	
New Teaching Methods	48
From The Flintstones to Transformers - The Journey from Averageistan to Extremistan	49
<i>Ágnes Rafay and Tibor Csizmadia</i>	
Towards Learning Environmental and Social Sustainability – Changing Paradigms of Teaching	57
<i>Sinni Seppelin and Anne Törn-Lappio</i>	
Reintroducing Disputations as a possible way to practice critical thinking	64
<i>Borna Jalšenjak and Kristijan Krkač</i>	

Future Skills for Future Jobs: The Social Service Project as a Complex Training Tool for Business Students	69
<i>Gabriella Maráz and Stefan Baldi</i>	
Expectations of Millennials in regards with applied teaching methods and learning through technology during Marketing classes	78
<i>Maja Martinović and Valentina Pirić</i>	
Best Practices in HE	83
New generation of small businesses	84
<i>Ágota Andrásik Kocsisné and Katalin Vajda</i>	
Why can't we benefit more from international talents? – Challenges and suggestions from an Austrian perspective	90
<i>Andreas Zehetner</i>	
Correlation of gamification usage during class in the same student generation with different course field and year of study	96
<i>Philip Vranešić, Mario Rašić and Karmela Aleksić-Maslač</i>	
Effect of Gamification User Type and Class Activity on Student's Class Engagement	104
<i>Mirna Koričan Lajtman, Ivona Škreblin Kirbiš and Ivija Bernatović</i>	
Index	111

Welcome Note

Dear Guests,

On behalf of Croatia's first AACSB accredited business school, the Zagreb School of Economics and Management, let me wish you a warm welcome to Dubrovnik, and to our sixth consecutive Higher Education Institutions Conference – HEIC 2018 – “Quality & Governance in Higher Education: Opening new frontiers”. We sincerely believe that this conference will prove to be a valuable forum in which you can share your experience with other higher education professionals, as well as gain valuable insights from our esteemed speakers.

The world is indeed getting smaller due to the rapid pace of globalization. External forces are causing the higher education sector to face both increased pressure and new challenging opportunities. Global interconnectivity puts diversity and adaptability in the focus of the higher education governance. Considering the complexity of these challenges that business schools face, this conference will provide three plenary sessions, each dealing with a vital issue regarding higher education, Innovation as a road for strategy competitiveness, Innovating financial models, Innovating learning methods and technology and Innovation in labor markets, while a bonus workshop on Thursday will provide attendees a valuable look into the new AACSB standards and the accreditation process.

Thank you for choosing to attend the HEIC 2018. I sincerely hope you will keep good memories of our conference and Dubrovnik. I would also like to take this opportunity to thank our sponsors not only for supporting this conference, but also for recognizing the need to further dialogue on the future development of business education.



Best regards,
Đuro Njavro, PhD
Dean, Zagreb School of
Economics and Management

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Panel session

Innovative financial models



Zoran Barac

Dr. Zoran Barac is the Managing Director of the Zagreb School of Economics and Management (ZSEM) where he is also the Head of the Finance and Accounting Department. Dr. Barac received his Ph.D. in Management at the University of St. Gallen in Switzerland and his M.Sc. in International Economics at the University of Zagreb, Faculty of Economics and Business. Currently he teaches the course: Corporate Governance. Dr. Barac currently serves as the President of the Supervisory board of Platinum Invest, an Investment Funds Management Company. He also serves as a Supervisory board member of the ZSEM Business Academy and a member of the Supervisory board of Croatia Airlines. As an experienced coach and sports official he serves as the President of the Croatian Wushu Federation, a national sports organization that governs Croatian Wushu, which is the collective term for the martial art practices and sports which originated and developed in China. Also as a National Wushu team coach, he coached medal winning athletes in national and international competitions. Dr. Barac also served as a member of the Governing Council of the Croatian Agency for the Supervision of Pension Funds in the period between 2000 and 2005.



Peter Chornitzer

Peter Chornitzer is currently Head of Business Division focusing on general business management, product development, business operation at Student Loan Centre Ltd., Hungary ("Diákhitel Központ Zrt."). Prior to that, he gained his experience as Head of Product Management at Hungarian Development Bank, Senior Manager at PwC Hungary Ltd., Managing Partner at Scale Consulting Ltd. and Head of Retail Product Management at Erste Bank Hungary. He obtained his Msc degree in Economics at Budapest University of Economics. He was a Chairman of the Supervisory Board at NEG Zrt, Member of the Management Board at Garantiga Zrt and a Chairman of the Supervisory board at Postabank Leasing.



Balazs Havelda

Balazs Havelda obtained his education at Budapest University of Economic Sciences and Public Administration, and later at Corvinus University of Budapest, Faculty of Business Administration, Financial investment analysis and risk management. From 2014 he is Chief Financial Officer and a Deputy CEO of Diákhitel KözpontZrt (Student Loan Centre Ltd.). Prior to that he was obtaining different functions at Diákhitel KözpontZrt from financing assistant to the Director of Directorate of Planning, Controlling and Treasury Director.

Empowering learning through technology



Philip Vranešić

Philip Vranešić, MBA, was born on 18th of May 1991. in North Vancouver, Canada. He finished undergraduate study program in economics and management on Zagreb School of Economics and Management (ZSEM) in Zagreb, 2014. In mid-2018 he graduated from a graduate study program – MBA Management Information Systems, also at ZSEM, with one semester on exchange in Singapore at Nanyang Technological University (NTU). He has been working for ZSEM as an Assistant on the Department of Information and Communication Technology since 2014. Since that time, he was involved in many seminars on several ICT courses, specialized in IT management and online marketing as he published several scientific and professional papers in that field and participated in various international conferences.



Afif Rustom

Afif Rustom is an International Business Development Professional whose career has been focused on transforming content providers and institutions to digital through various tools and methodologies enhancing the overall outcomes and learning experience. He is closely working with key stake holders in ministries' of education, consortiums, institutions and content providers to enable learners, Instructors and management to make a systematic transformation to digital and scale the solutions. In such capacity he held various roles within International with recently being European Senior Regional Manager at McGraw-Hill Education based in Frankfurt and prior to that being Regional manager for the Gulf region at McGraw-Hill Education based in Dubai . His experience has been extensive across more than 40 countries in building & leading teams to tackle educational solutions and implement digital transformation with successful results based on usage, collaborative interaction, and achieving learning outcomes . He is currently leading the Business Development team for Europe, Middle East & Africa at VitalSource Technologies based in Frankfurt and working closely with various Higher Education & K12 Institutions, regional partners, publishers, consortiums, & ministries of education. Key Interests: Technology, Digital Education, Business Intelligence, Innovation, Learning Science, transformational management & Professional Development.



Branka Vuk

Branka Vuk has been working in the field of application of digital technologies in education and teaching practice for 15 years and holds the position of Deputy CEO for Education Support in Croatian Academic and Research Network – CARNET since 2012. Her main areas of interest include generic competences, digital skills, OER and digital educational materials in general, as well as public policies in education. She has been a member of expert workgroups dealing in education public pol-

icies and application of ICT in education, including Expert workgroup on Curricular reform in Croatia, Indicator Expert Group on ICT in Education in DG EAC, Digital Skills Expert Sub-Group to the Digital Single Market Strategic Group in DG CNECT. She has also been a member of the Committee for the introduction of mandatory Computer Science education in Croatian primary schools with the Croatian Ministry of Education and Science. Branka regularly writes papers, gives presentations, keynotes and workshops on the implementation of ICT in education and participates in knowledge exchange between experts in the field of digital education in Croatia and internationally.



Darija Aleksić

Darija Aleksić is Assistant Professor at Faculty of Economics, University of Ljubljana, Slovenia (FELU). Her research interest includes ethical behavior, flow, creativity, digital natives, innovation, and workaholism. She is also a co-founder of Society for Business Ethics and Ethical leadership and a member of the expert council of the association, whose mission is to raise public awareness about business ethics, ethical leadership, and ethics in a broader sense, in the economy, public institutions, and civil society. Darija actively participates in domestic (scientific and expert) and international conferences in the field of management.



Lana Balić Matijašević

Lana Balić Matijašević graduated from Zagreb School of Economics and Management and currently attends MBA in human resources. From 2006. she was a head of Career Centre where she developed process with 92% of student employment success. She gained experience in HEC Paris and John Carroll University (JCU), Cleveland, USA. With the age of 26 she got opportunity to work for next several years for the significant VW retailer in Croatia where she produced software for human resource working with 800+ employees. She specialized in finding ROI (return on investment) of people performance from financial and human resource data analytics. From 2012 she has successfully introduced technological transformation and operational processes in several Croatian and cooperated with several international companies. Has a local experience and international experience with global companies like InfosecGlobal, work with leading cyber security specialists. Lana currently performs a duty of CEO of Careesma.co, IBM business partner. She specialized in solving bottleneck in business administration process through analytics and augmented intelligence that enhance and scale human expertise using virtual assistant chatbots. Lana continued to carry out her five-year transformation plan that calls for the market average of consumers movement increased toward chatbots by 25% yearly.

Redefining the role of HEI in a transforming world



Borna Jalšenjak

Holds a Doctorate from the University of Zagreb. He is a Senior Lecturer at the Zagreb School of Economics and Management (Croatia), where he teaches courses in Business Ethics & CSR, Leadership and Philosophy. He also serves as an invited faculty member at Faculty of Philosophy of the Society of Jesus, University of Zagreb (Croatia), the College of Business of St. Ambrose University (USA), and Universidad Internacional de la Rioja (Spain). Areas of interest include: business ethics; leadership; philosophical anthropology and the cross-section between management science and philosophy. Besides teaching, at ZSEM, he is engaged in the assurance of quality and continuous improvement processes.



RT Good

Dr. RT Good joined Lynn University as the dean for the College of Business and Management in July 2016. Before that, Dr. Good worked for 24 years with Shenandoah University in a number of roles from starting in student affairs to serving in several dean appointments. Prior to his work in higher education he provided leadership for business organizations in the hospitality, construction and land development industries, particularly in the field of human resources. He has an active consultancy practice and has worked with the U.S. Departments of Defense, Education and Health & Human Services on grant projects. Dr. Good holds a Bachelors of General Studies from Virginia Commonwealth University, a Master of Business Administration from the University of Mary Washington, a Doctor of Education from Nova Southeastern University and a post-doctorate from the University of Florida in international business and entrepreneurship. Dr. Good also holds professional human resource certifications including the SPHR, GPHR and SHRM-SCP designations. Additionally, he is an ordained Buddhist priest in the Mugendo Zen Kai tradition in the Order of the Boundless Way. Finally, Dr. Good enjoys life in Boca Raton, Florida where he recently celebrated his silver anniversary with his husband, Dr. Mark Sipe.



Sung Joo Park

Sung Joo Park is a professor at the KAIST Business School in Seoul, Korea. He was the former Dean and Vice President of KAIST, and served as the founding President of AAPBS (Association of Asia-Pacific Business Schools). He also served as a member of global business education boards including AACSB and GFME (Global Foundation for Management Education), and is an Asian Advisory Board member of EFMD. For more than 10 years, he was the mentor or reviewer of business school accreditation for AACSB and EFMD for schools such as Tsinghua SEM in China (Mentor), Chinese U. Business School of Hong Kong, Keio Business School in Japan, Chengchi Business School and Soochow Business

School in Taiwan, Sogang Business School in Korea, and University of Malaya in Malaysia. Also, he is an advisor for Sasin Graduate Institute of Business Administration of Chulalongkorn University in Thailand, FPT University in Vietnam, and a board member of the Higher School of Business Kazan Federal University in Russia. He is a founding scientific committee member of Eduniversal as well. He received a Ph.D. at the Michigan State University in 1978 and worked for the KAIST since 1980. He was a visiting professor at UCLA Anderson Graduate School of Management in U.S., Tsinghua SEM in China, and Keio Business School in Japan. He is currently a professor emeritus at KAIST.

He was an advisory consulting professor for Samsung Group for 10 years including the companies like Samsung Corning, Samsung SDS, Samsung Advanced Institute of Technology among others. He sits on the editorial boards of international academic journals such as Decision Support Systems, J. of Operational Research, International J. of Modeling, Simulation and Scientific Computing. He was a member of Korean Presidential Advisory Council on Science & Technology and currently is a lifetime member of the Korean Academy of Science & Technology.

He is currently teaching 'Innovation Management: The Asian Way' and doing research on the Asian management and innovation.



Kjell R. Knudsen

Dr. Kjell R. Knudsen became dean of the School of Business and Economics at the University of Minnesota Duluth, on January 1, 1998. A native of Norway, he first came to the United States on a Fulbright Scholarship to Gonzaga University in Spokane, Washington in 1965. After graduation from Gonzaga in 1967, Dr. Knudsen attended the University of Minnesota, Minneapolis on a Torske Klubben Fellowship. He received his MBA in 1969 and PhD in Management in 1973. Since 2000, Dr. Knudsen has been heavily involved as a Peer Review Training member and chair as well as a mentor with AACSB International. From 2003–2009, Dr. Knudsen served on the Initial Accreditation Committee. In April 2009, Dr. Knudsen was appointed to serve a three-year term on the PreAccreditation Committee.

Innovation, Quality Assurance and Governance in Higher Education

Session Chair: Goran Oblaković

From skills to behaviours - how can Higher Education Institutions respond to the need to develop students with the behaviours required by 21st century organisations?

Dr David Laughton

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Abstract

Employability has become a key issue for most Higher Education Institutions. This is in response to the interests and concerns of the main stakeholders: governments, employers and students. What is meant by employability has shifted in recent years, with a change in the emphasis from skills to attributes and behaviours. Feedback from employers has helped to define the desired attributes and behaviours possessed by graduates. However, this begs the question: from a pedagogical perspective, how should Higher Education Institutions approach learning design for employability? This paper presents a framework for learning design for employability grounded in the experiences of Sheffield Hallam University in the UK. It also suggests the main pedagogical traditions and approaches that can be drawn upon by those involved in course and module design to ensure students are equipped to be successful in their chosen careers.

Keywords: employability, skills and attributes, Higher Education Institutions, learning design,

1. Introduction

Higher education institutions (HEIs) have been challenged over recent years to become more explicit as to how courses are equipping students to become successful with regards to their career aspirations and contribution to business and economic development i.e. their employment and employability strategy. Universities have responded by devoting more resources to understanding business and national economic needs, liaising more with employers and employer groups, enhancing the vocational dimensions of curriculum, and facilitating the development of (what are seen as) key skills amongst the student body.

In the UK the skills 'debate' is illustrated by the Confederation of British Industry's interest and statements in this context, for example:

“The Task Force believes that business and universities must ensure that all students develop employability skills while still at university. These skills are self-management, teamworking, business and customer awareness, problem solving, communication and literacy, numeracy, and the application of information technology. Language skills are also important in an increasingly globalised workplace. Students should be striving to develop these skills which, alongside their academic qualifications, are not an optional extra.” [1]

More recently in the UK there has been a move from a focus on the skills required of graduates only to skills, behaviours and attributes. For example, the Chartered Management Institute [2] suggests that what employers are looking for in 21st century leaders are the ability to take responsibility, project management skills, honesty and ethical awareness, and collaboration and team working abilities.

These perspectives present considerable challenges for HEIs in terms of curriculum and pedagogy. Traditionally strong in the areas of propositional knowledge and research practice, universities are now being encouraged to deepen the imprint of employability on their learning, teaching and assessment practice. Although the 'what' of employability has taken shape from the perspectives of employers and employer organisations, the 'how' of employability (i.e. employability pedagogy) is not straight forward in this expanding context - e.g. how can university lecturers develop personal responsibility amongst their students? How can this be both defined and measured in terms of learning outcomes?

This paper will make a contribution to the 'how' discussion within HEIs and propose an approach that focuses upon alignment between learning outcomes and learning tasks, suggesting that the choice and design of learning tasks (and their underpinning characteristics) is the crucial component of a learning experience that integrates employability. Learning tasks are seen as multi-dimensional phenomena (requiring, in response, propositional knowledge, skills, behaviours and dispositions) and should take inspiration from the metaphor of fusion i.e. the blending together of different things as if by melting so as to form one whole. Creative learning design i.e. holistic learning tasks are seen as the key to helping students develop those task-based skills required in contemporary organisations and supporting behaviours as well as the knowledge and cognitive skills which are delivered through the curriculum.

The paper will present the experience of learning design and learning tasks from the Sheffield Business School, Sheffield Hallam University, UK, which has a long history of vocational business education and alignment with the UKs employability agenda. It will also review Sheffield Hallam University's recent upgrading of its employability strategy which now emphasises 3 core attributes that all students should develop: confidence, creativity and resilience, codified in an internal university policy document.

2. Employability

The relationship between higher education and the world of work has been a long and complicated one. In the 20th century, in many countries, the desire for a vocational higher education was often associated with new developments in the higher education system, principally the emergence of Polytechnics, with their distinctive missions, applied curricula and relationships with employers and employer organisations. More recently (e.g. the UK post 1992) the 'binary divide' between Polytechnics and Universities has been abolished, providing an enhanced legitimacy for the vocational aspects of the University curriculum.

Alongside these developments national governments, as key funders and stakeholders of higher educational systems, have placed the preparation of graduates for employment at the forefront of national policy development. In the UK, for example, the shift in terminology from vocationalism to employability was a feature of the Dearing report [3]. "Employability" has subsequently become ubiquitous as part of the HE discourse in the UK, although it is a less than straightforward term. For some, employability means being able to secure employment of choice after graduation. Attention here is focused upon the ability of courses to educate students who are then sought by employers in their graduate intake, and on the first destination statistics of these courses. For others, employability is about student attributes which employers find important, and which support continual personal development and enable graduates to engage in life-long learning and career management, so that they are successful in their chosen careers. Clearly, these perspectives are not exclusive, but they are different, encouraging HEIs to make a choice of their own working definition of employability. Having reviewed the employability literature, Yorke [4] suggested that employability be understood as:

“A set of achievements – skills, understandings and personal attributes – that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy.”

The above definition brings into question the nature of the skills, understandings and personal attributes associated with employment and employability, and the source of many of these insights have come from employers and employer organisations themselves.

3. Employers Perspectives on Employability Skills - the example of the UK

The Confederation of British Industry codified its thoughts in relation to the above in a document in 2009 [1]. Employability skills were defined and summarised as follows:

Self Management	accept responsibility, flexibility, resilience, self-starting, appropriate assertiveness, time management, readiness to improve own performance based on feedback/reflection
Teamworking	respecting others, co-operating, negotiating/persuading, contributing to discussions, awareness of inter-dependence of others
Business and customer awareness	basic understanding of business drivers for success including importance of innovation, taking calculated risk and profit, customer satisfaction
Problem solving	analysing facts and situations and applying creative thinking to develop solutions
Communication and literacy	ability to produce clear, structured written work and oral literacy
Application of number	manipulation of numbers, general mathematical awareness and its application in practical contexts
Application of IT skills	basic IT skills, including familiarity with word processing, spreadsheets, file management and use of internet

A more recent rendition of employability skills in the UK, with a focus on business and management students (which had joint authorship from a number of key stakeholder groups in business and management education: Chartered Association of Business Schools; Institute of Student Employers; and the Chartered Management Institute) made a distinction between the skills and the behaviours that employers desired in graduates:

Top 5 skills	Top 5 behaviours
1 Managing people	Taking responsibility
2 Problem solving and critical analysis	Honest and ethical
3 Developing collaborative relationships and team working	Decision-making
4 Communication	Curiosity and willingness to learn
5 Objective setting and performance	Resilience, grit and determination

Source: [2]

This, i.e. the change in emphasis from skills to behaviours, is an interesting development in employer perspectives on their human capital requirements, reflective of the nature of modern work and workplaces and the requirements of high performing and value adding organisations.

4. The University's Response - Case Example - Sheffield Hallam University, UK

Sheffield Hallam University agreed a curriculum framework and policy on employability in 2004 via an internal policy document in response to the growing interest in this from both employers and government. This framework was utilised to guide course design and delivery and emphasised the following features to be embedded in provision:

Essential Framework features

1. Progressive development of autonomy.
2. Skills development (intellectual; subject; professional; Key Skills).
3. Personal Development Planning (PDP).
4. Inclusion of activities reflecting external environments.
5. Reflection on the use of knowledge and skills between contexts.
6. The development of career management skills.
7. Engagement with learning from work (LfW).

Additional features for appropriate courses

8. Preparation for professions.
9. Engagement with enterprise.

In 2018 this framework was revised, based on feedback from consultants Gradcore who work with graduate employers in the UK, and who undertook a bespoke piece of consultancy for Sheffield Hallam University which resulted in a reformulated "3+3" approach, ratified by the relevant university board: all courses are tasked with developing confident, creative and resilient graduates, and then emphasise 3 other behaviours/attributes from a prescribed list e.g. being able to handle ambiguity well, taking other people with them, taking ownership, being comfortable with risk. The change in approach from the 2004 framework is striking, and resonates with recent findings from work with employers on their expectations of graduates. The challenge for higher education providers is therefore how to support students in 'becoming' in this context, which is the pedagogical dimension of the 'how' question.

5. Pedagogy and Employability

Students can develop employability skills and behaviours via curricular, co-curricular and extra-curricular activities (e.g. voluntary work). This paper will focus on the delivery of the curriculum and specifically the pedagogy associated with employability. It espouses a framework as follows:

- 1 Pedagogy and learning design is the vehicle for delivering curriculum
- 2 At the heart of learning design is the design of *learning tasks* for students underpinned by a pedagogical approach
- 3 Learning tasks are multi-dimensional phenomena incorporating and fusing: propositional knowledge, skills, attitudes and dispositions
- 4 The role of the educator is to create a fusion of these elements (the union or blending together of different things - whether material or immaterial - as if by melting, so as to form one whole) to affect the development of student employability capability.

The choice and construction of learning tasks therefore becomes crucial to the objective of employability development amongst students. Some learning tasks have more expansive possibilities in this context than others which is dependent on the nature of the fusion created. An example is offered by way of illustration:

The curriculum learning outcome is: "At the end of the module you will be able to...."**Construct an international market development plan for a company wishing to internationalise its operations.**"

From a pedagogical perspective the challenge is: how could students evidence achievement of this learning outcome in a way that embeds and integrates employability dimensions?

In terms of learning/task design and underpinning pedagogy teaching teams would have a number of choices including:

- 1 preparing students for an exam - this emphasises propositional and theoretical knowledge
- 2 students analyse a case study – emphasises skills (problem solving, identifying relevant data) and linking theory to practice
- 3 students evaluate a scenario via groupwork – emphasises inter-personal skills, group dynamics, negotiation of meaning
- 4 (group) consultancy project with a local company – develops work related skills and behaviours, tacit knowledge, 'getting things done'
- 5 Internship which focuses on the internationalisation project - emphasises holistic performance in a work context
- 6 Self- employed placement – emphasises enterprise, opportunity awareness, risk taking, self-management etc

As we move down the range of possibilities above the opportunity to develop a rich mix of employability related knowledge, skills and attributes expands. In this sense there is no necessary contradiction or tension between the development of subject knowledge and employability knowledge and skills. The art of learning design is to create the most appropriate fusion.

6. Key Considerations in Learning Design for Employability

Course design teams can draw upon 3 key pedagogical traditions and approaches to help inform learning design for employability. These frameworks and sources of inspiration are deemed to be transformative in the education/employability space and will help inform the 'fusion' in learning tasks described above:

1 Work-related learning - defined by Laughton [5, p 54] as "learning which results in knowledge, skill or attribute development derived from engaging with tasks, processes and environments *similar* to those that occur in specific organisational and vocational contexts." Three WRL task types are deemed to be particularly useful in this context: *case studies, simulations and role plays*. Designing tasks in this way and integrating them into course design afford students the opportunity to develop a wider range of employability skills.

2 Work-based learning [5 and 7) -due to the situation and embeddedness of learning tasks and experiences within real world organisations and workplaces (e.g. in the form of internships, placements, in-company projects), work-based learning contains the possibility for students to develop an enhanced range of skills and attributes compared to work-related learning approaches (see [6] for one empirical study of this).

3 Authentic learning [8] - contains a number of features which can be considered as design principles when developing learning tasks for students that have enriched employability dimensions:

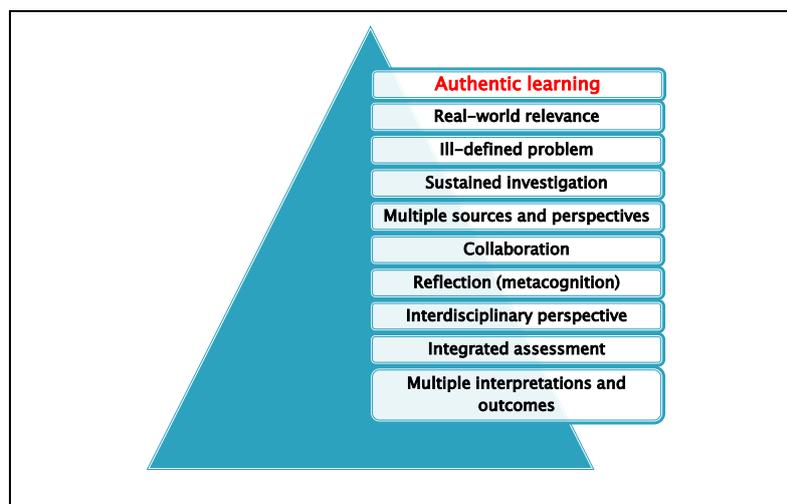


Figure1: elements of authentic learning

7. Conclusion

This paper has reviewed the current discourse on employability in higher education, framed as it is by employer perspectives and government economic priorities. It has identified a recent shift within this discourse: from an emphasis on skills to one on behaviours and attributes. This presents a challenge to HEIs in the context of the 'how' question i.e. how do we construct curriculum and pedagogy to help students develop those behaviours and attributes that are perceived as relevant and important? A framework for learning design is proposed based on the metaphor of fusion - learning tasks should aim to fuse propositional knowledge, skills and attribute development in holistic and synergistic ways that create a rich mix of employability possibilities. In undertaking this task course designers are encouraged to review and deploy 3 pedagogical and learning task design approaches that researchers have suggested incorporate powerful possibilities in this context: work-related learning, work-based learning and authentic learning.

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Changing University Governance Dynamics through Interplays and Convergences with Corporate Governance

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Abstract

Both explicit and implicit pressures on the public funded universities have been increasing to mobilize financial resources in order to remain competitive. The current theoretical paper addresses the following research objectives- first, how the existing governance structure of universities is responding to, or prepared to respond to need to mobilize financial resources; and second, whether the university governance and corporate governance are converging. The current paper has made two contributions to the body of knowledge; first, it helps to understand the dynamics of governance in the institutions of higher education system in the wake of changing institutional settings through the lenses of various theoretical underpinnings, which are complementary and conflicting at the same time; and second, it helps to explore understanding of convergences and divergences between university governance and corporate governance systems.

Keywords: *university governance, corporate governance, agency theory, resource-dependence theory.*

1. Introduction

Governance is a process involving leadership and management. Unsurprisingly the ambit of governance is very vast, vague, complex and dynamic, due to the fact the nature and structure of organizations have become more and more complex over time. A governance structure, either formal or informal, allows various social, political, economic, and institutional actors to create, organize, communicate and implement their mutual commitments [1]. The notion of governance underscores *power and authority* vesting in the hands of those, who are entitled to use it [2]. In the organizational context, *the power to exercise the authority* vests in the hands of leadership and management and it aims to achieve the resource allocation and management efficiencies through actions and interactions of various sets of policies and procedures involving monitoring, control, accountability, decision-making, performance evaluation and reviewing [3].

For every type of organization, be it public or private, for-profit or non-profit, governance plays an important role right from its inception to operations to planning to strategic decision making, and so on. The role of governance is even more pivotal in the context of public sector organizations, especially when they are experiencing rapid transformation and structural changes [3]. Noticeably, the public organizations, in order to fulfill their broad range of missions, may face the daunting task of maintaining, and even enhancing the quality of their governance standards/practices, distribution of functions, monitoring, reducing and/or resolving conflicts to continue to remain

socially legitimate and efficient and, therefore, serve the interests of their various stakeholders, including the resource providers.

Across the world, the public universities have been experiencing major structural changes; one of the key change is the adoption of the policies requiring public universities to become 'enterprises'. This development implies that the public universities, on the one hand, continue to explore and innovate more services and improve the quality of existing services that they can offer to their current and potential clients and at the same time generate revenue through such services [4, 5]. Rising competition in the education sector in many countries is due to the emergence of private institutions/universities, both national and foreign, reduction in the government financial/non-financial support and making the state funding contingent to the performance of public universities. However, this phenomenon was missing until recently in many countries due to near monopoly of the state in the education sector in general. In other words, the current policy developments require public universities to increase their *product portfolios* and improve their quality in order generate significant commercial revenue, which in turn will determine their future growth. Undoubtedly, the core elements of intelligence and knowledge creation, development, and transmission as well as critical inquiry exist; however, their nature and objectives are being redesigned through new entrepreneurial parameters. Indeed, the public universities are getting required by the state to upscale and diversify their activities in order to attract, generate and augment income from the corporate sector, reduce expenditure, increase efficiency and become more competitive. Thus, universities are nearing corporates, for example, with respect to their nature, missions, objectives, staffing, ownership and control. Another important characteristic of on-going public universities restructuring is the adoption of performance culture, which has strong commercial orientation [5, 6, 7].

While receiving little attention from commentators, public universities are now carrying significantly more business risk than hitherto as the trend of increased reliance on non-government income is unprecedented [8]. The impact of macro-economic changes is not only restricted to business corporates but also transmitting to other public institutions, including universities. This implies that similar to the corporations, the universities are exposed to both the unsystematic risks (internal risks, for example, weaker monitoring, and control and poor decision-making) and the systematic risks (external risks, for example, increasing inflation, interest rates and fiscal deficit). Increasing competition, and regulatory requirements coupled with their changing dynamics and rising share of performance based state funding have increased the business risks of universities manifold. Many Australian universities have become heavily reliant on international students revenue generated from the students studying in Australia, at overseas campuses, through distance education or at partner providers [9, 10]. At some regional universities, there is a heavy reliance on revenue derived from the private partners, who operate their campuses in major capital cities, including the major Australian capitals. The 'business' of international student income has now elevated Australia's universities to be among the top export earning sectors in Australia. This development has imposed increased external scrutiny on the university sector such as has been experienced in respect to protests by certain international students over personal safety and security issues in Melbourne and Sydney and in relation to particular concerns about the quality of education provided by certain private colleges [11, 12, 13]. Notably, the concept of corporate managerialism is featuring on the key agendas of the public universities to the extent that future funding of such universities by the state, for example in Finland, will commensurate with revenue generated through corporate collaborations, among other things [14].

2. Existing Theoretical Underpinnings of University Governance

2.1 Corporate Managerialism and Enterprise Governance Framework

The starting point of the integrated governance framework is the enterprise governance. Enterprise governance is a comprehensive framework that encompasses every aspect pertaining to an organization [15]. As given in Figure 1 the scope of enterprise governance is inclusive of business governance, corporate governance, value creation, and resource utilization and accountability, and assurance. The enterprise governance framework, reproduced in governance – encompassing both performance and conformance.

As shown in Figure 1, conformance is the hallmark of corporate governance and it puts explicit emphasis on accountability and assurance, whereas performance is element of business governance that focuses on strategy, value creation and resource utilization [5]. Nonetheless, both corporate, and business governance do not fail to intersect as

the optimum strategy, value creation, and resource utilization cannot be achieved without optimum conformance arising as a result of an efficient system of internal, and external controls. Similarly, accountability and assurance standards followed by an organization are markedly affected by its business governance, as successfully performing organizations usually have of the sound system of corporate governance.

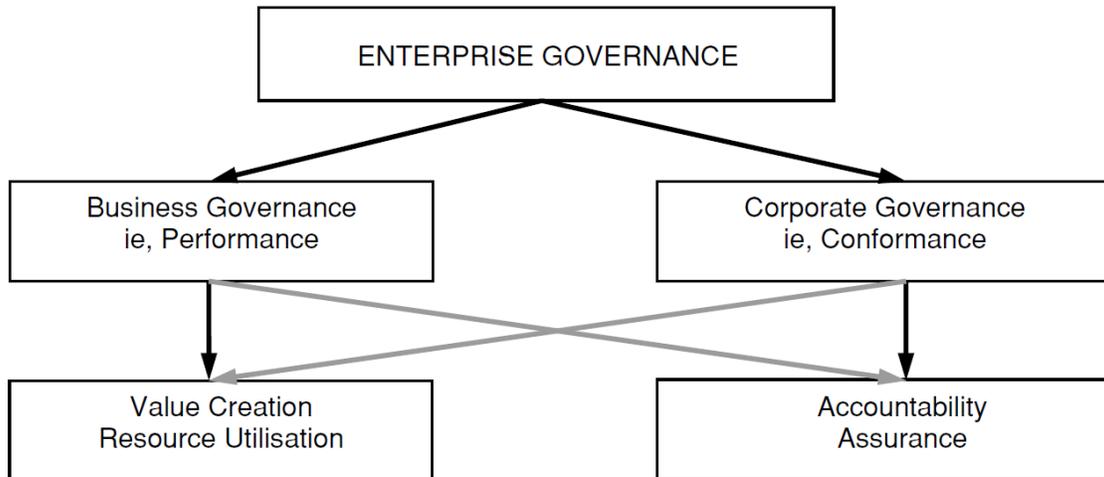


Figure 1. The Enterprise Governance Framework [15]

However, above-mentioned framework finds limited applicability in the context of higher education institutions (HEI) because of its strong inclination towards commercial approach. In order to make the enterprise governance framework meaningful in the realm of HEI the concept of academic governance requires special attention as well deeper inquiry.

2.2 The ABC Model of University Governance

The essence of academic governance is *the scholarship* that the HEI are supposed to support, create and promote. The perceptions and processes related to the scholarship can be different in different HEIs; nonetheless, the scholarship still assumes the paramount importance [5]. Academic governance includes various dimensions pertaining to control, monitoring, assurances, accountability, and disclosures related to teaching, learning activities, and environment, research activities and contribution of HEIs to the society.

As given in the Figure 2, ABC denotes three types of governances-Academic, Business and Corporate, and when three are combined Integrated Governance framework of university/HEI can be formed. The integrated governance framework also consists of business governance and corporate governance. Fundamentally, the integrated governance framework depicts the institutional settings of the HEIs. The concept of business governance assumes an important place in the overall integrated governance framework as modern day HEIs, in general, have been experiencing increasing commercial inclination. Traditionally, financial performance has been reckoned as one among the several parameters of performance; however, amidst a situation in which there is disproportionately larger emphasis on commercial activities, the role of financial performance measures has tremendously increased. Owing to the unprecedented pressure on the modern day HEIs to shift their focus on revenue generating activities and achieving the financial bottom-line results, the issues pertaining to resource utilization and risk management have become important dimensions business governance of HEIs. However, it is very important to understand that despite mounting pressure on HEIs, nowadays, to generate revenue and achieve commercial success the notion of business governance in the HEIs is not same as in the context of typical commercial organizations. The stakeholders, including students (current, prospective and past), employees, government, partners, and the wider community and the scholarship orientation are the cornerstones that differentiate the concept of business governance in case of a HEI from that of a 'for-profit' entity [5].

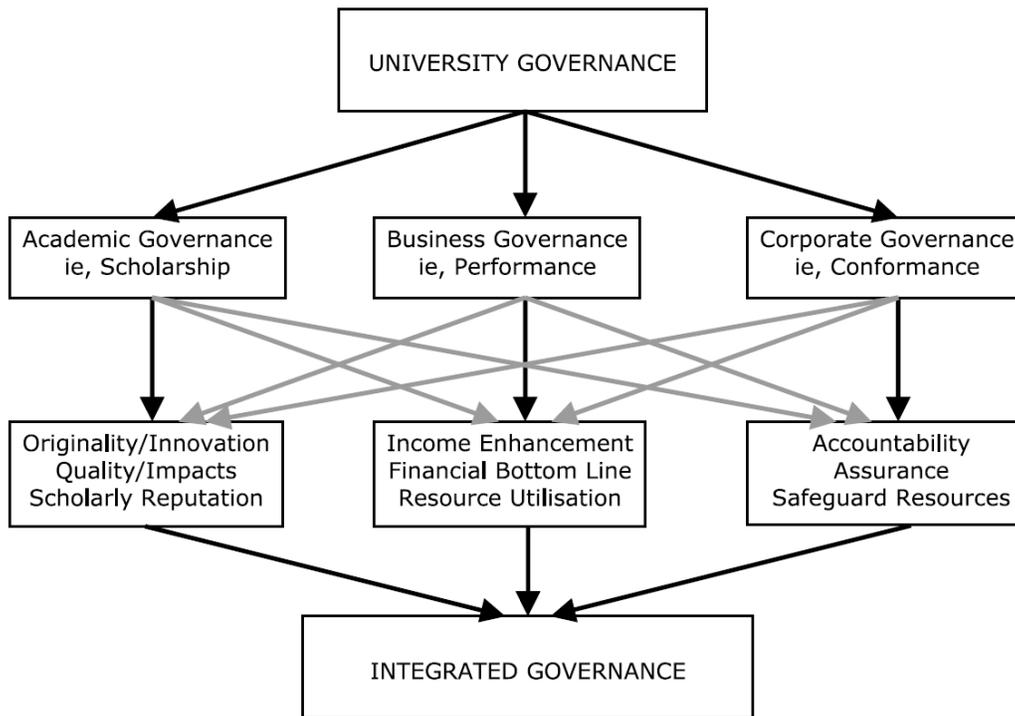


Figure 2. The ABC of University Governance Framework [15]

Corporate governance, which denotes the conformance framework including internal and external control mechanisms, monitoring of actions, accountability system, and disclosures and reporting of an organization, plays a pivotal role in the HEI governance too. However, as in case of business governance, the concept of corporate governance and its applicability with respect to HEIs are not same when compared with those in the context of purely commercial organizations. When studying from the point of view of commercial organizations, corporate governance generally include comprehensiveness and quality of financial reporting and related disclosures, monitoring and control mechanisms, protection of shareholders and other stakeholders, nature and composition of board of directors, executive remuneration and other mechanisms of enhancing accountability. On the other hand, corporate governance, when studied from the HEIs perspective, signifies a system of accountabilities, evaluations, quality assurances and controls; protection, and rational utilization of organizational resources; and protection, rights, and responsibilities related to intellectual property rights (IPRs), among others. The integrated governance framework, as depicted in Figure 2, highlight three core pillars of HEI governance, namely scholarship, performance and conformance representing three distinct but at the same time interactive types of governance-academic, business and corporate, respectively.

The high (low) level of ‘scholarship’ can increase (decrease) revenue, and at the same time reflect high (low) standards of accountability; the HEIs demonstrating high (low) level of ‘performance’ are expected to produce high (low) level of original, and innovation based scholarship and maintain high (low) standards of conformance; and similarly, high (low) standards of ‘conformance’ can influence the HEIs to become successful (unsuccessful) in promoting original, and innovation based scholarship and enhancing their revenue. For example, an HEI that follows in-depth system of conformance that requires performance evaluation of the faculty members is more likely to raise its teaching, research standards and attract high quality teachers and researchers. Resultantly, such HEI will motivate existing students to continue their studies, and potential students to seek admission to it, which will increase its revenue (fees/research funding/financial support by the state).

3. Convergence of University Governance and Corporate Governance

3.1 Complexity Theory and Educational Governance

Educational governance usually tends to be complex rather than complicated and its solutions are not necessarily replicable and transferable [16]. However, educational initiatives often attempt to dwell in the realm of the complicated when in fact they are operating in the realm of the complex [17]. This means that problems are often solved by experts launching a solution they believe is whole, complete, widely replicable and easily actionable. However, complex problems cannot be captured with such linear approaches. [17, 18]

Educational governance thus requires an approach that allows for changing initial conditions, the emergence of non-mechanistic phenomena and flexibility. Above all, it must allow for the fact that reductionism will not work – there will be no single right answer, no single approach that holds the key to successful implementation. Flexibility and feedback are necessary to manage successfully in a complex system, but doing so requires a fundamental reframing of the way we look at common problems in educational governance. Policies must move from one size fits all solutions to iterative processes derived from constant feedback between all stakeholders and the barriers between design and implementation should collapse. The whole undertaken becomes process driven rather than outcome driven. This requires strong leadership at all levels, and focusing on the complex interactions of the actors within educational systems, creating a broader view of educational systems as holistic organisms. It will also require an approach that allows key issues to be identified within complex systems so that the nature of educational systems does not lead to systemic paralysis and to the temptation of oversimplification. Viewing governance issues in isolation and seeking reductionist approaches targeting specific policy areas or pedagogical changes is unlikely to yield positive, sustainable change on a large scale. To be effective in a complex realm requires a fuller understanding of complexity itself. [16]

In a survey based study conducted in May/June 2013 covering 140 respondents including directors of R&D, vice rectors, deans, heads of departments, and research services and industrial liaison officers affiliated to research universities and universities of applied sciences in Finland very interesting and conflicting results were found [14]. On the one hand, based on questionnaire, an overwhelming majority of the respondents did not consider corporate collaboration adversely affecting their institutions' *business as usual* related to educational or research activities. This can be attributed to the fact that there is an increasing interest in commercialization of intellectual property rights (IPRs), principally created by the research universities; whereas, the Finnish universities of applied sciences are more oriented to develop two way processes of collaboration, open innovation and joint knowledge creation with corporates. However, on the other hand, when analyzing responses to *the open questions* asked in the survey, the results are certainly not indicative of painless university corporate collaborations. Among several bottlenecks that do not permit the university corporate collaborations to become *optimal* are, for example, first, underdeveloped collaboration structures that allow unequal bargaining strength of counterparties; second, contingency of collaboration to specific activities that limit the size of collaborations; and third, the sub-optimality of funding structures that may jeopardize the principle of fairness, therefore, demotivating one or both counterparties. Above study further finds that universities of applied sciences often experience the paucity of time and financial resources, and it can be conjectured that this phenomenon may have been caused by the fact that both types of universities are at the different stages in terms of their collaborations with the corporate sector. However, the Finnish universities are a heterogeneous group of institutions in terms of corporate linkages [14]

3.2 Agency Theory

Agency relationship defines a contract as one or more persons (the principal) engage another person (the agent) to perform some service on their behalf, delegating some decision making authority to the agent [19]. As highlighted in the Figure 3, the agency theory considers 'the principals' as the shareholder and 'the agent's' as the Chief Executive Officer (CEO) and other senior executives. In a similar vein, several aspects of the agency theory can be applicable to the university governance too. In a typical university set up 'the principal' may include government, including other public institutions, both financial, and non financial institutions; similarly 'the agent' may include rectors, deans and other senior executives. If the principal and the agent are utility maximizers, there is a possibility that the utility function (needs, preferences, interests etc.) of the agent will not be the same as that of the principal. For example, the principal may be interested in the long term growth of the organization, whereas, the agent may be more interested in achieving of the short term performance goals in order to claim personal benefits, such as performance based

remuneration. The loss arising due to the above-mentioned divergences of the utility functions of the principal and the agent is known as the agency cost [20]. The principal can limit divergences of utility functions and the resultant agency costs by two ways. First, by establishing an appropriate system of monitoring the inputs (actions) and outputs (performance) of the agent incentives for the agent. The input monitoring can be done, for example, by internal audit, and controls and disclosures; whereas, the output monitoring can be done, for example, by benchmarking organization’s performance against the specific competitors, national/international university ranking tables, and other recognitions conferred by the external accreditation bodies such as the European Foundation for Management Development (EFMD). Second, by establishing an appropriate system of incentives for the agent (bonding costs) in order to align the interests of the principals to those of the agent. Nonetheless, the agent has the information advantages (asymmetry) over all other stakeholders in an organization and this *residual power* places him/her at an advantageous position [21]. In smaller organizations, where ownership, and control divergences are smaller, lower agency costs are expected. On the other hand, in larger organizations above-mentioned divergences are usually significant; therefore, one may expect higher level of agency costs in such organizations.

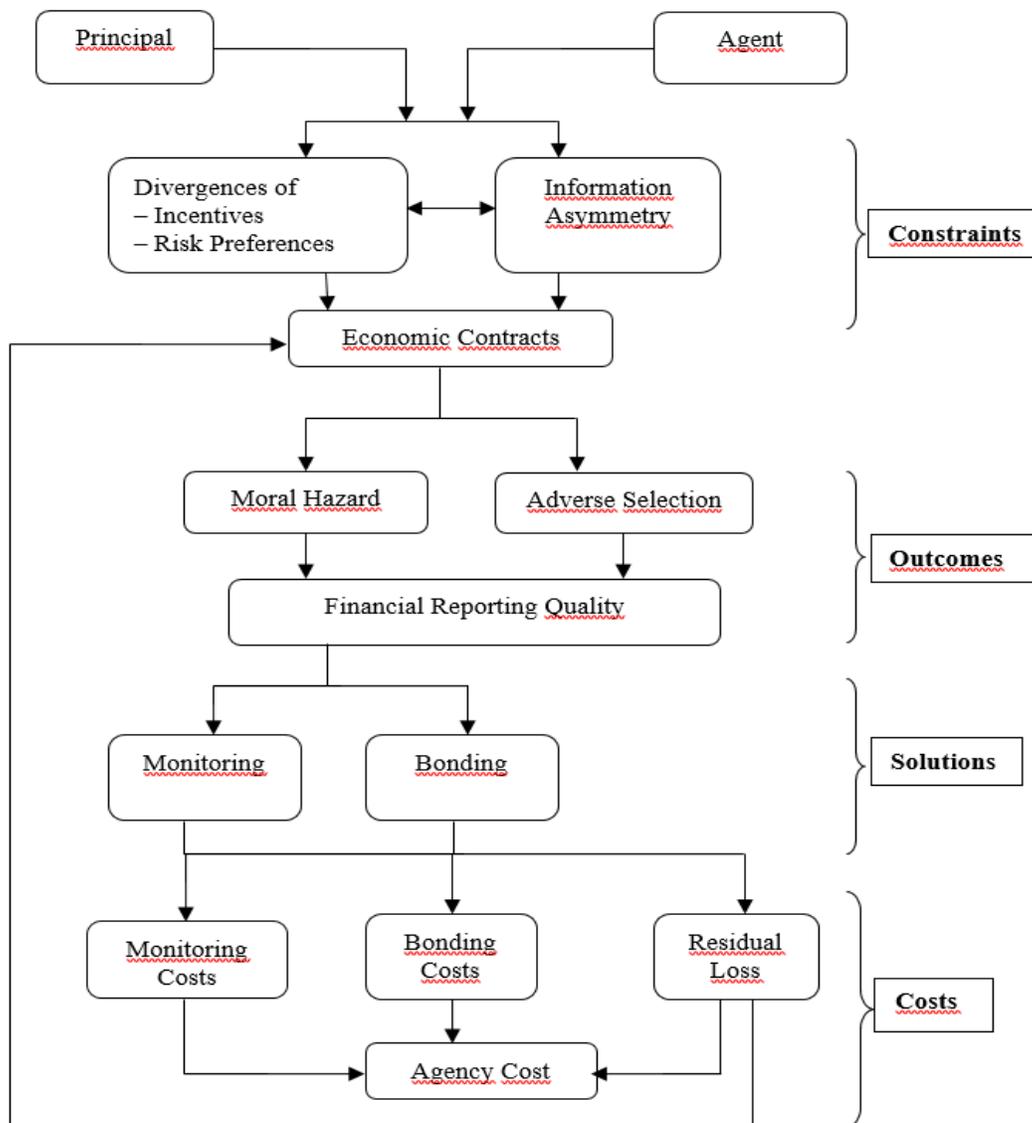


Figure 3. Agency Theory Framework (modified by authors)

3.3 Resource-dependence Theory

According to the resource dependence theory, a resource is anything that can enhance value of an organization [22]. Board leadership is one of the most significant resource of any organization. Pfeffer and Salancik (1978) have cited the following types of contributions that board leadership can make to the organization they are affiliated to [23]:

(i) Advice and Counsel: Professionals such as lawyers, accountants, senior managers of other organizations, current/former government officials, and community leaders serving on the board of an organization contribute valuable expertise, experience, and skills to it [24].

(ii) Legitimacy: The high level as well as diversity of skills, knowledge, experiences and external linkages of directors provide legitimacy to the action of an organization [25].

(iii) Communication Channels: An organization having effective channels of communication with other organizations is likely to be relative successful in, first, obtaining timely and valuable information, and second, developing cooperation. These communication channels help to develop shared resources, which further help to minimize transaction costs that the organization incurs when operating amidst various uncertainties [26, 27].

An organization, when appointing agents and other board-level directors, who also serve on boards of other organizations, must consider whether they bring resources to it in the form of both, human capital (education, experience, expertise, skills) and relational capital (network of ties to other firms, external environment and external contingencies). The sum of human and relational capital of such *intelligentsia* of an organization as *reputational capital* [28, 29]. The modern day universities function in relatively uncertain environment and at the same time experience complexities in terms of their operations, and organizational structures; therefore, by recruiting directors and senior executives, both having high level of reputational capital, the universities may experience improvements in several aspects, for example those related to their policy, planning, strategy, operations, and decision making. One can argue that *reputation begets reputation*, which implies that once a university is having its leadership possessing high level reputational capital, it may witness an escalation in its resource base, brand name, and overall image in academia; and as a result of the above, the talent-inflows to it may accumulate in the future, as such organization becomes the preferred future employer of the people endowed with exceptional skills, and qualities [28, 29]. High level of reputational capital of directors of an organization act as a stimulus to other job seekers, and it can be interpreted that university directors having high reputational capital display higher order of professional conduct, for example, attending the board meetings. Such behavior may be, first, out of fear of losing their *hard-earned* reputation in case such directors do not lead by example, and second, they want to consolidate their reputational capital further. The nature of the strategic contingencies that an organization observe or factors that affect its operations, planning, decision making and even its survival as important determinants of its board composition. The essence of strategic contingencies or other related aspects is the uncertainty. An organization that operates in a highly uncertain business environment can justify its actions if it has rich resource base comprising of directors carrying high reputational capital [28]. Directors owning high level of reputational capital play a pivotal role in rescuing the organization when it is struggling with impending bankruptcy, as such directors not only thwart looming bankruptcy situations but also implement the effective restructuring process by capitalizing their reputational capital so that such adverse situation do not arise in the future. Increasingly, the performance of public universities is measured and evaluated in calculative terms, especially in financial terms. In line with New Public Management (NPM) philosophies, Australian universities are required to use full accrual accounting in the determination of their periodic financial performance and financial position [30]. The classification of directors as per agency, and resource-dependence theory are given in Figure 4.

4. Conclusions

The current theoretical paper addresses the issue of the preparedness of the existing governance structure of universities in response to the ever-increasing pressure to mobilize financial resources and whether due to this pressure the university governance and corporate governance are converging. The public universities have been experiencing major structural changes in the form of the policies requiring public universities to become 'enterprises'. The current policy developments require public universities to increase their product portfolios and improve their quality in order enhance their revenue and promote the future growth. The is also mounting pressure

on the public universities to upscale and diversify their activities in order to attract, generate and augment income from the corporate sector, reduce expenditure, increase efficiency and become more competitive. Thus, the governance structure of universities and corporates are converging. Furthermore, in the wake of public universities restructuring process the performance culture of the universities is tilting in favor financial key performance indicators (KPIs). Overall, the current paper has made two contributions to the body of knowledge, first, it helps to understand the dynamics of governance in the institutions of higher education system in the wake of changing institutional settings through the lenses of various theoretical underpinnings and arguments, which are complementary and conflicting at the same time; and second, the current paper helps to explore understanding of convergences and divergences between university governance and corporate governance.

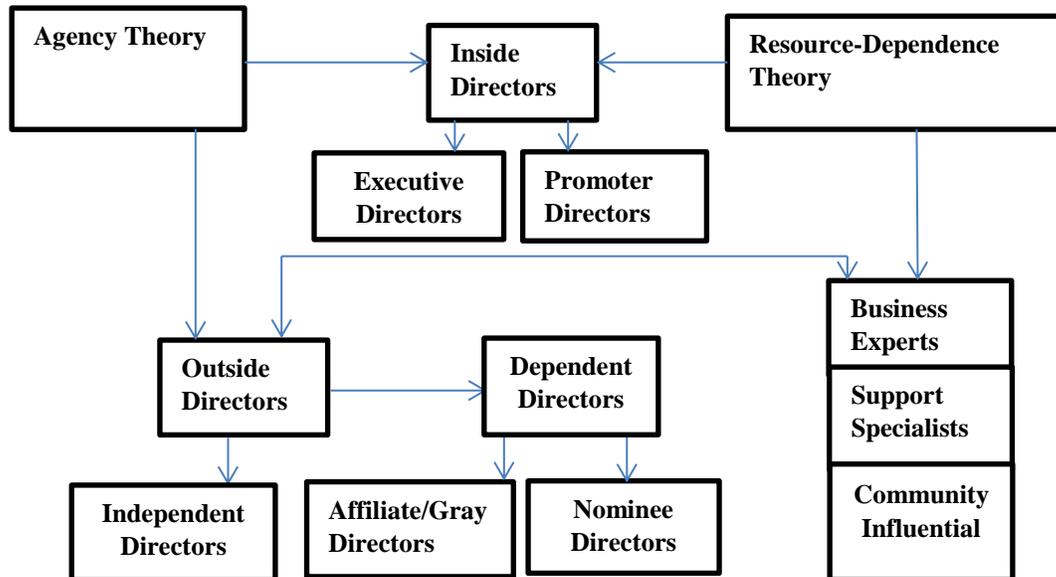


Fig 4. Classification of directors based on agency theory and resource dependence theory (modified by authors)

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Innovation by Immersion projects for valorization of the role of Higher Education institutions in the economic development

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Abstract

The development of university researches and their economic valorisation are still nourishing a scientific debate. For decades, the dichotomy was notorious between the work done by theoreticians / academicians and managers within companies. University research could bifurcate towards new models and innovations, useful for the entrepreneurial needs but unfortunately not communicated. There is a lack in the link that constituted an opaque dam. The challenge is about rising the entrepreneurial paradigm within the university sphere, and allow considerable synergies between the two stakeholders. The triple helix theory developed by Loet Leydesdorff and Henry Erzkowicz (2000), aimed to create bridges between university and industries with the support of the government. Also, several theorists try to reinforce the collaboration and to valorise the role of higher education institutions in the economic world. The literature is rich but the measures of impacts are difficult to find. In the same way, International accreditations such as AaCSB, highlight the debate; the new pedagogy models includes the immersion of students in the entrepreneurial world and the approach of “Test and learn” for the innovative ideas. That’s why a new approach related to pull innovation, is developed by ISCAE, Moroccan Business School, to fulfil triadic collaboration: Students, companies and school. The study results should answer the problematic: Are the immersion projects a first step to create bridges between schools and companies? What kind of Approach and what the results, and perspectives? This article is divided into two main parts, the first one is devoted to a theoretical analysis of the problematic. The second part is dedicated to an empirical study that aim to present case study about Immersion project in ISCAE High school.

Keywords: Pull innovation, immersion, business school, International accreditation, AaCSB, triple helix

1. Introduction

Many theories and articles tried to formalize the collaboration between universities and companies, this win-win strategy can have real benefit for all the stakeholders and induce new models of innovation based on immersion.

The triple helix theory developed by Loet Leydesdorff and Henry Erzkowicz (2000), aimed to create bridges between university and industries with the support of the government. Also, several theories related to collaborative pull innovation and immersion education, try to valorise the role of Higher Education institutions in the economic development.

International accreditations highlight the debate; the new pedagogy models includes the immersion of students in the entrepreneurial world and the approach of “Test and learn” for the innovative ideas.

This article is divided into two main parts, the first one is devoted to a theoretical framework. In a second part, the focus will be on the emergence of an entrepreneurial paradigm within the university sphere. A case study about ISCAE immersion projects will then be drawn up in order to have a concrete overview about operational results and innovation areas.

2. Theoretical framework

The framework of our research aims to present, at first, several models developed by theorists to create bridges between universities and firms, and allow the creation of new modes of socio-economic development in the knowledge economy. Several theorists have been interested in the interactions between scientific research and business world and suggest conceptual frameworks to explain transformations. The triple-helix model, the collaborative pull innovation and the immersion education are a perfect examples of this dynamic.

2.1. Triple Helix Model

The "Triple Helix", primary founders were sociologists, Loet Leydesdorff and Henry Erzkowicz (2000) insists on historical continuity and focus on previous relations that persist between university, industry and government. It is a continuous interdependence of a tripod, which gives birth to a new stratum of knowledge, which identifies a new world in full economic, industrial and intellectual change. 2000, the authors of the "Triple Helix" published an article under the name: "Mode 2 and the Globalization of National Innovation Systems: new environment, new practices "to highlight the evolution of their model, following the rapid development of ICTs. Innovative approaches have the lead to a transversal reorganization of the triad. In this way, university research becomes a place to explore the evolution of these knowledge-based triads.

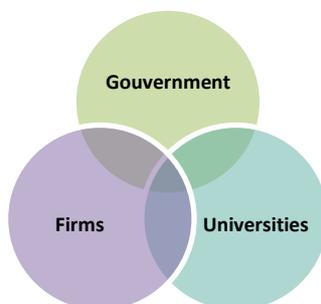


Figure 1. Triple Helix Model

The model involves 3 stakeholders, which are:

- **Government:** guarantor of societal rules, regulations, and can be a source of subsidies,
- **Firms:** Seek to improve their productivity on a continuous basis,
- **Universities:** Generators and disseminators of knowledge.

The combination of these three actors can induce several forms of collaboration, mainly: Clusters, incubators and innovation centres', and in smaller scale: Immersion projects.

Clusters:

The concept of cluster was developed by the economist Alfred Marshal who had identified in 1890 the benefits of the concentration of economic activities in "industrial districts composed of small similar specialized institutions to achieve a particular stage of the production process." The concept was taken up by Michael Porter (1990), defining it as "a geographic concentration of related businesses, specialized suppliers, service providers, related industries and associated institutions (universities, standard-setting agencies or professional organizations, for example) in a particular area, which clash and cooperate. "

Innovation centers:

The Innovation Centers are places of creativity, where training is provided. A multiple fields are opened to research and promotion of innovation federating different actors with multidisciplinary skills. The centers can provide work rooms, technology platforms and advanced equipment, and can also become incubators for project leaders. It is a nursery of new ideas where the major objective is to encourage inventions, to make them evolved into innovations and to support their implementation.

Incubators:

It is a new concept that appears in USA in 2000, it's a consequence of clusters and innovation centers. The main objective is to promote the innovation and encourage launching small businesses. A business incubator is a place to meet the creators of companies. It can be financed by a public authority, but also by private funds. Some incubators are integrated with business schools or universities. Companies welcomed in incubators are very young, even in the process of being created. These are often innovative companies in the new technology sector, called "Start-ups".

Immersion projects:

The professional immersion projects (PIPs) are different from internships and are intended to be more operational and applicative for three main reasons:

- PIPs are considered as a course, and required during the semester,
- PIPs are subscribed in pull approach: for internship, students have to postulate till finding host companies, unlike the PIP where the companies express their interest to work on a problematic with the students,
- Third difference, the PIP is more applicative since the results will be exploited immediately by the company, unlike the topic of internship that answers a general problem.

PIPs are also different from "Alternation studies" that consist to have a contract with the company simultaneously with courses. In this case, there is no specific project and no supervision teacher.

2.2. Collaborative pull innovation

Shyam R. Chidamber, Henry B. Kon (1993) wrote an article about "A research retrospective of innovation inception and success: the technology-push, demand-pull question". Historically, innovation researchers debated whether organizational innovation is driven by market demand or new technology.

- Innovation Pull: (coming from the expression: market pull), refers to the innovation following the expressed demand from the market that 'pulls' the new product.
- Push innovation: (from the expression: technology push), means innovation following the evolution of a technique that 'pushes' to innovate.

This interactive approach was initiated by Schumpeter (1935), Schmookler (1966) and Kline & Rosenberg (1986).

"Science Push" Model:

This principle was initiated by J. Schumpeter which assumes that innovation is pushed by science and that technical progress is an exogenous entity (out of the market). Innovation then consists in giving a social use to the invention. The stage of innovation is the entrepreneur's own who introduces a break in the routine of the market by offering new products. So, the main principle is that the scientific discoveries push entrepreneurs to find applications and therefore to innovate. The innovations create the need of the market.

"Demand Pull" model:

This principle was initiated by Schmookler (1966). The principle is that not science that pushes innovation, but the market - in other words the demand - that drives and explains innovation. Market demands are taken into account by a contractor, an inventor or even a company looking for innovative solutions to meet them. This was the reference model for years (60-70).

Le Chain Linked Model

This model was initiated by S.Kline and N Rosenberg (1986). Nonlinear, the innovation process is an interaction between several steps of the process described in the illustration below. The design process plays a

central role and constitute the backbone of the model (Forest, 1999) because it creates a link between research laboratories, industries and production. This is the interactive model by Excellency.

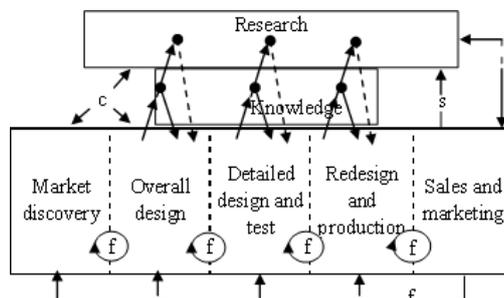


Figure 2. Chain linked model S Kline and N Rosenberg

This design process is a combination of market discovery, design, production, sales and Marketing. All these steps are linked to the market through researches. By placing the design process at the center of the innovation process, this model aim to fulfil needs of final clients and drive an adaptive innovation. In this case, science contributes in two ways:

- It is possible to draw knowledge from the existing data to feed the innovation process or to solicit new knowledge to satisfy the engaged innovation process
- The nature of the knowledge drawn varies according to each stage of the process innovation.

For example, at the “Invention” phase, it is rather the knowledge of basic research that is solicited while at the time of development, it seeks more research that relates to how the different components can interact.

2.3. Immersion education

RK Johnson, M Swain, in their book “Immersion education: International perspectives” states that the dilemma is about immersion in practice or reflection on action. They highlight that immersion in practice is essential to have an operational and ready graduated students. Although the newness in educational pedagogy, such as flipped classes, integration of digital and a development of software programs to manage classes and courses, Reflection-oriented capacities is the major route towards helping them to grow in their practice learning, and to actively be involved in changing and (re)constructing the knowledge by experiencing. However, the dynamic interchange between reflection and immersion into practice teaching is related to the process of belief change, with student, teachers and professionals.

As per Michel Leclerc (1991), in his article¹ related to relationships between universities and companies, the university is therefore called, more and more, to play a role in the development of the economic fabric of the country. This was approved by OECD report (2016), states that: "this strengthening of demand stems mainly from the increased need for scientific knowledge to develop advanced technologies and related education and training service needs and to apply these to trade and industry ". Also, from the companies' side, economical leaders believe that the results of university research have economic value only if they are systematically put on the market

¹ The Canadian Journal Of Higher Education, Vol. XXI-1, 1991 Canadian Journal of Higher Education, Vol. XXI-1, 1991

and develop a new potential through the value creation (M.Porter, 1981). The Research and Development in companies can work with the universities laboratories to fulfil market demand.

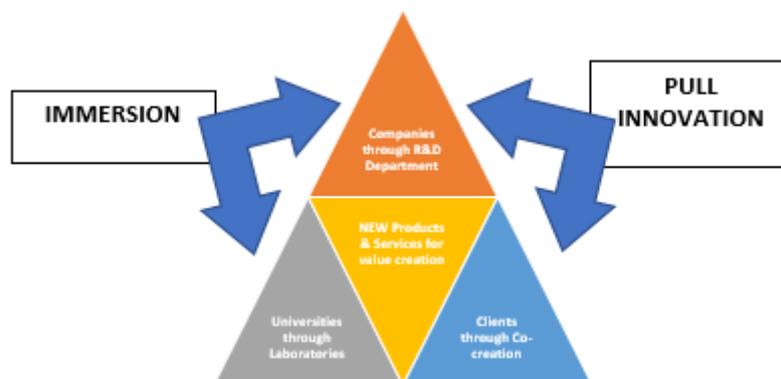


Figure 3. Collaboration in immersion projects

This triple approach have a lot of advantages: student immersion, economy scale for companies and new adaptive products and services for the clients. The link is doubled between universities and companies trough immersion projects, and between companies and clients through pull innovation. This dynamic induce new products and services that create value (Value Chain, Michel Porter 1981). The literature is rich and several authors focus on operationalization and exploitation of universities researches. In other hand international accreditation of business schools (such as AACSB) integrate this criteria to evaluate the dynamic of schools in their ecosystem.

To conclude the theoretical framework, PIPs projects are part of Triple Helix models that can be considered as a pull innovation coming from companies, and developed in an interactive way as the chain linked model, to reinforce an immersion education.

3. Empirical research

The empirical research has for mean purpose to explore the immersion projects Model in ISCAE Business School. First, we'll define AaCSB international accreditation, then we'll present ISCAE group, and finally we'll scroll up the PIP's case study.

3.1. AACSB Accreditation

In fact, AACSB accreditation is focusing on validation of a processes named Assurance of Learning (AoL). This is an ongoing and valuable process with continuous improvement at its core. It's refers to demonstrating, through assessment processes, that students achieve learning expectations for the programs in which they participate. The AOL purpose is to drive the curriculum change. The first step of AoL process is curriculum alignment, where learning goals are mapped on the curriculum and the all the linked courses have to contribute to this goal. The objective of AACSB accreditation is to have the same standard all over the world that insure the quality of education and facilitate the mobility of students. Also, it leads to an improvement in student learning and raise the quality of graduates, which is positive for the students, the school and the society.

In this context, ISCAE launches this year a new course model referring to this immersion. Immersion projects are different from trainings and enterprise projects that are done generally at the end of the year. This new experience aimed to have cross year course dedicated to immersion in companies. The student's benefits from real professional world experience but also an internship supervision by both dedicated professor and dedicated professional. The immersion project is noted as a separate course and has 2 main advantages; Firstly, the innovative course fits perfectly with the basis of international accreditations such as AMBA, AACSB and Equis. For reference, ISCAE dispose already from AMBA and aim in mid-term to submit to AACSB accreditation. Today, international accreditations requires the consolidation of bridges between universities and companies.

Secondly, the new era of digital and new conceptions of trigger marketing forced a reorientation of companies into pull system, to be sure in co-creation perspective to fit the new generation needs. This situation induce a new dynamic in innovation processes that switch into collaborative pull innovation. This motivation for each part can induce a win-win relationship that can be very rewarding for both parts.

3.2. ISCAE presentation

ISCAE is the first management school in Morocco, created in 1971. The ISCAE High school courses includes 3 years: pre-Master, Master1 and Master 2. It is a selective training, polyvalent, in phase with the rapid changes in the global economic context. ISCAE has always allowed students to experience real-world experiences of the company and its environment through internships, application work, simulations and case studies. Also, ISCAE is in complete international immersion, thanks to the numerous partnerships established with renowned schools and universities around the world (More than 60 exchange or double degree partnerships, with 28 countries).

ISCAE has just been accredited in 2017 AMBA and is currently preparing AACSB accreditation. ISCAE launched this year the Professional Immersion Project (PIP) for first-year Master students and the Social Impact Project (PIS) for Pre-Master students. In our article, we will focus on PIP since this model aim to create a new bridge between the academic world and the professional world with the supervision of the school.

3.3. Professional immersion projects (PIP's)

The first objective of the research is to evaluate the impact of immersion projects for the 3 stakeholders: Students, companies and school. The study results should answer the problematic: **Are the immersion projects a first step to create bridges between schools and companies? What kind of Approach and what the results, and perspectives?** The evaluation will be done through case studies, and the measure of impact will be done through qualitative research with: company supervisors, students, and also focus groups with professors or School supervisors. The advantage of the bridges between the academic world and the professional world are created more and more and that for a triple contribution, for the institutions, for the host company and for the students:

For the training institution: This Pip's projects help to match the student profile with the demands of the marketplace: it is no longer conceivable to train students without confronting them with the professional world in order to consolidate their achievements in the university. Also, they allow to join an international accreditation process: today, for educational institutions, it's very important to be recognized internationally and accredited (AMBA, AACSB or Equis). It is necessary to make immersion projects for students and to be able to evaluate their capacities within the company to refine their profiles.

For the company: PIP's bring freshness and free Consulting. This missions can help on predefined subjects for which the company does not have a dedicated budget, or simply no time. The students can focus on specific matters while monitoring from both parts: with the "professional" supervisor in company and the supervisor "Professor" at the training institution. It's a dedicated multi-specialty team. The groups are constituted by six students from combined specialties: Marketing, Finance and Audit.

For students: The PIP's allow students to live the real experience with professionals in a context of interaction and sharing of sectorial practices, it's a real immersion in the work world. The subjects are generally applicative. It's allows student to bring new ideas, propositions or simply new processes with a freshness point of view.

PIP Process:

The PIP approach is identified as a pull innovation. It means, to offer solutions and options to the companies according to their real needs. The launch of PIP projects were organized into 2 phases:

Phase 1: This phase was launched the previous academic year for 2016-2017. It wasn't exhaustive but organized for a representative sample: 50 students representing 20% of total population organised in 10 Groups. The PIPs were done in collaboration with a consulting firm. Supervision was done only by the firm that subcontracted students with actual cases of companies and who had given very good opinion on the prepared report. The areas for improvement in this phase were:

- Generalization in relation to all students,
- Double academic and professional frameworks,

- The involvement of renowned companies from different specialties.

Phase 2: The second phase of the project, hold during the 2017-2018 academic year, took into consideration identified improvement points during Phase 1 and proceeded according to the following steps:

- Stage 1: Launching a call of interest for companies based in Morocco, to offer them advice missions made by our students free of charge with a group of specialized teachers according to the theme. 28 projects were collected. All the students were implicated 200 students, from different specialities: finance, marketing and audit, and 10 professors were volunteers to coach and evaluate the groups. The summary table is as follows:

Company	THEMATIC PROJECT
ARTEGIS	1. Digital Strategy for Artegis communication consulting agency
BMCE Bank	2. Digitization of services offered to youth and student segments and entrepreneur segments. 3. Strategy of the educational agency for an innovative and educational positioning. 4. Analysis of the accompanying incubates devices. Analysis of motivations and obstacles to entrepreneurship among young graduates. 5. BRAND ACTIVATION BMCE brand: define an animation plan of the educational banking agency for a living customer experience.
HUB AFRICA	6. Develop and set up communication campaigns, collection, follow-up and lead transformation 7. Creation of the content and animation of the entrepreneurs support platform, B2B Hub Africa 8. Organization of the event in mode project
IMC	9. The values of the company as managerial lever: analysis of the values evolution with panel, development of a program of live dissemination.
INTELCIA	10. What is the future of customer service with the advent of artificial intelligence? 11. How to develop entrepreneurship around contact centers? 12. Digital transformation at the service of improving employee experience at Intelcia 13. Accompanying the internal launch of an online spelling learning platform 14. Develop a coaching strategy to transform the customer service into a customer experience. 15. Which HR practices to attract and retain millennial? 16. Which managerial features do "Z generation" face?
KLF Com	17. Sports space for brand communication and university sports funding
Lesieur Cristal	18. Development of a digital dashboard & "easy to use" listing all Lesieur Cristal branded KPIs? 19. Vegetable proteins: context and potential in human nutrition? What role to play? 20. Shower Gel: Can we revive the category via a sachet packaging? 21. Mapping panel of industrial suppliers and sourcing in Best Cost Countries 22. What digital communication adapted to Lesieur Cristal: develop the spirit of belonging, reputation management, social communication?
MATIS AEROSPACE	23. Carbon Footprint Rate Identification for Matis Aerospace AIRBUS Products 24. Valorisation of the waste of the company (Production & No Production)
Prospecom	25. Business Intelligence and Strategic Information. Doing Business In WEST AFRICA 26. Business Intelligence and Strategic Information. Doing Business In NORTH AFRICA
OCP DUPONT	27. Market Analysis of Consulting in Energy Efficiency and Environmental Management
Peugeot SA	28. Mobile Economy

Table 1. Table of PIP companies and subjects

- Step 2: organization of an information meeting at the school, in the presence of the students and supervising professors, so that the companies present the subjects and the problems which they propose,
- Step 3: soliciting the supervising professors for the choice of the subjects according to the specialty, random assignment of the students groups.

This process took place during the first semester. For the second semester, students are expected to immerse in the professional world with a double supervision:

- A teacher supervisor: 5 supervision sessions with sequential progress reports are organized during the semester;
- A professional supervisor: as needed, meetings are organized within the host companies.

At the end of the semester, students submit a written report to the company and the institution. An oral presentation is planned in order to jointly evaluate the rendering and the assessments of the companies. These PIPs made it possible to value the contribution of students, to work on application projects and to create partnerships with companies.

PIP Results:

The evaluation was based on 3 levels of analysis at PIPs closing:

- An interview guide for professional supervisors,
- A student interview guide,
- A focus group realized with the supervising teachers.

Interview Guide: Professional supervisors

The sample chosen was exhaustive: 28 professional supervisors corresponding to 28 subjects. The results were analysed according to the statements made. 82% of the supervisors found the students at the height of the mission, which approves it is the ratings awarded which was around 14/20.

For the highlights of this first edition of PIP:

- Autonomy of students and the rapid appropriation of subjects
- Fresh and innovative vision of the issues raised by companies
- Respect of company appointments and presentation efforts,
- Integration and the creation of affinity with the professionals and the proof is their presence on the spot, the day of the presentation at ISCAE

For the points to improve:

- Difficult to schedule appointments with students during working hours,
- At the beginning, the referral to the subject was laborious but once the topic was explained the recovery was easy,
- Not all members of the group are involved, some did not come to the coaching sessions, and even don't contribute to the final report.

Interview Guide: Students

The sampling of the students was exhaustive for the leaders of each group (28 Leaders corresponding to the 28 subjects). The overwhelming majority of students find the PIP a great help (90%).

48% of the students managed to have summer internship proposals in the same company and 75% of them agreed to come back.

The remaining quarter shows the following reasons:

- Inadequate internship with professional interest
- Want to live new experiences
- Enrich the CV with new references

The students unanimously would like the PIP to be renewed since it allowed:

- A real immersion in the professional world
- A request that comes from the company and not from the student (like internship applications)
- Mobilization of companies and schools with dual supervision
- Combined and very rewarding learning
- Personalized progress monitoring in "Project Management" mode with intermediate states to present.

Focus Group: Supervising Professors

For supervising 10 professors, a focus group was organized. They are happy with the initiative and have been more aware of the input on the day of the presentations since the company managers showed their satisfaction and their adhesion to the program. Unanimously, the teachers will renew their supervision during the next edition and the majority were happy with the students' rendering and their ability to adapt. In the interest of improvement, the supervising professors made the following recommendations:

- Introduce the PIP as a full-fledged subject in Master1 programs, with dedicated slots, pre-planned appointments and a well-rounded program of the course of the mission,
- Organize an information meeting to further explain the subject, with the supervisors and students,
- Negotiate a small monetary reward for the best subjects (motivational factors),

- Assign students and supervisors according to a list of choices,
- Constitute homogeneous groups by specialty to non-randomly affect groups of students.

Overall, the PIP's was a success and attain his objective to create dynamic with companies within the school. This immersion project is now a part of student evaluation and it's considered as a full seminar that students have to complete and to validate. Thanks to the global accreditations, schools try to improve their programs and to align their content with the international standardization, and this can be considered a "must have" in a recognized business school all over the world.

4. Conclusion

The immersion project in professional world had a positive impact on the three stakeholders: students, companies and ISCAE School. The project was adopted by students and create bridge between ISCAE School and companies. Beyond the managerial and technical learning, the PIP is an opportunity to live an human experience of professional relations between teammates and tutors. The decision is to renew this course next year with improving the detected areas of development. In the big picture, ISCAE can develop the capacity of answering company's specifics problematic, or develop areas of innovation in a co-creation perspective with the entrepreneurial world.

This synergy can had benefits for development and insertion of students and also keep ISCAE improving in his international accreditations projects. Finally, no country is deprived of supporting the relationship between the university and the company. The most recent OECD report on this subject explicitly states "that this is a key element of technological development, and in many countries the strengthening of these relations is a priority objective of national researches and inclusive development".

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New Developments in the Funding Model of Finnish Universities of Applied Sciences - A Critique

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Abstract

The Finnish higher education system has recently gone through many changes. There is a national government project in Finland aiming at making Finland the most educated nation by year 2020. The program also aims at improving the quality of work life in Finland to make it the best in Europe by year 2020. At the same time, the country has experienced a long financial recession where the state budget money spent in education has been cut. Improving the quality of education and work life at the same time as cutting the financing of education has put the universities of applied sciences as any other institutions of higher education in a situation where they are required to produce results that are more positive and/or better results with less costs. New performance-based higher education funding models where the state allocates funding based on the achievement of predefined objectives have been introduced for both traditional universities and universities of applied sciences. The effect of such funding model is very strong in a country like Finland, because in Finland there are, in general, no higher education tuition fees that higher education institutions could use to finance their operations. However, at the same time with the new funding model, introduction of tuition fees for the incoming students from non-EU/EEA area can be seen depicting a clear divergence from the long tradition for tuition free education in Finland. Admitting that Finnish higher education authorities are still deliberating and developing financial models, nonetheless, we depict, at the conceptual level, the impacts of the recently introduced funding model on the quantitative and qualitative targets of universities of applied sciences and their alignment to larger political targets set by the Finnish government.

Keywords: *higher education, university of applied sciences, funding model, performance-based*

1. Introduction

The Europe 2020 strategy states that the aim of educational policy in the EU is to increase the proportion of people having a higher education degree over 40% among the population in age groups 30 - 34 years old. Finland has set the target at 42%. [1] The education level of population (measured usually by calculating the proportion of those with a higher education degree of a certain age group) is connected to economic growth and increase of well-being [2] as desired by the Finnish government programme. The high level of education on the level of whole population in Finland has enabled the adoption of new technology, which in turn has been one of the key factors of the economic growth. On the other hand, there is a critical debate about the education policy aiming at a very high level of higher education where over education is a constant topic of discourse. [3]

Despite of the good reputation Finland has gained in international comparisons of education quality and education outputs, there is a growing perception in Finland that the country is losing ground in its knowledge producing capacity. In 2015, the Ministry of Education and Culture in Finland ordered a study on the functionality and performance of Finnish higher education system with international comparisons to some other countries with the same kind of higher education system. [4] This study serves as a starting point for our considerations on performance-based funding as well as a quest for further research made by Kettunen [5]. He conducted a research on the performance-based funding schemes of universities in Finland and suggested that it would be worth of further study to analyze the funding in the sector of the Finnish universities of applied sciences (UAS), which have adopted a new performance-based funding scheme at the beginning of 2014. This paper concentrates on the funding model of UAS by analyzing the effectiveness of performance-based funding

model and providing critical aspects on the functioning of the funding scheme. The aims of performance-based funding and performance agreements are to boost productivity, increase quality and performance, and enhance accountability and transparency. In Finland, the government has reported progress in strategic profiling, cost and performance awareness and dialogue after the adoption of performance-based funding model. [6] However, the effectiveness of performance-based funding has been questioned by prior studies [7, 8, 9, 10]. In many countries, performance-based funding schemes have largely failed and have been uneven and unstable, as they tend to reduce the scope of strategic planning and the autonomy of higher education institution (HEI) [5]. It has also been evidenced [6] that in countries with longer tradition with performance agreements such as Finland, performance-based funding models linked directly to performance agreements tend to show a shift from comprehensive contracts to more narrow and focused agreements.

2. Literature review

Investments in education and research have traditionally been quite substantial in Finland. For example, in 2015, Finland invested 6.4% of GDP in education comparing to EU average 4.9%, and 1.7% for higher education comparing to OECD average 1.1% [11, 12], but due to state budget cuts, the spending has been diminishing during the past years. However, with current level of education, Finland meets both the EU target and the national target with proportion 45.5% of population having a higher education degree, which is among the highest in the EU, comparing to EU average 38.7%. The employment rate of those with higher education was 81.1% in 2015 [12], but the goal is to use the resources of science and research in a more efficient and effective way [13]. This has made the HEIs to look for new methods of financing. From 2017 on, tuition fees were introduced for the incoming students from non-EU/EEA area ending the long tradition for tuition free education in Finland. At the same time, it is worth of noticing that there is no tradition of alumni-based financial support in Finnish higher education institutes. However, from the beginning of 2018, the HEIs were granted a permission to collect donation money (where every euro collected is linked to extra monetary support from the Ministry of Education and Culture) from business life, but there is yet no data available on the influence of these donations.

The evidence prior research [4] has produced suggests that the Finnish higher education system is generally well functioning and well performing. Before 2014, the funding model of UAS was based on costs, which did not motivate to increase effectiveness but rather, it motivated to increase the costs [14]. Now, the UAS have become independent legal entities (non-profit registered limited companies) and the responsibility of their core funding has been transferred from local authorities to the state. This has required a change in legislation. At the same time, the number of UAS has declined through mergers and the pressure for further consolidations continues. As to the size, the UAS vary from 1 200 to 16 000 students. [4]

The reforms above have led to many improvements in Finland's higher education sector. They have provided HEIs with an independent legal status and improved their governance systems. However, at the same time, there are many problems. Finland is losing its competitive advantages based on highly educated workforce and innovation capacity. The duration of studies is among the longest in the OECD countries. The transition from school to higher education and to the labour market is slow. The learning outcomes at the school level education are declining. The population is ageing. Internationalization of higher education and research remain key challenges. The research output suffers from the fragmentation, lack of large-scale research infrastructures and absence of big national goals. Finland also has a dense network of knowledge producing organizations which, compared to a small and ageing population, appears to be quite profound and makes the higher education system somewhat fragmented and weakly profiled. Nonetheless, there is no empirical evidence that a system with a few large units is more efficient than a system with many smaller units, or a system with both a few larger units and several smaller units. There is a unanimous opinion in Finland that the number of institutions should be decreased, education needs modernization and internationalization and the whole innovation system needs to be made more effective in its ability to transfer knowledge if the country is to achieve the targets it has set in terms of international competitiveness, improved performance and in its ability to create new jobs. [4]

Estimating the productivity of knowledge work such as education is not easy. Traditional productivity measures are usually unsuitable for measuring the productivity of knowledge work due to the complex, intangible and individual nature of knowledge work [15]. It has been proposed that in the case of knowledge work productivity measurements should concentrate on subjective approach on actual working processes because other productivity output measures are too challenging [16, 17]. Quantity of outputs is seldom mentioned in the literature; quality of employees, innovation capability, learning and the outcomes perceived by

customers are usually considered more important [15]. Continuous improvement of knowledge work productivity can be seen an open-ended process where an organization adapts to changing circumstances and conditions. The process is usually seen taking place from the bottom up. This way to describe the process takes the emergent approach instead of a planned, top-down approach. [19] However, it may be that there is a need to balance the emergent approach and planned approach, i.e. the learning and planning processes, which gives the management the shaping role instead of pure controlling. [20]

The shaping role approach can be used to describe the way Finnish HEIs are steered by the Ministry of Education and Culture. HEIs enjoy extensive autonomy in organizing their instruction and academic year. Their operations are built on freedom of education and research. The higher education sector is steered through higher education legislation, national development plans for education and research, performance-based funding, performance agreements, which are legally binding, and quality assurance measures. The national development plan for education and research, based on forecasting future demand of occupation and skills, is adopted every four years by the Finnish government. A 4-year agreement between HEI and Ministry of Education and Culture defining the qualitative and quantitative targets and determining the resources required is negotiated. [21, 22, 15] The multi-annual time frame is expected to guarantee stability, security and confidence [8]. The agreement also defines how the targets are monitored and evaluated. The HEIs themselves decide on administration, student admission, contents on study programmes and state funding. [21, 22, 15]

The UAS are required to have a government-granted operating license. Finland has no higher education accreditation system but instead, the HEIs are also responsible for the evaluation of their own operations and outcomes. In this task they are supported by a national body (the Finnish Education Evaluation Centre) that is responsible for developing the quality of education, they can invite external accreditation agencies such as EFMD (EPAS). The UAS are audited regularly using thematic system-based external evaluations that form the basis of the national evaluation and quality assurance system. In addition, each institution has been obliged to create its own system and is responsible for the quality and continuous development. The evaluations are always developmental in nature and aim to help institutions improve their operation, but the result of quality assurance has no significance in the funding model. [4]

As de Boer and Jongbloed [6] point out, it is often a matter of taste what counts as performance. They argue that performance is goal- or problem-oriented, result-based and measured against pre-set standards that are the result of a political decision, a negotiation process among stakeholders, or a benchmark (where a standard means doing better than others). Performance agreements can have aims such as encouraging institutions to strategically position themselves (institutional profiling), establishing or improving the strategic dialogue between the government and the institutions, improving the core activities of the institutions (higher quality of teaching and research, higher levels of productivity, or securing minimum standards), increasing the efficiency of the institution's activity and specifying targets and indicators related to completion rates, drop outs, or time to degree is an example and informing policy makers and the public the institutions' individual performance in return of public subsidies (accountability and transparency). The measures typically used as indicators of productivity in different countries are the number of degrees produced, number of study points, exam results or time spent in studies. Other less used measures are those connected with employment, internationalization of teachers and students and student feedback. Measures typical for research and development activities are usually connected with the number of publications and external funding. [6]

3. Data and method

This study attempts to describe the performance-based funding model of UAS in detail describing both its quantities as well as its contents and to give an interpretation and subjective understanding on the implications of adopting the funding model with some critical perspectives. The study benefits from prior developments and relies on case study method presented by Yin [23], where focus is on contemporary phenomenon with real-life context and no control is required on behavior events. The purpose is to illuminate a set of decisions – the reasoning behind them, the way how they were implemented and the results they produced [24]. The data is collected from working papers, official archival records and documents and from Education Statistics Finland, and it describes both the contents of the model and the monetary values connected to it. The first set of data describes the changes in state funding of UAS and their percentage changes from year 2007 to 2012 just before the funding model reform. The second set of data compares the period of funding model change including years from 2012 to 2015, which is a transition period for adopting the new performance-based funding model

including year 2014 when the performance-based funding model was introduced and year 2015 when all UAS started to operate as corporations under public law and financing responsibility was transferred to the state. The third set of data describes the effects of funding model since 2015 up to the present time. The analysis has been done by tabulations providing time-series analyses to show both absolute and relative changes. Finally, the total change between years 2012 and 2018 will be depicted. To ensure triangulation [25], three writers of this paper have evaluated the data.

In the new funding model, the result of any UAS is measured as an average of several indicators of three years and the measurements of each university of applied science are proportioned against the measurements of other UAS. The purpose of the model is to allocate the funding for those UAS that are more productive, efficient and influential than the average. The total amount of money is divided among the measurements based on their coefficient. The performance-based funding formula implemented for UAS is based on indicators (figure 1).

Universities of Applied Sciences core funding from 2017



FIGURE 1. UAS funding model [26]

The basic funding is allocated to the UAS taking into account the impact and scope of operations as well as other targets of educational policy and RDI policy. The new financing model is based mainly on the amount of degrees produced and on the pace of proceeding of studies. The funding model is a matrix combining education, RDI and other objectives on the horizontal axis and regional impact and links with business and industry and quality and internationalization on the vertical axis creating a total of 13 criteria on their crossroads. Education, the main function, accounts for 79% of the total basic funding. Education is divided into the following metrics: the number of Bachelors' degrees achieved (as agreed upon for the period of the performance agreement and thus representing the upper limits for the performance funding) 40%, progress of studies (55 European Credit Transfer System (ECTS) credits annually to shorten the duration of studies) 23%, student employment 4% (those employed as entrepreneurs have a double coefficient), education in open UAS 5%, student feedback 3% (questions cover teaching and learning, international, multicultural and language learning activities, work life connections and tutoring, work placement, thesis and overall satisfaction), degrees in vocational teacher education 2% and international student mobility 2%. The RDI activities account for 15% of the total of basic funding and they are divided as follows: external funding raised 8%, number of Master's degrees 4%, number of publications 2%, faculty and staff mobility 1%. The policy objectives account for 6% where 5% comes from

strategic funding and 1% from sector-specific funding. The strategic funding emphasizes national higher education and research targets and the ability of a UAS to align its strategy with those targets. The criteria thus emphasize quick employment of graduates, social impact, regional impact and new research, learning and innovation environments among others.

4. Findings

The renewals on the UAS funding model started in the beginning of 2014, about 20 years after the establishment of UAS. The financing of UAS used to come from municipalities, but in the new financing model, it comes from the state budget. Until 2012, the amount of financing for UAS had a rising trend (table 1). [27]

TABLE 1. Basic funding of UAS 2007-2012 [31]

	2007	2008	2009	2010	2011	2012
Basic funding	758 000 000	837 000 000	876 000 000	907 000 000	922 000 000	965 000 000
% change		10.42%	4.66%	3.54%	1.65%	4.66%

From 2014, the financing has based on indicators, i.e. the results the UAS is able to produce. Due to gradual changes made in the funding system, the UAS lost their financing remarkable between years 2012-2015 (table 2). [17]

TABLE 2. Basic funding of UAS 2012-2015 [28]

	2012	2013	2014	2015
Basic funding of UAS	965 000 000	923 000 000	905 000 000	816 000 000*
% change		-4.35%	-1.95%	-9.83%

* VAT compensation not included

From the beginning of 2015, all UAS have operated as corporations under public law. Operations as an independent legal person are supposed to give the UAS a more independent status and more flexibility. This has implications to the leadership model and decision-making. Despite the corporal structure, the UAS operate as non-profit organizations and cannot pay dividend for shareholders or produce other financial benefit. [6] In 2015, when the financing responsibility was transferred to the state, the municipal share of financing accounting for 58.11% was cut. The state funding of UAS is calculated on basic funding and value added tax compensation. The basic funding is divided among the UAS based on their calculated output. 85% of funding based on output is defined based on the criteria relating to education and 15% of funding depends on the criteria relating to research and development. From the beginning of 2017, the share of strategic development in the total funding of UAS has been strengthened while, at the same time, the performance-based funding scheme has been ameliorated. [32] The state budget allocates 826 250 000 euros for financing of UAS for 2018. The figure has been declining during the past three years (table 3). The decline was 2.9% in 2017 and 1% in 2018. [29]

TABLE 3. State budget funds allocated to financing of UAS

	2016 state budget	2017 state budget	2018 state budget
euros	859 974 770	834 915 000	826 250 000
% change		-2,91%	-1,04%

*year 2015 state budget euros were 816 000 000

Since the renewal of the funding model in 2012, the UAS have lost approximately one fifth of their financing (figure 2) by now. However, the Education and Culture Committee of the Parliament of Finland has published a vision on higher education and research for year 2030, which states that the financing of UAS should be directed back to the growth trend to reach the targets expressed in the vision. The targets are, among others, to increase the amount of population with higher education up to 50% among those in age cohort 30-34 years. It is also desired to increase the progress in higher education studies. At the moment, 60% of age group starts higher education studies but, because of slow progress in studies, only 41% gets a degree. Another target is to decrease the number of HEIs but at the same time, to increase their level. In addition, there is a target that research, development and innovation funding should account for 4% of Finland's GNP. [11]

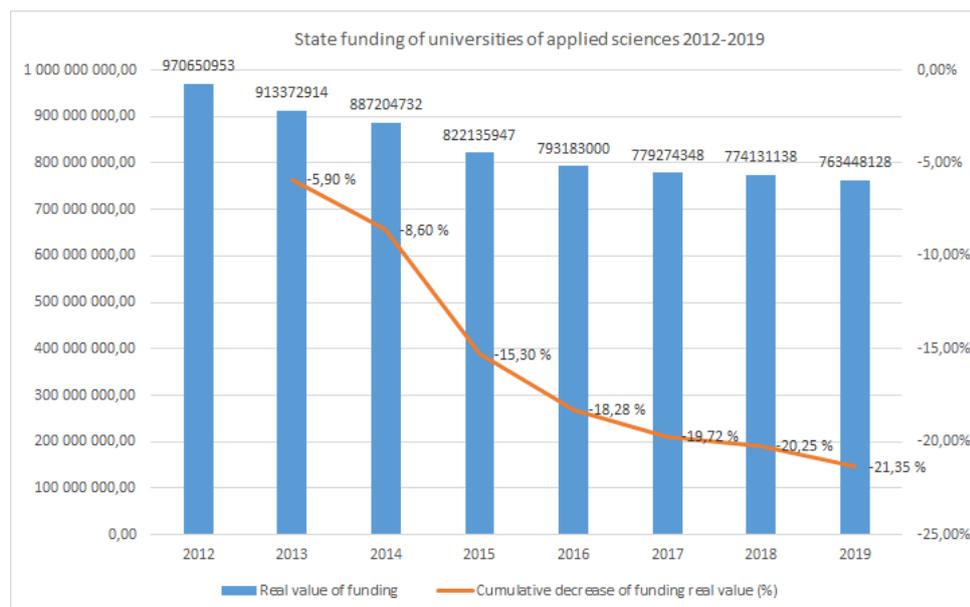


FIGURE 2. State funding decrease since the introduction of the new funding model of UAS [21]

The realization of meeting the targets set for UAS can be seen in table 4 [30]. The table also contains targets set for 2018, where the value for degrees has been calculated as an average of years 2017 – 2020. The cut of degree places in 2012 is reflected in figures describing the number of Bachelors' degrees. The figure shows a decreasing trend even though the internal efficiency has increased due to degree places cut. As to other measures, the share of students who have gained at least 55 study points has increased remarkably. Partly the improvement is due to the change made in the measurement. Originally, the measurement covered only those who exceeded 55 study points, but from 2017 on, it was changed so that the exceeding part of study points was transferred to following years.

TABLE 4. The key figures and quantitative targets for UAS

	2012 realization	2014 realization	2016 realization	2018 target
Bachelors' degrees	22 123	22 778	23 040	22 269
Masters' degrees	1 708	2 115	2 517	2 950
Degrees in vocational teacher training	1 740	1 849	1 795	1 600
Publications / person (teacher or R&D)	0.61	0.85	n. a.	1.20
% share of graduates 5 yrs. from starting	60%	60.3%	n. a.	60%
% share of students with 55 study points	51.5%	59%	62.6%	60%

5. Conclusions

The overall impression is that the model has increased efficiency of operations in UAS during times because the number of students and degrees produced have remained on the same level despite of funding cuts. As de Boer and Jongbloed [6] point out, despite that there is no compelling evidence about the relationship between performance-based funding and quality, productivity and efficiency in higher education; improvements in these three areas have been reported in the years following the introduction of performance agreements in Finland. The new funding model also appears to have contributed to an increased cost and performance awareness even if it has become evident that UAS allocate the money in a very different ways inside the organization. Some UAS use the strategic model as such while some others use totally different allocation basis. [31]

An overarching trend in European higher education governance has been to enhance the autonomy of the HEIs. However, this autonomy is debatable because performance agreements are just another way for the government to stay in control [8]. If the UAS want to collect as much funding as possible, it must follow the funding scheme as closely as possible. This way, the model can indeed limit the autonomy and strategic thinking. [4] In the case of Finnish UAS, as the share of each UAS is calculated on its relative performance and the performance-based funding formula allocates the state funding as a lump sum, this implies that UAS are put in a

position where they compete against each other. If any UAS improves its performance in any of the indicators more than others, it can increase its funding based on that criterion. In other words, it is possible to increase the financing only by improving results more than other UAS. This is reflected also by prior research [4] stating that the dual system has failed in creating co-operation between HEIs. De Boer and Jongbloed [6] also suggest that when serious amounts of funds are attached to the performance agreements, the game will change and institutions may be less willing to cooperate. Even small amounts of money can have a serious impact on institutional behaviour, while big amounts may have destructive impacts.

While efforts have been made to develop a more transparent and clearer funding formula to increase steering effect, the performance-based system with its 13 components with different coefficients is very complex. Melin and others [4] have explained this complexity, for instance, with the tendency of each government to bring new elements to the formula. They also point out that the influence of performance agreements has diminished due to the indicator-driven performance-based funding system. In the absence of allocation rules, the performance-based funding scheme may fail in increasing incentives, because teachers are in a very autonomous position where they may not be interested in general objectives of education policy if there are no personal incentives for them from the increased funding [5]. It is also possible that teachers are not primarily committed to quantitative targets that are far away from their scope of tasks but would rather commit to qualitative targets. In addition, it is not clear whether the university of applied science should emphasize all the measurements or whether it would be better to concentrate on some of the measures only. The performance-based funding models combined with the performance agreements have stimulated institutional profiling, which is desirable, but at the same time, they have failed to create a more diversified system and led to uncomfortable unity. This is understandable. If institutions are rewarded in the same way for the same outputs, as is the case in Finland, then they will inevitably seek the same ways of maximizing their income in the absence of explicit diversity objectives in the model. [6]

The funding model neglects the elements of quality. If the results of all UAS should decrease, it would be possible for one UAS to improve the results even with lower performance. One reason for the lack of quality elements offered by de Boer and Jongboed [6] can be the possible downsides because quality elements are usually less clear and transparent, the transaction costs are relatively high, and disputes may arise when the realization of qualitative targets needs to be assessed. A strong focus on quantitative measures has its appeal. They can be transparent and create a sense of objectivity. Assessment of quantitative performance measures is easy; what is measured gets done. In worst case, only what is measured gets done when institutions focus on quantifiable issues only and concentrate on easy targets or even lower quality standards to meet targets. Melin and others [4] suggest that the quality of both teaching and research should be the emphasis of the UAS rather than their regional role because the regional role emphasis has had many negative effects from scientific quality point of view and it is as strong knowledge producing organizations that they can play a better regional role in the future. Kettunen [5] also points out that an important challenge would be to study the motivation of students and personnel to stimulate improvements in the quality and efficiency of the teaching process.

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Fundraising perspective of private higher education institutions in Croatia: an empirical study

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Abstract

With the development of economic systems, the education sector is aligning education standards within the latest market trends. In line with current economic requirements, educational systems are increasingly approaching the notion of a separate business that ultimately requires business forms necessary for its proper functioning. An inevitable part of every higher education institution are its finances, ensuring the internal stability of institutions. For the purposes of financing higher education institutions, many models have been created to monitor their development. Still, one of the least explored in the literature fundraising. Even if there is empirical evidence of fundraising implementation in US universities that use this model for decades, European ones are still not using the full potential of this financing path. Through a qualitative research approach, we outline the current status of fundraising in higher education in the US with best practices advice, as well as to compare it to European perspectives with a special focus to Croatian higher education institutions. Practical implications of this study rely on the guidance model for fundraising implementation that will aim at improving the quality of higher education institutions with a special reference to private owned institutions.

Keywords: Fundraising, higher education, financing, private higher education, US, Croatia.

1. Introduction

Majority of business schools in developing countries are currently following the best business practices practice models of business schools from the United States. What they are doing is imitating the strategy according to which business schools compete with leading business schools in the United States. It is a natural course of development of modern competition. The management of the international educational community is sufficiently open to losing potential members to join this advanced market. What such a model of systematic imitation of best practice was the strengthening of the education market in the United States and beyond [1].

Researchers believe that the domination of the American model of education is strong enough to affect the development of the world education system. Evidences show how much the American model of education is developed and stable. One must not ignore the fact that majority of business schools in developing countries send their teachers or students to exchange in the leading US business schools. When it comes to exchanging of teachers and students, we should note that some European schools have used this tactic in the 60's and 70's of the past century, while for example China as one of the greatest potential leaders of education this tactic began much later to implement it most in the 1980s. This is the strategy of importing knowledge and best practices - importing from areas that have developed knowledge in areas that knowledge as a profitable product will only begin to use [1]. Of course, not all that would be so simple, imitation of the best model in many countries also has negative sides regarding the specifics of local economies, business practices in countries, regulatory and social differences. US domination is not just about imitating education when we talk about the education market; the US is also the leader of new models of education funding, but also the institutions of higher education (HEI) itself. One of these models is fundraising or collecting external sources of funding.

This is the area where we start pointing out the financial stability of HEI's. Financial stability, which is achieving and maintaining the stability of the financial system of higher education, is one of the main goals of most higher education institutions around the world, even when that goal is not specifically prescribed by statute

or regulations that regulate the activity of the institutions. Financial stability is characterized by the smooth functioning of all segments of the financial system (institutions, markets, and infrastructure) in the process of resource allocation, risk assessment and management and execution of payments, as well as the resilience of institutions to respond to sudden shocks.

2. Non-profitable or not-for-profit higher education institutions

Considering that this paper is about the private higher education institutions (HEI), their financial stability we define as the financial stability of companies with regard to working with organisations that receive funds for their account by individuals through scholarships. In general, private institutions of higher education are non-profit institutions. This term is often equated with the notion of "unprofitable". Specifically, the term "non-profit" shows that profit does not exist or is not realised, or, ultimately, that is not the goal of business or business activities, while the concept of "unprofitable" shows that there is no possibility of making a profit. Since that in the most non-profit organisation, there is a possibility of generating a revenues/profit; it is correct to talk about non-profit, rather than unprofitable institutions. It is important to point out that the non-profit organisations are not set nor act to make a profit. Earnings however in their operations may occur, but only as a secondary objective, because the primary goal is the completely different type of social benefit. Precisely, because a secondary goal is collecting funds, it is important to maintain the financial stability of the institutions of higher education. [6]

High educational institution fundraising may also refer to the traditional sources of financing and on derivative financial instruments, or some more modern sources of financing. Under the traditional sources of financing, we could include the financing of capital by the founder or co-finance the loan through a syndicated bank loan if it comes to increasing the amount necessary for the development of the institution. With the loan, lenders in many cases require, especially in the startup or greenfield investment, the participation of the founders of the optimal gearing ratio and other provisions that protect lenders or suppliers of capital. The current spread on loans, necessary for the development of the institutions, of 20 years to maturity is going about 400 bps for the Croatian risk. In addition to the institution's risk premium, in that the structure of financing, the lenders must agree on repayment of principal, which takes into account the projected income of the institution, which is certainly less in the initial development cycle, and most of the institutions principal last year maturity. Financing through the issuance of shares is not possible because the HEI cannot be treated as stock companies because of the status of non-profit institutions, according to Croatian law. After a certain number of years in business and proof of creditworthiness, of course, after a period of investment in property development, HEI management may also consider the more modern sources of financing such as issuing bonds. By this type of refinancing, the institution can achieve a longer maturity, larger amounts of financing, fixed rate, which would reduce interest rate risk and the possibility of repayment by equal annuities, bullet repayment at maturity, with no coupon payments as well as variable annuities, which are progressively enlarged and follow the rhythm of income. In Croatia, for this method of HEI financing, no real practice exists, and such funding requests more protective clauses, rating agencies and additional collateral for the bondholders. Financing through bonds, options, stocks and other derivatives will certainly get a space by the additional liberalization of capital markets and greater flexibility of the Croatian legislation, where will the HEI be considered profitable as in most Western countries.

2.1. Domestic higher education market and economy setting

Even if the benchmark for this research are the US, the practices and conclusions to consider should be relevant for Croatia. Croatia belongs to the countries of Central and Eastern Europe (CEE). CEE countries are in fact the former communist countries of Europe after the collapse of the Iron Curtain in 1989/90 that by its fall symbolised the beginning of a new, post-communist period. It is, however, associated with the political changes that ultimately led to the formation of a series of new countries, so that now even talking about the 27 post-communist, and 22 European post-communist countries. The transition at the beginning of the 90's states an intense transition from communist to a new socio period. This novel is the most clearly defined in the economic and political agenda. In the field of economics, it is a transition from a planned, centralised state-ownership in the market, pluralistic-ownership economy. New systems have brought the openness of markets and the possibility of modernisation and the opening of the very educational system. So, at the beginning of the 90's started first business studies, of course, driven by the transition to the open market. After conversion of all the aforementioned systems before the early '90s, was created an increasing need for new management skills that

are required, as well as the modern-educated employees, and particularly the main leaders of the modernised company.

The mid-'90's are marked as the beginning of the initiative of private high schools in Croatia, which should provide a new way of education of future business leaders in the modern business community. Capitalist society, as opposed to a society that has just entered into capitalism, has a greater potential for improving such projects. That is why; society needs to work on developing a culture of giving. To be successful fundraising in any institution of higher education around the world, it is essential that before that is created the culture of giving. It is difficult to talk about the creation or development of a culture of giving. The culture of donations can be easily explained as a kind of culture of investing in future generations. Maybe deans of business schools could invest donated money better than some corporations. Perhaps donations to HEI are of great importance for the development of modern education which will in future contribute to the economy, locally and globally. Since the fact that fundraising at Croatian HEI has not been emphasised in the educational community, partly because of general ignorance about it, because the lack of need, and because of the lack of proper prerequisites, is finally time to develop this type of financing.

3. Raising funds in higher education

Fundraising as a concept comes from the combination of two words, "fund" which refers to the fund, equity, cash funds that are required for the existence of the organisation; and "raising" which in means the collection and increasing the amount of money. Fundraising is a process of contributions in the form of money, cash or other sources applicable for financing, or finding and collecting contributions from individuals, companies, charity foundations, government agencies or other external sources for organisations or projects. Although fundraising is mainly related to the efforts to raise money from the non-profit institutions, it is also used for the identification and collection of investors or other sources of capital for the profit of the enterprises itself. Traditionally, fundraising consisted from the application for the donation, collection funds "door-to-door", and as such referred to a highly influential way of raising funds "face-to-face". During the time, the development of technology, market and changes of habit in the business world, online fundraising started to develop. It is based upon old, traditional methods, but the modernisation of business made fundraising closer to a wider range of users.

Fundraising project must begin with a decision made by the board, management or another type of entity within the organisation that can make crucial decisions for the development of the organisation. This project must be high on a scale of priorities to be recognised and supported by the entire organisation. Unfortunately, that exists only in theory because the board does not spend time on educating the entire organisation about the project. It spends most of the time on observing current inflow of funds rather than looking for "something that could make more money". Since it is a long-term project whose results can be visible after a few quarters, necessary decisions regarding fundraising are not easy to make. On the other side, if the board decides to initiate fundraising project and it is ready to collect money, allocate at least 20% of its energy and funds to make it successful, then the project may and will succeed.

Through the development of the market, financial systems of countries developed as well, thus access to the money of individuals as citizens. There is a small chance that citizens of undeveloped countries or countries of post-communist Europe will think about the money on the same way as citizens from the U.S. Capitalist society, as opposed to the society that has just entered the capitalism, has a greater opportunity for the promotion of such projects. It is precisely this problem in the difference to thinking that refers primarily to the cultural differences. To make successful fundraising in any HEI across the world, it is important to create a culture of giving. Certain requirements are necessary to influence a culture of giving. The first prerequisite in HEI is to provide a sense of influence and the importance of the donation. The feeling of importance and influence created stems from well-reasoned spent donated funds to donators. Donators are the population that wants to see where their money ends up, on what it is spent and what are the implications of their financial funds on the society. The second prerequisite is to create a relationship with the alumni community. Alumni community should be an important part of the plan to develop HEI, an important base of the future donators [2]. Regardless often the fact that the alumni board is first base on the list of the future donators, creating good relations between alumni and the school is not just for the financial purposes. The sense of caring that school shows to alumni, even if they completed their education, creates a sense of belonging that is extremely important for the future donations [3].

Considering that the fundraising is mainly associated with sources of private donors, and fewer donations come from the business community, if funds raised through the fundraising could be as high as possible, there should be followed several criteria:

1. the existence of the donor, preferably the richer, who was familiar with the programs and operations within HEI that will run a fundraising project, and donors who have developed a culture of giving,
2. the developed culture of philanthropy, which includes acceptance of the obligation to give back to institutions of higher education in which the alumni studied, and through which they believe in creating real social value,
3. updated database of alumni, friends, school and business community,
4. tax and legal system that favours the fundraising (ideally - tax deductible in the number of donated funds) [4]

The fundraising success within private and public HEI in the United States must be taken with a special note that this is a very philanthropic conscious society that not only understands but also can give back. Also, due to the fact that it is a country that has a long development of a variety of fundraising programs, as well as a stable concept of private higher education, it is difficult to determine exactly what is the best practice that could be applied to the rest of the world when we take into account cultural and geographical differences. Alumni of institutions of high education in the U.S., by environmental effects, by institutions themselves, and by society, have become a community which gives back the community that gave them the most important - knowledge to achieve or have achieved everything they have: opened doors for the future, networking and knowledge [5]. These are all factors which, among others, are affecting philanthropy phenomena linked to American society. Since the discovery of the concept of successful fundraising is one of the main determinants of this paper, the focus will be on the fundraising of private institutions of higher education in the United States.

4. Methodology and data

In this paper, we conduct an inductive qualitative study. Through a phenomenological approach, we aim to explore, describe and analyse the meaning of individual fundraising decision maker lived experiences. To incorporate a phenomenological approach to our research, we will involve multiple long, in-depth interviews with individual decision-makers at selected HEI's in the US and Croatia who have experienced the fundraising process.

We post following research questions for the empirical study:

- RQ1: What makes US private HEI's successful in fundraising campaigns?
- RQ2: Why fundraising is not sufficiently developed in Croatian private HEI's?
- RQ3: What are the successful fundraising models that could be adapted to Croatian private HEI system?
- RQ4: What are the prerequisites for implementing successful US HEI fundraising models to Croatian private HEI's?
- RQ5: Is there a difference in fundraising private and public HEI's?

4.1. Method

Qualitative research in this paper will provide depth and details, as well as create openness. The idea is that through in-depth semi-structured interviews, we simulate HEI decision makers in individual fundraising experiences, as well as attempt to avoid pre-judgments on the fundraising process and criteria. In this manner, we aim to use qualitative methodology from the field of psychology that will be grounded in phenomenology [6].

4.2. Sampling and data

We choose the purposive sampling in this study as we want to find a more closely defined group of decision makers experienced in financing higher education, for whom the above-posted research questions will be

significant. We interviewed decision makers in The Republic of Croatia and United States of America: R1 (CRO): Dean of private HEI in Croatia; R2 (USA): Dean of school at the University of Michigan-Flint; R3 (USA): Development and Foundation Relations Officer at University of Harvard; R4 (USA): St. Ambrose University Strategic Planning. It makes a relevant sample for our study and increases a cross-country based understanding of fundraising perspectives. Additionally, the rationale behind purposive sampling is based on the uniqueness of the topic being studied in this paper.

Regarding referral processes in this qualitative study, we aim to use snowball sampling as recruitment strategy that will involve asking fundraising executives in HEI's for the recommendation of acquainted decision maker in fundraising activities in HEI's that qualify for participation. This system will lead to the development of referral chains and might be a useful tool in bridging the communication gap towards fundraising. Even if this method aims at generating high response rate, it is biased and is strongly dependent on how initial angel investors will be recruited. Generalization on qualitative research samples is of great importance. Still, we have a specific background of study that lies in phenomenology. Guidelines for actual sample sizes in phenomenological research is limited, and advice is given by [7] to keep sample size from 5 to 25 respondents, and from Morse (1994) to have at least six respondents. Smith and Osborn (2008) claim that studies with interpretative phenomenological analysis (IPA) were published with small samples, ranging from one to fifteen and more, and the recent trends impose small sample sizes [9].

4.3. Procedure

To conduct semi-structured in-depth interviews, we follow the interview protocol as proposed by Turner (2010). It is important to add that respondents are familiar with initial interview questions once they agree to participate and can prepare themselves. This way, we avoid any ethical concerns posing questions they are not comfortable with or due to ethical reasons cannot reply [10]. Also, it is a good way to sustain a good structure of the interviews and to give respondents flexibility of thinking in advance on some issues they would like to point out but were not covered with interview guide. Interview duration is one hour or longer. Interviews are voice recorded with an electronic device.

Interviews cover key topics that are selected for their relevance under a detailed literature search. We used following topics covered by the interview schedule along with an example of the type of open-ended questions used to elicit responses; HEI fundraising organisation; Fundraising strategies; Strategic importance; Financial issues and form of ownership; Motivation issues; Attitudes towards fundraising. Interview voice memos are transcribed, and with interview notes analysed .

5. Findings

Four main themes emerged in the analysis: fundraising system organisation, fundraising strategies, fundraising culture and form of HEI ownership. Four themes also reconciled findings on five research questions that will be further discussed.

One of the starting pillars in successful fundraising campaigning is fundraising system organisation. It is dependent on the respondent's country of origin. We did not receive enough reliable information for Croatia as there was only one respondent and the system is not implemented in Croatia, but parallel could be mainly drawn from US respondents where the system exists for hundreds of years. The second theme are fundraising strategies where we found out that the alumni database is the main pillar of successful fundraising. Continuous improvements and update of alumni database, taking care of the alumni society, is what all US universities point out. Besides continuously keeping in touch with alumni society, one of the strategies is also keeping track of donators database and cherishing their involvement through additional activities from the university side. The third theme is the fundraising culture where significant differences are observed from the interviews. The culture of fundraising in the US is developed for the past hundreds of years, and it makes fundraising activities much easier to run. The fourth theme in our results is concerned with HEI ownership. US respondents pointed out that there is no difference between public and privately owned HEI's about fundraising activities. On the other side, the Croatian respondent has pointed out that there is a significant difference between public and privately owned HEI's in Croatia. Evidence on those themes and further insights are available in Table 1.

Table 1. Themes in the interview analysis

Theme	Replies
Fundraising system organisation	<p>“Croatian HEI’s do not have organised fundraising system. So far, there is no evidence of fundraising practices” (R1).</p> <p>“The University of Michigan-Flint implemented fundraising system 20 years ago, and there are a special department organising fundraising activities. There is no special fundraising strategy used, but a classical fundraising strategy used all over the USA. Majority of activities is based on fundraising campaigns” (R2).</p> <p>“There is a special department organised for fundraising campaigns. Employees that are dedicated to future investments and money collection” (R2).</p> <p>“University of Harvard was funded through fundraising system and is using the system for the past 375 years. There is a special office that organises this set of activities” (R3).</p> <p>“St Ambrose University is using fundraising activities for the past 25 years. There is a special office with 18 full-time employees working on fundraising activities and reconnecting with alumni society” (R4).</p>
Fundraising strategies	<p>“Fundraising campaigns have their “silent phases” where you analyse current state, update alumni database, check on potentials and requirements and eventually hire a fundraising consultant. Afterwards, you decide on what kind of campaign is it going to be, what is going to be the target value. Throughout that period, information on the campaign is shared. The most important thing for every campaign is the goal. The goal has to exist; for instance, it can be the need for new buildings, scholarship funds, etc. However, besides larger capital campaigns, there are also some smaller campaigns that are developed for specific school goals” (R2).</p> <p>“Annual activities sometimes are organised just for gathering together alumni society. Still, fundraising activities are an inevitable part of this gatherings” (R3).</p> <p>“Recent fundraising activities were related with new building construction, and third building renovation, as well as an increase of annual scholarship fund. Majority of donations, around 67,5% comes from private donators, individuals or larger donators. There are also planned donations systems, e-mail donations systems (around 2% of donations) and telephone donations (3,4%). Still, online fundraising has not been used” (R4).</p> <p>“On an annual basis, there are approximately six fundraising events; wine festival, two gold tournaments, and three thematic events. If there were more fundraising events, it would not be useful. Contrary, the outcome of fundraising activities at those events would be not so good” (R4).</p>
Fundraising culture	<p>“One of the greatest issues for implementing fundraising in Croatia is the culture of donations. After 50 years of completely different societal system, where wealthy individuals were destroyed, also the potential donators base was destroyed. In the past 20 years, Croatia is reconstructing its economy, and due to the entrepreneurial environment rise, wealthy individuals are again part of the equation. Still, they have not reached the point where they understand that because of the luck, education or some other criteria, they reached their wealth, and because of that level of wealth, they have a certain responsibility for the society” (R1).</p> <p>“There is no problem with the fundraising culture as the majority of alumni are aware of the giving back to society” (R2).</p> <p>“Development of alumni society is very important, as well as supporters from the real sector. Companies are looking for new employees, and if school recommends good students as potential employees, they feel like they have to give that favour back. It is a good start for fundraising. Companies want good, and quality employees, donations and supporting schools is a good way to achieve that, and students get much more opportunities for quality education” (R2).</p> <p>“Alumni society organisation is critical. There is a constant need for continuously</p>

	<p>informing that specific, potential donators group about university activities” (R3).</p> <p>“Some potential donators are not from alumni society, and there is a need to include them in diverse activities. Sometimes, they are included in university decision making processes” (R3).</p> <p>“We organise up to 60 additional events annually, but those do not have fundraising purpose, contrary they are used to engage donators and to “say thank you” to specific groups of donators” (R4).</p>
Fundraising and form of HEI ownership	<p>“Private and public universities in Croatia cannot compete. The public university still receives significant funding from the government. On the other side, private universities are completely privately funded, mainly from tuition fees. Public universities still do not need to compete for additional funding” (R1).</p> <p>“Fundraising at Michigan University is not that great part of the annual budget. It is a public university. Still, students pay for tuitions, and there is a generous state support’s. Also, there is money from special trusts that are supporting current financial requirements. From that side, there is no significant difference between private and public universities. It is good that public US universities charge tuition fees as it develops a certain level of responsibility between students” (R2).</p> <p>“There is no difference if the school is private or public. What matters is the relationship between school and donators, their interests and engagement. Donators do care about universities as students are the future of society. There is a strong connection between the mission of school and donators, not the ownership type” (R3).</p> <p>“There is probably the long tradition of fundraising in private HEI’s, and it is sometimes transmitted to alumni society that has developed a culture of fundraising. They studied in the fundraised system; they feel like they need to give the same amount back” (R4).</p>

6. Conclusion and discussion

The quality of the education system is closely linked with the quality of the institutions that provides education. Although through this paper we addressed the private HEI and a modern form of their financing – fundraising, we also explained the variety of successful fundraising strategies and models that are active in recent research on modern HEI financing. In an international context, although austerity seems to be the best solution to rising costs, successful fundraisings that are based on U.S. principles is sometimes a better, long-term solution. There are more types of HEI, but fundraising is the one that opened a brand-new networking market for mentioned institutions.

According to the results of our research, we can state that there is perspective for fundraising in private Croatian HEI communities. One of the reasoning behind that lies in the early-stage fundraising development and learning from the best fundraising practices from the US. Our research introduced four different themes in fundraising perspectives. Firstly, we conclude that there is a significant impact of “giving-away culture” in the fundraising success. Croatia has serious issues in this “giving-away culture” just because the system itself has not been fostered throughout the years, and the economic system is relatively unstable. Additionally, we can state that the majority of newly-employed members of alumni society do not have high enough earnings that they can participate in potential fundraising activities. On the other hand, powerful individuals are not used to this kind of “giving back to society”, and the system must be fostered through the years until it starts showing the first results. The only potential solution in this region are private companies that can participate in fundraising activities, but those also should be fostered through different pathways, from the policy measures fundraising must be promoted to be more than a tax-deductible lump sum. This is the main reason what makes US HEI’s currently successful in fundraising campaigns, contrary to Croatian, or we could even say regional HEI’s. Aside from fundraising culture as the main pillar of the system, strategies are rather simple and straightforward. Business schools are teaching students to be successful managers, impactful financial analysts and great marketing and sales specialists. This is all that fundraising activities from our examples are covering, selling the product, fostering the stakeholders and improving the brand.

Also, there is a difference in Croatia regarding the ownership, but the fundraising projects per se are additional funding projects and public and privately owned HEI's are in the same position. If we go back to our thoughts, we already drew upon on what business schools are teaching, and what they must be successful in. Therefore, fundraising should also be a reflection on how successfully schools are at teaching skills they should implement on their own. Of course, here we must go back to the behavioural part of the equation – the culture to be fostered, the alumni society to be kept in touch, and business society to be eager to fight for best students. If Croatian HEI's are thinking on starting fundraising activities, first they have to explore the current alumni community perception on their project, they have to provide more information on fundraising project or real education, have to take care on financial transparency of project and have to develop a culture of giving. Additionally, we can draw upon policy issues in Croatia where current criteria for fundraising is not in favour of fundraising.

6.1. Limitations

We are aware of the limitations of qualitative phenomenology research. First, we are aware that fewer people were studied, the sample was smaller than in quantitative study, and it is less easy to generalize. Hence, the qualitative phenomenological study provides a detailed experience, but is not easily quantifiable and qualitative research is strongly depended on biasing. We aim to overcome this limitation by diversifying our interview transcripts also to the software-based tool in the later stage of research. Additionally, we aim to combine insights from the other side of the fundraising project, the alumni society where we could gain valuable quantitative insights and provide further conclusions.

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New Teaching Methods

Session Chair: Maja Martinović



From The Flintstones to Transformers

The Journey from Averageistan to Extremistan

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Abstract

'Students are not dumb, just have not been fortunate with thinking so far.' They have been taught with Stone Age methods, urging them to repeat what they have been told rather than to think (critically). The most valuable workforce in the 21st century are the Transformers, who can think and act responsively and are able to adapt to the dynamically changing environment. In this process, the lecturers are key players – their mindset need to be changed first in the process – AACSB gave us a new impetus to transform their thinking. The Professor Flintstones need to turn into Professor Transformers to be able to facilitate students' development into broad-minded and multi-skilled workforce. To support the individual study processes of the Young Jedis a peer as well as lecturer mentor system was developed at the University of Pannonia. The developmental journey is monitored through student-focused and program-focused assessments including an analysis of the basic skills on entry and annual basis, and the measurement of the fulfillment of the pre-defined learning goals as part of our Assurance of Learning process. The paper will explore the milestones of this transformation.

Key words: critical thinking, facilitate students, changing environment, mentor system.

1. Introduction

In the second half of the 20th century teaching methods in Hungary (but probably in most communist-socialist countries) used to concentrate on passing on facts and , and expecting students to repeat the facts and information that they were exposed to during the lectures. This *frontal teaching* method did not give room to questioning the validity and relevance of the data and information, and did not facilitate the search for linkages between the given information and data. This is not to say that connections were not made between these, but to show that students were not expected to think beyond what they were taught.

Central Europe, but the World in general, has seen significant changes since the 1980s. Political regimes have changed, industries have changed and we have witnessed unexpected growth and development in the world of technology. And all of these factors have impacted on the field of higher education as well. The changing environment in relation to higher education can be viewed twofold: on the one hand, the industries (and fields of science) that higher educational insitutions serve have evolved, and may require different knowledge and skills from graduates, and on the other hand, higher educational insitutions themselves are operating in the changed environment. Some of the significant changes to be observed in Hungary involve the following:

- Practice-orientation has become a requirement from students and from the future employers alike;
- Government regulations made the business programmes fee-paying for most students (getting closer to market economy, and also turning students into customers);

- Students (customers) have higher expectations from their studies in general, and also in term of life-like exercises, and IT use during classes and their tuition;
- Students' need to express opinions has emerged, rather than just accepting being told things;
- Need for more involvement (in projects) is also more significant.

Higher educational institutions need to be able to respond to these changes, partially to better serve their customers, and partially (and strongly linked to the previous thought) to remain competitive amongst the widening offer of universities offering business courses. Professor Flintstones will not be able to teach in the world of Transformers, they will need to transform first to be capable of understanding the changes, to cope with the dynamics of change and to facilitate students along their journey to become Transformers themselves.

This paper will discuss how changes can be approached, what kind of skills are necessary to develop to be able to address the changes most successfully, and how the lecturers of the Faculty of Business and Economics were and are involved in projects that support them in changing their approach to teaching, so that they can better prepare students for the dynamically changing environment.

2. Dynamics of change

The dynamics of change in the world that surrounds us has accelerated so much in the past 2-3 decades that the need for quick response and adaptation has become just as important as the actual-factual knowledge people have in their field of expertise. As the Hungarian mathematician-psychologist MÉRŐ (2014) explains, preparing people for the unexpected is extremely important, the dynamically changing environment offer less and less predictable growth. He compares Averageistan (Mildovia) where variability and stability are characteristic, with Extremistan (Wildovia) where any extreme happenings are possible. We have scientific knowledge about Averageistan, therefore things can be forecast and operation is more or less predictable, whereas there is hardly any scientific knowledge about Extremistan, and whatever there is convinces us that things, events cannot be predicted here. In MÉRŐ's (2014) view, following rules is useful and appropriate in Averageistan, while in Extremistan being sceptical is the most appropriate approach. However, he also argues that the modern world requires the ability to utilise both kinds of thinking, average and extreme alike. In Averageistan intelligent people can predict the future reasonable well with their specific knowledge, whereas in Extremistan intelligent people are aware that it is impossible to even remotely predict the future but still can adapt because they have knowledge that is convertible any time to almost anything.

2.1 Dynamic capability

Almost two decades before MÉRŐ, Teece, Pisano and Shuen (1997) pioneered an approach that enable companies to operate in a competitive way in the rapidly changing (technological) environment, which they labelled as 'dynamic cabability'. They argued firms needed to identify how combinations and resources can be developed, deployed and protected, how internal and external firm-specific competencies can be exploited to be able to respond to the challenges of the changing environment. The dynamic capability approach emphasises the need for thinking in complexity, just like we have seen in the teachings of MÉRŐ (2014).

In the entrepreneurial world, dynamic capabilities can be distinguished in three categories of activities and adjustment: "identification and assessment of an opportunity (sensing); mobilization of resources to address an opportunity and to capture value from doing so (seizing); and continued renewal (trasnforming)" (Teece, 2012:1396).

Although dynamic capabilities were originally described for the management and operation of companies, the approach can easily be translated to universities as well. As we have argued before, higher educational institutions are also characterised by market orientation, trying to respond to the market demand with the range of courses they are offering, and considering education as a service where the (often fee-paying) student-customers have high

expectations of the standard of teaching and the teaching environment. Universities have to operate in a fierce competitive environment where the ones with the highest quality of service survive in the long run.

Teece (2012:1396) argues, “capabilities change over time, ... They are not built just on individual skills but also on the collective learning derived from how employees have worked together”. He identifies change routines and analytical methodologies as key building blocks of dynamic capabilities. Responding to change in the business environment involves diagnosing the structure of any new challenges and then choosing an overall guiding policy that builds on the firms’s existing competitive advantage (Teece, 2012:1397).

As we have seen, individual skills and collective learning are equally important for being able to react to the changing world around us. We would suggest that another key building block that enable students, the young Jedis for the potentially unexpected, but certainly accelerated changes in the environment is the skill of critical thinking. The next part of this paper will introduce the basic concept of critical thinking before discussing the first milestones of the process of transformation from old-style teaching to new age facilitation at the Faculty of Business and Economics, University of Pannonia.

3. Critical thinking

The development of critical thinking is widely claimed as a primary goal of higher education (e.g., Barnett, 2000; Mason, 2007). Critical thinking is one of the most important skills deemed necessary for students to become effective contributors in the global workforce. It has received heightened attention from educators and policy makers in higher education and has been included as one of the core learning outcomes of students by the most higher education institutions. Reinmann-Rotmeier and Mandl (1998) addressed that experts from economy and education nominated critical thinking as the most important skill in knowledge society. Kraak (2000) saw critical thinking as a crucial, perhaps the most important of all present time educational tasks. The AAC&U (Association of American Colleges and Universities) founded in 2011, that 95 % of the chief academic officers from 433 institutions rated critical thinking as one of the most important intellectual skills for their students. Similarly, Casner-Lotto and Barrington (2006) found that among 400 surveyed employers, 92 % identified critical thinking as a very important skill for students to be successful in today’s workforce. The AACSB (Association to Advance Collegiate Schools of Business) also emphasized that critical thinking is an essential learning objective, the AACSB acknowledged that due to the complexities involved in developing critical thinking skills. When IBM interviewed over 1,500 CEOs, the leadership quality they most frequently identified as critical in the current environment was critical thinking (AACSB seminar, 2015, November). Similarly, the AHELO (Assessment of Higher Education Learning Outcomes) project sponsored by the Organization for Economic Co-operation and Development (OECD, 2012) includes critical thinking as a core competence when evaluating learning outcomes of students across nations.

The ability to think critically is a quality that is highly prized in the context of higher education. This is especially so in the current climate, where technological advancements have made vast amounts of information readily available to anyone who takes the time to look. This challenge has inspired research to analyze current approaches to the concept and to provide a more comprehensive view of what critical thinking might mean in a variety of disciplinary contexts (Bailin et al., 1999; Facione, 1990, Fábíán, 2014; Fábíán, 2015; Kennedy et al., 1991; Sternberg, 1986; Paul, 1992). Sternberg (1986) suggests that the three strands of critical thinking traditions are philosophical, psychological, and educational. These separate academic strands have developed different approaches to defining critical thinking that reflect their respective concerns.

The *philosophical* approach focuses on the critical thinker, enumerating the characteristics of this person (Thayer-Bacon, 2000); focusing on what people are capable of doing under the best of circumstances. Facione (1990) describes the ideal critical thinker as someone who is inquisitive in nature, open-minded, flexible, fair-minded, has a desire to be well-informed, understands diverse viewpoints, and is willing to both suspend judgment

and to consider other perspectives. In addition, Paul (1992) discusses critical thinking in the context of “perfections of thought” (p. 9). Critical thinking is thinking that attempts to arrive at a decision or judgment only after honestly evaluating alternatives with respect to available evidence and arguments. By emphasizing the ideal critical thinker and critical thought, this approach may have less to contribute to discussions about how people actually think.

The *psychological* approach contrasts with the philosophical perspective in two ways. First, psychologists tend to focus on how people actually think versus how they could or should think under ideal conditions (Sternberg, 1986). Second, they tend to define critical thinking by the types of actions or behaviors critical thinkers can do. Typically, this approach includes a list of skills performed by critical thinkers (Lewis & Smith, 1993). Philosophers have often criticized this approach as being reductionist—reducing a complex orchestration of knowledge and skills into a collection of disconnected steps or procedures (Sternberg, 1986). For example, Bailin (2002) argues that it is a fundamental misconception to view critical thinking as a series of discrete steps or skills, and that this misconception stems from the behaviorist’s need to define constructs in ways that are directly observable. According to this argument, because the actual process of thought is unobservable, psychologists have tended to focus on the products of such thought—behaviors or overt skills (e.g., analysis, interpretation, reflection, formulating good questions). Other philosophers have also cautioned against confusing the activity of critical thinking with its component skills (Facione, 1990), arguing that critical thinking is more than simply the sum of its parts (van Gelder, 2005). Indeed, a few proponents of the philosophical tradition have pointed out that it is possible to simply “go through the motions,” or proceed through the “steps” of critical thinking without actually engaging in critical thought (Bailin, 2002).

The *educational* approach identified six levels within the cognitive domain, each of which related to a different level of cognitive ability (Bloom, 1956). Bloom’s taxonomy is hierarchical, with “comprehension” at the bottom and “evaluation” at the top. The lower levels require less thinking skills while the higher levels require more. The three highest levels (analysis, synthesis, and evaluation) are frequently said to represent critical thinking (Kennedy et al., 1991; Krathwohl, 2002). Critical thinking emerges as students incrementally progress from lower to higher cognitive processing tasks. The benefit of the educational approach is that it is based on years of classroom experience and observations of student learning (Sternberg, 1986).

We can assert that there is far no universally accepted definition of critical thinking. Despite differences among the three approaches to defining critical thinking, the Delphi report gave us a description of critical thinking in terms of cognitive skills and affective dispositions. This resulted in a definition of critical thinking “as the process of purposeful, self-regulatory judgment; an interactive, reflective, reasoning process” (Facione, 1990). The Delphi report (1990) described the ideal critical thinker as one who is habitually inquisitive, well-informed, trustful of reason, open-minded, flexible, fair-minded in evaluation, honest in facing personal biases, prudent in making judgments, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in the selection of criteria, focused in inquiry, and persistent in seeking results which are as precise as the subject and the circumstances of inquiry permit. Most researchers also agree that critical thinking involves dispositions. Facione (2000) defines these dispositions as “consistent internal motivations to act toward or respond to persons, events, or circumstances in habitual, yet potentially malleable ways” (p. 64). These dispositions have variously been cast as attitudes of mind. According to Facione (2006) and Bailin et al. (1999) the personal attitudes, dispositions or characteristics of open-mindedness, fair-mindedness, an inquiring attitude, inquisitiveness, flexibility are important for critical thinking. In other words, to actively engage in critical thinking process, one must have various dispositions of mind to seek out problems and solutions in an evaluative manner.

With regard to these dispositions and attitudes, Walker (2003) is concerned that while educators value students who think critically about concepts, the spirit of attitude to think critically is, unfortunately, not really present in the classrooms. However, learning environment can provide a valuable asset to be considered when teaching critical thinking (Laird, 2005; Ernst & Monroe, 2006; Fernandez et al., 2012). Aizikovitsh-Udi and Amit (2011) suggest that teachers can and should create a learning environment which fosters student’s critical thinking.

Walberg (1999) also found that classroom environments were important influences on students' learning process. Higher education needs therefore to provide a learning environment that is conducive to critical thinking, giving the students opportunity for inquisitiveness, dialoguing and debating. However, the educational approach does not focus on that issue.

Rather than getting bogged down in the issue of exactly what critical thinking is and is not, we have focused on introducing the milestones of the transformation in this paper.

4. Professor Flintstone in Transformation

As it has been mentioned during the discussion of the changing environment, lectures themselves needed to come to the awareness that students needed a different kind of education, which would enable them to solve complex issues rather than just answering individual questions. This emerging need means transforming the old teaching habits into facilitation-oriented teaching, and focusing on developing transformable skills.

Along the journey of transformation, or from Averageistan to Extremistan, two key milestones have been passed so far. The preparation for AACSB accreditation has started to raise the issue of how to change the teaching-oriented higher education style to a more student-oriented and skill-focused facilitating method. Getting more into depth with the Assurance of Learning, formulating the new learning goals and learning objectives for our courses can be considered as the first major step in changing our way of thinking about why we teach students and how we should do it. The next significant milestone was achieved as an outcome of the European-funded LELLE - *'Let's learn how to learn'* – project, in the framework of which the first group of potential transformers of the Faculty of Business and Economics of the University of Pannonia got engaged into the new way of thinking about what to teach and how to teach – or more like what to develop in students and how to develop it.

The goal of the LELLE project was to address the skill-deficit in our current graduates and to foster the learning to learn culture; making them competitive and resilient in the 21st century (Tan et al., 2017). The critical thinking skill, together with its respective subsets was identified as pivotal for graduates entering the workforce. The mentor training materials was developed with a two-fold objective (Lelle Kit, 2017):

1. To provide a ready-to-use curriculum with learning scenarios including methods/ tools to develop and to evaluate critical thinking.
2. To provide a guiding framework for university facilitator/ instructor/ lecturer on the implementation of the curriculum.

To support this step, we have conducted a research in 2016. The basic aim of the research was to collect best practices – solutions used – for the evaluation and development of the learning competence. Opinions of employees from institutions of higher education, organizations that educate adults as well as employers (HR departments) in Europe and outside were the key information source. During the research such issues were mentioned as competence/skill importance, areas/fields where it is particularly important, its determinants and ways of evaluating it as well as its development. Seventy-two correctly filled in questionnaires were received, they were subject to further analysis.

The research covered universities, scientific and research centres related to LLL (life long learning), adult education centres (continuing education centres), training institutions, psychological and educational counselling services for adults, teacher education centres, counsellors, schools, foundations, associations operating in the education and continuing education field, career services and carrier counselling entities, job agencies, human resources departments in companies. Based on this research, critical thinking skill was deployed into the following subskills:

- reflecting and handling tasks autonomously,

- making sound decisions and reasonable judgements,
- identifying connections and recognizing opportunities,
- critically evaluating ideas.

In addition, a profiling criteria has been elaborated to offer students (in their first study year) a self-assessment. This self-assessment is available as online tool (<http://kerdoiv.gtk.uni-pannon.hu/index.php/921421?lang=en>). The profiling concept consists of 18 items-questionnaire covering critical thinking skill and its four sub-areas. It works as a self-assessment tool for learners and could be done online to support the coaching sessions. The individual and cumulated results of the completed surveys are displayed in statistical graphics and was viewed and analysed by the university facilitator/ instructor/ lecturer. Following this analysis, the coaching session was adapted in cooperation with and according to the learner`s individual needs.

The core component of the mentor training materials focused on the methods to develop and to evaluate critical thinking skill. It follows the a lesson structure, i.e., the lesson begins with a Starter activity, follows by Hands-on activities and ends with a Review activity. The Starter activity at the plenary level aims to focus and to engage the students on critical thinking skill for that particular lesson. Hands-on activities at both individual and group level ranges from case studies to simulated scenarios in different contexts in a progressive incremental level of complexity. Scoring rubrics with descriptors for critical thinking serve as a self-, peer- and group-evaluation tool, as well as a tool to assess their gaps in skill development. The final Review activity fosters reflective learning as students conduct a self-evaluation of their individual learning trajectory by documenting key learning points and responding to the reflection questions. Templates for adaptation and/ or modification of the lesson activities were also provided to participants.

Two universities, University of Pannonia and Wroclaw University of Economics tried out the profiling tool and used the results in the academic year of 2016/17. Both universities offered coaching for the students. 119 students took part in the academic year of 2016/17. Overall, the results showed that there is considerable development in most of the subskills of critical thinking. We concluded that the Profiling tool could be used for evaluating the improvement of students` skill of critical thinking which was introduced to their curricula. In addition, all subskills have been improved after conducting activities from the LELLE project. We can also emphasize that higher improvement in the sub-skills can be achieved if students have complete the coaching process. LELLE Profiling tool and procedures are excellent instruments to bridge the gap in skill-deficit in our current graduates and to integrate the critical thinking skill into the existing HEI curriculum and its instructional programmes.

During the project, several lecturers have also completed training modules to familiarise with the LELLE Kit, and have then tested some of the suggested new techniques and methods that facilitate the development of the skills the LELLE project had in the focus. These training sessions were `vehicles` to aid Professor Flintstones` move along the way to become Transformers, so that they can in turn assist students to become Transformers. Pilot sessions were conducted in the framework of selected modules, and the results have been incorporated in to the curriculum. We are fully aware that there is still a long way to go – and if we adopt MÉRŐ`S (2014) view, we cannot predict precisely how long this journey will be – but the feedback so far suggests that we are on the right path.

5. Conclusion

This paper intended to provide an insight into how the Faculty of Business and Economics of the University of Pannonia considers the role of higher education in the changing environment, how the changing environment for higher education is perceived in the first place, and what kind of approaches are necessary to be able to respond to the changing environment.

The changes were seen in relation to the business environment as well as the environment higher educational institutions operate in. The discussion included the dynamics of change as well as dynamic capabilities that enable the actors to respond to the changes.

We paid special attention to critical thinking which we considered as one of the most important skills that students need in this world characterised by accelerated growth and development and unexpected changes alike. To be able to pass on convertible skills, us lecturers also needed to change our way of thinking and teaching. Working on the alignment with the AACSB standards, the Assurance of Learning process and the LELLE project all assisted and are still assisting our transformation from using the old-fashioned frontal teaching style to adopting a modern facilitating approach which allows more room for skill development, including critical thinking, which as we have seen, is crucial for successfully responding to the changing environment.

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Towards Learning Environmental and Social Sustainability – Changing Paradigms of Teaching

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Abstract

Management education should keep up with the growing awareness of the global challenges like climate change, income inequality and biodiversity lost. Thus our task in higher education is to be able to develop practices and educational platforms that ensure the growth of responsible business leaders. In management education, there are differences between universities how the Corporate Social Responsibility (CSR) has been taken into their curriculum. Based on our experiences of teaching Corporate Social Responsibility for eight years, we have come to a conclusion that students coming to study business at a university of applied sciences, are not well aware of sustainability issues, neither globally nor concerning their own field of industry. Since we have noticed some major changes in the attitudes among several students, we wanted to elaborate more deeply the impacts of the course. Would it be possible to say that the course brought out even some kind of transformation [1]? To find out we carried out a research among our students. The CSR course (five credits) belongs in two Master's Degree Programmes at JAMK University of Applied Sciences. Multiple methods of teaching have been used: e.g. cooperative, collaborative, experiential and virtual learning, lecturing, visiting lecturers, company excursions, etc. Expected learning outcomes of the course are connected to the various elements of CSR and sustainable development including responsibility from the viewpoint of different stakeholders.

Keywords: *Corporate Social Responsibility (CSR), Sustainability, Transformative Learning, Higher Education.*

1. Introduction

'We must change and time is running out' – that is the message we hear among academics in the interdisciplinary field of sustainability [e.g. 2]. To stop the increasing global rates of human-caused environmental and social degradation a paradigm shift is needed. Is it possible and how, to include the dialogue and actions necessary to create this kind of change in education, and is it transformative learning that plays a role in creating a more sustainable future? (ibid.) Leigh and Sunley (2016, pg. 8) [3] point out that our teaching philosophies incorporate many dimensions that include our deeply held ideas about who we are (ontology), what we know (epistemology), what we value (axiology) and we should be aware of this both in relation with ourselves as teachers and with the role of students.

According to Cranton (1994) [4] transformative learning theory leads us to view learning as a process of becoming aware of one's assumptions and revising these assumptions. For change to happen, basic assumptions need to be challenged. Concerning CSR, the basic assumptions that should be challenged concern e.g. the sufficiency and renewability of natural resources and ethical issues concerning human and animal treatment. The transformation may include three types of change [5]: change in assumptions, change in perspective and change in behaviour. The role and potential of transformative learning, when dealing issues concerning sustainability, may be considered particularly significant in university education [2]. Butcher (2007) [6] and AtKisson (1999)

[7] have studied the pedagogy that will challenge students thinking and discovery. They point out that 'responsibility' and 'sustainability' will never arise from 'ready-made solutions', rather to gain these it requires the teacher to activate students to be creative [7]. Teacher's role should be more like a stimulator of interdisciplinary thinking and problem solving [8]. Also experiential learning has often been considered to be effective especially in connection with real-life cases and holistic thinking [8, 9].

There are alternative models for teaching and learning that can contribute to social and environmental change, e.g. cooperative learning, collaborative learning and transformative learning [10]. Within these different pedagogies e.g. the role of the teacher and the understanding how knowledge is produced differs. In *cooperative learning* learners work together in structured processes on a given task, share information, and encourage and support each other. Educators are in a position of power, they are considered experts and they control the outcome of the learning experience. The focus is more on the issues and subjects versus the interpersonal processes. Mostly there is a goal to be achieved, and the conversation focuses on achieving that goal. (ibid.)

In *collaborative learning* model teaching and learning shifts from knowledge transfer and discussion toward all participants sharing the construction of their knowledge (ibid.). "Collaborative learning assumes instead that knowledge is a consensus among members of a community of knowledgeable peers – something people construct by talking together and reaching agreement" [11, 2]. The role of the educator has changed to a participant or a colearner. He/she is not considered the expert or facilitator, questioning, negotiating, and creating a shared understanding of alternative ways of knowing is emphasised [10]. Thus, collaborative learning model challenges our customary teaching practices in higher education. The ideal conditions for discourse require e.g. that participants are allowed full access to information, they are free from coercion, allowed equal opportunity to assume various roles of the discourse, encouraged to become critically reflective of assumptions, empathic and open to other perspectives, willing to listen and to search for common ground of a synthesis of different points of view. Therefore, as Moore [2] has pointed out, one can question: '*Is collaborative learning possible in the current state of higher education – a place that is rife with competition, time pressures, and external pressure to train the leaders of tomorrow?*' Collaborative learning can only be developed in higher education, if the influence of the systems and structures influencing classroom dynamics are taken into account. And we think that one more interesting question arises when contemplating the possibilities of collaborative learning to happen. We are increasingly faced with the pressure to increase virtual learning settings as they are believed to boost the economic efficiency of teaching. Does it serve collaborative learning and transformation?

Transformative learning model goes even further from collaborative learning, including both the individual and social construction of meaning perspectives and it calls for critical reflection on biases and assumptions, which will enable us to process our understandings and worldviews. According to Mezirow (1997) [1] transformative learning as a process of effecting change in a *frame of reference*. Throughout our lives, we develop concepts, values, feelings, responses, and associations that make up our life experience. These frames of reference help us to understand our experiences in this world. They consist of two dimensions – *habits of mind* and *points of view*. Our habits of mind are broad and habitual and can be articulated through points of view. Points of view are generally more accessible than habits of mind, which are considered to be more permanent and harder to change. '*Transformative learning is about altering frames of reference through critical reflection of both habits of mind and points of view*' [2]. For example, in our data one student wrote that due to participating the course she noticed how bitter a person she had been, and she realized that she should completely change her attitude. She is a mother of a disabled child and she wrote that she decided that disability should no longer characterize neither her attitude towards her child as a person nor her own motherhood. Another student wrote that "... *after having the opportunity to learn more about things [concerning CSR and sustainability] during the course, I now believe a little bit more in the goodness of people*".

As the above mentioned example from our data implicates, transformative learning may have effects in different spheres of life, and these effects cannot be controlled. The educator in these situations is responsible for creating an environment that is supportive and open to self-reflection. The ultimate goal of transformative learning is to empower individuals to change their perspectives, but it remains unclear how individuals actually will transform. Thus, as Moore [2] points out, '*we are left with the idealism of empowerment and little sense of what students are transforming into*'. Therefore, we cannot know where a process of transformative learning is going to lead us. . "*I started to understand how huge the consequences concerning environmental risks could be, and that they are of the kind that one cannot even think and imagine about* ", as one student in our text data wrote.

Furthermore, transformative learning is complex, uncomfortable and time consuming in nature, which makes it challenging in educational contexts. Shifting perspectives often involves embarrassment and discomfort. People tend not to think about problems that are disconcerting, thus they avoid transformation of perspectives and aim at feeling safe and secure. We are unlikely to undergo transformative changes in our understanding, if learning is too comfortable like Mezirow (1991) [1] have pointed out. Besides, not many learners (including both students and teachers) have the skills and maturity to ask the inventive and creative questions or think critically about problem framing, that transformative learning would require. [4]

2. Methodology

Our research is qualitative in nature using content analysis. We based our analysis on the data consisting of students' self-reflection reports concerning their learning experiences. In total 143 students, who have participated the course during the past three years, have written self-reflection on their learning (n=103). In addition, three groups of students wrote a short reflective essay (n=40). Table 1 contains description of the data. The data was collected between spring 2015 and autumn 2017.

In self-reflection report, students were asked to 'Reflect on this course and on the goals given in the course description and on your own learning goals: 1) what did you find most interesting?; and 2) How did the different assignments contribute to your learning?'. In a short reflective essay, students were asked to 'write shortly under the heading: Observations and Thoughts about the Changes in my Thinking, Attitudes and Behaviour During and After the Course'.

Table 1. Description of the data.

<i>Data</i>	<i>N</i>	<i>Timing of course</i>	<i>Type of course</i>
<i>Self-reflection report (n = 103)</i>	20	Spring 2015 ^{*)}	Contact lessons and independent work
	26	Autumn 2015 ¹⁾	Web-based course
	23	Spring 2016	Web-based course
	22	Spring 2017	Contact lessons and independent work
	12	Autumn 2017	Contact lessons and independent work
<i>Reflective essay (n = 40)</i>	6	Spring 2016	Contact lessons and independent work
	22	Spring 2017	Contact lessons and independent work
	12	Autumn 2017	Contact lessons and independent work
<i>Total number of data collected</i>	143		

In this study we used qualitative content analysis and thematic analysis [for example 12, 13] analysing the data. This is an early draft. Our research is continuing.

3. Results

When scanning through the data mostly the texts told about the accumulation of information concerning sustainability and CSR, but we also we came across statements indicating implications that could be interpreted as changes in different levels: in assumptions, in perspective and in behaviour. Presumably changes have happened in students' thinking, attitudes, and behaviour both in the public and private spheres of life. However, plenty of comments were indicating increase in 'knowledge' rather than any kind of deeper change in thinking patterns, as the following extracts show: 'I thought that I already knew about the issue, but now I'm aware that actually I knew nothing about the big picture' and 'I'm going to give a presentation of this subject to the executive group based on the course literature'. Students reported that they learned widely about the concept of

responsibility and its different aspects. *'Lectures opened the concepts of responsibility, which were earlier unfamiliar for me' or 'I don't believe that my actions or my attitudes have changes during the course. However, my knowledge has increased significantly and I have learnt new concepts concerning corporate social responsibility.'* Some students were surprised how such a short course could give impulse to changes in thinking and clear things in mind.

Students wrote about changes in assumptions. Participating the course changed their attitudes and behaviour more critical towards the corporate responsibility. As one participant described *'My thinking and attitudes have totally changed during the course, because now I consider responsibility in my everyday life and actions. I also notice the newspaper articles concerning responsibility and also my behaviour in shops and cafés have changed more responsible.'* In the self-reflective essays some students reported changes in their behaviour, like this for example: *'My behaviour has changed after learning about the global problems. I will take better into account energy and water saving, recycling, waste sorting, decreasing meat-eating, consumption and consuming fair trade products.'* Students wrote that they had learnt how to analyse corporate social responsibility: *'I learnt more criticism and I learnt how to analyse the responsibility of companies and organisations.'* The following extract reflects changes in awareness: *'Since participating the course I've found myself talking constantly about the values of our company'*.

Potential changes in behavior may be assumed when reading the following extracts: *'The 'responsibility-analysis -learning assignment' has been beneficial for my work.'* Overall the self-reflection reports told that the responsibility analysis -learning assignment contributed substantially to students' working life, as one writer put it: *'By carrying out the responsibility analysis in my workplace, I noticed that really I am able to influence the practices to be more ethical and responsible. My behaviour and the information that I share play an important role as I work as a boss at grass root level.'* Students concluded that course widened their scope of reflection starting from their own working context towards more societal level. *'The course made me think and follow different aspects of CSR in society and in my organisation.'*

Many students described diverse changes in their behaviour concerning their private life: *" ... I find myself discussing these things with my friends and my family as well"*. Changes have evolved concerning the ability to reflect and discuss social, ethical and environmental matters wider and from different perspectives in general. Students report that they value this ability as a significant skill both in their personal and working life. They also point out how important is to learn to search information concerning corporate responsibility. Moreover, the development to be more open-minded and open-eyed has been reported by few students. Students report that after the course they follow more carefully the media and the news concerning responsibility issues. Some of the students say that after the course their attitude towards the newspapers have changed to be more critical. Also possibilities to influence, increase peoples' awareness or develop responsibility both in working and private spheres of life were mentioned in many essays and self-reflective reports. In addition, many students wrote about changes in their behaviour as a consumer. One student told that *'After the course I have started to pay attention to the responsibility in clothes manufacturing. I have started to favour more expensive clothes made in Finland, because I trust that Finnish companies have not used forced or child labour, and moreover this will support domestic business.'* Many students mentioned that they learned a lot from discussions with visiting entrepreneurs who had integrated responsibility in their business ideology. One student described that *'I learnt a lot when we had a visitor, an entrepreneur of an organic coffee roastery. I learnt how much resources are used to make one single cup of coffee and how I could affect with my own behaviour to other peoples' social and economic wellbeing and also to the environment.'*

Some students reported changes in their attitudes towards civic and environmental activity. This together with changes in self-knowledgement and self-awareness can be interpreted as indicating a change deeper in nature - maybe even a transformational change. The previously brought up example of the mother of a disabled child becoming more aware of the social and cultural frames of reference in our society belongs to this category of changes. Another example of a change deeper in nature comes from a student working in a big technology company. He understands that in theory it is the top management who determine the values and the strategies of the company *'...but the real values arise from the values of our staff in their work and in their private life. How can we interfere in and support that?'*

4. Conclusion

The challenges we face with "the super wicked problems" [eg. 14] are huge and thus, accordingly, they require major changes on the 'different levels of knowing, being and doing' [15]. The ways in which we execute higher education should be open to new approaches and frames of thought. According to our experiences of teaching CSR courses for eight years at a university of applied sciences, some students experience changes in their learning processes that may even be considered as transformational in nature, as we have tried to show in this paper. However, if we aimed at changes on a wider level enabling more students to gain deeper understanding in sustainability and responsibility issues, we should create new pedagogic approaches in our curricula.

When thinking of the possibilities of transformational learning in the context of teaching corporate responsibility and sustainability, form and teaching practices become as important as the content of the education, as our brief overview to the literature tries to show. Sustainability education is a process creating a space for inquiry, dialogue, reflection, and action about the concept and goals of sustainability as Moore (2005) [2] have pointed out. We have used different kinds of methods, e.g. cooperative, collaborative, experiential and virtual learning, lecturing, visiting lecturers, company excursions, etc., in the corporate responsibility course that we have focused on here. However, in this short paper of ours, we have not dealt properly with the pedagogics that we have employed. To do so, and to draw some ideas and conclusions from those in relation to the reflection reports of our students, would be an interesting task in the future.

According to our tentative results, and the results of e.g. de la Harpe and Thomas (2009) [16], changes in curriculum related to responsibility are needed if we wish to contribute to social and environmental sustainability. *'Sustainability is about the terms and conditions of human survival, and yet we still educate at all levels as if no such crisis existed'* [17]. But if we turned our teaching activities highly crisis orientated, we were prone to confront the question of how stressful a classroom might become when educating with a thought of a crisis looming? As teachers and academics, do we want to contribute to our culture of fear? Is it possible to raise awareness without creating more anxiety, and how are we able to support our students after exposing them to disturbing ideas? As Moore (2005, 79) [2] asks: *'... theories for transformative learning exist, is higher education prepared for transformative learning in practice?'*

Sterling and Thomas (2006) [18] have presented a model of the development of sustainable education. In this model they elaborate on how changes in education could affect changes in sustainability. Strong impacts have been achieved through implementations, in which the whole education was planned in line with corporate social responsibility and sustainable development. However, it seems more realistic that separate courses concerning corporate responsibility and sustainability are developed in view of enabling transformational learning. If we are to influence students' awareness of corporate social responsibility, this requires influencing students' attitudes and values. Already in many higher education institutions development of knowledge and consciousness about responsibility or sustainability issues is designed to change students' values and attitudes [19]. Radical shifts in education are necessary though, if we are going to create change agents who can put an end to the current ecological crisis. If we want to make changes in education, these changes should be visible, for example in the curricula [eg. 20]. To quote Moore (2005, 79) [2] once more *'Will we educate for the global marketplace, or will we educate for peace, social justice, diversity and integral development?'* To implement sustainability education at the university level, we need to consider process as well as content. Sustainable future challenges responsible education to invest in capacity building and critical thinking. Wals (2011) [21] has pointed out the importance of constructing the knowledge socially. He has also presented the concept of 'transformational social learning', which sounds brilliant when educating responsible leaders for future. Moreover boundaries in our teaching ideologies and practices could be widened to include "knowing-being-doing, engaging head, heart and hands" (Sipos et al., 2008) 9-11 [22].

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Reintroducing *Disputations* as a possible way to practice critical thinking

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Abstract

It is claimed that study of logic, philosophy, debating and similar subjects help students to be better critical thinkers. However, in our opinion know-how of critical thinking should be differed from the civic and basically human courage to use it in appropriate circumstances. In the paper, authors discuss challenges related to reaching the learning goal of enabling students to think critically. According to authors' experience main challenges in regards of practicing critical thinking are: (1) students have a hard time when they have to defend their position using clear arguments; (2) students are not accustomed to actively listen to other people arguing for their views, especially if those views are different; (3) impressing the importance of critical thinking on students is not easy. In order to overcome these challenges, the authors propose the use of traditional scholastic way of argumentative and syllogistic discussion usually referred to as disputations. Paper is comprised out of three parts. First, authors describe their experiences regarding teaching critical thinking. Second, disputation method is described. In the final part, authors suggest a method of using disputations in the classroom as means to overcome mentioned challenges and to serve as a framework for teaching and practicing critical thinking skills.

Keywords: *critical thinking, disputation, teaching method*

1. Introduction

If a person would type “critical thinking in business” to any search engine the results would be overwhelming. Just informatively, if one searches only *Harvard Business Review* for the keywords “critical” and “thinking” over 7000 hits will be displayed. The importance of such a skillset is further emphasized by numerous studies which constantly conclude that in the era of advancing AI and, evermore capable machines, there is a need to rethink some of the educational postulates and to include courses which are focused on different ways of learning. For example, the report on the future jobs done by the World Economic Forum [1] clearly states the importance of critical thinking. At ZSEM, critical and analytical thinking objective is defined as: “The students will discover problems and offer possible solutions, as well as identify possible risks of a proposed solution”. In addition to this very precise understanding of what critical thinking is, in this paper, critical thinking is understood, perhaps more broadly, as evaluating reasoning used in coming to conclusions. [2] In line with this, at Zagreb School of Economics and Management (ZSEM) we have been trying to create a method which would facilitate critical thinking among our students. Although the learning goal of critical and analytical thinking is mapped to many different courses at ZSEM. Students’ first contact with it is during the first-year undergraduate course *Introduction to philosophy*. The course is designed so it offers both introductory sessions in philosophy and logic and, after each session, there is time for exercises during which students apply concepts that were being discussed in class to real-life situations, usually in a business context.

This paper, mostly based on personal experience and impressions of its authors, aims to accomplish three things. First, the experience of teaching and facilitating critical thinking, in the context of *Introduction to philosophy* course at ZSEM, is going to be described. Second, using disputations in the format which was used in the Jesuits schools to enhance learning is going to be described. The real definition of disputations is: “A disputation is a scientifically ordered debate. Often in disputations arguments and counter-arguments are set in a rather freestyle; this easily leads to the danger that debaters no really collide “head on”. The scholastic type of

disputation proceeds in strict form according to set rules. (...)” [3] In other words, and perhaps more aligned with the inspiration for this text is the understanding of a disputation as an art of debate, following Belić’s free translation from Latin [4]: “Disputation is a mental play (fight) with proofs of the two, one of whom defends a certain thesis, while the other is attacking it, provided that both stick to the syllogistic pattern.” In the closing part of the paper using a version disputation method is going to be discussed as a possible way to overcome the challenges faced when trying to teach and practice critical thinking.

The goals of this paper are to describe the context of teaching critical thinking at ZSEM and to offer a possible way of improving student learning in regard to critical thinking skills with the use (of somewhat modified) scholastic disputations. As a side note, it is important to point out, that this paper deals with the method of disputation and does not deal with issues of encouraging students, or anyone else for that matter, of using critical thinking as part of something that can be named civic, human or social responsibility or courage.

2. Experience in teaching critical thinking

First-year undergraduate course *Introduction to philosophy* serves to introduce students both to major topics in philosophy and offer an opportunity for students to practice critical thinking and critical writing. In most cases, the class follows the following structure. First, some specific topic in philosophy using a standard lecture format is explained. After introducing the topic, a discussion in class follows. During the discussion, faculty members try to engage students to use the concepts from the lecture to some real-life situation, usually connected to business context. (ZSEM is a business school)

Unfortunately, what we often experience is that although students do have an opinion regarding the issues being discussed it is very hard to have a structured, constructive discussion about the issue. Very often the following situations occur: (1) Students have a hard time when they have to defend their position using clear arguments; (2) Students are not accustomed to actively listen to other people arguing for their views, especially if those views are different; (3) Impressing the importance of evaluating others’ reasoning (i.e. critical thinking) is not easy.

The first thing that we often encounter is that most students do have an opinion about the topic, unfortunately, besides the opinion, there are no clear arguments which might support that opinion, or the arguments are populist simplifications which can be found surfing the Internet. No matter how weak the reasons supporting the opinions, another thing that often happens is that students, if someone is having a different opinion from them, do not let others speak. It might be said that they are not prepared to listen to different ideas or opinions no matter where they come from. Of course, faculty moderates the discussion in order for everyone to have an opportunity to voice their opinions, but the tendency to disregard any opinion which is different is definitely there. First two described situations in our opinion point to something which might operationally for the purpose of this paper be named “lack of discussion culture”.

The third impression mentioned is not so easy to point to, and it may depend on a completely personal experience. Therefore, in this paper, it is just stated without any attempt at tackling it. Instead, the method of structured discussion drawing from Jesuit practice is suggested as means of tackling the first two issues.

3. Disputation

In the tradition of different philosophical schools, there are many versions of some kind of structured discussion used to obtain specific learning outcomes. [5] In this paper the scholastic method is presented. There are several reasons for choosing this method. First, plainly saying, the authors are most familiar with the Jesuit tradition of syllogistic disputations because they studied at a Jesuit school. Second, the scholastic disputation provides both the framework and the discipline needed to reach a specific learning objective. Third, no matter if a participant “wins” or “loses” in a disputation, the practice and learning are achieved through engaging in the activity. Finally, the purpose of a scholastic syllogistic disputation as a method is to make the topic or thesis more understandable and to exercise the mind. [4,7] It goes without saying that these goals are indeed suitable for any level of teaching, including the higher education institutions and they might especially be suitable for practicing critical thinking.

Generally speaking, the practice of disputation itself appeared sometimes in the late 11th century as part of monastic teaching practice which was emerging in Europe around that time. [6] For the Jesuit order, according to Belić [4], St. Ignatius of Loyola decided to incorporate disputations in the *Constitutions of the Society of Jesus* as a way of learning and practicing the mind. He himself encountered such a method of learning and practice when he was a student.

In what follows a short general overview of the method is provided as given by Belić [4, 8]. First, the written form of the disputation is presented in Table 1, and then a description of an oral form of the disputations, suitable for a live class setting, is provided.

Table 1. Overview of the scholastic disputation in form of a thesis (written form)

Part of the disputation	Explanation
<i>Tenor thesios</i>	Title of a thesis – a statement which will be argued
<i>Nexus</i>	Contextualization of a thesis – connecting the thesis to what comes before and after
<i>Status Questions</i>	Formulation of a question in a thesis – what it is about?
<i>Termini</i>	Definition of new (unfamiliar) concepts.
<i>Historia thesios</i>	History of a thesis – how was the question discussed in the history of the discipline (e.g. philosophy).
<i>Probatur</i>	The process of argumentation by providing evidence following a strict logical structure. The logical structure is provided by syllogistic form of reasoning.
<i>Corollaria and Scholia</i> (plur.)	Different additions which further elaborate on the things stated in the Probatur <i>Corollaria</i> – extended conclusion which follows from the thesis. <i>Scholia</i> – an independent addition which is naturally connected to the thesis.

It is not necessary that every thesis will have these parts, but some will always be present. Obviously, this is especially true for the *Probatur* part. If in Table 1 a description of a written form of a syllogistic (scholastic) disputation was given, an oral version will follow a similar principle. [9] This is described in Table 2.

Table 2. Overview of the scholastic disputation in an oral form

Part of the disputation	Description
<i>Before the discussion</i>	The person defending the thesis stands up and starts with: "Thesis that needs to be defended is: ..." After that, the person sits down and repeats the thesis finishing with the words: "Based on what was said, it seems that the thesis is proven."
<i>Discussion</i>	1. Both the defender and the attacker stand up.
	2. An attacker can attack the thesis in two ways: a. By defending a counter-thesis. b. Attacking the arguments used by the defender.
	3. Both participants sit down.
	4. The attacker starts proving his claim using syllogisms.
	5. Defender listens to the attacker's exposition and repeats his whole statement. This ensures that the defended understand what the attacker tried to say, but it also serves to buy some time for the defender.
	6. A defender can then say: "I accept the attack and respond" There are different strategies available to a defender as a response to attacker's claims: a. Some propositions, if they are not relevant for the outcome, can be disregarded. b. Some propositions can be allowed, if premises are considered true. c. Some propositions can be denied if the premise is considered to be false (the reason for denying the premise does not have to be exclusively stated unless the attacker demands it). d. Instead of denying a premise, a defender may require further evidence. e. If some propositions are ambivalent it is possible that additional explanations are required.
	7. An attacker has to prove the denied premise using a new syllogism.

	8. If all of the above solves the problem, then other objections can be addressed, if not, the argument is expanded.
<i>End of the discussion</i>	The process is repeated, objection by objection, until one side does not accept the claims made by the opponent.

As it can be seen from the descriptions above, a very strict structure is provided as guidelines to be used during the discussion. On one hand this definitely helps to manage and facilitate the discussion, but on the other hand, it seems as if the strict format is overly strict for live class usage, especially in schools which are not specialized in Western philosophy, theology or logic. This is especially true regarding the requirement that only syllogistic form of argumentation is allowed. It seems that teaching this method might require more time than it is available during a single semester and in the end, more time would be spent on teaching the method than on the learning goal critical thinking. Therefore, in the next section, a slightly simplified model for the disputation is presented.

4. Reintroducing disputations

Since disputations provide a strict structure for discussions and they can be applied almost any learning goal that the program requires, it seems reasonable to try and applied them in order to overcome first two already described challenges that we are facing. In the table below please find the somewhat modified structured that is proposed to be used as a model for discussion in class in order for students to learn to evaluate reasoning used in coming to conclusions, i.e. critical thinking.

Table 3. A simplified version of a disputation

Before the discussion	Discussion	End of the discussion
Defender retells his position/claim.	<ol style="list-style-type: none"> 1. Attacker claims the opposite of what the defender is saying. 2. Defender denies what the attacker is claiming. 3. Attacker argues for its claim using at least the following: <ol style="list-style-type: none"> a. One academic source. b. One other type of sources (newspapers, blogs, popular literature, etc.). c. One real life example. 4. Defender retells the attacker's claims. d. Defender responds to the attacker's arguments: <ol style="list-style-type: none"> a. If they are not relevant to the outcome, they can be disregarded. b. If they are considered true, they can be allowed. c. If they are considered false, they can be denied (the reason for denying does not have to be exclusively stated unless the attacker demands it). d. Instead of denying them, a defender may require further evidence. e. If some arguments are unclear or ambivalent it is possible that additional explanations are required. 4. Attacker proves the denied part of his argument. By using, at least, the following (different from before): <ol style="list-style-type: none"> a. Two academic sources. b. Two other types of sources (newspapers, blogs, popular literature, etc.). c. One real-life example. 5. Either the dispute is resolved, or the argument is reinforced with new material. 	Parts of discussion are repeated until one of the sides in the discussion proves its claim, i.e. when the opposing person accepts the proofs or does not know how to respond.

Basically, the version of a disputation described in the Table 3 follows more or less the same general structure as the syllogistic scholastic Jesuit disputation described in Tables 1 and 2. There are two significant differences though. A first difference is that in the modified version it is not necessary to use syllogism as a method of proving a claim. Therefore, in our opinion, it is more appropriate for use in a non-philosophical class setting. The second

significant difference is that we have decided to include the expected minimum number of sources for the arguments used in the disputation. The reason for such a prescriptive approach is that we think that it is important to guide first-year students when they are preparing for the discussion. The reason for prescribing precisely these sources is that they mirror what students will be exposed to in their subsequent careers. Namely, they will have to be familiar, at least in some degree, with academic publications in their fields. They will be definitely be exposed to the media, and last they will draw learning from real-life experience. This preparation can also be used as pre-class assignments. And, by knowing what and where to research, student learning is enhanced.

5. Conclusion

There is no question that advancement of technology impacts what is expected that people master during their education. One such thing seems to be that they are capable of evaluating someone's reasoning, or in other words, that they are able to think critically. In this paper, which draws heavily on authors personal experience and impressions, there seem to be numerous difficulties in reaching that goal. These difficulties can be grouped together under an umbrella notion of "lack of discussion culture" as manifested by students' unwillingness to listen to opinions which are not aligned with their own and in poor ability to provide strong evidence in support of their claims.

It would seem that a structured method of facilitating discussion can be helpful in overcoming the mentioned difficulties. One such method is the scholastic syllogistic disputation which were defined as a "scientific debate". Although one, among many such methods, the scholastic disputation is appropriate for this task because it is in its core focused on learning and practice of evaluating arguments which is precisely what is needed for critical thinking. Although the disputation seems to be appropriate as a method, the traditional style of such a debate – in which only arguments formed as syllogisms are accepted – seems to be inappropriate for schools that are not focused on the study of philosophy, theology and logic. Because of this, a slightly modified version of the disputation is suggested. This modified version does not rely purely on syllogisms and the minimum amount and style of sources from which the arguments are created during the discussion are prescribed in order to enhance learning.

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Future Skills for Future Jobs: The Social Service Project as a Complex Training Tool for Business Students

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Abstract

The workplace of the future will require different skills than in the past, but how could universities prepare their students for it? Developing skills like Complex Problem Solving, Critical thinking, Creativity, Emotional Intelligence, Judgment and Decision Making (skills ranking 1 to 3 and 6 and 7 according to the 10 Skills mentioned by the World Economic Forum, 2016) should draw on other formats than traditional lectures and seminars. The course Social Service Project in the Bachelor International Business program at Munich Business School is well suited for training and developing these and other skills, which according to studies could prepare students for the future workplace. The Social Service Projects is a mandatory course of the bachelor study program in the 2nd and 3rd semester, students have to organize a social project in groups, find a partner organization, get involved with beneficiaries of their project and finally evaluate and present their project in a written report and in a group presentation.

Since students are free to choose their project, they will have to generate own ideas, solutions, gain practical experience, interact with project partners and beneficiaries and finally to evaluate their project and to reflect on lessons learned. The authors evaluated the written reports of 56 projects involving 307 students from 2012 to 2018 regarding the reflection of students on their project and the skills acquired. The limitations of this analysis are clear: inconsistent data (individual vs. collective reflections or no reflections at all contained in the reports), the reliability of the students' self-reflection as well as different instructions due to different supervisors. The authors tried to match the inherent challenges of the project work with the skills to be acquired and mentioned by the World Economic Forum [1]. This can be regarded a first step in designing a more reliable and detailed catalogue of questions students will have to answer in future reports regarding lessons learned. The following improvements should give more clear answers to the research question: more specified requirements regarding the reflection on lessons learned and on the methods and tools of project management used to be contained in the written project report as well as requiring an organization chart showing individual tasks and responsibilities of the group in the first phase of the project work.

Keywords: *Service Learning, Skill Development, Social Service Project.*

1. Introduction

University education for business students is meant to develop skills, which will be useful and necessary for the students' future career in business and management. Hard skills – macroeconomic theory, financial accounting, marketing tools and the like – will remain a stable part of education, although the content will change, too. But what could universities do to prepare students for the changes likely to be brought about by the so called fourth industrial revolution and the ongoing globalization?

The future of jobs and thus the future of skills required for these jobs has been the topic of a survey undertaken by the World Economic Forum in 2016 [1]. By taking the skills mentioned there as a starting point, we decided to review a course offered in the Bachelor International Business program of Munich Business School – the Social Service Project – in order to understand whether this course is suitable to train students for future jobs.

The course had been introduced in 2003, project reports are available from 2012 to 2018 (56 projects) and the effects of this course can be assessed by the results – the Social Service Projects – and by the written reports and presentations submitted by the project groups. The students' personal reflections in the reports and – if they were not available – the evaluation of various aspects of the project work (cooperation with the different stakeholders,

application of project management methods, contributions to problems and solutions etc.) gave us an insight to the learning progress experienced by the students.

Originally, the purpose of the course was to combine the transfer of knowledge (“hard skills”) about project management methods with practical experience while emphasizing social responsibility. There is a wide range of projects and project partners chosen by the students so far, but the lessons learnt by the students resemble each other: they refer to time and people management, coordinating with others, communication and experience which could be subsumed as developing “emotional intelligence”.

We reviewed the reports and matched the skills mentioned by the students themselves in their reports with the skills mentioned in the survey of the World Economic Forum.

2. Theory and Literature

2.1 Future Skills

Several studies (e.g. [1, 2]) show a shift of the skills demanded for future jobs due to the digital transformation as well as the globalization. At present and in the future, the most important competence is the ability to solve new, poorly structured problems in a complex environment. This is followed by an array of social skills, among them coordination with others (in a team), emotional intelligence, service orientation and negotiation skills. Our study is based on the framework of the World Economic Forum depicted in Table 1:

Rank	Skill	Definition
1	Complex Problem Solving	Developed capacities used to solve novel, ill-defined problems in complex, real-world settings.
2	Critical Thinking	Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
3	Creativity	The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
4	People Management	Motivating, developing and directing people as they work, identifying the best people for the job.
5	Coordinating with Others	Adjusting actions in relation to others' actions.
6	Emotional Intelligence	Being aware of others' reactions and understanding why they react as they do.
7	Judgement and Decision Making	Considering the relative costs and benefits of potential actions to choose the most appropriate one.
8	Service Orientation	Actively looking for ways to help people.
9	Negotiation	Persuading others to change their minds or behavior.
10	Cognitive Flexibility	The ability to generate or use different sets of rules for combining or grouping things in different ways.

Table 1. Top 10 future skills and definitions according to [3], based on the O*NET Content Model

The importance of these skills is also reflected in many program learning goals of AACSB accredited business schools. While business knowledge remains an important goal, a majority of the goals is skill oriented [4], thus not directly reflected by traditional functional or industry focused business courses. This means educators have to find new and innovative ways to develop skills within their students.

2.2 Service Learning

Service learning is “a form of experiential education where learning occurs through a cycle of action and reflection as students work with others through a process of applying what they are learning to community problems, and at the same time, reflecting upon their experience as they seek to achieve real objectives for the community and deeper understanding and skills for themselves” [5]. Service learning is characterized by a

balance between learning goals and service outcomes. Unlike many other university group projects, service learning requires the students to actively work and interact with people outside the university. Projects typically involve non-profit organizations. Service learning provides an experience distinct to internships or real-life business cases as it also instills in students an understanding of community responsibility.

Several studies have investigated the relationship between service learning and specific skills and competencies, such as communication skills [6], project management [7] or critical thinking [8]. Other researchers take a broader approach and look at a set of management skills instead of individual skills (e.g. [9]). The studies generally report a positive impact of the presented service learning project on the investigated skills. The majority of the studies are based on individually developed questionnaires; others are using the standardized SELEB scale (Service Learning Benefits), a follow-up survey with 20 predefined categories [10].

Our paper adds to the body of research in several dimensions:

- It focuses on the current skill set presented in the previous section.
- It uses service learning projects in the early stage of a business curriculum instead of a senior-level capstone project.
- The service learning projects studied focus on education, social integration and intercultural communication and involve disadvantaged people.
- A content analysis of students' open reflection papers was conducted instead of using a standardized questionnaire in order to limit socially desired answers.

3. Methodology and Results

3.1. Description of the "Social Service Project" Course

Since 2003, the Social Service Project is part of the curriculum of the Bachelor International Business program at Munich Business School; it is a mandatory course for all bachelor students. We examined the project reports still available in our archive, starting with 2012 until spring 2018. The Social Service Project earns 5 ECTS and is embedded in the curriculum as follows:

1 st Semester	2 nd Semester	Semester Break	3 rd Semester
Kick-off (2 hours)	Lectures (13 academic hours)	Implementation	Finalization and Presentation
Students are informed about their task and encouraged to think about a project, a partner, a project group, (Senior students present their completed projects)...	<p>Lecture: Basics of project management</p> <p>Group presentation: A specific topic from the field of project management (e.g. risk management, conflict management)</p> <p>Group work: Find a project, a partner, a group, elaborate and present a first plan</p>	Regular reports (monthly) to the supervisor about the group work, meetings with supervisor, if necessary.	Submission of project report (20 pages) and presentation of project work

Table 2: The Social Service Project in the Bachelor International Business Program of Munich Business School

Requirements of the project are: It must be a group project (between 5 and 7 students) and it must serve a social purpose, thus benefit people in need or a social cause, preferably with the overall goal of sustaining social integration, intercultural communication and education. Students have to get personally involved with the beneficiaries, i.e. collecting money and transferring it to an organization will not suffice. There is a set deadline for the project completion (middle of 3rd semester).

The motto for the project is: freedom and responsibility. Students are free to choose a project and a project partner. In order to collect donations (money or donations in kind) it is necessary to collaborate with a registered association, which is able to issue receipts for tax purposes and of course in order to enhance credibility of the student group towards potential donors.

Students must, however, also assume the responsibility for their projects, for their cooperation with project partners, the beneficiaries of their project and also for the university as they are acting as students of the Munich

Business School. Regular (monthly) reports must be sent to their supervisor and no written external communication is to be sent without the consent of the supervisor.

The project reports are limited to 20 pages text; some instructions regarding the content are given by the supervisors (description of the project, of alternative plans etc., reflection on the use of project management tools, reflection on the cooperation within the group and with the partner organization etc.). In many cases, the supervisors required personal reflections on the learning process and on the individual student's own contribution; however, this requirement has not always been communicated in the same way. This is due to different supervisors over the years and because the reports do not necessarily contain what was required. The grading of the projects is solely based on the written report and on the presentation, clearly not on the achieved "results", i.e. the amount of money collected is irrelevant for the grading. This is due to the different conditions of the student groups and to the fact that "success" is not completely under their control. One of the financially most successful projects was a gala event for the benefit of an organization sending doctors to an Asian country for surgical interventions of people with eye diseases. Most of the large donation came from the family of a student whose father was an active doctor in the charity. In another case the non-profit organization withdrew its consent to organize a charity event for severely traumatized patients because of internal reorganization. In again another case a group approached the Federal Ministry for Economic Cooperation and Development in order to get support for Togo: They wanted to build a health clinic and an elementary school in rural Togo – they were promised to receive 80% of the money needed under the condition to collect the remaining 20% within one year.

3.2. Basis of Data Analysis

We reviewed all project reports still available in the archives. There were 56 project reports involving 307 students and 47 partner organizations from 2012 to 2018. We extracted the organized events, the partner organizations and the student reflections in tabular form.

The reflections were made either individually – each group member wrote up to one page about his or her experiences – and as such they were either part of the project report or (those of the year 2012) submitted by each student as a separate document. Alternatively, these reflections were collective reflections made by and for the whole group as part of the project report. The project reports with individual reflections also contained a collective reflection about the cooperation of the group members, with the partners and so on. Seven project reports did not contain any reflections, in some cases there were statements regarding the project success, cooperation and conflict management "hidden" in some other parts of the project report, for example in the description of the project.

During the kick-off lecture, project groups of the previous semester are invited to present their project, which serves as an inspiration to the students and every year there has been at least one project, which is followed-up by a new group.¹ Preferred beneficiaries are children but students also help other groups of the society: homeless, young refugees, handicapped teenagers, senior citizens in a retirement home etc. Some groups chose to cooperate with organizations abroad, sometimes connected with visits in these countries in order to bring aid supplies. Table 3 shows a selection of projects that illustrate the diversity of activities.

¹ Among the projects reviewed, there were for example four cooperating with the Ronald McDonald House in Munich, three with a local Youth Center and three with a local Multicultural Youth Center.

Constructing a raised-bed gardening element in a multicultural youth centre, donations were generated by selling wafers at a community celebration in the neighbourhood.
Bringing together a group of young children from a nursery school with residents of a retirement home by matching them in intergenerational teams for a scavenger hunt.
Organizing a concert with students of a local music school in order to collect money for an orphanage in Russia.
Organizing a charity run for the benefit of a youth centre helping disadvantaged children and youngsters.
Organizing a play afternoon and a dinner for the parents and siblings of severely ill children at the Ronald McDonald house in Munich – after having collected money to sponsor a family apartment for two years.
Making an excursion to Neuschwanstein castle with a group of young refugees.
Organizing an excursion to the BMW showroom and factory grounds for handicapped young people.
Cooking an international dinner together with refugees.
Organizing concerts for the benefit of severely ill children in Belarus.
Organizing an afternoon for senior citizens with discussion tables and a bingo game in a retirement home.
Organizing a gala dinner in Luxembourg for a charity organization helping in Africa.
Organizing a multicultural soccer tournament for youngsters attending a youth center in Munich.
Visiting the soup kitchen of a local monastery in order to find out about the needs of homeless and poor people – and then providing some of them with a camera, organizing a photo exhibition and collecting donations for the homeless.

Table 3. Sample Social Service Projects

3.3. Inherent Challenges and Skills Development

There are specific difficulties involved with this project work which each group encounters at a different level and which are mentioned and explained by the students either in their project reports or in their project presentations. These difficulties and challenges also shed light on the skills and competencies, which are trained by the student groups in overcoming them. The difficulties match most of the skills mentioned as “future skills” (cf. [3]) and are highlighted in italics:

Design the project and acquire a partner organization: The groups have to agree on a common project and to find a partner charity organization, a venue for their event, a project partner. Some stated that this was the most difficult part of the whole task and it is truly a *complex problem* to be solved. There is room for *creativity*, to design an own event, to cooperate with new partners. Of course, *negotiating*, *coordinating with others* and *people management* are also involved with setting up a project with a group of students. The need for *service orientation* will become obvious when negotiating with a partner organization about matching the own ideas with the needs and the experiences of this organization. There are always project groups which start to elaborate an idea without having contacted any partner organization, they are then disappointed to find out about the real needs and possibilities of this organization.

Cooperation: All students have to do a mandatory company internship in their semester break between semester 2 and 3. Group communication is difficult in this period since students are doing their internships in different cities and countries. Language skills play a significant role in groups where none of the members speak German. Some students leave the university after semester 2, thus forcing the remaining students to reorganize themselves. Thus, sometimes completely new groups have to be formed shortly before the start of semester 3 requiring emergency plans for the project work - the submission of the project report is scheduled for the middle of semester 3 leaving them little time for the project implementation. Cooperating with the partner organization and with the supervisors must also be taken into account. Besides *complex problem solving* there is also *critical thinking* required in almost all phases of cooperation, last but not least when writing the report and the reflections. *Judgement and decision making* is needed for example at the point when plan A fails in order to go on with plan B and/or plan C, but also when implementing the project. *People management*, *coordinating with others* and *emotional intelligence* are skills, which are trained in diverse project groups, having diverse interests and schedules. Working with beneficiaries from very different backgrounds requires being able to change one’s own perspective and to see the world with other eyes – an important prerequisite for *emotional intelligence*.

Organization: Project groups had reported quite often that they started without any form of distribution of tasks and duties, since they did not want any of them to be the “boss” – a typical problem for groups of peers. They explained that since they were “good friends” they would not need a project leader nor a project coordinator; they would work as a group of friends and refuse any hierarchy. Most of these groups found out subsequently that some form of coordination within the group was necessary; they then appointed a spokesperson, a coordinator and sometimes even a project leader. *People management, coordinating with others, judgement and decision making, service orientation and negotiation* are skills, which are helpful with these challenges.

Communication: Project groups encounter difficulties keeping everybody updated on meetings, decisions, deadlines and it takes time to set the rules for communication routines. It is also challenging to communicate as a project group with external partners, all the more so for foreign students in Germany. It is an own task to coordinate all the communication with all the stakeholders of the project, including the supervisor. The necessary skills match *people management, coordinating with others, emotional intelligence, judgement and decision making, service orientation and negotiation*.

Writing of the project report: Writing a report as a group work is a challenge in itself, as well as the group presentation. The quality of the project reports shows a wide range, there is room for improvement, for learning. At this point, students usually have understood the necessity of distributing tasks according to individual skills. Structuring their own experience, reflecting on their achievements, on results and possible improvements show the importance of communication skills and also of the need to organize the group and to *coordinate with others*. Finally, the project has to be presented by the group to a jury – the challenge is here to involve the whole group. Practically *all the skills* mentioned as skills for future jobs are important at this point.

It is clear from the reports and the presentations that the Social Service Project is a *complex problem* to be solved involving many different competences and skills. It is, however, also clear, that the project groups and the individual students experience all these problems and challenges at a different level and thus have different opportunities to learn and to train their personal skills.

Table 4 summarizes the skills and selected tasks that challenge and develop these skills:

Skill	Tasks
Complex Problem Solving	The project itself is a complex problem with many factors to be considered, even though the students themselves design it.
Critical Thinking	Decisions have to be made in every phase of the project, also regarding the distribution of tasks and the solution to conflicts and failures.
Creativity	Design an own project, generate ideas for potential sponsors and an “event”, for a plan B and C, if necessary
People Management	Organizing the group, organizing the event, coordinating with the partner organization.
Coordinating with Others	Coordinate with the group members and with the partner organization, match with other study duties.
Emotional Intelligence	Solve conflicts among group members, cope with intercultural differences; get involved with beneficiaries in other social realities.
Judgement and Decision Making	This proves to be necessary at all steps of the project.
Service Orientation	Learn to cooperate with a partner organization and to find out about the needs of the beneficiaries, but also of the other group members.
Negotiation	Negotiate with group members about the project itself and the way to its realization, with the partner organization, also with the supervisor and potential sponsors.
Cognitive Flexibility	Documenting the project in the report and in the presentation as a group work, writing a reflection, implementing the project.

Table 4: Skills required for selected Social Service Project tasks

3.4. Perceived Challenges and Skill Development

According to Dewey [11], experience contributes to education, no matter if this experience is negative or positive, if it is reflected, compared to other experiences, if there is an attempt to understand what went wrong and why, what has been learned and which consequences can be drawn from these experiences for future actions and problem solving. Reflection can be considered the link between “service” and “learning” [12].

The students’ individual and the collective reflections mention similar skills based on the same difficulties encountered while working on the project. In summary, these can be described as follows:

- *The importance of communication:* In negotiations with the group about the nature of the project and the realization, the way of communication and the rules (How to work with social media or any software? How to find a balance between information for everybody and information overload? How to speak about tasks and duties – and conflicts?), but also in solving conflicts or trying to get group members involved (there is usually at least one member of the group not willing to participate fully).

“We learned that email is often not serious enough, it was better to convince potential partners by a phone call.”

“We also found out, that we have to follow-up on contacts and that partners have to involve each other at each step of the project and especially when changes occur.”

- *Time management:* Being on time, answering on time, coordinating the schedules of a group and coordinate with the partner organization, choosing the right date for an event, coordinating the tasks and the schedule of the event etc.

“It was difficult to follow up with our project during the semester break since the group was dispersed in different cities for their internship.”

“Group meetings took a lot of time, coordination was difficult and some group members were really not cooperative at the beginning.”

- *Organizational management:* Distributing tasks, appointing different roles as the project coordinator, a contact person, using planning tools for the organization of the different project phases etc.

“Since some members of our group did not react and did not work on the report, it was me and my friend who spent the whole night to finish the report. Unfortunately, we did not have a project leader and a clear distribution of tasks, that might have helped.”

- *Insights to other social realities,* i.e. a change of perspective: experiencing people of different age, with handicaps, people in need, experiencing themselves in a different role.

“Also the caretakers did not expect this harmonious cooperation, since even some of the “troublemakers” among the children treated the seniors with much love and respect.”

“I had a lot of respect for those parents of severely ill children, they must have felt enormous stress because of that, but they were so nice with us.”

- *Experiencing failure and overcoming failure,* sense of own effectiveness, feeling responsibility for others, for the society – and being proud of one’s own results.

“We learned that it was not so easy to realize our idea – we had to ask many retirement homes and child care institutions before we found the right one for our project.”

While the skills mentioned in the students’ reflections are similar to the ones expected from the project layout they are not identical: Students focus on communication and coordination issues as well as self-perception and self-development. This does not mean that other skills have not been strengthened, but merely that students have not considered them noteworthy. One reason for this may be that these interpersonal skills and self-awareness are also experienced more emotionally than skills such as complex problem solving, critical thinking or judgement and decision making.

3.5. Reflection on Lessons Learned

The Social Service Project is clearly successful – out of the 56 projects reviewed, there were only two projects which were not accepted and as a consequence the students had to complete a new task in order to earn the credits awarded for this course. Reasons for those failures were the complete lack of cooperation within the group combined with a lack of communication – the work in progress had been presented to the supervisors as successful throughout the course and only the report and the presentation showed that there has not been any project executed.

All the other projects were successful. Success is measured here in terms of designing, executing and completing a project in cooperation with external partners and documenting it as well as reflecting on the own performance. Some groups were less satisfied with their project when they heard that other groups had collected much more money or had been covered in the news, had worked with celebrities etc. while their project had involved only little money, no news coverage, no celebrity etc. But all the groups reported proudly the completion of their project and most of all the very rewarding experiences in contact with the partner organization and the beneficiaries of the project.

The role of the supervisors of such a course is the role of facilitators: they explain the setting, ask for regular reports and consultations, help with critical situations, give advice and request the students to document and to reflect on their experience.

4. Discussion and Conclusion

The most important problem encountered regarding the evaluation of this course and its suitability for training the desired competences is to acquire consistent and reliable data. The reflections of the students are just an indicator of the lessons learned. There are considerable differences in the reflection capability and there are, of course, socially desired answers to the requirements connected with the writing of the report, especially if there is no individual reflection of each student, but a collective one as part of the report. Students' participation in the experience and in the evaluation varies enormously. In combination with the description of the project, visits to the project events and the supervision meetings as well as the final presentation, supervisors get a fairly reliable idea of the experiences made and the skills trained. For the future, a more consistent framework for the evaluation of the lessons learnt is necessary – either as part of the project report, with the help of a questionnaire or other inquiry tools. All current and future supervisors should ask for the same information in the project report and in the presentation. There are many ways to trigger reflections, writing personal reports is only one [12].

The second problem is reflection on the “hard skills”, i.e. project management and the use of tools like time planning, conflict management, communication tools etc. In order to do this, the use of such tools should be required more consequently even before the start of the project and at least in the initial phases of the project (for example by asking for an intermediate report on the project involving the tools and methods used). So far, regular reports were required, but there was no explicit demand to explain project management methods and tools used.

A problem students regularly complain about is a lack of solidarity by usually one or two group members who do not participate, do not assume their tasks, do not communicate etc. In some cases this problem became a severe conflict blocking completely the work of the students and requiring the supervisor's intervention. One way to tackle this issue could be requiring student groups to formulate an organization chart for their group with a distribution of tasks for the individual members in the initial phase of the project work. This problem is well known by groups and especially by groups of peers without hierarchy imposed on them from outside.

The fact that students are free to choose their project, their project partner and their project group proves to be the major asset of this course as it makes the projects become truly “their” projects. This freedom may seem counterintuitive for a freshman course, where educators often choose to present pre-structured problems and simplified cases to students. It is this freedom in connection with real projects, which deal with people in unfamiliar social realities, which particularly challenges and trains the skills of the future.

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Expectations of Millennials in regards with applied teaching methods and learning through technology during Marketing classes

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Abstract

There is a much discussion recently about “Millennial” students. They are different from the generation that preceded them in regards with their expectations towards applied teaching and learning methods, going after innovative teaching methodology and frequent usage of technology. They expect also a more interactive approach. In this article, being focused on the higher education experiences within marketing courses at Zagreb School of Economics and Management, the authors emphasize that the professors must engage actively in the learning process, frequently using innovative teaching methods during e-learning and distance learning processes while engaging and motivating the Millennials, empowering learning through technology while using mobile devices, as well as frequently using different interactive qualitative research and learning methods in the classes. Within their research, the authors aimed to test the hypotheses that Millennials give an advantage to the innovative teaching and research concepts and that they prefer learning through technology in comparison with traditional teaching methods. The survey results make it clear that new, interactive and innovative research techniques and teaching methods, as well as concept of e-learning through technology have a strong influence on Millennial student’s engagement, motivation and on their satisfaction with the marketing courses.

Keywords: Millennials, Technology, Marketing, Teaching, Learning, Expectations

1. Introduction

The purpose of this article is to provide an overview that illustrates some of the defining attitudes of the marketing students belonging to the Millennial generation towards innovative teaching and research concepts and learning through technology in comparison with traditional teaching methods. It offers a framework for understanding the most compelling issues marketing professors face in their effort to effectively teach marketing courses to the Millennial students.

There is a much discussion recently about “Millennial” students, i.e. those born between 1982 and 2002 [1]. Additionally, there is no shortage of data regarding the Millennial generation. They are higher educated than earlier generations, highly competent users of information and communication technologies [ICTs], and accustomed to the world of social media [2]. Thus, because of their earlier exposure to technology, Millennials are more comfortable with technology and its use for communicating and learning than previous generations [3]. Yet, Millennials seem to eschew great books and scholarly wisdom in favour of online information and peer opinion often lacking in accuracy and validity [4].

2. Literature review on the world of Millennial students

The first indication that the Millennial Generation may be different from previous generations is to consider how many different names we have for the generation and the people who belong to it. They’re referred to as Generation Y, Nesters, Baby Boom Echo Generation, Echo Boomers, Digital Natives, Generation Next, Generation Me and Millennials [5].

Millennials are often qualitatively different from the generation that preceded them, being sometimes even difficult to motivate, to reach and to cooperate in classes. They have grown up being able to Google anything they want to know. Millennials have information at their disposal through the internet, text messaging, instant messaging, mobile devices, and other forms of telecommunication. Simply, they are online most of the time and they are digital natives, not digital immigrants. Social networks and world of digital marketing are part of their lifestyle. Different forms of digital marketing and online teaching methods are familiar to them, as well. Interactivity in communication plays an important role for Millennial students. Their values and beliefs are most closely aligned with technology [6]. Research suggests Millennials prefer a variety of active learning methods. When they are not interested in something, their attention quickly shifts elsewhere. Interestingly, many of the components of their ideal learning environment – less lecture, use of multimedia, collaborating with peers – are some of the same techniques research has shown to be effective [7].

The digital generation of today is affectionately called the Millennials. Millennial students are not simply incrementally different from the generation that preceded them but are qualitatively different and different in regards with their expectations towards applied teaching and learning methods, going after innovative teaching methodology and frequent usage of technology during the learning processes. Millennials prefer a less formal learning environment. Additionally, they expect a more interactive approach during learning and teaching processes together with applied advanced technology. Therefore, many educators feel frustrated that Millennials are especially difficult to reach and to motivate. Millennials do not respond well to classical teaching methods [8]. Team-oriented and more informal approaches to learning achieve better outcomes, and students find new teaching methods that incorporate multimedia and social networking more appealing [9].

Through the evolution of society, media, technology, and communication, professors must understand their audience while developing instructional methods and delivering styles that will produce effective learning outcomes in the Millennial student. An essential component of facilitating learners is understanding learners. Today's professors must learn how to communicate in the language and style of their students. Research showed that Millennial students value activities that engage their interest through class/small group discussion, simulation games, and group projects in contrast to activities that isolate them as individual participants in learning [e.g., lectures, tests, texts, papers]. Interestingly, students' vs. professors' perceptions of effective teaching techniques may differ considerably [10]. Research suggests Millennial students usually prefer more hands-on or interactive instructional techniques to other more traditional techniques such as lecture [11]. The learning styles, attitudes and approaches of Millennial students differ from previous generations. They have a different attention capability than other generations [12]. To be successful while communicating with Millennials, professor must take them seriously into consideration.

Specifically, research suggests college-age Millennials generally prefer the use of these five techniques in their classrooms [13-14]:

1. Moderate levels of interactive technology
2. Presence of team or group activities and/or projects
3. Presence and quick turnaround of instructor feedback
4. Presence of hands-on learning or interactivity
5. Presence of peer evaluation opportunities.

3. Objectives of the study

This paper seeks to examine expectations of Millennials in regards with applied teaching and research methods and learning through technology during marketing classes. Thus, further teaching and learning success and better perception of the marketing classes may be future source of competitive advantage for the college, since it's success is heavily depending on student's perception of the total teaching and learning process and applied innovative technologies.

1. To study Millennial students' attitudes towards innovative teaching and research concepts in the marketing classes such as – blind tests, quizzes, focus groups in comparison with traditional teaching and learning methods;

2. To study Millennial students' attitudes towards distance and e – learning during marketing classes combined with mobile devices usage, i.e. learning through technology in comparison with traditional teaching methods;
3. To examine Millennial student's perception of the marketing classes quality based on applied innovative teaching and research concepts and applied innovative technology and its' relevance to the total college success in terms of possible competitive advantage;

4. Research methodology

Based on previous research on Millennials in regards with applied teaching methods and learning through technology [8]-[10], following hypotheses were formulated with the focus on Millennial marketing students:

- H1 Millennials give an advantage to the innovative teaching and research concepts in the marketing classes such as – blind tests, quizzes, focus groups in comparison with traditional teaching methods;
- H2 Millennials prefer distance and e – learning combined with mobile devices usage for marketing classes preferring learning through technology in comparison with traditional teaching methods;

The study was carried out in Zagreb, the Croatian capital, in the period spring – winter of 2017 and spring of 2018. The survey was conducted among the marketing students at the Zagreb School of Economics and Management within marketing courses conducted in English – Marketing Management, Principles of Marketing, Consumer Behaviour (3rd year of the study) and Marketing Metrics [5th year of the study - MBA students].

For testing hypothesis, a structured questionnaire was designed. The first section of the questionnaire captured demographic information. The results from the questionnaire providing demographic information describing a sample are presented in Table 1.

Table 1: Demographic data

Gender	Frequency	Percent
Male	40	39,2%
Female	62	60,8%
Total	102	100,0%
Country of origin	Frequency	Percent
Croatian student	37	36,2%
International student	65	63,8%
Total	102	100,0%

The second section of the questionnaire was designed to measure Millennial marketing student attitudes towards innovative teaching and research concepts within marketing classes - blind tests, quizzes, focus groups and other interactive group activities compared with traditional teaching methods. Additionally, there have been measured Millennial marketing students' attitudes towards distance learning, e – learning and learning through innovative technology concepts combined with mobile devices usage for marketing classes in comparison with traditional teaching concepts.

Furthermore, a 5-point balanced Likert-type scale was developed for measuring Millennial marketing students' attitudes towards innovative teaching and research concepts and towards learning through innovative technology, where 5 indicated 'Totally agree' and 1 indicated 'Totally disagree'. The sample size consists of respondents who were students of Marketing Management, Principles of Marketing, Consumer Behaviour and

Marketing Metrics courses conducted in English at Zagreb School of Economics and Management during period spring 2017 – spring 2018. The survey questionnaires were distributed to 110 students, all of them students of marketing classes in English. In total, 102 usable questionnaires were collected, resulting in a 92,7% response rate.

5. Research findings

Table 2. provides the distribution of Millennial marketing students according to hypothesis statements.

Table 2: Distribution of Millennial marketing students' answers in regards with H1 and H2 [N=102]

Hypotheses H1 and H2	Fully agree %	Agree %	Neither agree nor disagree %	Disagree %	Fully disagree %
Millennials give an advantage to the innovative teaching and research concepts in the marketing classes such as blind tests, quizzes, focus groups in comparison with traditional teaching methods;	88,2%	11,8%	0	0	0
Millennials prefer distance and e – learning combined with mobile devices usage for marketing classes preferring learning through technology in comparison with traditional teaching methods.	93,1%	6,9%	0	0	0

The initial expectations in regards expectations of Millennials towards applied innovative teaching and research methods, as well as towards learning through technology during marketing classes have been fulfilled and supported. Both hypotheses are accepted, with different levels of agreement, both showing the positive trend towards applied innovative teaching and research methods, as well as towards innovative technology in comparison with traditional teaching methods.

The survey results make it clear that new, interactive and innovative research techniques and teaching methods, as well as concept of e-learning through technology have a strong influence on Millennial student's engagement, motivation and perception of marketing classes, as well as on their total satisfaction level with the marketing courses.

The authors suggest that innovative teaching methods and research methods as well as e – learning empowered through technology should be actively applied to get the attention of the Millennial students and get them actively engaged within the courses material.

6. Conclusion

Understanding expectations of Millennial marketing students and using new technology environments to facilitate their teaching and learning activities are important success factors to be successful. This can be a source of competitive advantage for the college, as well.

In this article, being focused on the higher education experiences within English marketing courses – Marketing Management, Principles of Marketing, Marketing Metrics and Consumer Behaviour at Zagreb School of Economics and Management in Croatia, the authors emphasize that the professors must engage actively in the learning process, while communicating with Millennials, frequently using innovative teaching methods during e- learning and distance learning processes while engaging and motivating the Millennials. They should be focused on empowering learning through technology while using mobile devices, as well as frequently using different interactive qualitative research and learning methods in the classes, such as focus groups, projective techniques, analyses of metaphors, blind tests, quizzes etc. All this is to be done to engage the Millennials actively in the learning process, putting an accent on interactivity and creativity of the learning processes, exceeding their expectations and raising the level of positive perception towards marketing courses, professors and college. This synergy and interactivity will ensure adequate level of Millennial student's satisfaction.

Among developing a more customized approach and tailor-made teaching, research and learning methods according to the expectations of Millennial students during marketing classes, professors should focus most on their expectations. Exceeded and fulfilled expectations might strongly influence on Millennial student perception being serious source of competitive advantage to the college, as well.

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Best Practices in Higher Education

Session Chair: Karmela Aleksić Maslač



New generation of small businesses

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Abstract

Our main activity is to educate young men and women, aspiring, future professionals, who are looking for their place in the world and planning their future. These students dream about living better than their parents have. Therefore, they are open to new knowledge and innovation. In our research we were seeking answers to the question: how young people think about starting their own business? Is business ownership important to them or do they prefer to work as employees? Analysing the answers obtained, we discovered, that 25% of the people taking part in the survey ponder starting a business of their own. We believe this is a good, healthy ratio and to assure that their thinking goes beyond the planning stage, it is equally important to support the young by offering relevant studies, training and other supportive programs designed to help their vision along towards success. Start-ups created by young adults are new, innovative, leveraging the information technology to its higher potential. They are likely to tap into a higher growth potential via the development of their problem-solving strategies. The conference offers the opportunity to learn about new research in the education of entrepreneurship.

Keywords: *entrepreneurship, education, youth generation.*

1. Introduction

Market economy has developed significantly since the change of the regime in Hungary (i.e. peaceful transition into parliamentary democracy from a one-party system under soviet influence), which is partially due to the activities of small enterprises playing their part in the economy. In the hope of their further development, it is important for small businesses to remain key players of the economy in the future. It is equally desirable that those businesses created, and successfully operating in the past decades, continue to operate in the future, and that viable new businesses are started in lieu of ones terminating their activities. In these processes both educators and students have a major role to play.

What young people think about businesses and self-employment is a critical issue in every economy. It is an important question, in those countries especially, which have evolved to embrace free market economies in the '90s. The small businesses created in the 90's in these countries are now ready for the next generations. Therefore, it is an important field of research to learn how the young generation fits into the economic and social system created by their predecessors. Are they willing to think and to act like their parents, are they willing to go the same way as they have? Social science studies underline the fact that the new generation of young people now live differently, think differently than previous age groups. The same can be observed at the creation and operation of small businesses. In our research program, we were seeking answers on how to find entrepreneurial forms for young people and how they think about the issue. To develop a motivational program for entrepreneurship, we need to understand this young generation, look for the characteristics in their way of thinking, behaviour, and recognize their values.

2. Literature Review

2.1. Generations and their way of thinking

To benefit from a balanced labour market, we need to ensure that multiple generations could successfully coexist and be motivated. This is not a new dilemma appearing in the 21st century, generational differences and different ways of thinking were always present in the labour market. The contrast observed today is that these differences have changed in terms of their quality and depth. The young are always more critical of the previous generations. Along with their critical perceptions, they also have a definite idea on how they choose to live, on what they want – or do not want - and how they want it. This often results in conflicts with parents, employers' expectations, expanding the generation gap. To examine the subject, it is important to consider the so-called generations Y and Z living their youth right now. Table 1 and the explanation below offer additional details on the different generations. [1]

Table 1. Generations.

Description of Generation	Year of Birth	Origin of Description
Veterans, the 'Silent' generation	1925-1945	Generation lived through WWII
Baby boomers	1946-1964	Born after WWII when birth rates exploded
Generation X	1965-1979	Based on Coupland's, 2007 work on generations [2]
Generation Y	1980-1994	Following generation X
Generation Z	1995-2010	Following generation Y
Alpha or New Silent Generation	2010-	Following generation Z, the α (alpha) generation

The Generation Y is characterized by openness to novelties; they know and use the tools of information technology well. With definite ideas about what they want to do, they are purposeful and agile. They are key pillars of our fast-paced internet driven world. Being more self-sufficient, more materialistic than the generations before them, their expectations are high when it comes to compensation and benefits. They move around confidently in the virtual world they have created. Their lives are mostly handled by smart phones and they are also excellent at building networks of their peers. Primary concerns are not working hours or office constraints, but the task at hand which can be done online from anywhere. A liberty-loving generation, they do not tolerate constraints and formalities. It is important for them to balance work and personal life, and they want to live differently than their parents have.

The members of Generation Z were born after the regime change (in the context of Hungary), they were usually raised under better conditions; more conscious planning, focus and attention went into their education. They are those who were born into a world defined by digital technology. They are constantly in touch with each other over the Internet. The answers they seek are not obtained from their parents but from the Internet as a preference, so they remain flexible and informed. The virtual world is where they are comfortable communicating with one another, but interaction in the real world makes them feel stressed out. Thus, they represent a real challenge for both the educational system and the labour market. It truly applies to them, that they will live differently, and already do, versus previous generations.

In conclusion, we can state that age has a major role to play in employees' decision-making process.

2.2. Entrepreneurship training of young people

Entrepreneurship training has long been present in education. According to the literature, the first such type of training was held at Harvard University in the mid-twentieth century. In an earlier article Katz wrote as follows: „It has been more than 50 years since Myles Mace taught the first entrepreneurship course in the United States. Held at Harvard’s Business School in February 1947, it drew 188 of 600 second-year MBA students.” [3] The term “entrepreneur „is derived from the French verb “entreprendre” which means to undertake, to attempt, to try in hand, to contract for or to adventure. [4]

Several previously published papers addressed the theory of the establishment and operation of successful businesses. In general, the motivation to create a business and the efficiency of running an existing one are examined separately. [5], [6]

In recent years, one of the most important research initiative was the GUESSS project focused the students' approach towards starting their business. A GUESSS-survey (Global University Entrepreneurial Spirit Students' Survey) in 2011, with the participation of students from 26 countries, it surveyed a students' thoughts on starting a business as well as their entrepreneurial activities. In Hungary 5,677 students completed the questionnaire. [7]

2.3. Change of generations in family businesses

In our opinion, the impact of the external environment on motivating young people to start a business is a determining factor, including the direct socialization within their immediate family. Similar results were observed in a 2016 research, which examined the entrepreneurial attitude of young people from V4 (Visegrad group: Czech Republic, Poland, Slovakia and Hungary) countries. „The highest explanatory power was observed in the case of gender, where being a male increases the odds of being an entrepreneur by more than three times. The second highest explanatory power was observed in the case of having entrepreneur parents, where an increase in parents’ involvement intensity (i.e. one vs. none, both vs. only one) doubles the odds of active and prospective involvement in business”. [8]

In Hungary, most of small businesses were created in the nineties, including a significant number of family businesses. One generation succeeding of in business ownership becomes a timely issue. Reisinger writes about this question in his study: „One of the most important aspects for business owners, who are also parents, is the conscious and focused preparation for handing the business over to their children.” [9] One way of doing that, is to consider, when applying to college or university, the knowledge required to ensure continued operations of the business under the future leadership of the young person. The key skills for being an entrepreneur can be found in the entrepreneur's personality, as well as in his circumstances, both internal and external. [10] In these activities, the value-creating work of the family and the school appears.

In Hungary, the number of active enterprises in Hungary was 669,000 in 2015. Between 2010 and 2015, the number of newly established businesses ranged from 10 to 11% in relation to operating companies. The five-year survival rate of these enterprises was 37%. 99.7% of businesses are small businesses; most employ less than 10 employees. [11]

3. Methodology

In our research at Széchenyi University, we sought answers to the question of what proportion of today's university students are willing to work not as employees, but entrepreneurs. We also examined their motivation for creating a small business and their attitudes towards business operations. The study was designed for 100 students and the number of evaluable questionnaires was 94. To ensure diversity of opinions, in the sample we aimed to include students from different classes and from different years, asking them to fill in the questionnaire. Most questionnaires were filled by students studying in tourism. The research was conducted among our students. Breaking down by age, most people, 55% were in the age group 18-22, 35% were between 23-25 years old and 10% in the 26-30 years old group. The majority of the respondents, 77%, were women.

4. Results

Focusing on getting to know young people's way of thinking about day-to-day life, especially about their future, in our own research students could indicate their preference on a scale of 1 to 5 based on the importance attributed to each question with regards to their future.

Table 2. Analysis of preference.

Scale of students' preference (1: not important, 5: very important) Results are shown in percentages	1	2	3	4	5
Professional knowledge	0	1	15	35	49
Professional experience abroad	16	13	27	19	25
Employee status	0	3	13	29	55
Establishing a business of their own	13	16	29	30	12
Stress free lifestyle	2	3	12	26	57

From the above data, it is clear, that most of the interviewed students, 55%, want to live without stress. 84% of students think that professional knowledge is most important, as they selected indicators 4 and 5.

Professional experience abroad has divided the group, but the emphasis is shifting towards gaining some experience in a foreign country, as many respondents identified it as important. The creation of an enterprise for self-employment was rated with scores 3 or 4 by 59% of our respondents, which suggests that many people are interested in entrepreneurship.

In the following, we seek to understand which path these students plan on choosing when entering the world of work after obtaining their university degree. Four alternatives were available to students. Equally, 28-28% said they would like to work as an employee or want to move abroad to work.

Votes for working abroad likely meant in employment status, but we did not follow up on this question. 18.3% of the respondents said, they were planning their future in their own business. A quarter of the respondents still don't know which alternative suits them best. (Figure 1.)

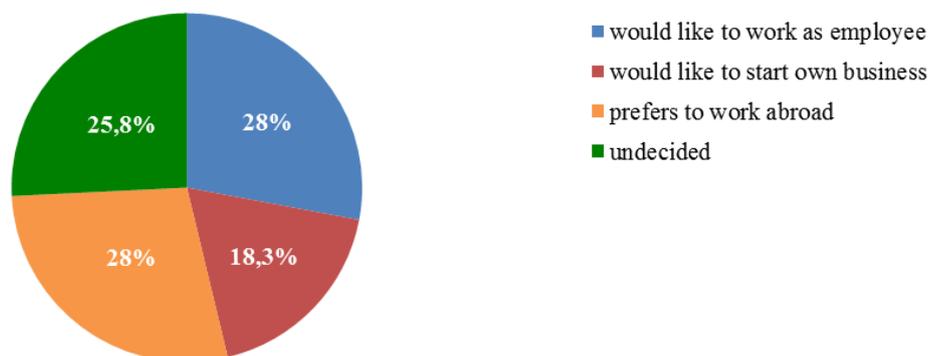


Figure 1. Professional orientation after university degree obtained

The proportion of 18, 3% of potential future business owners, we observed, appears to be promising only if these entrepreneurial plans will be realized, thus improving the Hungarian statistics on the number of small businesses in operation. These new businesses will represent "fresh blood" in the current small business market, as well as innovation, higher usage of information technologies, more networking, flexibility and greater financial skills. These are the weaknesses that experts generally point out about the operation of small and medium-sized enterprises in Hungary. Returning to the analysis of the data, one should not forget those who

have not yet decided. This group feels that there is still time to choose after finishing their studies, or they simply do not have enough information at present to make their decision. This proportion is 25, 8%. Since every fourth student would like to decide later, many of them may prefer to remain independent, embracing entrepreneurship later. To sum up, at least every fourth student plans to start their own business. This is a high enough rate to get high-quality training on becoming successful entrepreneurs during their studies.

Young people surveyed consider it important for the younger generation to be entrepreneurs and to set up a small business. As for what motivates them in becoming self-employed with their own business, they mentioned self-reliance, creative work, and higher income.

Students clearly deem income earned in business as important, because in their way of reasoning, higher earnings lead to greater social status. According to their opinion entrepreneurship is associated with independence, so when one is self-employed, one does with what one likes to do. They may not know, yet, that entrepreneurs are closely “dependent” on their customers and often do the tasks that they do not find suitable employees for or find it not economical to hire one for.

Finally, the survey concluded with this question: In your opinion, what is the general view of entrepreneur? This question is important because if you want to do business yourself, it is important to have a positive opinion of the entrepreneurial society. The result clearly shows that students’ opinion favoured the foreign-owned enterprises versus the ones of local business owners. This is surprising because these young people have not held a job yet, apart from their student work. So, what is the reason for foreign-owned businesses being judged more positively? This information, which is not based on personal experience, comes primarily from their immediate environment, family, friends, acquaintances and the media.

These opinions become significant when they are looking for a job, thus foreign-owned companies will have an advantage over their domestic counterparts - perhaps because of higher compensation packages offered.

5. Conclusion

Our research was conducted among university students and we were asked to find out how young people are looking for ways to prepare for their future either as an employee or an entrepreneur after completing their studies. Surprisingly, many people are thinking of creating their own business or taking over the family business. 25% of the surveyed students think, that after finishing university, they will be self-employed, so they can enjoy their autonomy and creativity. Nearly a third of students would prefer to work abroad due to opportunity of earning a higher income and improving their foreign language skills. Stress-free lifestyle, good education, and entertainment are equally important to their generation. They look critically at their circumstances and refuse to dedicate their lives only to work. Professors in the university need to understand the thinking of young people and their needs must be considered during their education. As many people imagine living their lives as entrepreneurs, we believe that developing and offering entrepreneurial competencies among university courses is particularly important.

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Why can't we benefit more from international talents? – Challenges and suggestions from an Austrian perspective

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Abstract

It is a well-known lament of the industry: internationally oriented, experienced, and rapidly employable talents are a scarce resource. On the other hand, each year many international talents graduated from Austrian universities leave the country, not finding an appropriate employment. This contribution discusses the main causes for this dilemma and some solutions of how can we might manage to better promote and to better take advantage of the huge potential of internationally experienced future employees. Evidence is provided by case studies from the University of Applied Sciences Upper Austria (UASUA).

Keywords: *university-industry relationships, international recruiting, university networks.*

1. Introduction

It sounds like an antagonism: the complaint about a 'shortage of skilled workers' (or as it is labelled in German: 'Fachkräftemangel') is a persistent and regularly raised topic of labour market policy debates in Austria. At the same time, there is a rising concern about growing unemployment rates. Clearly, a shortage in certain occupational fields faces an overabundance of labour in other disciplines. This also applies to professions that require higher education as a prerequisite. It is commonly agreed that not the number of available workers constitutes this problem but their education and professional orientation. As an example, Statistik Austria's (2014) micro census shows a gap of approximately 80,000 university and college graduates in 2025, especially in technical occupations [1]. This gap cannot be filled by organic growth only, as demographic conditions do not comply with the need (Landler 2010) [2].

On a higher level of complexity, the shortage of skilled workers is even more evident as companies are increasingly requesting international, interculturally experienced, globally deployable and mobile multilingual employees, which they do not find.

The province of Upper Austria with an export volume of 33.8 billion euros and a trade surplus of 8.8 billion euros in 2015 and a share of almost 26 percent in total Austrian goods exports (Statistik Austria, 2018) [3] is an example of a talent shortage, which is similar in the entire German language speaking area in Europe. Globalization has long since taken its place: Customers, suppliers and competitors have overcome geographical and cultural boundaries and the companies are facing international competition - including competition for the best employees. For this very reason, employers globally are looking for employees who not only have very good technical training but also linguistic and intercultural skills that are required to work on international markets.

In response, the universities focus on international recruitment in order to attract international talents. They offer English taught programs and they customize curricula to meet the challenges of international and intercultural audiences and recruiting international staff members. However, many higher education institutions face increasing problems to have their international graduates employed in Austria after completing their studies. Consequently, those graduates leave the country again after completing their studies.

2. Brain Gain becomes brain drain ('easy come, easy go')

Brain gain through the opening of education and labour markets for international talents in the disciplines sought after does sound like the perfect solution for the lack of highly qualified employees. However, a large proportion of international graduates from Austrian Universities leave the country after completing their studies in Austria without being able to offer their knowledge on the local labour market. Students that have been painstakingly acquired to study in Austria leave the country after graduation and numerous unsuccessful applications. As such, previously achieved 'brain gain' becomes 'brain drain', or loss of intellectual capacity.

The government has also recognized this. The university mobility strategy of the Austrian federal ministry for science, research and economy clearly warns that the emigration of international graduates poses a long-term problem for the Austrian economy (BMWF 2016) [4].

Why is this the case? Some root causes comprise a lack of understanding about the return on investment of employing international graduates as well as the fear of bureaucratic complexity along with employing international (especially non-European) staff.

3. Does international experience pay off for graduates and their employers?

On instinct, the answer is yes: International job aspirants who have graduated in Austria have been socialized in the Austrian as well as their home country's culture and they are (mostly) capable of speaking more than one language. This makes them very attractive to companies. If they do have a profound knowledge of the culture of the respective (export) market in addition to technical and language skills, they are able to promote networking and exchange, simplify local processes and improve the intervention in case of troubles (Barner-Rasmussen et al., 2014) [5]. Such employees are valuable human capital and make the company less vulnerable to copycats.

This is also reflected in the recent job performance literature: In a contribution by the Research Institute on the Future of Work, Aleksynska and Peri (2014) [6] demonstrate a high influence of (well-trained) immigrants on the export volume of companies. A survey of Danish companies that examined the impact of international employment on export success confirms this finding (Hiller 2013) [7]. Also, a study done by Crossman and Clarke (2010) [8] allows to conclude that stakeholders identify clear connections between international experience and employability given outcomes associated with the forging of networks, opportunities for experiential learning, language acquisition and the development of soft skills related to cultural understandings, personal characteristics and ways of thinking.

Austria has a vast potential of international talents, educated by the national universities. By international standards, Austria has a share of about 17 percent in foreign students (at universities, colleges and universities of teacher education combined). This puts Austria 3rd in the OECD behind Luxembourg and Australia. In the European Union, Great Britain and Austria rank 2nd behind Luxembourg in terms of the proportion of foreign students enrolled at universities (Bacher et al. 2016) [9].

Nevertheless, this is only one side of the coin. Anecdotal evidence shows that many companies still think in terms of linear career planning. Linear careers and organic leadership development, which is prototypical in many industrial settings and small and medium size companies, provides advantages to (local) graduates who perform their studies quickly and without extracurricular activities. They are earlier available on the labour market than international graduates, have established more local connections and networks, are less subjected to be "mobile adventurers" who leave the company for a better option very soon and they craft their career already when other students are still in their home countries, preparing for their ongoing studies in Austria.

In a narrow-minded perspective, these graduates are better 'employable' than international graduates, as they 'function' quickly in the desired way and the cost of integration and human resource development are lower.

Another aspect is the fear of bureaucratic and administrative complexity when hiring international (non-European) talents. Discussions with HR managers reveal that they regard the complex formalities as an obstacle to hiring - for example, the administrative burden associated with issuing work permit, visa, housing, language training etc.

In the following section, in order to cope with these challenges, the author presents some suggestions and ongoing projects from the perspective of University of Applied Sciences Upper Austria.

4. Suggestion one: Provide evidence and encourage to try and test

One of the guiding principles of Universities of Applied Sciences is to combine theory and economic practice. Many companies start with staff recruiting already when students are still engaged in their undergraduate or graduate studies. As the proportion of international students in higher education increases, HR representatives can selectively radar junior staff with specific geographic, cultural and linguistic backgrounds by awarding diploma theses, internships and research projects. They perceive this as an investment in personnel planning in conjunction with the international orientation of the university company.

UASUA strongly builds on internships as a connecting tool between companies and the university. A temporary integration of international students through an internship creates benefits to all parties involved: In a low-risk way, the company understands the challenges, which language deficits might bring, but also which benefits might arise from a new, international perspective, coming along with the international internship students. From an academic perspective, the positive aspects of internships as curricular elements have been studied extensively (e.g. Binder et al. 2015) [10].

Of less attention, but still increasingly important is the fact that companies can examine how the existing workforce responds to international colleagues. This might be an indicator of the company's 'international fitness', which, in turn, can be an excellent starting point for intercultural human resource development.

However, especially small and medium sized enterprises tend to be hesitant when it comes to employ international internship candidates. They simply do not know/understand the advantages presented above. Even more, due to a lack of experience, cultural characteristics of foreign internship students are often misinterpreted as a "lack of social fit" with teams or supervisors, and in individual cases also as a lack of social and communicative competence (Budde 2012) [11]. Aside from that, they expect bureaucratic hurdles, which might be a burden for the limited HR resource, especially in smaller companies.

4.1 Case: The 'B2S' (Business-to-students) initiative

In order to increase information and at the same time reduce barriers for SME's to provide internship places for international students, UASUA together with the Upper Austrian Chamber of Commerce has established the 'B2S' ('Business to students') programme. It targets small and medium sized Upper Austrian companies only and it helps to connect them to international students looking for an internship. In addition, it facilitates the matching of appropriate candidates with the needs of the companies in multiple ways.

The first element of the project included an information campaign that illustrates the value of international and intercultural expertise for small and medium sized companies. The campaign includes support and information about legal and administrative topics as well as it showcases examples and testimonials of successful internships that have been working in small Austrian companies.

Secondly, with the help of a database, ideal matches of company requirements and student capabilities and skills are identified. Language skills, country of origin, vocational skills, and many more facts are included in this database, completed by the students and the companies.

Third, in a face-to-face 'speed-dating' initiative (which is scheduled for November 2018) potential employers and students will meet and agree on final details. They get to know each other in person, which might reduce prejudices and caveats.

Finally, an internship agreement is made with the support of the Chamber of Commerce and progress and success of each single internship are monitored consequently. With this measure, it is expected to encourage SME's to make use of internship resources in a similar way as many larger companies to since long time.

5. Suggestion two: Improve the dialogue between business and university

Existing cooperation formats between companies and universities are not new to the community. However, they are important elements, which should be part of the industry-university relations. Those include thesis assignments and topics sponsored by companies, company projects as a curricular element, applied joint research projects, company visits with student groups, guest lectures and seminars by companies at universities, active alumni relations as well as connections of companies and universities via social media or job postings, internships,

projects etc. For the UASUA, the cooperation formats are presented here: <https://www.fh-ooe.at/en/cooperation/overview/>

Less popular, but increasingly demanded by the (Austrian) industry, are dual program initiatives, namely degree programs that have been jointly developed and are jointly executed by companies and universities.

5.1 Case: Dual master's programme in Automotive mechatronics and management

UASUA has established an international master's programme 'Automotive Mechatronics and Management', cooperating with partner companies from the very beginning of the curricula development (web reference: www.fh-ooe.at/amm). This cooperation aims at effective and efficient dovetailing of the program along with company practice. Cooperation agreements have been arranged with leading companies in the automotive industry, among them KTM, Robert Bosch, BRP Powertrain Rotax, Magna Powertrain, and others. These agreements regulate how students can pursue specialist part-time work in a (partner) company during their studies.

Thus there is the possibility for students to work for a partner company of the degree program for 18 months (2nd to 4th semester) and do the projects built into the curriculum (Company Project in Semester 2, R&D Project in Semester 3, Master's Thesis in Semester 4 at work, based on company-relevant tasks. The projects are well matched and correspond to the qualification profile of the degree program as well as to the needs of the participating companies.

To provide sufficient time for the students to engage in practical projects, there will be no university courses on Mondays and Tuesdays from the second semester onwards so that students can work on their projects in their companies. The conditions of employment will be defined in a bilateral contract between each student and the company.

6. Suggestion three: Encourage networking beyond geographic boundaries

Enterprises and universities should also work together beyond geographical borders. UASUA has around 250 partner universities worldwide, with students, faculty and researchers collaborating and moving between the institutions. Austrian enterprises, in turn, have their own networks, with branch offices, project partners, customers in existing and prospective target markets.

International cooperation between universities and industry can take place at various levels. Using university networks and personal contacts, the companies or their branches have the opportunity to obtain reliable and easy access to training and research facilities in the respective geographic location – ranging from market analysis to applied research projects and include recruiting and staff planning of course. However, these theoretical benefits are often not sufficiently exploited.

6.1 Case: University – industry network analysis

To explore university-enterprise relationships more in detail, UASUA did a network analysis of their international relationships with companies and partner universities. The analysis was compiled on different levels, namely between the UASUA and their partner universities, between UASUA and their local company partners, and between companies and their subsidiaries abroad. This analysis revealed (see exhibit 1) that there are stable relationships of UASUA and their partner universities (1). In addition, solid partnerships of UASUA with its Austrian company partners were found (2). The companies have, not surprising, clearly organized and substantial relationships with their subsidiaries and partners abroad (3). Aside from that, only weak relationships exist between UASUA's partner universities and the international subsidiaries of Austrian companies (4), and between UASUA and the foreign branches of Austrian companies (5).

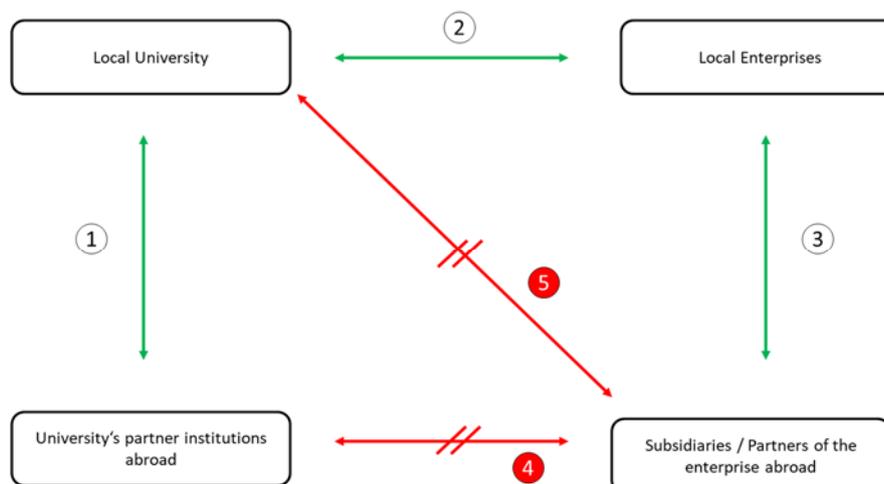


Figure 1. Analyzing university-industry networks: Detected weaknesses

Apart from positive effects on research collaboration, mobility and strategic partnerships, establishing connections (4) and (5) better and more sustainable would also improve employment for international students. Given a better alignment of UASUA's partner institutions and the Austrian companies' subsidiaries abroad would allow to create better career plans for students: They might be identified in UASUA's partner university as potentials and are encouraged to spend a semester in Austria (connection (1)). They are studying subjects requested to meet the local demands (connection (3)). Next, they apply for and get an internship in Austria through UASUA (connection (2)), after completion move back to their home country and apply for a job at the Austrian company's subsidiary (connection 4). Alternatively, they apply at a domestic company of their home country which has business relationships to Austria.

Currently, UASUA, together with company partners, is drawing and stabilizing paths like mentioned above to evaluate the added value of this relationship extension.

7. Suggestion four: Grow entrepreneurial thinking of students

As an alternative to find an appropriate employment in an Austrian company, UASUA encourages students also to consider entrepreneurial activities. This initiative is grounded in the fact that the entrepreneurial intent (cf. Engle et al. 2010) [12], but also possibilities and entrepreneurial competencies in many of our graduates' countries of origin are different. Austria ranks high in possibilities and entrepreneurial competencies (Global Entrepreneurship Monitor) [13], but not that high in actual founding activities (US News Entrepreneurship report, 2018) [14].

7.1 Case: Intercultural entrepreneurship seminar

In 2017, UASUA started an initiative to train international students in entrepreneurial skills in order to encourage them to start-up own businesses in Austria. For an effective entrepreneurial and organizational management, the analysis of recent developments and trends but also bureaucratic, funding, and administrative issues are taught in class through text and case studies. Entrepreneurship-, Start-up- and Cross Cultural Management Strategies for international graduates in Austria are evaluated in the context of global changes and the development of future markets. The course topics include, but are not limited to: Entrepreneurial Spirit, Thinking and Behaviour; Economical and technical trends and developments within competitive markets; Cultural and entrepreneurial differences and their boundaries; Creating Ideas and Products; Managing Interdependence „Social Responsibilities and Ethics“; Intercultural communication; International Negotiation; The Austrian and International Start-up Ecosystem; or starting a company in Austria.

8. Conclusion

In this contribution, some root causes and challenges for the unsatisfying results of infusing international talents to the Austrian labour markets were discussed. This was followed by some suggestions and anecdotal reports of initiatives started by UASUA to cope with these challenges. Being still far from the objective set 'to have all our international graduates find a great job in Austria or start-up a successful enterprise', UASUA is trying to bridge the 'knowing-doing-gap' with concrete activities.

These range from improving communications between companies and universities with respect to talent recruiting; providing spots to try-and-test employment relationships without a large risk; bridging the gap between local universities/companies and their respective international stakeholders; and finally, encourage international graduates to start-up their own business by teaching and training them with the right methods and tools.

Much has still to be done, especially in streamlining and professionalizing the linkages, providing pathways for applicants but as well for searching companies, and introducing market intelligence also in the field of international graduate employment.

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Correlation of gamification usage during class in the same student generation with different course field and year of study

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Abstract

With the development of new technologies, the roles of students and professors have changed dramatically. Today, everyone is exposed to information overload and has the ability to find specific information in the matter of seconds. Therefore, it has become challenging for students to sit silently for the entire lecture and consume information given to them. Also, it is challenging for professors as well. Since students have the opportunity to learn everything through the Internet, professors ask themselves how to keep the lecture interesting and exciting for students of the new technology generation. For this reason, new and innovative methods of teaching must nowadays be present in the education process in order to motivate students to be active in class. One of those methods is called gamification. This paper analyzes usage of the gamification tool Kahoot on the undergraduate program of Zagreb School of Economics and Management (ZSEM). Special emphasis of research goes to analyzing the same group of students in gamification on different course fields and years of study in order to see correlations between old and new Kahoot results. Students were part of gamification in the 1st semester on course Information and Communication Technologies (ICT) and 4th semester on Principles of Commercial Law (PCL). Research shows that students are very satisfied with gamification, regardless of the course field and study year.

Keywords: *Gamification, Education, Teaching methods, Information technologies*

1. Introduction

The rapid development of information technologies not only offers numerous possibilities of improvement in higher education, but also alters the role of students and professors today. As students are exposed to information overload through technology, it has become challenging for them to sit for a longer period of time and being forced to listen and consume more information during classical, *ex cathedra* lecturing. The traditional method of teaching is not interesting enough anymore for the new generations and higher education institutions are aware of it. Professors need to pursue new teaching methods enabled by technology that keep the class both educational and entertaining, enable interaction and lift students' motivation. One of those methods is called gamification [1]-[5]. A gamification tool, named Kahoot, is used in class in order to check students' knowledge and to support continuous learning. Additionally, this educational tool can also be part of e-learning [6, 7].

In the paper titled „Influence of gamification on student engagement in education“ [8], authors state that there is no connectivity between the Kahoot games, meaning that students are not discouraged if they have not prepared for one quiz as they can still have excellent results in the next game. Also, students that have a high final grade at the end of the semester, usually have better scores and standings overall in Kahoot games.

In another paper, “Influence of gamification on student motivation in the educational process in courses of different fields” [9], authors have shown that there is no difference - in terms of student motivation and satisfaction - between IT and law courses in using gamification teaching method. In this paper, only one student group was part of the gamification process in a certain time period - first course that used gamification was a part of Information and Communication Technologies (ICT) course which is taught in the first semester, and the

second was Principles of commercial law (PCL) which is taught in the fourth semester at Zagreb School of Economics and Management (ZSEM). The student sample is the same – meaning that the results have depth as part of students' individual experience throughout the years of study with the gamification teaching method.

The aim of this paper is to explain how gamification was used on ZSEM and what were the results based on student perspective research and correlation analysis of the Kahoot games between the students on both of the mentioned courses.

2. Gamification on ZSEM

ZSEM started in 2002 and since that time it has implemented best practices concerning processes in quality management, standardization [10] and also, new technologies in education [11, 12]. Some of the professors on ZSEM already started using gamification in 2011, however, the gamification with Kahoot started since 2016. [9]

So far, gamification research on ZSEM has proven to be mostly positive as students do accept the new teaching method and think of it as encouragement for better motivation towards learning and, eventually, earning a better final grade. However, the interest lies in the question: can gamification sustain its beneficial and fun teaching dynamic if it is used too often? Because of this, the research was conducted upon one student group in order to see the influence of the gamification teaching method throughout the years of study of the same generation provide insights into education via gamification tools topics such as: does the motivation and satisfaction remain the same, how does it reflect their grade continuously throughout the education and years of study, etc.

2.1. Gamification on ICT

ICT course is an obligatory course for first-year students in the Economics and Management undergraduate study program at ZSEM. The course is taught within one 15-week semester in the 1st semester. Students attend the course for four hours per week: two-hour lectures and two-hour of practical computer lab work.

ICT aims to teach students how to use new technologies and how to adapt in today's digitalized and globalized world. The course has a very developed e-learning component so students are adjusted to using new technologies, either in class or in the form of asynchronous distance learning [13].

Kahoot is used for repetitive learning and for exam preparations. The quiz is assembled from 7 to 10 questions, and for each question there is a 20 seconds time limit to answer. Kahoot counts accuracy, as well as speed of answering the question. Activity in gamification is not a necessary part to form a grade, but it provides extra percentage which depends on students' Kahoot placement order. In Table 1, it is visible that the first place is awarded with 1.5%, and students that were from 2nd to 5th place are awarded with 1%. The rest of the students get a symbolical award of 0.5% for participating in the Kahoot game. [9]

Kahoot placement	Extra percentage award system
1 st place	1.5%
2 nd – 5 th place	1%
Symbolical activity award	0.5%

Table 1. Kahoot award system on ICT

2.2. Gamification on PCL

The Principles of commercial law (PCL) is an obligatory course for second-year students in the Economics and Management undergraduate study program at ZSEM. The course is taught within one 15-week semester in the 4th semester. Students attend the course for three hours per week: two-hour lectures and one-hour of practical teaching.

The goal of this course is to introduce the students with the basic notions and principles of corporate and company law and commercial contracts. This course is a necessity for proper understanding of different legal issues as well as the modules how modern economies operate nowadays. It is foreseen that the knowledge provided in this course should be easily applicable in practice. The course integrates two legal fields: company law and the law of commercial contracts. In the segment of company law, the students learn procedures of setting up and managing corporations and other commercial entities. In the segment of the law of commercial contracts, the students learn about the major contractual principles and forms, especially those that are of immense importance while conducting commercial activity on the market. The main objective of the course is to raise students' awareness of the impact of legal rules and their importance for the daily operations of entrepreneurs and companies. Special emphasis is placed on the fact that the legal system within which they operate their businesses makes up the macroeconomic environment and as such has a direct effect on the business process and results of operations. That is why students should be familiar with the regulations and legal requirements which they will apply in their future work and possible issues that can occur related to them.

The lecturer used Kahoot during the practical teaching in order to measure the knowledge of students on a specific course-related topic discussed that week and award points for additional activities. Student could earn as much as six percent of the total grade via their success in Kahoot. The grade elements are provided in Table 2.

Principles of commercial law grade element	Percentage in grade total
Class attendance	4%
Activity	6%
Mid-term exam	40%
Final exam	40%
Term paper or presentation	10%
TOTAL	100%

Table 2. Principles of commercial law grade elements

During each Kahoot session, only the top half of participating students were rewarded one percentage point for activity points, while the winner was awarded two percentages for activity points. The rules about using Kahoot and how they could earn activities percentage points were stated to the students before each Kahoot. Participation in the Kahoot quizzes was not obligatory for students. Students participated in Kahoots individually.

In total, there were six Kahoot sessions during the 15 weeks of course provision. Students participated in at least one Kahoot quiz. Each quiz had twelve questions and students could provide an answer within 30 seconds (questions with only correct/incorrect answers were also set to 30 seconds for providing an answer).

3. Research results

As gamification was part of both courses, on ICT and PCL for the same student group, the correlation analysis was conducted only for students that had at least one gamification participation on both courses – creating a sample of 47 students. Out of the mentioned sample, students were asked to participate in the gamification survey in order to receive their perception and feedback regarding gamification in class. ICT survey had a sample of 41 students with a small majority of female students (58%), while PCL had a sample of 29 students, but also 58% of the sample were female students. Two survey questions were analyzed to examine students' interest towards gamification in class – regarding satisfaction and motivation. The other part of the research was the correlation analysis of student answers and ratings after all quizzes within the semester for both courses – trying to determine how does the success from 1st year of study in gamification reflects with the success from 2nd year of study with the same student group.

3.1. Student satisfaction

The same student group filled the survey after gamification process on both courses regarding their satisfaction. In ICT, over 90% of students graded their satisfaction level with a grade of 4 or 5 in the survey, while in PCL 89% gave a high grade of 4 or 5. The average of students' satisfaction in ICT is 4.6, but with median and mode function the result was a clear 5. In PCL, students' average score was 4.5 with also highest median and mode – 5. The results show students high satisfaction level when using a new teaching method in class.

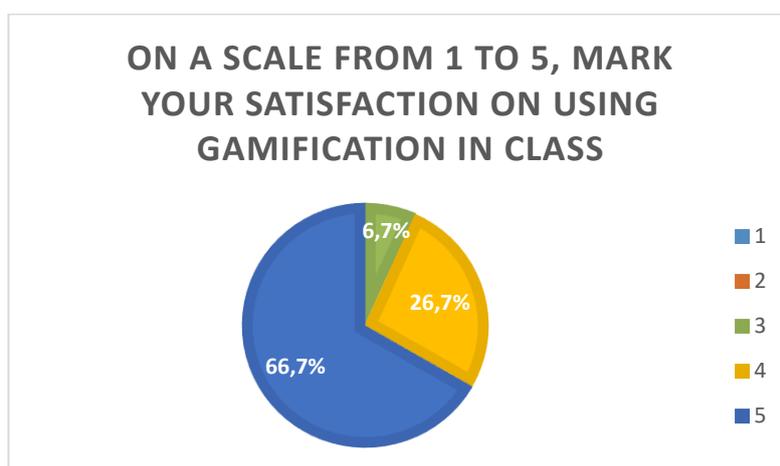


Figure 1. ICT student satisfaction

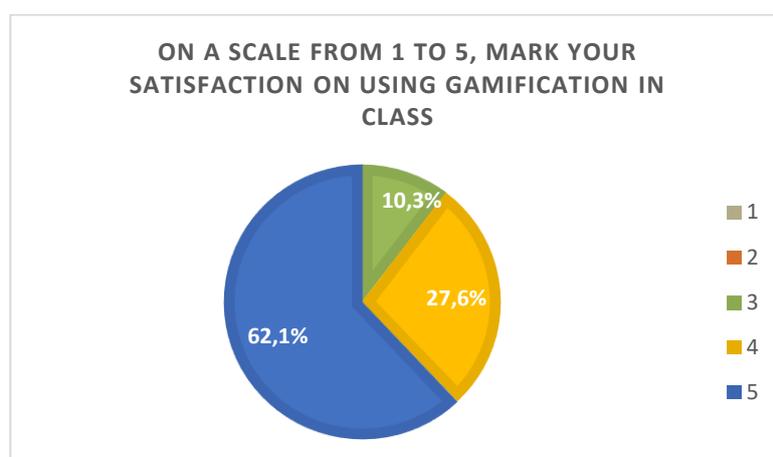


Figure 2. PCL student satisfaction

3.2. Student motivation

The students were also asked in the survey to rate how much gamification has helped them to progress during the semester - in terms of motivation. The results of student motivation in class is high as the results of satisfaction level. In ICT, 93% of students believe that gamification is helping their motivation by grading with a 4 or 5. The average grade in ICT is 4.4, while median and mode functions are the highest grade, 5. For PCL, the scores are also high, however, lower than the scores students gave for ICT when they attended it in the academic year of 2016/17. The average grade of students' motivation perception is 4.2, with a median of 4, while mod is a grade of 5.

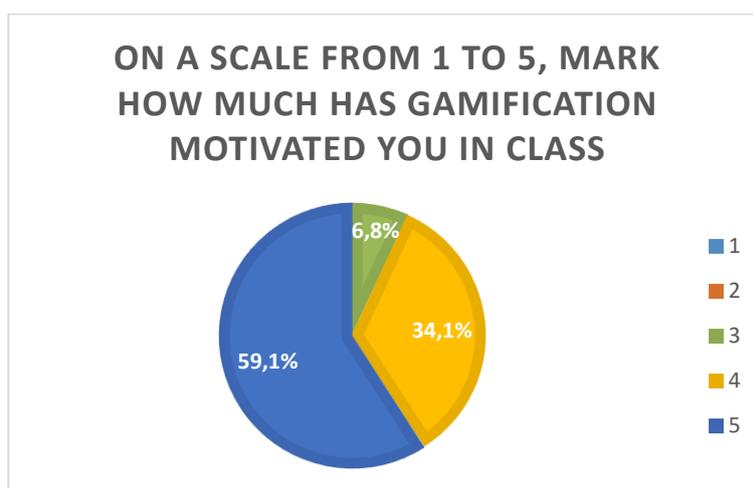


Figure 3. ICT student motivation

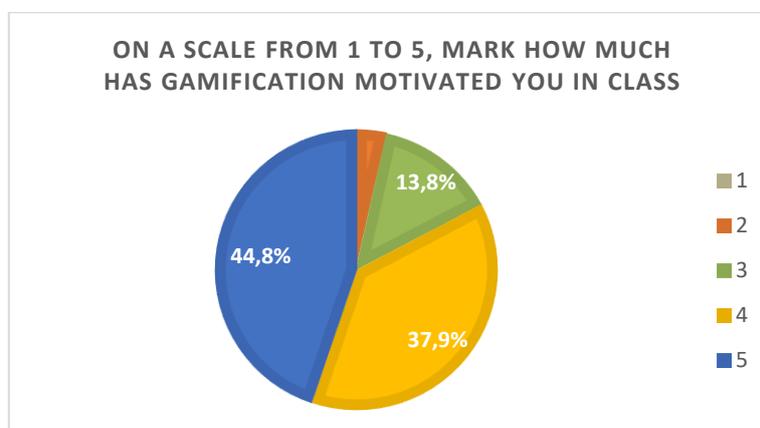


Figure 4. PCL student motivation

3.3. Correlation analysis

ICT and PCL Kahoot results were analyzed in order to identify the correlation of students' scores and rankings on different course fields and years of study. The correlation was based on the absolute value and relative value of both Kahoot data sets.

Absolute value is the result gained on a Kahoot quiz depended on correct answers and time used to answer the question as the program generates the values of the score. The correlation of ICT and PCL absolute values is 0.56. Relative value is the final ranking among students based on placement earned after each Kahoot game –

the rankings of the students were set from absolute values. The correlation of ICT and PCL relative value is 0.58. As correlation of both cases is similar in values, only relative values will be used in further analysis.

A scatterplot was created in order to display the relationship of ICT and PCL relative values. Figure 5 shows that students are either well positioned on both courses, or very bad, there are only couple of dots that are a stand-alone with no correlation. This means that it is mostly about the students and their individual engagement – they either care or don't about the knowledge and final grade.

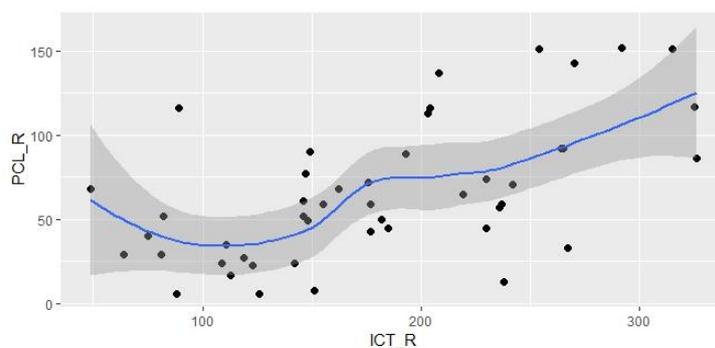


Figure 5. Scatterplot of ICT and PCL relative values

In order to examine the data set more detailed, the set was separated on male and female students. In Figure 6 it is visible how female students really follow the mentioned theory how there is a correlation between high standings in both of the courses, or low. However, male students are more scattered and it does not necessarily mean that if a student is good at one course, that it will have good results on the other course as well.

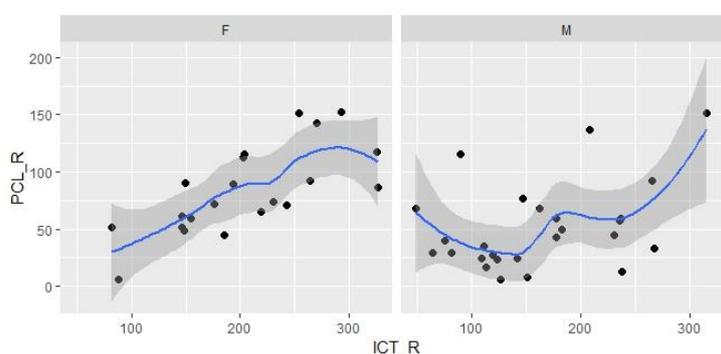


Figure 6. Scatterplot of ICT and PCL relative values of male and female students separated

As the scatterplot showed the difference between female and male students, additional tables and graphs are provided to enrich the research. In Figure 7, a table for boxplot is presented in order to see the difference between minimum, median, mode, maximum, 1st and 3rd quartile values. The difference is based on number of students in participation on Moodle on both courses.

	ICT Relative value	PCL Relative value
Minimum	49,0	6,0
1st Quartile	124,5	34,0
Median	177,0	59,0
Mean	180,6	65,6
3rd Quartile	236,5	89,5
Maximum	326,0	152,0

Table 7. Statistics of ICT and PCL relative values for boxplot

The correlation of both courses in relative value (or absolute) is low as the maximum standing number and minimum are different. However, it was interesting to see the difference between genders in both of the courses separately. Figure 8 and 9 provide a histogram and boxplot of both ICT and PCL. In ICT, most of the better standings are taken by female students as it can be seen in both of the graphs. However, PCL boxplot shows a big difference in relative values as female students are better than male students - maximum value of male students is lower than median of female students.

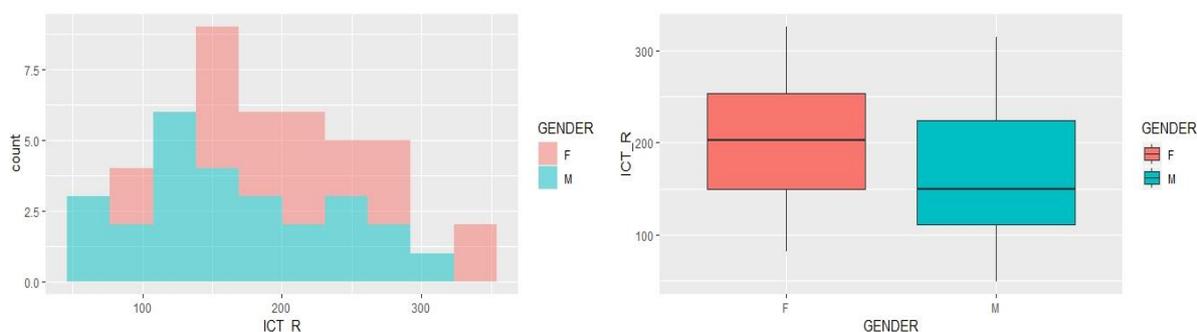


Figure 8. ICT relative values: histogram and boxplot

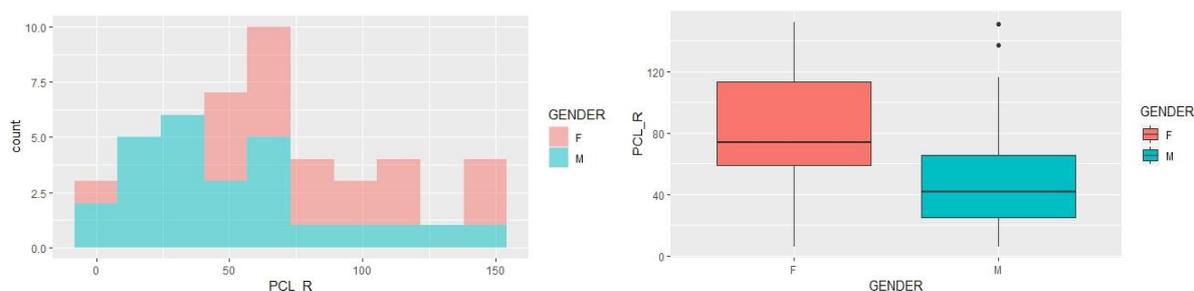


Figure 9. PCL relative values: histogram and boxplot

4. Conclusion

The aim of this paper is to show the impact of the new teaching method gamification in higher education. The research and Kahoot quizzes were conducted on one student group while they were on 1st year of study and 2nd year of study – and the courses that supported gamification were of different field. This study has found that generally the satisfaction of students using gamification is high, however, the motivation drops as they get older. A possible explanation for these results may be that students want to use new tools that enforce gamification in order to keep the interest in the new teaching method. Also, the correlation of Kahoot answers between the two evaluated courses is positively moderate, which means that students who had excellent results on one course had higher scores in the other course as well – and vice versa. Also, female students have better overall scores and standings in both courses – ICT and PCL.

A further study could assess new gamification methods and tools which should be tested in order to determine the best approaches to enhance student motivation and satisfaction. Also, it would be interesting to undertake gamification research on the same group for the whole undergraduate study period of economics and management at ZSEM – meaning two more years so the results of research have a deeper meaning.

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Effect of Gamification User Type and Class Activity on Student's Class Engagement

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Abstract

Different students prefer different in-class and extra class activities ergo to engage students in coursework academics nowadays use gamification. Gamification can be defined as the use of game design elements in non-game contexts. Under the gamification, different user types prefer different game mechanics and game dynamics in activities. The aim of this paper is to research which type of in-class activity (lectures, project guided class, workshop and gamified activities) engages students the most and whether gamified content is better compared to conventional teaching method. With a use of gamification user type model we will also explore which type of students prefer what kinds of in-class activities. Using Intrinsic Motivation Inventory after each course activity, we will inspect the student engagement and motivation aligned with Self-Determination Theory of motivation. Paper will explore the phenomenon in a class of senior students in undergraduate program.

Keywords: *Gamification User Types, Gamification, Students' engagement.*

1. Introduction

With the rapid development of technology, traditional method of teaching is shown to be less effective with the new generation of students [1]. Traditional method of teaching is usually seen as dull and students are less motivated and achieve lower scores compared to modern ways of teaching and use of technology.

While gamification is widely known in other context, it is still a relatively new concept in the education world [2, 3]. It is defined as the use of game design elements in non-game contexts [4], implicating "game mechanics" and "game dynamics" into delivery of the content with a goal of participants' higher engagement. The purpose of educational gamification is to motivate students by creating an engaging learning experience that can keep students focused on the learning task [5].

The importance of gamification is becoming wider since the younger generations are usually referred to as "digital natives" as they spend most of their time playing games on different devices [6]. Additionally, there is also the notion of the lack of interest and motivation of students in learning process. Thus, researchers are observing how the use of gamification in non-gaming context can improve participants' engagement and results. For this reason, instead of the repetitive nature of traditional learning media, there is now a tendency to integrate the technology into education by placing the students in more entertaining, effective and creative situations, thus creating solution for the problems they experience during learning [7].

This research is trying to resolve three research gaps replicated in the literature. Even though gamification of education gives positive impact on learning, most of the research in this field lacks to explore the effect of psychological aspects of the students and different motives students have while immersed in education [4, 8]. Diverse psychological viewpoints agree that people are not equal; therefore, they cannot be motivated effectively in the same way [9]. Individual approach via gamification of the content could motivate students more effectively. This paper will inspect the effect of individual approach, using gamification user type, on the preference of the class activity. It is assumed that different students prefer different in-class activities and the paper will observe which students prefer what kinds of activities.

One other limitation continuously mentioned in research is a lack of use of “validated psychometric measurements” while analyzing gamification effect on student engagement [10]. For this reason, we will use validated Intrinsic Motivation Inventory tool to measure student engagement and validated test inspecting gamification user type.

Third limitation mentioned in research is a lack of experimental and comparative research. Most of the research on gamification in education observe effect of gamification on student engagement in one gamified activity not comparing the results of student engagement with other in-class activities [7]. This study will measure student’s engagement, on the same participants, in two gamified in-class activities and three other in-class activities so that the results could be compared.

Three main research questions for this study are:

RQ1: Which type of in-class activity engages the students the most?

RQ2: Do preferences on different in-class activity relate to different Gamification User Type?

2. Review of the Literature

2.1. Gamification in Education

Different research observing gamification effect on student in-class engagement has positive results on motivation, attitude, satisfaction, etc. In one research students playing several rounds of Kahoot quiz reported different scores in different rounds proving gamification affects competitiveness and proving that scores are not necessarily tied with grades [11]. Candidates studying in the gamification supported flipped classroom were found to be more eager to participate in coding training and they demonstrated positive attitudes after the implementation [7]. Interestingly, rewards, as part of the gamified experience, motivate younger population more compared to older and experienced participants. Explanation is found in students’ perception of reward after playing a game. This perception changes with years, as younger generation does consider some type of a reward is necessary to play the game intensively, while older generation get the satisfaction of learning in a new and meaningful way [1].

Other research shows that gamification has a positive effect on children in terms of improved lesson participation and lesson success. Research noted an increase in the number of students who achieve higher grades in their lessons [12]. Another research shows that students prefer gamification in several courses and state they would like that majority of the courses applies this new way of co-creating the class [13].

2.2. Self-Determination Theory

Motivation is a process that initiates, guides and maintains goal-oriented behaviors which causes us to act in order to obtain a desired outcome and intrinsic motivations are motivators that arise from within the individual that are often intangible and subjective such as solving a complicated cross-word puzzle purely for the personal gratification of solving a problem [14]. Intrinsic motivation depends on feelings of autonomy, competence and relatedness [15, 16].

Several studies have shown positive findings that gamification had an impact on students’ motivation and engagement level across different contexts [17, 18]. In case of conventional teaching methods some studies show that it negatively impacts students’ motivation [19] which can as a consequence lead to low performance and eventually affects employability.

2.3. Gamification User Type

Marczewski proposed six user types that differ in the degree to which they can be motivated by either intrinsic (e.g. self-realization) or extrinsic (e.g., rewards) motivational factors [20]. Accordingly, the four intrinsically motivated types in the Hexad model are derived from the three types of intrinsic motivation from Self-Determination Theory, namely relatedness, competence, and autonomy, with the addition of purpose [21]. In the Table 1 all 6 types of players are described.

<i>Hexad Type Players</i>	<i>Motivation and description</i>
<i>Philanthropists</i>	...motivated by <i>purpose</i> . They are altruistic and willing to give without expecting a reward.
<i>Socialisers</i>	...motivated by <i>relatedness</i> . They want to interact with others and create social connections.
<i>Free Spirits</i>	...motivated by <i>autonomy</i> , meaning freedom to express themselves and act without external control. They like to create and explore within a system.
<i>Achievers</i>	...motivated by <i>competence</i> . They seek to progress within a system by completing tasks, or prove themselves by tackling difficult challenges.
<i>Players</i>	...motivated by <i>extrinsic rewards</i> . They will do whatever to earn a reward within a system, independently of the type of the activity.
<i>Disruptors</i>	...motivated by the triggering of <i>change</i> . They tend to disrupt the system either directly or through others to force negative or positive changes. They like to test the system's boundaries and try to push further. This type is derived from SDT, but from empirical observation of this behaviour within online systems. Although disruption can sometimes be negative (e.g., cheaters or griefers), this is not always the case because disruptors can also work to improve the system

Table 1: Description of Hexad Type Players

Some motivations underlying these user types are related, but the user types themselves overlap slightly. Also, rarely is one individual motivated only by one motivation cluster presented as user type but this motivation is mostly going to guide their behaviour. In research, the survey can be used to better understand user engagement and enjoyment in studies regarding gameful applications [22].

3. Results

3.1. Participants

The study was conducted with 51 students who took Human Resource Management undergraduate course at Zagreb School of Economics and Management. Class consisted out of 66 students, but not all participated in all of the measurement periods thus research included 77% of the class. Participants were mostly male students (61%). Minority of the students felt that for this class they had to work more (16,7%) or less (7,1%) compared to other courses.

3.2. Tools

Gamification User Type. Gamification User Type was measured by Hexad User Type Scale that consisted out of 24 items and measures 6 different Gamification User Types [22]. Students filled out the questionnaire after the first *in-class* activity, namely lectures, after 7 weeks into the class. Reliability of the scale was really high ($\alpha=867$) and factor analysis extracted 6 component factor explaining 69% of the variance in the results.

Student's Class Engagement. When measuring class engagement Intrinsic Motivation Inventory was used with 14 items [21]. This measurement was applied 5 times after all 5 in-class activities (check Table 2).

<i>In-class activity</i>	<i>Reliability</i>	<i>Validity</i>
<i>Lectures</i>	.894	3 factors (72%)
<i>Workshops - Student Future Day</i>	.926	2 factors (75%)
<i>Project guided class</i>	.897	3 factors (72%)
<i>Class presentations</i>	.912	2 factors (70%)
<i>Workshop – Career Development</i>	.892	3 factors (73%)

Table 2: Reliability and validity of Intrinsic Motivation Inventory scale

3.3. Data Collection

The undergraduate course of Human Resource Management comprised of 15 weeks and senior students (N=66) attended class lectures in 8th semester of their undergraduate studies. Student engagement was measured in 5 different time points during the class for different class activities (lectures, workshop 1, project guided class, presentation of group project, workshop 2). In-class, activities are described in Table 3.

<i>In-class activity</i>	<i>Short description</i>	<i>Weeks</i>	<i>Gamified</i>
<i>Lectures</i>	Students were learning about functions in human resource management with some group activities.	1 st -7 th week	No
<i>Workshop 1</i>	Students prepared for Student Future Day solving different online personality tests, doing SWOT analysis for their career and preparing their CVs. Student Future Day is an event when companies come on campus to scout potential employees.	8 th to 9 th week	No
<i>Project guided class</i>	Group work for the class was to inspect HR processes in one selected company, do secondary and primary research and propose improvement, develop procedures, speculate about future HR challenges. Classes were held as project guided classes with lecturers as mentors.	10 th to 13 th week	No
<i>Class presentations</i>	At the end of project guided class teams of students had the opportunity to present their project to other colleagues. Other students participated in grading of students work and gained rewards for participation. For grading purposes, www.polleverywhere.com was used.	14 th week	Yes
<i>Workshop 2</i>	At the end of the semester students participated in the workshop held by two career consultants offering advices for their career. At the end of the workshop quiz was held with a use of kahoot.it and winning students got rewards.	15 th week	Yes

Table 3: Description of in-class activities

After each class activity finished, students' engagement was measured with a use of Intrinsic Motivation Inventory tool. Students' Gamification User Type was measured with the first in-class activity.

4. Results

In order to answer the first research question and find out which type of in-class activity engaged students prefer the most descriptive statistics analysis was made (Table 4). Results show that all in-class activities have similar means ranging from $x=3.64$ to $x=3.73$. However, two gamified in-class activities, second workshop (mode=4.21) and class presentation (mode=4.07), have the highest modes.

	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>Median</i>	<i>Mode</i>
<i>Lectures</i>	1.86	5.00	3.64	0.66	3.78	3.43
<i>Workshop 1</i>	1.00	4.64	3.50	0.83	3.64	2.92
<i>Project guided class</i>	2.00	5.00	3.71	0.70	3.75	3.71
<i>Class presentations</i>	2.00	5.00	3.73	0.76	3.82	4.07
<i>Workshop 2</i>	2.36	5.00	3.73	0.66	3.78	4.21

Table 4: Descriptive statistics of in-class activities

To explore possible statistical differences paired samples t-tests were conducted among different in-class activities (Table 5). None of the testing pairs show significant statistical difference so first hypothesis proposing

differences is rejected. It seems that small sample size might have affected the results. From the results, we cannot conclude that gamified in-class activities produce more student's engagement in different activities.

<i>Paired samples</i>	<i>t-test</i>	<i>p</i>
<i>Lectures – Workshop 1</i>	1.268	p>0.05
<i>Lectures - Project guided class</i>	-0.893	p>0.05
<i>Lectures - Class presentations</i>	-1.057	p>0.05
<i>Lectures - Workshop 2</i>	-0.839	p>0.05
<i>Workshop 1 - Project guided class</i>	-1.945	p>0.05
<i>Workshop 1 - Class presentations</i>	-1.964	p>0.05
<i>Workshop 1- Workshop 2</i>	-1.858	p>0.05
<i>Project guided class - Class presentations</i>	-0.234	p>0.05
<i>Project guided class – Workshop 2</i>	-0.504	p>0.05
<i>Class presentations - Workshop 2</i>	0.027	p>0.05

Table 5: Paired samples t-tests

Second research questions was to inspect if there are individual preferences for in-class activities connected with the Gamification User Type. To inspect which Gamification User Types prefer what in-class activities all students were scored on all 4 major gamification types. After the scoring all students having above average score per each Gamification User Type were assigned to the same group (“higher score”) and students having below average score were put in a different group (“lower score”). T-test analysis were performed for each in-class activity and Gamification User Type to test students' preferences (Table 6).

		<i>Philanthropist (purpose)</i>		<i>Socializer (relatedness)</i>		<i>Free Spirit (autonomy)</i>		<i>Achiever (competence)</i>	
		Mean	t-test	Mean	t-test	Mean	t-test	Mean	t-test
<i>Lectures</i>	<i>higher</i>	3.91	14.358**	3.84	9.638*	3.82	5.152*	4.00	19.934**
	<i>lower</i>	3.25		3.26		3.40		3.27	
<i>Workshop 1</i>	<i>higher</i>	3.75	6.673*	3.68	4.332*	3.77	7.236*	3.80	6.774*
	<i>lower</i>	3.15		3.17		3.15		3.20	
<i>Project guided class</i>	<i>higher</i>	3.95	9.369*	3.84	2.933	3.88	4.006*	4.03	12.467*
	<i>lower</i>	3.36		3.47		3.48		3.39	
<i>Class presentations</i>	<i>higher</i>	4.00	9.919*	3.81	0.994	3.91	3.529	3.97	4.701*
	<i>lower</i>	3.35		3.58		3.50		3.50	
<i>Workshop 2</i>	<i>higher</i>	3.78	0.308	3.88	5.072*	3.78	0.308	3.83	0.731
	<i>lower</i>	3.66		3.39		3.66		3.64	

Table 6: T-tests among subsamples of 4 Gamification User Types and in-class activities

Results of the research show that students scoring higher on all four Gamification User Types also have higher satisfaction with non-gamified in-class activities (except for Socialisers). Students that can find purpose during lectures, workshop or during project guided class, or can fulfil the need for relatedness and autonomy or can show competence also have higher satisfaction with that specific in-class activity. Results are somewhat different when gamified in-class activities are analysed. Since scores of students' engagement for those assigned to “lower score” groups are also relatively high not all t-test are significant. Gamified content is more preferred

by students that have higher scores as philanthropist, socializers and achievers. However, preferences differ depending on the type of the in-class activity as well.

Class presentations where students were able to grade other students via online form of voting is more engaging for students that have a higher score as philanthropists and achievers. Being able to grade other colleagues seems to engage students with higher sense of purpose and those who appreciate competence. Knowledge quiz held via Kahoot is more engaging and interesting for students having higher score as socializers. Opportunity to test knowledge and see one's results compared to other colleagues in the same class is equally appealing to those shoring low and high as achievers, free spirit and philanthropist.

5. Conclusion

As most of the research inspecting gamified activity and student engagement using one gamified activity [7], in the conducted research we observed 5 different in-class activities. Three of the in-class activities were not gamified and two were gamified. Results of our research show no statistical differences in students' engagement scores for different in-class activities. These scores are also not significantly higher for gamified in-class activities compared to non-gamified in-class activities as it was expected. Results can be assigned to relatively small group of participants and this needs to be researched further. To inspect this phenomenon more in depth, similar research on different courses with more students participating need to be conducted.

Other research gaps being addressed was lack to explore the effect of psychological aspects of the students and different motives students have while immersed in education [4, 8]. For this purpose students were scored on 4 major Gamification User Types to estimate their major motivation. Conducted research was inspecting differences in students' engagement in in-class activities that were gamified and that were not gamified. When in-class activities are not gamified students who score higher on 4 major Gamification User Types have also higher engagement in these activities. Motivated students (purpose, relatedness, autonomy and achievement) score higher in engaging in different in-class activities. More important, results show that what is being gamified is also important. Different Gamification User Types prefer different in-class activities. Philanthropists and Achievers are more engaged when able to participate in grading of other colleagues' work. Socializers are mostly engaged when they are able to participate in knowledge test and compare their results with results of other colleagues.

We can conclude that mere gamification of the in class content and activities will not ensure successful students' engagement. Course creators and lecturers might prosper if understanding students' motivation and understanding which activities motivate what students. When implementing gamification in the class one needs to be careful. Reducing the complexity of well designed games and only applying surface elements (i.e. badges and experience points) falls short of engaging students and can also damage existing interest and engagement [23]. This means that the class material needs to adopt and change in order to keep students motivated [24].

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Index

A

Aleksić, Darija 3
Aleksić-Maslač, Karmela 96
Andrásik Kocsisné, Ágota 84

B

Baldi, Stefan 69
Balić Matijašević, Lana 3
Barac, Zoran 1, 40
Bernatović, Ivija 104

C

Chornitzer, Peter 1
Csizmadia, Tibor 49

E

Eskola, Anne 14, 32

G

Good, RT 4

H

Havelda, Balazs 1
Hundal, Shab 14, 32

J

Jalšenjak, Borna 4, 64
Joo Park, Sung 4

K

Knudsen, Kjell 5
Koričan Lajtman, Mirna 104
Krkač, Kristijan 64

L

Laughton, David 7

M

Maráz, Gabriella 69
Martinović, Maja 78

Nj

Njavro, Đuro 40

P

Pirić, Valentina 78

R

Rafay, Ágnes 49
Rašić, Mario 96
Rustom, Afif 2

S

Seppelin, Sinni 57
Soudi, Nada 23

Š

Škrebilin Kirbiš, Ivona 104

T

Törn-Lappio, Anne 57
Turpeinen, Jukka 32

V

Vajda, Katalin 84
Vasić, Dina 40
Vranešić, Philip 2, 96
Vuk, Branka 2

W

Wahlgren, Asta 14

Z

Zehetner, Andreas 90

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