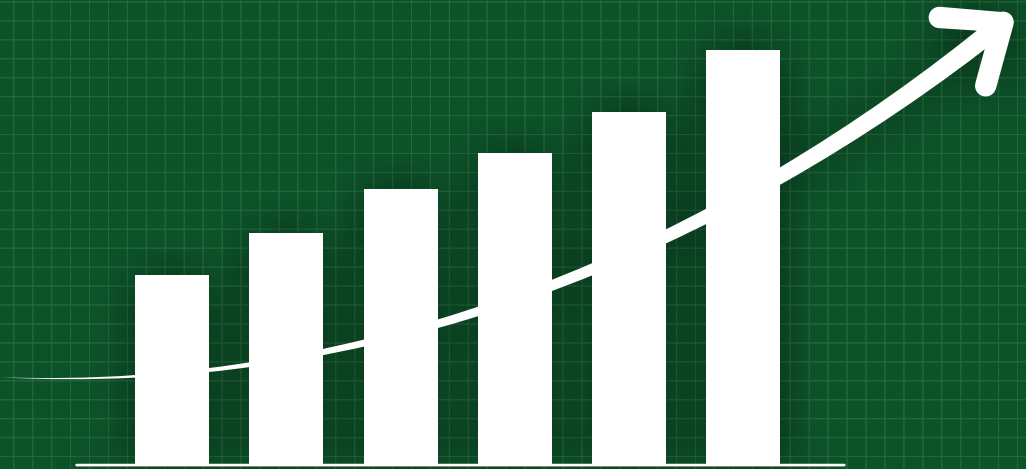# Fostering Entrepreneurial and Sales Competencies in Higher Education

Edited by **Maciej Pietrzykowski**

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Spis treści

Maciej Pietrzykowski ⓘ

Introduction

The fourth industrial revolution, related to the systematic use of information technologies through the development of automation and the processing and exchange of significant amounts of data, means that technology for managing all processes has become a fact. The main elements of this new reality are artificial intelligence, the Internet of Things and the Internet of Everything, 3D printing, nanotechnology, quantum computers, cloud solutions, as well as cyber-physical systems and modelling, i.e. a virtual representation of physical reality. This latest industrial revolution fundamentally changes our perception of reality and our functioning within it. The basic consequence of the revolution will be the progressive marginalization regarding the role of human labour, which means that the creation of new jobs may not be balanced by the loss of existing ones, and increases in the amount of human labour may not lead to a significant increase in production. This also means that there may be a class of people who will not have the opportunity to work because of their skills are lacking or inadequate for current needs. This can lead to social tensions and will be a huge challenge for economic policy, which will have to deal with the growing social expectations of people brought up in prosperity and not accustomed to the concept of saving, especially in the case of job loss. Meanwhile, there are powerful overlapping problems relating to climate protection, decarbonisation, mass migration, aging populations and the global economy's shift in focus towards Asia. It is difficult to estimate the real consequences of the processes taking place today, due to their unprecedented nature. Obviously, the processes do not necessarily mean mass unemployment, because, as in the case of previous revolutions, new processes may generate a demand for new jobs in sufficient numbers to ensure balance in the labour markets. Certainly, robots and automation will push tens of millions of people out of work, but at the same time new technologies will generate a demand for new skills. Regardless of whether predictions of mass unemployment and people being forced out of the job market by robots come true or not, it seems indisputable that the world is facing revolutionary changes.

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Therefore, the key problem facing the world today is what competencies will be needed by the generation that will enter the labour market in a few years' time; that is, the one which has just begun its university education. At the start of the century the digital revolution began a new age; which seemed it would shape reality and the labour market for many decades to come. At that time, it seemed that the key competences were those resulting from computer skills or programming knowledge. Until recently, it seemed that humanities graduates would not be able to find a (well-paid) job; but today they are irreplaceable if they are well versed in the digital world. The development of technology has accelerated significantly and today it turns out that the key competences are those that can stand out from the background of widespread automation and robotization, i.e. those in which a machine will not be able (for some time) to replace a human being.

Competency in the future is going to be, above all, a combination of:
a) Solid digital and technical competences,
b) Social competence, ability to empathize and cooperate,
c) Cognitive competences, commonly called thinking competences (creativity, but also the ability to solve complex problems).

Thus, one can assume that the following skills will be indispensable in the future: active learning, analytical thinking and innovation, critical thinking, creativity, emotional intelligence, mentoring, leadership and social influence, management of material resources and HRM, manual dexterity, endurance and precision (desirable for cooperation in multicultural complex environments), cooperation in virtual teams, spatial abilities, persuasion and negotiation, reasoning, problem solving and ideation, resilience, stress tolerance, flexibility, systems analysis, technology design and programming, as well as visual, auditory and speech abilities.

The fundamental question therefore arises, are universities prepared today to teach such skills and to transfer knowledge that will prepare new generations to find their place in a changing labour market? The whole of the nineteenth and twentieth centuries were a time when school was to instil in students' discipline and compliance with the rules, and thus the virtues needed for mechanized factories as well as for inter- and multinational corporations. In the post-industrial age, in the information society era, the catalogue of necessary skills is different. The linear way of acquiring knowledge by acquiring further diplomas and moving to higher and higher positions in the process of career progression has also been negated. So, are teaching institutions keeping up with the pace of change, in particular large public universities, which are characterized by inertia resulting from the large scale of their activities? After all, are the methods that are used by large universities adequate for the expectations of the Z-generation brought up in the digital world, used to tablets and computers, as well as accustomed to information noise? This book is intended to contribute to this important discussion in the field of entrepreneurial and sales competences that are still needed in the market, but it seems that for effective and efficient operations they must be accompanied by a number of other, soft skills.

The collected articles enable two parts in the book to be distinguished: the first covers the theoretical aspects related to the formation of entrepreneurial and sales competences in the higher education sector.

The first chapter refers to constructivist education which puts the student at the centre of the educational process. This paradigm change has to entail a completely new organization of the teaching process and the tactics used in the classroom. Teachers have to acquire new competences and universities have to support them in this process because it is not an easy task and will take a long time. The first chapter generally discussed the education process, while the second and third relate to education on entrepreneurship. The second chapter characterises the edutainment as the modern approach towards teaching the entrepreneurship. The advantage of edutainment is its high efficiency in the transfer of knowledge and skills. The author presents his own experience with the implementation of the integrated teaching technique in the Erasmus+ project, containing various teaching approaches, including movie education. In the third chapter the authors present the results of studies covering the role of universities and higher education in creating, shaping and maintaining entrepreneurial intentions among the younger generations, especially among students. There is a growing interest in the subject of entrepreneurial education, although it is difficult to find unequivocal confirmation of the impact of education on the development of entrepreneurial intentions among young people.

The next chapter addresses issues related to the digitization of sales and marketing. Modern technologies are changing the world and the business approach to sales planning and the use of sales support tools. The art of the sale is the subject of the next chapter, and the author reports on the results of a survey at the Cracow University of Economics relating to sales competencies. The results enable some recommendations regarding programmes and course contents to be presented.

The second part of the book is devoted to some practical aspects of acquiring competencies in sales as well as various aspects of running a business, along with covering the practical aspects of transferring knowledge at universities and thus the tools and techniques used.

Charity is not a fancy or easy product to sell. Therefore, the example of a university initiative described in the next chapter – a store that promotes the re-use of products – can be a good example of how entrepreneurship education in practice can be combined with care for the environment and human needs. The phenomenon of moral hazard in entrepreneurial activity is presented in the following chapter. The authors performed an experiment whilst using a business simulation programme and provided evidence that moral hazard leads to riskier behaviour among nascent entrepreneurs. Moral hazard is correlated with overinvestment, excessive costs, lower sales revenue and the reduced financial effectiveness of a company. These conclusions are very important for teachers educating future generations of entrepreneurs and sales agents. On this occasion it should also be emphasized that business simulations are an extremely valuable and modern form of entrepreneurship education, appreciated by students. Entrepreneurship

teaching makes more sense when combined with tools and techniques that increase student engagement and are based on practical examples. A good example is the video case studies presented in the subsequent chapter. In an era of digitization Generation-Z students expect more interactive ways of teaching, and video case studies certainly provide many advantages over the traditional written case studies. In the last chapter another teaching tool has been described – gamification. As research reveals, implementing game-based elements into education can increase the effectiveness of the learning process, but it should be rigorously combined with the content of the course and the skills and competencies required in a given syllabus.

This textbook is intended for an academic audience (teachers, researchers and advanced degree students) as well as a professional business audience of trainers, top managers, directors and developers. Due to the issues raised, it can also be useful to entrepreneurs interested in the best preparation for enabling the younger generations to perform roles in modern companies in the era of the 4th industrial revolution.

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The University Teacher's Competence in the Process of the Paradigmatic Shift

Introduction

When thinking of the competence of graduates entering the labour market today, one takes into account not only their knowledge and specialist skills connected with their field of study. In the last decades, special emphasis has been put on social competence, necessary for building interpersonal relations and teamwork. The competence required from university graduates also includes cognitive skills, which are of a universal character, independent from the syllabus and content of academic classes. Nowadays it is expected students to have the skill of reflective and critical thinking, the ability to seek relations among different issues, to understand and explain them, to provide arguments and discuss them. In other words, we – as the society – want the young generation to ultimately understand the ongoing processes and be aware of the mechanisms applied in different areas of our socio-economic and cultural functioning. However, it takes a long time to shape such competence and it should be done at classes, in which the teacher allots time and space for initiating the abovementioned cognitive activities. By designing teaching situations which give an opportunity to explore cognitively, we help students to develop the deep approach to learning (Biggs, Tang, 2007). Contrary to the surface approach to learning, it is not confined to remembering, identifying, naming and, if necessary, paraphrasing content, but is based on an in-depth study of facts and ideas in an active and critical way. In the learning process, students have a chance of utilizing their prior knowledge and, owing to

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being involved in the process, they are able to extend and reconstruct their cognitive structures. Thus, they create knowledge that is relevant to them and is applicable in different contexts. Such an approach is characteristic of non-objectivist educational paradigms, in which knowledge is of an individual and subjective nature and is the product of the multilateral involvement in the learner's process. What is the key factor that plays a role in developing and reinforcing students' deep approach to learning is academic staff's proper teaching competence, especially "teaching and assessment methods, which support active and long-term involvement in learning situations" (Ramsden, 2002).

In this chapter, the focus is put on teaching competence of academic lecturers that emphasizes their utmost importance for students' learning, for developing their approach to the teaching process and the educational effects they obtain. The goal is to reconstruct this issue, taking into consideration changes that are happening in academic teaching. The paradigmatic shift towards student-centred education, which is clearly accentuated in the literature, must be reflected in university teachers' actions. Therefore, in the first part of the chapter, the trend of educational transformation is shortly discussed, explaining that it generally concerns moving from objectivist to non-objectivist paradigms, while specifically it refers to a change from teaching based on behaviourist theses to constructivist education. Thus, in the next section, the theses of didactics inspired by the premises of educational constructivism are presented, and the model of constructivist classes is also discussed. The given assumptions and guidelines for teaching design show the necessity of developing and modifying competence that the constructivist teacher needs. Thus, academics' pedagogical competence is described, providing an overview of aspects which constitute the new understanding of it. In this way, the process which requires lecturers to undertake individual effort and change is shown. The process that requires change not only their actions, but, even more importantly, their beliefs regarding knowledge and learning. At the same time, it is emphasized that the transformation needed today should be a job performed by different stakeholders, the effort made by various parties: the academics, but also the university as the organisation that employs them. In the process of change, the lecturer needs constant and comprehensive support.

1. From passing knowledge to the facilitation of learning

In today's academic teaching, we observe the paradigmatic change consisting in the shift from teaching to supporting learning (Dylak, 2009; Kember, 2009; Malewski, 2010; Wach, 2019; Wright, 2011), which is particularly emphasized in Anglo-Saxon textbooks in the field of the scholarship of teaching and learning (Biggs & Tang, 2007; Fry et al., 2009; Ramsden, 2002). It is proposed that "passing on knowledge should be replaced by teaching cognitive and existential self-reliance" (Kwiatkowska, 2008, p. 41), and that the educational culture of imposing should give way to the culture of offering. This need was stressed in

the frequently quoted article included in the *Change* journal (Fear et al., 2003), entitled *The Shift from Teaching to Learning* (Barr, Tagg, 1995). Its authors not only presented the vision of the paradigmatic shift, but they also used the characteristic expression "*learning paradigm*" (Fear et al., 2003). As they suggested, modern education favours orientation with the student placed in the centre of the educational process, called "the facilitation of learning", which is replacing teacher-and-content-centred education, based on "passing knowledge" (Kember, 2009; Kember, Gow, 1994; Samuelowicz, Bain, 2001). In other words, in thinking about the student and the educational process, approaches based on the behaviourist paradigm give way to the humanist, constructivist and critical-emancipatory paradigm. Thus, objectivist paradigms are being abandoned in favour of non-objectivist ones, which share the same epistemological and ontological approach. Although there has been a lot of discussion recently about the multi-paradigmatism and the co-occurrence of various perspectives in theory and practice, resulting in the creation of eclectic approaches which eliminate the efficiencies of each of them (Klus-Stańska, 2018), it is educational constructivism that is the most frequently quoted theoretical approach in the literature on the subject. As opposed to behaviourist theses, some propose constructivist ones (instruction, passing knowledge vs. construction, building knowledge) (Carnell, 2007). Constructivist teaching, which places the student in the centre, is an alternative to conventional methods with the teacher on the podium (Yuen, Hau, 2006). Smit, de Brabander & Martens (2014) point out that student-centred education is "based on those learning theories that consider learning as a constructivist, situated and social activity" (p. 696), in which it is students rather than teachers that take responsibility for the process. By comparing the two learning environments, the authors clearly refer to the premises of constructivism and behaviourism. In the same context, the relation of constructivism with the student-centred approach has also been observed by Elen et al., (2007). The two-paradigm approach, with the model based on the tenets of positivist and constuctivist teaching, is presented by Gage (2009). The paradigmatic shift from teaching to learning, defined as moving towards the constructivist approach in teaching, was mainly stressed by the abovementioned Barr & Tagg (1995), who believe that "a collage's purpose is not to transfer knowledge but to create environments and experiences that bring students to discover and construct knowledge for themselves, to make students members of communities of learners that make discoveries and solve problems" (p. 15). Thus, they clearly indicate the shift towards constructivist theses in the scholarship of teaching and learning.

The above assumptions and the analysis of the academic teaching process from different theoretical perspectives (Wach, 2019) let us state that educational constructivism is probably the most common "learning" paradigm, and, given the organizational conditions of the teaching process, including system and organization elements, it also seems to be the most applicable one, counterpoising the behaviourism-based approach, which is so strongly rooted at universities. What is the strength of constructivism is not only the central position of the student, but also the fact that the constructivist tenets concerning cognition and

learning have led to the formulation of teaching rules, constituting a cohesive model that could be applied at all levels of education, including university teaching (Biggs, Tang, 2007).

2. The assumptions of constructivist theory

The constructivist paradigm is now the most intensively developed approach to teaching. It seems to be the most common theoretical approach of all (Gołębniak, 2002; Klus-Stańska, 2018; Sajdak, 2013). It is an internally strongly diverse approach, which is constantly evolving (Dylak, 2000; Gołębniak, 2005; Klus-Stańska, 2010, 2018; Rutkowiak, 2009; Sajdak, 2013). This diversity is the reason for which, despite the current fashion, the tenets of constructivist teaching are not always properly interpreted (Klus-Stańska, 2010). To understand the main ideas of this approach, one should refer to the views of Piaget (cognitive constructivism), Vygotsky (social constructivism), and Bruner, who, just like, Vygotsky, emphasized the socio-cultural aspects of the constructivist perspective (Wach, 2019).

When referring to the philosophical foundations of constructivism, one should point out that, as a non-objectivist paradigm, "it advocates the world which is built, perceived and interpreted by the man in a subjective way" (Sajdak, 2013, p. 390). The reality in which an individual functions is not an independent being, but is the result of human cognition, a kind of the construction of the world. Similar assumptions refer to knowledge, which is not an external phenomenon, "a set of information", but a subjective category that is individually constructed and reconstructed in the process of human cognition, and is embedded and interpreted in a specific cultural context (Klus-Stańska, 2010). As Dylak indicates (2000) "knowledge is not beyond us and it is not waiting to be discovered (…); the reality is not separated from the observer; it is some *unity*; it is the observers who create the meaning of what they see and, thus, the knowledge of what they see and the world in which they live" (pp. 65–66).

Constructivism is also embedded in the cognitive psychological concept of the man, according to which people are independent, creative and intellectually stimulated individuals, who are interested in the world and are guided by curiosity in the process of exploring the reality (Łukaszewski, Doliński, 2000; Sajdak, 2013). They ask questions and experience cognitive dissonance (a conflict, incompatibility between previous knowledge, concepts and experiences and new, incoming stimuli), and, in their thinking and actions, aim to find answers to the questions that are bothering them. These people learn by processing information coming from outside, and giving it meaning themselves (Ledzińska, Czerniawska, 2011), but also by using their previous knowledge resources, gathered in so-called cognitive structures (Kozielecki, 1995). The interaction that occurs in the mental representations of the world (through Piaget's mechanisms, such as assimilation and accommodation) supports the

process of learning and creating individual knowledge, which is meaningful for a particular person (Illeris, 2006). This knowledge is negotiated in the social context, among other people learning and organizing the learning environment. It takes place in the zone of proximal development (Vygotski, 1978), in the peer group and in the presence of the teacher-facilitator and in the process of building the scaffolding. The learner gradually takes control and responsibility (Dylak, 2013; Filipiak, 2012, 2018; Ledzińska, Czerniawska, 2011; Pritchard, 2009), gaining space and time for the autonomous construction of his or her knowledge. Learning in accordance with the tenets of constructivism also takes place in the cultural context, which was particularly emphasized by Bruner (2006). He argued, in line with Vygotsky's views, that in order to give and interpret meanings, one should have the knowledge of culture and cultural tools (in the specific language), because culture is a source and medium which shapes the human mind, and helps it function and develop (Filipiak, 2012; Gergen, 1995; Sajdak, 2013).

Constructivism is a theory of knowledge and cognition, in which learning and learners occupy the focal position. Dylak proposes a neat and accurate definition of learning from this point of view (2000). Quoting the works of Lloyd (1995) and Lewis (1996), he points out that "learning (…) is a self-regulatory process of tackling a conflict between the existing, personal models of the world and the information coming from outside (…) it is a process of building new models and representations of the world with the use of cultural tools and symbols; it is a process of constantly negotiating meanings, through learning, teamwork and discourse" (p. 66). Thus, what are the implications of the constructivist assumptions for the teaching process? Although constructivism "describes and explains the universal essence of the processes of cognition and learning" (Klus-Stańska, 2018, p. 136), this does not mean that its main theses cannot be used to formulate guidelines for designing and teaching classes, "identifying what teaching methods give a chance for better education" (Klus-Stańska, 2018, p. 136). The constructivist principles concerning learning may serve as a kind of framework for teachers and educators, determining the teaching methodology (Biggs, Tang, 2007; Fosnot, Perry, 2005; Klus-Stańska, 2010). The analysis of a number of publications (Biggs, Tang, 2007; Filipiak, 2012; Fosnot, Perry, 2005; Fry et al., 2009; Klus-Stańska, 2012, 2018; Ledzińska, Czerniawska, 2011; Pritchard, 2009; Sajdak, 2013) led to adopt the principles of constructivist teaching as proposed by Klus-Stańska (2010), but they were supplemented with the views of other theoreticians of teaching, and they were embed in the context or academic teaching:

- **The student's activity** as the starting point. Learners' involvement helps them handle, though often inefficiently, the cognitive situation designed by the teacher (Klus-Stańska, 2010). The teacher's task at the initial stage of the teaching process is to arrange so-called learning opportunities and activate students' prior knowledge. Such a solution is proposed instead of the so-called typical "introduction to the subject". The constructivist-teacher is a designer and moderator of teaching situations rather than a transmitter of knowledge.

- **Problem situations** as key to stimulating the student's interest, triggering the cognitive conflict and arousing internal motivation (Klus-Stańska, 2010). The proposed task should be a challenge, should give rise to controversy and encourage posing hypotheses and taking verifying actions (Fosnot, Perry, 2005). Teaching based on inquiring and seeking solutions also finds application during lectures, which is confirmed by the current popularity of interactive teaching in large classes (Morton, 2009).
- **The student's prior knowledge,** i.e. his or her previous experience and knowledge, as having importance for the learning process (Klus-Stańska, 2010). The activation of prior knowledge supports building cognitive structures and combining new portions of information with the existing resources. Diagnosis is particularly important as it allows the teacher to design cognitive tasks that go beyond the zone of proximal development. In other words, "teachers have to understand where the learners are so that they (the students) can obtain the proper level and adjust misconceived notions and fill in their own competence gaps" (Fry et al., 2009, p. 22). By creating opportunities to share resources and experiences, we make learning more contextual and based on sharing and cooperating, and we support the process of negotiating the reality.
- **Recognizing what the student means** rather than guessing what the teacher thinks (Klus-Stańska, 2010). In the constructivist educational process, it is essential to ask questions and discover students' thinking models, their notions, understanding and perception of the reality. The teacher encourages learners to formulate rules independently, discover them and defend their own position (Brzezińska, 2006; Fosnot, Perry, 2005). Thus, he or she supports the process of developing intellectual competence, such as analytical, reflective and critical thinking.
- **The social negotiation** of understanding the reality in the learning process instead of assimilating someone else's concepts (Klus-Stańska, 2010). Creating opportunities to exchange, discuss and view the reality from different perspectives, which supports the in-depth and more thorough understanding of the issue under study (Fry et al., 2009).
- **The cognitive procedures** of achieving the result in the student's memory rather than only the effects of his or her mental activity (Klus-Stańska, 2010). In the constructivist approach, the process of gaining knowledge is more important than the end result in the form of specific knowledge. Thus, the teacher's task is to create the space in which students will have an opportunity to explore and find their own way of action and methods of solving problems before the so-called "explanatory and conceptual activity of the teacher" follows (Klus-Stańska, 2010, p. 332). It is important to give them a chance to pose hypotheses, ask questions, order information in accordance with their own criteria, compare facts, and create associations and metaphors. These processes support in-depth, permanent and holistic learning, and contribute to the development of cognitive competence, which the man uses at every stage of life-long education.

- **Learning on the unconscious level** as a significant part of the process of obtaining knowledge (Klus-Stańska, 2010). This means that even students themselves not always notice an educational change, particularly in the area of cognitive or social competence. Only some teaching outcomes can be observed and measured with the application of quantitative tools and that is why constructivists recommend qualitative approaches and techniques of formative assessment, such as portfolio, essay, open questions (Angelo & Cross, 1993).
- **Mistakes** made by students as **a natural element of learning** (Klus-Stańska, 2010). They should be perceived as the result of students' reasoning (creating the concept of the reality) and, thus, they should not be reduced or prevented (Fosnot, Perry, 2005); just the opposite – we should take interest in the students' way of thinking and help them get through the accommodation process, without stigmatizing, evaluating or rebuking, but we should see the "misconceived" (i.e. different) interpretation of the reality as an intellectual fact and the starting point for negotiating meanings.
- **Learning opportunities** as an element of educational planning, with no possibility of precisely formulating the teaching outcomes (Klus-Stańska, 2010). Teaching is about "the creation of the learning environment and offering problem situations" (Klus-Stańska, 2010, p. 341), which will be filled with meanings by students themselves. The teacher may only outline the area of cognitive activity, but he or she cannot precisely formulate the goals of teaching, which will be dependent on the involvement and action of learners and the relations they will establish. The teacher's task is thus to follow the students and be flexible depending on their interests and other needs.

The above assumptions do not constitute the complete list of principles and rules important from the point of view of designing and teaching classes inspired by the ideas of constructivism. They are the framework for creating the class model with the learner's multiple activities at its heart. An overview of the literature shows that **the model of constructivist classes** consists of a few stages (Gołębniak et al., 2002; Klus-Stańska, 2010; Michalak, 2004; Sajdak, 2013; Wynne, 1996). The presented approaches differ – each of the proposals encompasses the issue of planning and teaching classes on a different level of detail, although all of them can serve as valuable guidelines for constructivist teachers. For example, Klus-Stańska's constructivist teaching model (2010) consists of the following stages: "cognitive conflict exploration and personal procedures of understanding social negotiation change and functioning of meanings in the mind" (p. 352). Sajdak (2013), in turn, focuses on the structure elements of the teaching process, beginning from formulating goals, diagnosing prior knowledge through creating learning opportunities, to measuring students' achievements and evaluating classes. Gołębniak et al., (2002) address the issue of planning on a few levels, but we should definitely mention the stages of classes in the design method they described: involvement search transformation presentation reflection. Wynne (1996) indicates the following stages of planning constructivist classes: identifying and revealing knowledge constructing and restructuring new

knowledge referring the modified theories applying new knowledge. Michalak (2004) comes up with a similar proposal for early school education. Following this path, the stages embedded in the context of academic education are presented below:

1. The identification and recognition of knowledge, in which cognitive curiosity is stimulated, interest in the topic is aroused, students' prior knowledge is diagnosed, and the teacher poses the problem task.
2. Revealing learners' preliminary concepts, ideas and experiences, which help to activate the previous structures of knowledge. Students become aware of what they do not know, the teacher finds out what their level of competence is, what experiences they have had and how they interpret them, and what ideas for solving a specific problem they have, and whether and what mistakes they make. The teacher adapts teaching methods and the difficulty level to his or her students' capacity and interests.
3. The restructuring of knowledge is the phase in which students absorb new information in the process of assimilation or accommodation and reconstruct their own knowledge, expanding or rebuilding their cognitive formats.
4. The ability to use new knowledge in different situations comes in the application phase, i.e. companioning theory with practice and the application of knowledge and skills in new contexts.
5. The review of changes in students' knowledge as they become aware of the change that has occurred in their structures of knowledge. The teacher supports their self-evaluation, stimulates the process of reflection and analysis of activities undertaken by students, and uses the techniques of formative assessment.

The use of the constructivist model of teaching in academic education requires teachers to change their perspective of what knowledge is, what learning consists in, and in what conditions it occurs, so that they could later develop their competence in the sphere of planning, organizing and supporting students' learning. The teacher who is going to work in the constructivist paradigm has to abandon the behaviourism-based transmission model, which is strongly rooted at university, and redefine his or her role: from an "omniscient" expert – the transmitter of knowledge – to the designer of learning situations and the facilitator of the educational process, giving the central position to his or her students.

The growing body of the research is seen as the support for such theoretical assumptions. Especially the learning context and student-centred/teacher-based environment are meaningful for supporting student learning, shaping his/her approach to learning: deep or surface (Baeten et al., 2010; Baeten et al., 2013; Lindblom-Ylänne, Lonka, 2000; Prosser, Trigwell, 1999; Vermunt, 1995). The other important group of research shows the relations between the academics' perception and understanding of such processes as learning and teaching, the teaching methods they use in the classroom and the way how it influences on students' approach to learning (deep and surface) and learning outcomes (Kember, Kwan, 2000; Trigwell et al., 1999).

3. Teaching competence from the constructivist perspective

The paradigmatic shift, which moves the focus to the student's learning and involvement, requires totally different teaching competence than in the transmission model. Strong technical and instrumental approach to teaching, typical of the previous behaviourist paradigm (Kwaśnica, 1994, 2006), have given way to the philosophy of reflective practice (Gołębniak, 1998), with consideration "in action" and "on action". Competence from the constructivist point of view does not come down to a trade defined as reproducing algorithmic sets of actions used in "teaching" students, but is a category that is dynamically created, extended and developed under the influence of new teaching situations which the teacher finds himor herself. It is thus and incomplete category, which is constantly "on the move" and which requires openness to the new and readiness to become modified.

The paradigmatic transformation and the shift from transferring content to the support of learning requires not only a change of attitude towards one's competence and teacher's development, but also a change in the perception of knowledge, of what learning is and what teaching should consist in. It is an extremely challenging task, considering the fact that the traditional teaching models at university are based on the transmission model, which originates from positivist pedagogy. Hence, the proposed change consists in moving from the role of an omniscient expert to the position of the facilitator – who diagnoses the student's development potential, organizes a rich learning environment, creates educational opportunities, supports students in the process of building knowledge and values their autonomy and freedom of choice, promoting shared responsibility for the educational process (Filipiak, 2012; Fosnot, Perry, 2005; Fry et al., 2009; Klus-Stańska, 2010). Once acquired skills are not sufficient, but need modifications depending on the educational situations in which teachers find themselves. They require that teachers are sensitive to students' needs and are ready to learn for their whole life.

The above approach is reflected in the model proposed by Apelgren & Giertz (2010), who view pedagogical competence (defined as teaching competence) as "the ability and will to regularly apply to attitude, the knowledge, and the skills that promote the learning of the teacher's students in the best way. This shall be in agreement with the goals that apply, and within the framework available and presupposes continuous development of the teacher's own competence and instructional design" (p. 30). In their publication, they specify their own understanding of this notion and, what is more, they propose the evaluation criteria of teaching competence (Apelgren, Giertz, 2010; Wach, 2019): (1) an attitude that promotes learning (2) based on research and a scholarly attitude, (3) broad and current knowledge of the subject, (4) knowledge about how students learn, (5) knowledge about teaching, (6), awareness of goals and frameworks, (7) holistic view, (8) applied teaching skills (9) striving for continuous improvement, (10) leadership and organisational ability, (11) collaboration with others and external contacts.

An attitude that furthers student learning is an approach which assumes the positive motivation of students and the subjective treatment of them in the

educational process. The teacher defines his or her role and the tasks for students, as well as specifying the responsibilities of both sides. He or she does it in a friendly, open atmosphere of dialogue, informing students about the causes of and motives behind his or her actions. The teacher includes students in the educational process, negotiating the teaching goals, taking into account their prior knowledge, experience, interests and the possibility of getting engaged in the process.

Another aspect taken into account when it comes to understanding teaching competence is **the research-based and scholarly attitude,** also referred to as the scholarship of teaching and learning in the Anglo-Saxon literature. It includes the latest research findings concerning academic teaching in the educational process and takes into consideration the results of studies conducted in the field of the subject taught. This approach is also defined as the reflective and critical attitude, and, first of all, as supporting students in the development of deep and critical thinking in the evaluation of scientific phenomena.

The third of the factors is **broad and appropriate subject knowledge,** which is related to expert knowledge. This knowledge is updated, broad and consistent with the most recent research findings in a given discipline. While this aspect seems to be natural, because the academic lecturer's competence has always been based on specialist knowledge and substantive preparation for classes, the following aspects are not so obvious or are not given much weight in practice. One of them is **knowledge about how students learn** and **knowledge about teaching**. One must admit that so far the issues regarding learning mechanisms have seldom been the subject of interest of university teachers – who have not got any diploma in education. In the new approach, it is important for the teacher to have knowledge of the learning process, to know and consider various learning styles and students' individual qualities while planning classes, and to translate this knowledge into classroom methodology. This issue is strictly connected with another aspect, i.e. **knowledge about teaching**. This link is particularly significant as the methodology of work, the applied strategies and techniques of teaching and assessment should stem from the teacher's knowledge of the learning process and his or her views on it. It is essential that they be paradigmatically cohesive. The academic teacher should have knowledge and skills regarding different applicable teaching approaches and methods. He or she should also know techniques of formative assessment and be able to use the constructivist class model.

Another aspect of the evaluation of teaching competence as proposed by Apelgren & Giertz (2010) is **knowledge about educational goals and the organization**. This criterion refers to the awareness of the general goals of the scholarship of teaching and learning and the regulations concerning higher education. The teacher is able to prepare a class syllabus by following curriculum guidelines and teaching outcomes. Moreover, the syllabus also takes into consideration the labour market needs, supporting the student in vocational training. The goals and organizational framework of classes is discussed, which helps the student to

comprehend the essence of the educational process. The contemporary teacher is also required to have a **holistic view** of the whole curriculum. The teacher should not only be knowledgeable about the subject he or she teaches, but, during classes, should also refer to the content taught by other lecturers, supporting the student in integrating and supplementing knowledge, making it complete and permanent. In other words, it is essential that the teacher help the student in establishing links between various subjects, so that they would be better understood and applied in practice.

What is another important aspect of pedagogical competence are **applied teaching skills**, which focus on the practical aspect of teaching capabilities. They stress the ability to use different educational strategies, methods and techniques depending on teaching goals and students' needs, including their individual characteristics. Teachers are required to structure the content of teaching in order to support processes of assimilation and accommodation in the cognition process. They can also use formative assessment and apply diverse evaluation techniques, both of the qualitative and quantitative character. In their work, teachers spend a lot of time preparing materials for students, including academic textbooks. Their classes are highly appraised, and their students get very good marks at examinations.

According to Kwaśnica (1994, 2006), the academic teacher's competence from the constructivist perspective is never ready, sufficient or complete. Therefore, **striving for continuous improvement** has become part of the lecturer's development at every stage of his or her professional career. The teacher is a reflective practitioner in action (Schön, 1987), who constantly analyses his or her teaching skills in a deep and critical manner. It is the teacher who takes into consideration evaluation conclusions, who hones his or her skills and discusses the applied teaching methods and assessment techniques with other teachers. He or she participates in workshops and conferences on teaching in higher education institutions, sharing his or her experiences with fellow teachers. The university lecturer also publishes texts about teaching. In other words, such a teacher works for the development of the discipline he or she specializes in, but also contributes to the development of the scholarship of teaching and learning.

The last two aspects of teaching competence are interrelated to a certain extent. **Leadership and organizational ability**, as well as **collaboration with others and external contacts** refer to interpersonal relations. Considering the fact that the work of academic teachers is of a highly individual character as they usually prepare for classes, draw up methodological plans and give lectures or teach classes on their own, social interaction and co-learning are of importance from the constructivist point of view. Thus, teachers should cooperate with each other and should gather around leaders, who stimulate development and encourage others to share their experiences. By submitting various ideas and solutions for validation, being open to constructive criticism and drawing on the experience of others, teachers build the communities of practitioners, eliminating the sense of loneliness and warding of threats related to professional burnout.

4. Final conclusions

The above description of teaching competence from the angle of educational constructivism shows how much work a lot of teachers have to undertake in the process of the transformation of their role. It is not only a technological and instrumental effort connected with the methodology of the educational process, but also, more importantly, a mental change referring to the definition of notions such as: knowledge, learning and teaching. It is quite a strenuous job since it requires "separating oneself" from traditional, well-established patterns of transmission teaching present at universities for centuries. To complete this task, academics need to modify their thinking of their role as a teacher, abandon their *ex cathedra* position in favour of a partner relation, and support students in the learning process. The teacher is no longer an infallible expert, who presents the teaching material and verifies the degree to which it has been memorized, but becomes a person who joins his or her students in their individual process of building knowledge. His or her task to a large extent consists in organizing the learning environment, providing necessary materials and tools, and fulfilling advisory and supportive functions (Klus-Stańska, 2018). The teacher becomes a creative designer and facilitator of students' activity, who flexibly responds to their needs and incessantly reflects "in action" and "on action", which in practice translates into the so-called deep approach to learning discussed in the first part of this chapter. As students interact with such a teacher and are taught in the manner inspired by constructivist ideas, they become active, creative, independent people, who are curious about the world, have highly developed cognitive skills, have an unwavering belief in themselves, and see "themselves as the source of own actions, goals as the subject of their intentions and the world around them as a chance to fulfil their potential" (Sajdak, 2013, p. 417).

To conclude, it must be pointed out that the paradigmatic shift that we discussed – from teaching to the facilitation of learning – requires not only an individual effort on the part of the academic lecturer. The teacher must not be and should not be left alone on "the battlefield". This process should involve the whole community of the university, including its authorities, which set trends concerning the improvement of the quality of teaching, but also ensure the system of support. In the process of the development of the teacher's pedagogical skills, offering help rather than controlling development should be promoted (Kwaśnica, 2006; Sajdak-Burska, 2018), so it is important to create proper growth conditions at university through moulding the organizational learning culture and promoting the quality of teaching. It is thus essential that such a permanent and comprehensive system of teacher's development support be built. With this respect, the university may undertake activities which are part of its offer of educational programmes: inductive courses, followed by specialist courses aimed at the development of specific skills, methodological counselling, supportive class observations, coaching and mentoring schemes, and granting awards for the development of teaching competence. It is also necessary to promote good educational practice, organize teaching conferences, methodological seminars

etc. Grassroots initiatives, establishing practitioners' communities or informal discussions should also be encouraged. What is another group of pro-quality activities are initiatives launched from the level of organizational units, in which teachers should have a chance to develop their teaching competence on a daily basis, during meetings concerning the issues of teaching, at peer observations or taking part in classes taught by teams of teachers (Wach, 2019). These and other similar activities can support teachers in the process of transformation, in the development of teaching competence embedded in the constructivist perspective.

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Edutainment as an Innovative Form of Teaching Entrepreneurship

Introduction

As stipulated in the Council Recommendation of 22 May 2018 on key competencies for lifelong learning, entrepreneurship has been recognized as one of the key competences. As mentioned in the document, the development of key competences, their validation and the provision of competence-oriented education, training and learning should be supported by establishing good practices for better support of educational staff in their tasks and improving their education, for updating assessment and validation methods and tools, and for introducing new and innovative forms of teaching and learning (European Union, 2018). The fourth industrial revolution that we face every day has a transformative impact on industry, the economy and society as a whole, thus also having a huge impact on education. Considering the dynamic changes in society and the rapid evolution of technology, education has to change and a revolution in teaching and learning methodologies is required to adopt a type of learning outcome based on competencies, blending academic and vocational education to answer market needs (Fomunyam, 2019).

The goal of the paper is to characterise edutainment as the modern approach towards teaching entrepreneurship. The specific goal is to present the teaching approach used in the Erasmus+ INKAMS project, run in the years 2017–2019,

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which can be qualified as edutainment. Descriptive methodology has been used to present both the structure of the presented approach and its mechanisms, as well as the requirements and expected benefits.

The structure of the paper is as follows: first, entrepreneurship has been characterized as one of the key competences in life-long learning. Then, various methods of teaching entrepreneurship are presented. The next section refers to experiential and active teaching methods, putting special emphasis on edutainment and movie education. The paper ends with conclusions and recommendations for teaching entrepreneurship to future generations.

1. Entrepreneurship as a key competence

Entrepreneurship is certainly a complex concept. As noted by A. Gaweł (2007), "economists who study entrepreneurship believe that there is a lack of a comprehensive and uniform theory of entrepreneurship or even its definition, which is the result of the multithreaded issues raised in its study and the interdisciplinary nature of this phenomenon". Similarly, we are dealing with ambiguity in the field of entrepreneurial education, dealing with many synonymous terms, such as: *entrepreneurship education, entrepreneurship about education, education for enterprises, education in enterprise,* etc. (Wach, 2013, 2015). *Enterprise education* is used more in the United Kingdom, referring to the broader concept of personal development, attitudes, mindset, skills and abilities; while *entrepreneurship education,* used in the US, covers mainly setting up a venture and becoming self-employed (Lackéus, 2015). Erkkilä (2000) proposed using the term *entrepreneurial education* to cover both enterprise and entrepreneurship education. The overview of the terms and definitions used in entrepreneurial education is presented in Figure 1. As can be observed, practice-oriented teaching is not used at the higher education level, which is a huge problem, since even graduates from business schools have no practical knowledge, as well as neither the skills or competencies on how to set up and run a company.

Another important thing visible in the Figure, but also in literature (Kwiatkowski, 2018), is the change in perceiving the concept of entrepreneurship as a competence, which now refers to:

a) knowledge, i.e. a set of facts, laws, theories, principles and experiences acquired or constructed independently,

b) skills, i.e. ability / readiness to use knowledge during the implementation of various types of tasks,

c) social competences, including the ability to design and shape one's own development, as well as autonomous and responsible participation in social and professional life.
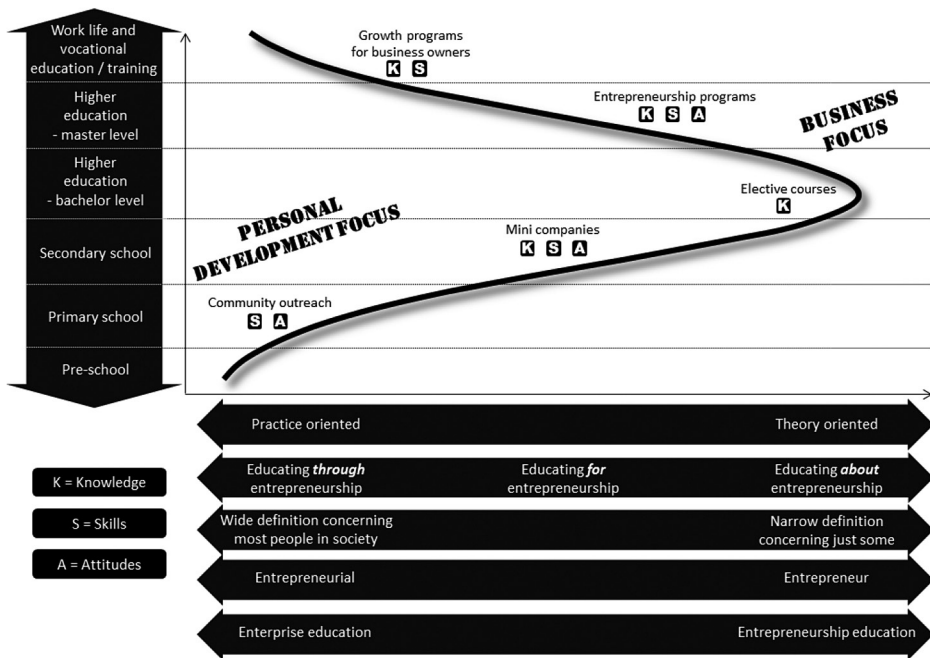
Figure 1. The overview of terms and definitions currently used in entrepreneurial education
Source: Lackéus, 2015, p. 8.

As stipulated in the Council Recommendation of 22 May 2018, the key competencies for lifelong learning, essential knowledge, skills and attributes related to this competence are as follows (European Union, 2018):
- entrepreneurship competence requires knowing that there are different contexts and opportunities for turning ideas into action in personal, social and professional activities, and an understanding of how these arise. Individuals should know and understand approaches to planning and management of projects, which include both processes and resources. They should have an understanding of economics and the social and economic opportunities and challenges facing an employer, organisation or society. They should also be aware of ethical principles and challenges of sustainable development and have self-awareness of their own strengths and weaknesses,
- entrepreneurial skills are founded on creativity, which includes imagination, strategic thinking and problem-solving, and critical and constructive reflection within evolving creative processes and innovation. They include the ability to work both as an individual and collaboratively in teams, to mobilize resources (people and things) and to sustain activity. This includes the ability to make financial decisions relating to cost and value. The ability to effectively

communicate and negotiate with others, and to cope with uncertainty, ambiguity and risk as part of making informed decisions is essential,

- an entrepreneurial attitude is characterised by a sense of initiative and agency, being pro-active, forward-looking, courageous and persevering in achieving objectives. It includes a desire to motivate others and value their ideas, having empathy and taking care of people and the world, as well as accepting responsibility taking ethical approaches throughout the process.

The second part of the definition of key competencies can be perceived as the characteristics regarding the necessary knowledge, skills and attitudes associated with a given competence. There are new references to proactivity (extremely important nowadays), the capacity for empathy, caring for other people and the world, as well as assuming responsibility and ethical attitudes. The issues of understanding economic processes, the ability to make financial decisions, effective communication and negotiating with other people, as well as dealing with uncertainty, ambiguity and risk as elements of the process of making informed decisions were also emphasized more.

The definition of entrepreneurship as a key competence has been further developed and proposed by the Thematic Working Group on entrepreneurship education, a body created by the European Commission (European Commission/EACEA/Eurydice, 2016, p. 21; Thematic Working Group, 2015).

"Entrepreneurship education is about learners developing the skills and mind-set to be able to turn creative ideas into entrepreneurial action. This is a key competence for all learners, supporting personal development, active citizenship, social inclusion and employability. It is relevant across the lifelong learning process, in all disciplines of learning and to all forms of education and training (formal, non-formal and informal) which contribute to an entrepreneurial spirit or behaviour, with or without a commercial objective".

What is emphasised in this definition is the necessity to turn creative ideas into entrepreneurial actions. Secondly, entrepreneurship is not only related to economic activities and business creation, but more widely to all areas of life and society.

Building an effective strategy for shaping entrepreneurial competences in the education system from an early age requires adopting a fairly uniform approach to entrepreneurship, as it should be borne in mind that the recipients of this definition are not so much researchers, but primarily decision-makers in the field of education; authors of core curricula, teaching programmes and textbooks; teachers; and finally the students themselves.

A very interesting approach towards entrepreneurship can be found in the publication *EntreComp: The Entrepreneurship Competence Framework* (2016), which presents a shared definition of entrepreneurship as a competence, with the aim to achieve consensus among all stakeholders and to establish a bridge between the worlds of education and work. The EntreComp Framework is made up of 3 competence areas: 'Ideas and opportunities', 'Resources' and 'Into action'. Each area includes 5 competences, which together are the building blocks of
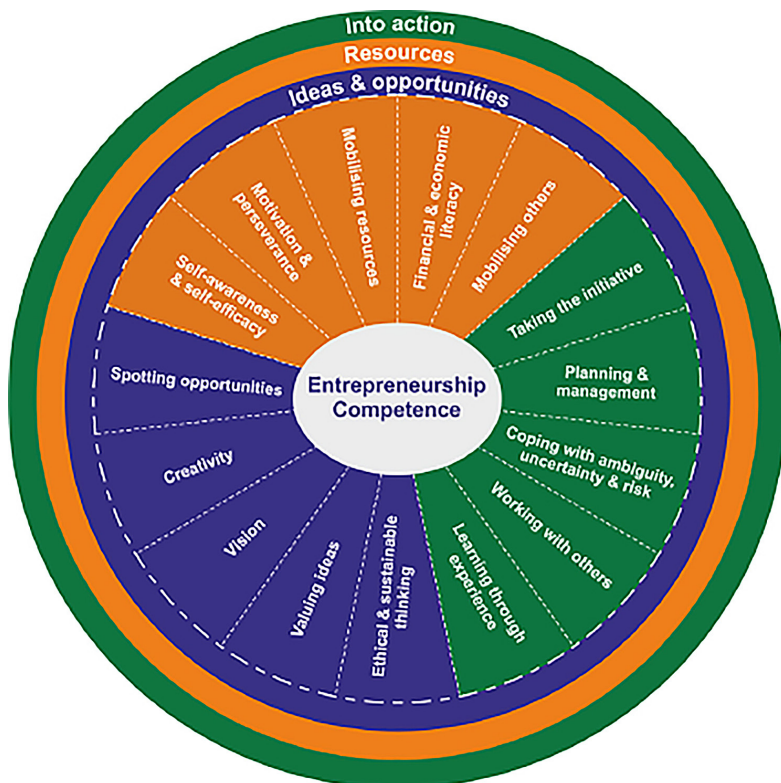
Figure 2. The EntreComp approach towards entrepreneurship as a competence
Source: Bacigalupo et al., (2016) EntreComp: The Entrepreneurship Competence Framework, JRC-Science for Policy Report, European Commission, Seville, Spain, p. 8.

entrepreneurship as a competence. The framework develops the 15 competences along an 8-level progression model. Also, it provides a comprehensive list of 442 learning outcomes, which offers inspiration and insight for those designing interventions from different educational contexts and domains of application. EntreComp defines entrepreneurship as a transversal competence, which applies to all spheres of life: from nurturing personal development, to actively participating in society, to (re)entering the job market as an employee or as a self-employed person, and also to starting up ventures (cultural, social or commercial).

Learning outcomes are statements of what a learner knows, understands and is able to do after completion of learning. These statements can be designed and used for educational planning and curriculum development or for different types of accountability, such as legal or professional accountability (for the full list of learning outcomes developed by EntreComp, see the Appendix of the publication, pages 25–37).

To keep up with the dynamics of changes in the perception of entrepreneurship in society and the economy, the academic community has to continuously and flexibly react, in particular to take an effort to adapt academic teachers to these changes.

2. Teaching entrepreneurship – different pedagogical approaches

As previously mentioned, the higher education system lacks modern, practice-based ways of teaching entrepreneurship. In most cases, the traditional theory-based teaching system dominates – a system in which various researchers, trainers and academics have been calling for change (see for example: Gibb, 1993, 2002, 2008; Kyrö, 2005; Wach, 2013, 2015; Neck et. al, 2014; Lackéus, 2015). As Lackéus (2015) points out, there is basically an argument between traditional, standardized, content focused, passive, single-based curriculum and new approaches, like progressive education (Reese, 2001; Löbler, 2006; Hayes, 2006), experiential learning (Kolb, 1984; Wach-Kąkolewicz, 2016), situated learning (Lave & Wenger, 1991), service-learning (Meyers, 1999), problem / project-based learning (Helle et al., 2006), adult learning (Jarvis, 2006), cognitive apprenticeship (Collins, 2006) and social constructivist learning (Steffe, Gale, 1995). The most common features of these all approaches have been summarised below:

- progressive education: emphasis put on learning by doing; integrated curriculum focused on thematic units (here entrepreneurship); strong emphasis on problem solving, critical thinking; team work, development of social skills; collaborative learning projects; personalized learning; blended learning; emphasis on lifelong learning and social skills; tutor works not in the position of authoritarian, but rather as facilitator of the discussion or a group leader; movement for physical and mental health is recommended to create a sound body and mind,
- experiential learning: refers to the experience of the student or trainee; the student has to be actively involved in the experience and must be able to reflect on that experience, then use analytical skills to conceptualise the experience and finally make decision how to use new ideas gained from the experience – these four stages are the key elements of the Kolb learning cycle; people by their nature prefer a certain autonomous learning style affected by different factors and go through three stages of personal development, which are: acquisition (birth to adolescence) – acquiring basic abilities and cognitive structures; specialisation (schooling, early work and personal experiences of adulthood) – development of a particular specialised learning style affected and influenced by their own background; and finally, integration (from mid-career on) – expressing a non-dominant learning style in all life domains,
- situated learning: a model of learning in a community or practice – in this sense, the classroom is not determined and it can be a very random place;

trainees or students become a part of the community through the learning process; they understand and experience the world, as well as knowledge, through the constant interactions by which they reconstruct their identity and evolve the forms of their membership in the community as their relationships change. In situated learning, no importance is given to the retention of the content; learning begins with people trying to solve problems; when learning is problem-based, people explore real-life situations to find answers, or to solve the problems,

- service learning: community oriented – combines learning objectives with community service in order to provide a pragmatic, progressive learning experience while meeting societal needs; it covers the following hands-on learning methods: volunteerism, community service and internship; trainees get tasks combined with delivering value for society, which enables them to practically use the theoretical knowledge acquired during formal education; the lessons learned from these situations are discussed during the lesson, creating a closed circle of school (theory) – practice (experience) – school (combining experience with theory),

- problem-based learning: students learn about a subject through the experience of solving an open-ended problem, usually in small groups with a tutor to facilitate discussion; students set their own goals and conduct their own research before coming to the group by individually searching for materials related to the topic; every person in the group has a role to play; fosters active learning, and also retention and development of lifelong learning skills; it encourages self-directed learning by confronting students with problems and stimulates the development of deep learning; it encourages students to activate prior knowledge and build on existing conceptual knowledge frameworks,

- adult learning: allows the use of prior, accumulated knowledge as well as work experience and adds to the learning experience; orientation to learning is problem-centred rather than subject-centred; motivation to learn is internal; it improves the social atmosphere and order,

- cognitive apprenticeship: the learner, while using cognitive tools and led by the teacher, can observe, enact, and practice implicit knowledge, thus achieving a successive approximation of mature practice; enculturates learners into authentic practices through activity and social interaction; the model consists of 6 stages: modelling (after observation of the teacher learners can model the desired performance); coaching (hints, feedback, modelling, reminders are provided); conceptual scaffolding (teachers support the learner in accomplishing tasks); articulation (covers any method of getting students to articulate their knowledge, reasoning, or problem-solving processes); reflection (the learner reflects on the problem solving task while comparing their own way with the expert one); and finally exploration (students are encouraged to explore new ways in which knowledge or skill can be used),

- constructivist learning: learners are encouraged to use knowledge derived from their own background in the educational process; emphasizes the impor-

tance of the learner being actively involved in the learning process; learners should learn to discover principles, concepts and facts for themselves, hence the importance of encouraging guesswork and intuitive thinking in learners; learners gain meanings through the interactions with each other and with the environment they live in; they gain additional experience due to interactions with the group and community.

The presented approaches are more individualised, active, process based, collaborative, experiential and multidisciplinary. They require much greater student involvement, but also, above all, proper teacher preparation. They force you to go beyond patterns and open yourself to new experiences, far beyond the comfort zone of theoretical considerations and models. When using these approaches in entrepreneurship education, it would be necessary to implement activities such as: apprenticeships in companies, participation in real project teams, establishing and conducting real companies, meetings and discussions with business practitioners, finding and solving real economic problems in the form of case studies, discussions and giving opinions on legal acts, solutions and regulations introduced by the government; meetings and discussions with local communities, participation in conferences and business symposia, competitions for practical solutions to economic problems, writing business plans, feasibility studies, etc. There is a real need for more interactive learning approaches in which the teacher acts as a moderator rather than a lecturer. An essential element in building entrepreneurial skills is crossing the boundaries between disciplines and multidisciplinary cooperation. Because academic teachers often lack practical preparation, the solution may be the involvement of real entrepreneurs in teaching entrepreneurship. Unfortunately, there are very few cases where business people are truly engaged in teaching. European higher education institutions are not sufficiently involved and effective in working with graduates who are successful in business ventures and who could bring knowledge and funds. Companies unwillingly accept students for an apprenticeship, since they have no capacity to take care of apprentices and the value added from their presence is usually low. The mobility of teachers and academic scientists between higher education and business institutions is also generally low and is not actively promoted, sometimes even discouraging such activity, and even prohibiting it. At the same time, going outside the school walls and changing the environment are limited by legal regulations or lecturer's discomfort. Another obstacle is certainly the focus of academic teachers on research that is the basis for professional promotion. The implementation of new solutions, going beyond the usual teaching patterns, the search for innovative solutions is too often seen as a "waste of time".

3. Edutainment as a modern way of teaching entrepreneurship

As the world is dealing with a generational change at universities, perception and cognitive abilities change. New generations bring to the classroom a new hierarchy of values and their own style of work, beliefs, as well as new needs and opportunities. Digital technology has a powerful impact on how the brain shapes and functions. Under the influence of electronic media and new forms of virtual socialization, new ways of brain activity and new skills are emerging. Students are not willing to read paper books as much as before. They expect a change in the form of communication and adapt educational content to their perception. The answer may be edutainment being a form that comes from merging education and entertainment. It is a form of entertainment designed to educate and train, but also to amuse. The main purpose of edutainment is to promote student learning through exploration, interactivity, community experience, team work, trial and error, and repetition in such a way that students get so lost in the fun that they do not realize they are learning at the same time. The digital era, portrayed as the 3rd and 4th industrial revolutions, and the internet have affected the traditional educational environments and enabled implementation of a large variety of edutainment types (video, social media, virtual games and simulators) in the learning process, thus radically transforming the educational paradigm by strengthening the relationship between learning, new media and play (Zorica, 2014). The educational process has become more challenging and much more complex, requiring completely new strategies and approaches in the classroom, and also much higher engagement from academic staff. The popularity of various web tools or visuals, like mind maps, pins, social media, podcasts, and Youtube has enlarged the availability of the educational toolbox, while at the same time changing the way people acquire knowledge and perceive the construction of the educational process. Turning to education for fun and equipping it with internet tools is a trend which dominates many aspects of our lives. A new form is given to the message, which is set in a new virtual environment, a "virtual edutainment environment" (VEE), where interaction with the consumer takes place. A VEE is an environment in which one or more consumers experience the recreated message. This message is delivered in real time. In this context, users may interact with each other, but what is essential is that the information be elaborated in one complex way, utilizing multimedia tools in order to affect the consumer's senses. Hence, consumers are immersed in a deep experience of edutainment (Addis, 2005). Edutainment is an evolving alternative to traditional educational methods. It can be organized in different ways. White (2003, cited in Harnani & Nor Zuhaidah, 2010), categorized edutainment in four different groups, which are:
- location-based edutainment, which can be divided into two categories: interactive and participatory, where children can play and participate in games; and non-interactive and spectator, where children can just be seated and explore (movies, science shows, museums and zoos),

- edutainment on purpose in which content consists of informal education, which is to improve learners' life control; and skills education which is to give experiences, like simulations,
- edutainment by target group, which includes motivation-oriented (learners who have the same interest), and age-oriented (learners who have the same age),
- edutainment by type of media: edutainment on TV – including comedy drama, historical drama, comedy sketches, skill learning and travel programmes; computer edutainment – including adventure, quiz, role-playing, strategy and simulation game types, as well as experimental drama; edutainment on the Internet – including tele-teaching and tele-learning systems, and web-based educational systems; and interactive television. These types of edutainment use the advent of digital television to provide interactivity via software and hardware and connect with other telecommunication systems.

Zorica (2014) suggests a further division in this typology by dividing edutainment into four categories: video, web 2.0, games and virtual worlds; seeing advantages from using these kind of tools as development of generic skills, enabling education to be based on social constructivist theory, influencing student motivation and bridging the gap between theory and practice by providing opportunities for gathering experience, sharing knowledge and providing an authentic context along with activities for learning by doing. Aksakal (2015) points out the following characteristics of edutainment:

- entertainment and interaction, which is thought to be missing in education, attracting learners' attention due to being gamified,
- combining education and entertainment and increasing learners' excitement and enthusiasm to teach them subjects and information that is hard to learn,
- acquiring learning more easily by making the subjects and information that will be taught more enjoyable,
- attracting learners' attention and gaining the permanence of learning by the rousing of learners' feelings,
- making the internalization of difficult subjects easy using methods of simulation or graphs and visual methods, like in real life,
- teaching how to use resources and methods regarding the value of life by combining educational aims and measurement,
- teaching how individuals in learning environments apply their own knowledge,
- demonstrating how individuals understand or internalize what they learn,
- used in order to teach to learners combining what they perceive or evaluating what they learn,
- finally, it provides learners with a good time in the process of creating and experiencing.

Edutainment is an attractive method of teaching, since it encourages personalized learning, enhances creativity and visualisation, transforms a conventional

classroom into a smart classroom, improves interactive and collaborative teaching and learning methods, promotes a digital culture and provides technological tools for educators. Thinking about edutainment in teaching entrepreneurship should relate to using virtual reality in the educational process, like for example, business simulations, strategic games, using all kinds of interactive media (videos, Youtube transmissions, podcasts), video case studies, providing chatrooms and teleconferences with real entrepreneurs, producing films and webinars. Edutainment can also serve as a tool for building entrepreneurial identity. As Schneider (2019, p. 10) points out, "the opportunity and necessity to interact with other avatars and stakeholders in a virtual environment enables a person to acquire information and support, social validation through social standards as reference points for their aspects of the self, and to identify with other successful entrepreneurs. Forming a new entrepreneurial virtual environment by a constellation of cherished objects, spaces and characters also furthers the process of self-reflectivity and significance making as an innovator". The development of role-playing in society, as well as in working groups through relationships, social validation and comparison, plays a crucial role in education and also being very important for the self-development of every entrepreneur.

4. Method of teaching entrepreneurship developed by CONFORM S.c.a.r.l and tested by the INKAMS Partnership[1]

The INKAMS project aims were to realize, pilot, disseminate and systematize a new University-based learning programme focused on International Sales and Key Account Management (KAM). This was supposed to be an integrated and permanent European framework which, through changing the methodological paradigm, would enable the development of International Sales and Key Account Management skills, with innovative, interactive modes that are adaptable to business and individual needs. The expected results of this project were:
- the design and application of a new university learning curriculum, based on international sales and KAM,
- digital integration in learning, facilitating access to a variety of OERs, developed with visual thinking techniques,
- the adoption of a European model of interactive university teaching that can help methods, tools, solutions and learning situations to evolve and enhance the level of students' management culture and the valorisation of new talents for International Sales and KAM,

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[1] INKAMS – International Key Account Management and Sales (2017-1-IT02-KA203-036707), project cofounded by the Erasmus+ Programme of the European Union within a Consortium led by Università Politecnica delle Marche in Italy in years 2017–2019 (prof. Silvio Cardinali as project manager). Poznań University of Economics and Business was a member of the Consortium.

- the building of stable links between universities, businesses and territories, and realizing systems of relationships where sharing of knowledge, experiences and technologies guarantees value co-creation and the construction of a European-wide relational capital,
- developing forms of social/collaborative learning opportunities facilitated by the creation of the CLIMA learning environment to develop skills and manage sales processes and increase SME sales volumes,
- creating, through online social networking spaces, networking opportunities to aggregate ideas, experiences and skills,
- the involvement of a group of 85 students in the testing of a training course based on the following three dimensions:
- cognitive (learning by thinking),
- operative (learning by doing),
- behavioural (learning by acting).

From the focus perspective of this paper, the most important was introducing a new learning approach, developed by CONFORM S.c.a.r.l and tested by the INAKMS Partnership. The methodology has been based on the three dimensions mentioned above.

Learning by thinking

This element referred to the traditional, cognitive aspect of the learning process. Partners prepared Open Educational Resources, which were created while bearing in mind:
- pleasure in use, taking care of the graphical interface of the Learning Objects and balancing the stimuli affecting the different sensory channels,
- experiential approach, with the representation of typical situations of organizational behaviour, in order to lead the learner to reflect,
- multiplicity of solutions adopted, integrating different types of multimedia resources (2D/3D animations, audio/video tutorials, e-books, assessment tests).

Materials were prepared in the form of a presentation, with the lecturer performing in a virtual office with subtitles in different languages, associated by additional interactive materials (PDFs, videos). Students were supposed to login to the platform, watch the materials and acquire skills and abilities by completing the test.

Learning by doing

This part of the learning process referred to the implementation of a cognitive analysis aiming to understand the ways and means by which SMEs can be guided

in defining their strategic routes to improve sales processes, based on the current and prospective development potential of companies that is not fully exploited, in terms of commercial performance. A questionnaire was prepared to enable the audit of the company in the following areas:
- company technological and commercial know-how,
- communication and relationships with key customers,
- reference market and sales network,
- articulation of commercial processes,
- methods and criteria used,
- income and competitive performance,
- monitoring and reporting systems.

This audit was a foundation for a further check-up. Students received the results of the survey; they were supposed to analyse them under the supervision of the lecturer or tutor from the chamber of commerce and then meet with the company representative for a further deep interview. After those activities, students were supposed to prepare a final report. The aim of this part of the learning process was to allow the beneficiaries to strengthen their possession and exercise of the distinctive skills of sales and KAM processes; thus gaining greater awareness of the specialization they have achieved, enabling them to carry out a highly-skilled professional search/action activity divided into the following steps:
- definition of intervention priorities to align change with sales development business strategies,
- definition of the types of commercial and competitive development projects on foreign markets that can be activated and position them in key customer matrix / contact channels and technologies,
- development of a feasibility plan indicating the innovative commitment required and correlated resource requirements,
- identification of the availability of existing resources and skills to support the process of sales innovation and strategic management of key clients,
- identification and sharing of sales and competitive development projects to be implemented with relative allocation of resources,
- drafting of the project implementation plan with an indication of activities, outputs, key skills and realization times.

In particular, analysis conducted through desk research and company check-ups will help students to gather useful information to map the strengths, weaknesses, threats, and opportunities to seize to understand how to guide SMEs in defining strategic routes to:
- define strategies by setting objectives and guidelines,
- map the competitive starting point,
- use different segmentation criteria,
- conduct a competitor analysis,
- identify critical success factors,
- define one's value proposition,

- redesign the business model,
- choose key customer management strategies and short- and medium-term goals,
- apply strategic positioning by defining times and actions,
- make the sales plan a central and shared reference point.
- translate the strategy into a sales plan that contains specific actions regarding top clients.

Learning by acting – movie education[2]

The company check-up was only a preparatory session to create educational short films, which enabled seeing the beneficiaries engaged in drafting the scripts to be interpreted to stage the typical situations of commercial processes and the relationships with strategic clients.

The realization of short educational films was based on the edutainment model, called "movie education", as a result of a project that CONFORM S.c.a.r.l (Partner of the INKAMS project) developed in the Research & Development program of the Italian Ministry of Economic Development. One can find more information on the company's websites dedicated to that model, for example at https://conform.it/movie-education/, or watch an interview with the company's CEO, Alfonso Santaniello (https://vimeo.com/373095316), which describes the model in its characteristic aspects. Thanks also to the support of images taken from several short film / web series, realized in various projects at national and international level. An application of movie education to entrepreneurship can be seen in the 4 episodes of the web series "5TO Succeed" (https://5tosucceed. conform.it/en/). The "5TO Succeed" interactive training series combines entertainment and learning, with the aim of developing and consolidating economic-financial and entrepreneurial skills, together with the negotiating, relational, decision-making and creative qualities that an aspiring entrepreneur must mobilize in the processes of business creation and management.

The Web Series, exploiting the potential of new digital technologies, allows users to interact with the film while watching the 4 episodes, involving them and directing them to consult the different in-depth materials provided at various points in history, to expand and consolidate knowledge, as well as the skills and behaviours that characterize entrepreneurial skills in an integrated way. Four iconic, fun and educational episodes tell the story of a group of young people struggling with the start of a new business initiative.

This pedagogical approach, combines didactics and entertainment through movie education methodology, to convey know-how in film mode and to evolve learning methods, so as to:
- foster experience-based learning,

- combine emotional and cognitive aspects,
- stimulate interest and motivation to learn,
- allow one to capture the virtuous behaviours to be emulated and the mistakes to avoid,
- transmit meaningful messages with a strong educational impact, structured according to a cause effect logic, where a story generates other situations, according to the intertext mechanism, promoting networked knowledge (connective knowledge) with dialogic comparison, critical thinking and a search for new interpretations.
- exploiting the potential of new digital technologies, which allows for directing the student towards technical insights, which can be accessed through the use of interactive tools.

Over the years, the experiments of the Movie Education Model have been different and in different learning contexts, nationally and internationally. This guaranteed CONFORM S.c.a.r.l. solutions that are state aggregated in two distinct areas, that of the Short Movie Laboratory and that of Audiovisual Production.

With the "Short Films Laboratory", the training objective is the state of the students' ability to:

- stage the theoretical notions learned during the courses, through their direct participation in the writing of a script for the production of a video capable of making the acquisition of know-how by other beneficiaries lighter;
- experiment and acquire video editing techniques;
- put into practice the examples related to the topics covered, through simulations linked to the interpretation of specific professional roles.

With the Audiovisual Productions, high-value short films, web series, films or docufilms have been established with the interest of involving and attracting the viewer, who is at the same time also a student, through a learning model capable of contaminating other characteristic elements of a entertainment product with the educational, thus allowing it to take advantage of different training contents.

This happens thanks to the presence within the filmic moments of:

- keywords, which, written in the screenplay, are interpreted by the actors to make the spectator more impressed,
- characters and situations that are staged using the use of the film plot to show key events, and are useful for educating the student in the correct way to act in specific moments and contexts.

Through the interactivity connected to the "keywords" recited by the actors, the viewer has the opportunity to access in-depth sections, where teaching materials of various formats (documents, videos, audio, images or links to external sites and anything else is possible) will contribute to the deepening of the contents and the treated themes, therefore making his learning more complete and more performable.

The update of the CONFORM S.c.a.r.l. Movie Education model represented a fundamentally important element for the INKAMS project, from the definition of the curriculum to its experimentation in the field, with teachers and trainers of the partnerships involved in learning mobility to understand and acquire the methodological bases of Movie Education, and with the students beneficiaries of the Improvement Laboratory of Storytelling.

The operating framework has been divided into the following didactic, inter-dependent and consequential steps, which have made it possible to standardize the approach in all the countries of the partnership. The steps are to (Figure 3):
• present the methodology of film education and storytelling,
• provide the Improvement Laboratory of Storytelling,
• support learners in storyboard development,
• assist them in shooting and editing,
• evaluate the functions of the product they have created.
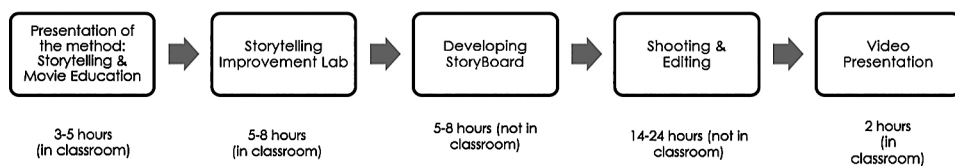
Figure 3. The operating framework
Source: CONFORM's materials.

For each of the steps, an average duration was suggested for carrying out the planned activities.

The Improvement Laboratory of Storytelling sessions, provided by the trainers following mobility in the partnership countries, allowed the evaluation of the didactic effectiveness of movie education, testing its adaptability to the different territorial contexts of the partnership and to the different cultural sensitivities of the beneficiaries. This aspect is of significant value for implementing a strategy for the dissemination and dissemination of results that can favour its transfer and replicability.

Students from Italy, Poland, Bulgaria, Spain, and Slovenia benefited from the workshops, making themselves the authors and actors in the realization of some shorts on the key themes of the international sales process.

The students, divided into groups of 6–8 people, have (Figure 4):
• defined the idea,
• chosen the theme on which to base the story, based on the 12 OERs used in the e-learning mode,
• used the equipment provided by the teachers,
• defined the roles of each member of the group,
• described the main steps of the story (behaviour, conflict, change, location, etc.),
• drafted a synopsis.

Figure 4. The movie education learning process
Source: CONFORM's materials.

Once the idea was defined, the students drafted the storyboard, graphically representing the story, before writing the script and filming and editing the product.

Altogether, in the program in Poland, 50 students took part, recording 9 films (also 20 Students in Slovenia, 60 in Italy, 63 in Spain and 18 in Bulgaria). Students were trained in movie education, especially in storyt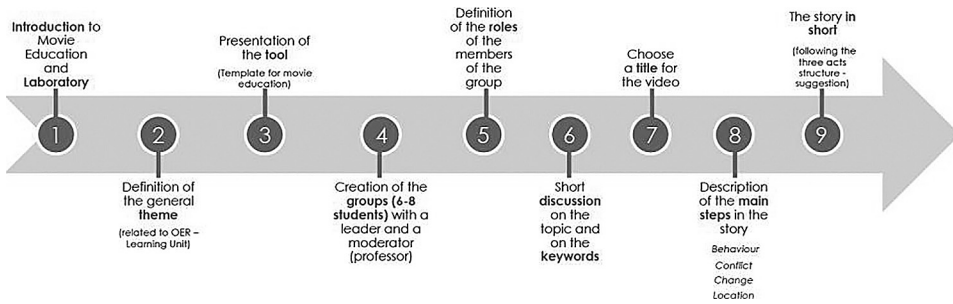elling and script writing. Some examples were also showed to students about how to record movies; additionally, further materials were placed on Moodle to enhance the process. Students were informed that they were supposed to refer to materials placed on the e-learning platform in their scripts. Choosing the language used in the movie was optional for all groups, but English was appreciated. Students were informed about the possibility of protecting their own image and they generally claimed their right to it. According to the disclosure agreement, 8 out of 9 groups refused to make the movie public.

According to the first impressions of the teacher, students were very angry with introducing this teaching tool. This was completely new to them; they did not feel comfortable in the new reality. They also barely perceived the process as didactically useful. They did not see any value in the process, and perceived it as long, tedious and monotonous, in a very busy period of their life. They did not express their opinions publicly, but in the lobby, and less formal conversations; they complained about all the requirements. However, once the process had been completed, their reactions were different and opposite. They found a kind of joy, which was visible in the recorded clips. Considering the pros and cons of this learning activity one could say the following (see Table 1).

The whole learning process was introduced into the classroom for the first time. As it was a completely new process, a number of errors and shortcomings were unavoidable. However, the positive effects seem to indicate that it is an attractive and didactically effective way of encouraging entrepreneurship education. Students devote less time to studying theoretical issues, treating them only as a necessary background to structure problems and build the basis for the conceptualization of observed experiences. At the same time, by working and solving real economic issues, they learn practical things, and while preparing films, they play and develop cooperation and teamwork skills. In this way, they fit more into

Table 1. Basic pros and cons of movie education

Pros (advantages)	Cons (disadvantages)
Engaging, addictive process, that brings joy.	Limited technical resources (necessity to train not only about storytelling, but also technical aspects of recording).
Greater assimilation of knowledge due to direct and personal involvement.	Very hard to tell a good story in a few minute long film.
Greater opportunity to cooperate with the group.	To write a good story, you need much more experience.

Source: Author's own.

experiential learning and problem-based learning as they examine a real company problem; then conceptualize it on the basis of the background and initial knowledge they possess; and finally try to test those concepts while proposing solutions that can be implemented in practice. And all this by way of combining knowledge and entertainment.

5. Final remarks

The entrepreneurship concept is multidimensional and very broad. Moreover, it is subject to constant and rapid changes. Entrepreneurship education in higher education seems to not follow the rapid changes in the socio-economic environment. If one adds to this all the technological and internet transformations visible within the 3rd and 4th industrial revolutions, the delay in adjusting to reality is even more apparent. Traditional learning processes are not sufficient for educating future entrepreneurs, and the call for change is visible not only in the literature but from the direct beneficiaries – students and trainees. Students require completely new practice-based approaches inclined more towards contact with real businesses. Change is required and one of the possible ways is introducing completely new approaches on the basis of modern pedagogical approaches, especially capturing elements of edutainment, which is close to the heart of the newer generations coming to the universities. The advantage of edutainment is its high efficiency in the transfer of knowledge and skills. Compared to the traditional approaches, it is a much more intuitive, collaborative, process-based and visually attractive. The use of this tool in the education process accelerates and consolidates the desired (or created) social attitudes. Minds are more open to educational messages when recipients do not realize that they are actually learning. Integrating all elements of the learning process – cognitive, operational and participating (movie education) – may bring about a synergy effect, which simultaneously bridges traditional and modern approaches and connects it into one educational strategy. Although experience of this strategy of teaching entrepreneurship seems to be promising, it requires further observations, and first of all, methodologically designed research heading towards comprehensive evaluation and assessment.

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The Role of University in the Development of Entrepreneurial Intentions of Younger Generations: Selected Models[1]

Introduction

The role of higher education in shaping entrepreneurial attitudes and education in the field of entrepreneurship faces modern economic challenges, and the links between education and entrepreneurship since many decades remain the subject of scientific disputes (Daszkiewicz, 2013; Głodowska, 2017; Wach, 2014a), but also civilizational and social disputes (Głodowska, 2018), especially in the context of globalization and Europeanization of higher education (Wach, 2014a). We should shape entrepreneurial attitudes not only through family environment (Wach, 2015b) but primarily through the Polish educational system ("Polish school") already from the first year of early childhood education, in all forms, later developed at all levels of education: primary (Huber et al., 2014), secondary (Rachwał et al., 2016), and higher (Wach, 2019b). The entrepreneurial intentions of different societies – both local and global (Kurczewska, 2013), or professional

perspective (Marona, Głuszak, 2014; Pera, 2018) – are an interesting and often pursued research area. Especially the entrepreneurial intentions and attitudes of the younger generation are an intensely explored research area (Rachwał, Wach, 2016; Wach, Wojciechowski, 2016; Jiménez-Moreno, Wach, 2014).

This study presents the results of a literature query on the role of universities and higher education in the creation, shaping, and maintenance of entrepreneurial intentions among the younger generations, especially among students.

1. Entrepreneurship at the higher education level

The identification of conditions and factors that may influence the creation and formation of entrepreneurial intentions seeks such elements that one could somehow shape to stimulate entrepreneurship. This approach agrees with the general assumption that entrepreneurship generates positive effects for individuals and societies, which explains the need to stimulate entrepreneurial intentions that lead to the development of entrepreneurship. Among factors that determine entrepreneurial intentions, scholars most often mention education in its broadest understanding (Wach, 2016). According to Wach (2013), entrepreneurship education plays a key role in building an entrepreneurial society and economy.

The world's first academic course in entrepreneurship began in 1947 at Harvard Business School, and in 1953 Peter Drucker initiated the first courses in entrepreneurship and innovation at the New York University. At the beginning of the new millennium, it was already possible to choose entrepreneurship as a field of study at 600 universities around the world or as a major at 400 universities (Wach, 2013; Kuratko, 2009). The literature shows a diverse approach to the integration of education and entrepreneurship, both at a lexical and contextual level (Wach, 2013, 2014b). Jamieson (1984) introduces three categories of a framework for education and entrepreneurship, distinguishing between education about enterprises, education for enterprises, and education in enterprises. Education about enterprises provides theoretical knowledge about establishing and running their own business. Education for enterprises develops the skills needed by entrepreneurs to run their own business, mainly managerial skills. Education in enterprises concerns already operating entrepreneurs and helps them to develop further business skills related to the development of their business (Raposo, do Paço, 2011). Noteworthy, this is one of the first typologies, although entrepreneurship education is treated here mainly as economic or business education. Guzmán & Liñán (2005) distinguish four categories of entrepreneurship education: (1) education in the field of promoting own business activity as an alternative career path, (2) education in the field of launching a business activity in the start-up phase, (3) supplementary education aimed at mature entrepreneurs, (4) education in the field of entrepreneurial dynamism that promotes entrepreneurial attitudes: creativity, innovation, ingenuity, personal initiative in the workplace and in own business (Wach, 2013). In turn, the Quality Assurance Agency

for Higher Education (QAA, 2012) identifies *enterprises education* as a process of equipping students (or graduates) with a wealth of tools to generate ideas and shape skills necessary to implement these ideas. On the other hand, *entrepreneurship education* seeks to equip students with the knowledge, skills, and attitudes required in the context of creating a new enterprise or business. What is interesting in this idea is the holistic approach to the teaching process: *enterprise and entrepreneurship education* (EEE).

Wach's (2013, 2019a) model of entrepreneurship education process identifies the direct impact of knowledge, skills, and attitudes acquired through education on entrepreneurial intentions as an impulse to trigger entrepreneurship (see Figure 1). We may explain this with Becker's human capital theory (1975) and entrepreneurial self-efficacy (Chen et al., 1998).

We must make several important assumptions to show further detail of the model above. Understood as skills and knowledge acquired during education or workplace training, human capital may be seen as a determinant of entrepreneurial intentions (Unger et al., 2011; Davidsson, Honig, 2003). Investments in human capital and individual performance may correlate positively if measurable effects of this impact are visible in the form of appropriate attitudes of, say, students who then undertake new ventures and establish companies. Moreover, according to Wilson et al., (2007), there is a link between entrepreneurship education and self-efficacy, which may increase entrepreneurial intentions. This refers to one's personal belief in one's own ability to play different roles and
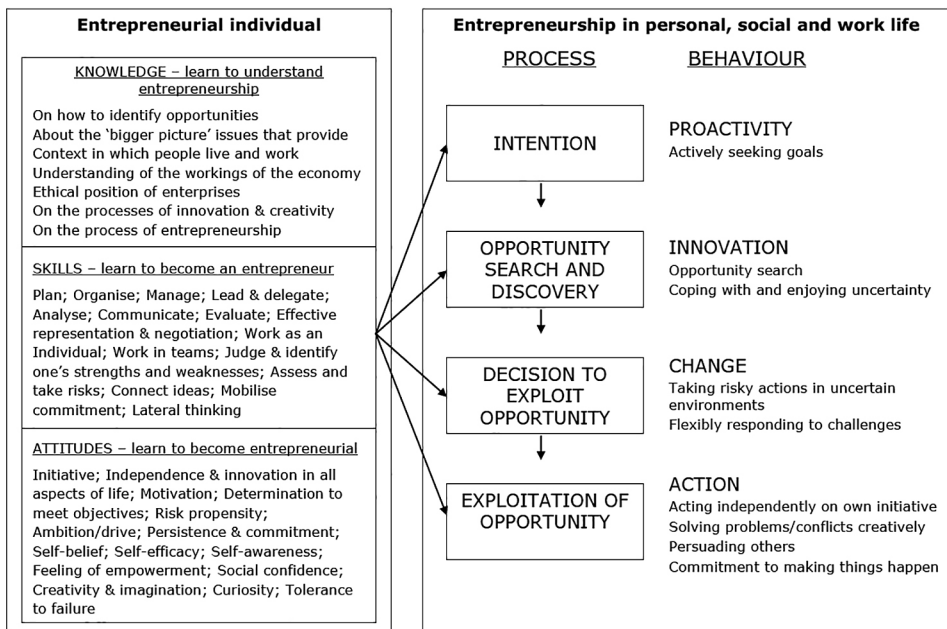

Figure 1. Elements in entrepreneurship education
Source: Gibcus, de Kok, Snijders, Smit and van der Linden (2012).

conduct various tasks related to entrepreneurship. Entrepreneurship education can lead to enhanced entrepreneurial efficiency. Bandura (1982) lists four factors that contribute to this: (1) enactive self-control, (2) substitute experience, (3) verbal persuasion, and (4) emotional stimulation. The concept of self-efficacy was part of Bird's model (1988) of entrepreneurial intentions, especially its version modified by Boydand & Vozikis (1994). Davidsson's model (1995) suggests that entrepreneurial intentions may derive from a belief that results from certain general attitudes and domain attitudes. The former refers to change, competition, and autonomy, while the latter to social contribution or know-how. Individual beliefs are conditioned by personal factors such as gender, age, education, and experience.

Noteworthy, modern university education requires the search for always newer forms of transfer and communication between lecturers and students, not only as traditional case studies (Gaweł, 2012) but also strategic games (Gaweł, 2014), e-learning, m-learning, MOOCs (Wach, 2018), or new forms and methods of education such as coaching and tutoring (Kwaśny, Żur, 2018). Moreover, modern education requires teachers to focus on entrepreneurial attitudes (Bigos, 2018; Maciejewski, 2018; Michalik, 2016) while maintaining a high quality of education adapted to the requirements of the job market (Pera, 2018). Let us emphasise that education does not end with graduation but continues throughout one's life (Hajdukiewicz, 2018; Najda-Janoszka, Wach, 2008).

2. The essence and determinants of entrepreneurial intentions: literature review

Entrepreneurial intentions are most often associated with the entrepreneurial process. They define the desire to own a business or to establish one (Crant, 1996; Krueger et al., 2000; Gaweł, Pietrzykowski, 2015). Having entrepreneurial intentions is an essential determinant of the existence of an entrepreneurial process, which begins with the consideration of initiating own company and ends when an already operating company (Gaweł, Pietrzykowski, 2015). Low & MacMillan (1988) argue that intention-based models, along with theory- and process-based approach, are a direct analysis of entrepreneurial behaviour. They demonstrate how decisions about a new venture happen before the verification of the practical capabilities of individuals. Etymologically, *intention*, from the Latin "*intentio,*" denotes a conscious mental process that boils down to an active attitude of the mind towards a problem or situation. This is a form of desire that transforms into potential conscious action (Shook et al., 2003). According to Bird (1988), intentions are a state of consciousness that leads to a specific goal or means of achieving it. Kurczewska (2013) defines intentions as a property of the mind: "a directed purpose, the awareness of an individual that results from his or her thoughts" (Kurczewska, 2013, p. 133). Scholars define the term "entrepreneurial

intentions" from the above definitions by referring them to entrepreneurship, entrepreneurial behaviour, and entrepreneurial process. Krueger (1993) defines entrepreneurial intentions as a tendency to have a decisive potential to initiate one's own business in the future. Similarly, Thompson (2009, p. 676) states that it is a "self-acknowledged conviction by a person that they intend to set up a new business venture and consciously plan to do so at some point in the future."

Therefore, scholars mostly treat entrepreneurial intentions as a conscious state of mind that precedes action and directs attention to entrepreneurial behaviours. These behaviours most often mean establishing a new company and identifying oneself with being an entrepreneur (Moriano et al., 2012). Kocoğlu & Hassan (2013) define entrepreneurial intentions by focusing on the factors that shape them. There is no consensus in the literature on entrepreneurial intentions and the factors that determine them. The three fundamental theories that date back to the 1980s and 1990s dominate the field, and most consider them to be the most relevant (Uygun, Kasimoglu, 2013; Gaweł, Pietrzykowski, 2015, Wach, Wojciechowski, 2016; Rai et al., 2017):
1) Theory of Planned Behaviour by Ajzen (1991; TPB);
2) Entrepreneurial Event Model by Shapero & Sokol (1982; EEM); developed by Krueger (1993);
3) Theory of Ideas Implementing by Bird (1988; TII; also known as Contexts of Entrepreneurial Intentionality, CEI); revised by Boyd & Vozikis (1994).

2.1. The Ajzen Model

According to the theory of planned behaviour, behavioural intentions depend on three antecedents (see Figure 2): (1) the attitude we have towards this behaviour, (2) the perceived behavioural control, that is, its feasibility, and (3) the social norms that shape the perception of such behaviour. The first two factors – the attitude towards the behaviour and the perception of social norms in relation to this behaviour – reflect a purposefulness and desire for the occurrence of such behaviour. On the other hand, the third factor reflects the personal perception of the possibility of controlling a behaviour and is identical with self-efficacy (Wach, 2015a; Wach, Wojciechowski, 2016). What follows is that human behaviour is
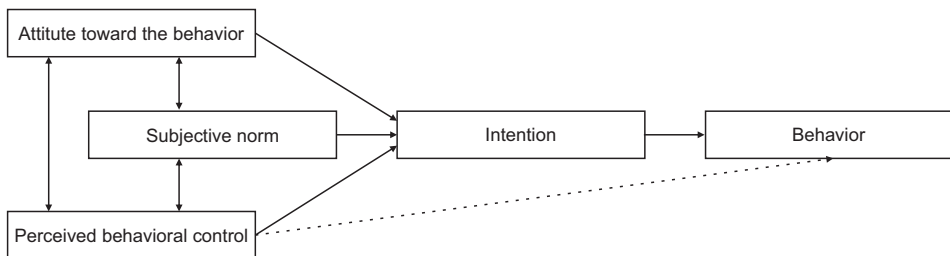

Figure 2. Ajzen's Model of Entrepreneurial Intentions
Source: Adopted from Ajzen, 1991.

rational, planned, and controlled. Before these behaviours occur, one should consider their possible effects. TPB was developed on the basis of previous concepts of rational behaviour. Kurczewska (2013) indicates that it is the result of the evolution of Fishbein's, Ajzen & Fishbein's models (1977), which indicate the relationship between intention and individual attitude or conviction and their dependence on social norms.

2.2. The Shapero-Krueger Model

EEM is the second important concept for explaining entrepreneurial intentions (Figure 3). It was initiated by Shapero (1975) and then developed by Shapero & Sokol (1982). This concept is also known as the Shapero-Krueger model because Krueger (1993) contributed to the development of Shapero's model by introducing an external factor (Wach, Wojciechowski, 2016). The theory of entrepreneurial management is based on the preference to establish new enterprises through the initiator's activity and then the so-called triggering action. Company founders must take into account the process of initiating new ventures, which are realistic. In turn, the initiation of a new business venture requires a credible implementation process. Credibility refers to the assessment of feasibility, legitimacy, and purposefulness of action, but also the inclination to act within the scope of potential opportunities. The Shapero model indicates the key factors that influence entrepreneurial intentions: perceived desirability, perceived feasibility, and propensity to act. The first two factors refer to the individual's perception of one's own intentions. Scholars agree that perceived desirability plays a fundamental role in determining entrepreneurial intentions. It follows the individual's attitudes and beliefs towards entrepreneurs. Perceived desirability is expressed through a positive attitude towards entrepreneurship and entrepreneurs and as a desirable direction for future professional careers (Shapero, Sokol, 1982). Perceived feasibility is the second important determinant of entrepreneurial intentions. It relates to the evaluation of an individual's own skills and abilities necessary for entrepreneurial activities and the realisation of one's desire (Krueger, 1993). The third determinant of entrepreneurial intentions in the Shapero model is the propensity to act, which means the individual's will to act (Kurczewska, 2013).
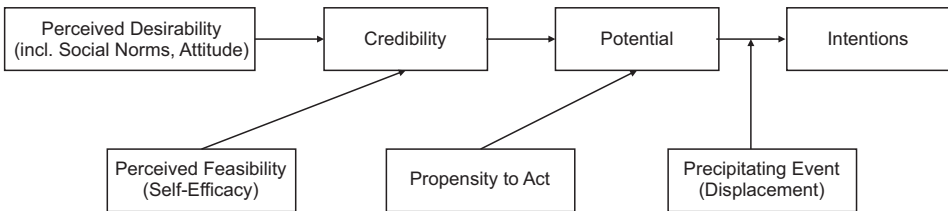

Figure 3. Shapero and Sokol Model of Entrepreneurial Intentions
Source: adapted from Rai et al., 2017.

According to Gurel, Altinay & Daniele (2010), propensity to act is a type of control that determines whether a person has the ability to execute an action plan independently. Krueger (1993) was the first to conduct an empirical verification of the model by indicating its practical validation. Next, Krueger elaborated on the model by attaching to it an external factor. This external factor can be perceived as a movement: an action that displaces entrepreneurial behaviour. This action is reinforced by the individual's perceived purpose and perceived feasibility. It is a kind of paradigm shift or a fundamental "push" in the mind of the individual that leads to the development of entrepreneurial activity. This means that the pushing event – reflected in the mind of the individual – leads to the creation of the enterprise through an evaluation of its purposefulness and feasibility. In effect, an entrepreneurial event is a coincidence of social and environmental variables, in which a given individual operates (Rai et al., 2017). Moreover, some note that this external event is often negative in origin. It can be an event that disturbs an individual's balance, like the loss of a job. Such impetus forces one to act entrepreneurially (Heuer, 2012).

2.3. The Bird Model

In the Bird model (1988), the entrepreneurial intention is a state of mind that directs the individual's attention to specific goals (Figure 4). This refers to the creation of a new venture or an added value in an already functioning venture, an organisation. Therefore, objectives determined by an entrepreneurial intention refer to the establishment of new companies. Entrepreneurs and their intentions form an initial template of new strategic organizations; they are the basis for the development of new enterprises and their key values. Such a behaviour of an individual is not isolated from contextual factors, because – in the proposed model – entrepreneurial intentions are also influenced by social, economic, and political contexts, in which the entrepreneur operates. Moreover, individual factors also have their influence, such as personality, behaviour, and personal values (Kurczewska, 2013). Therefore, the Bird Model (1988) is a coexistence of external and internal factors that shape entrepreneurial intentions. Furthermore, this model draws attention to the process character of intentions' creation and the complexity of the relationship between the factors that determine them (Bird, 1988).

Boyd & Vozikis (1994) developed Bird's model (1988) by integrating the concept of self-efficacy, based on Bandura's social learning theory (1977). The inclusion of the concept of self-efficacy refers to an individual's conviction that he or she can perform a given task, which is decisive for the development of entrepreneurial intentions (Ryan, 1970). This self-efficacy is not constant, and its growth can continue on the basis of personal experience of different stimuli. Boyd & Vozikis (1994) proposed ways to develop self-efficacy.

The presented popular models explain the process of shaping entrepreneurial intentions. They also indicate stimulants that directly or indirectly determine entrepreneurial intentions and their conditions. Furthermore, the explicit linking
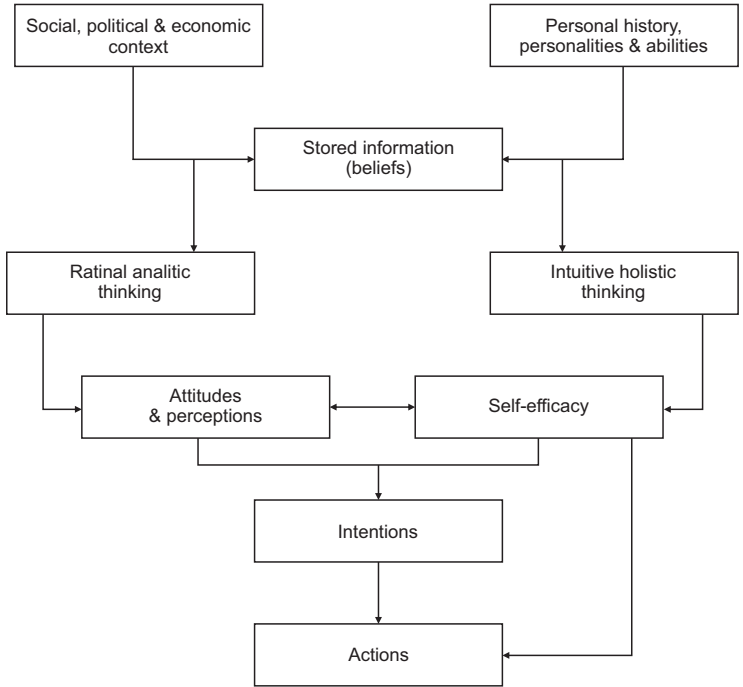
Figure 4. Bird's Model of Entrepreneurial Intentions, revised by Boyd and Vozikis
Source: adopted from Rai et al., 2017.

of entrepreneurial intentions with the entrepreneurial process implies the recognition of factors that influence the emergence of entrepreneurial intentions. So far, empirical research was unable to provide us with clear conclusions (Schalaegel, Koenig, 2014). Figure 5 attempts to organize common groups of factors that determine entrepreneurial intentions.

We may divide the first category of factors that influence the development of entrepreneurial intentions into situational and cognitive. Situational factors refer to events that affect individuals' entrepreneurial behaviour. In turn, cognitive factors refer to the perception of certain events and reality. Krueger (1993) indicates the situational factor in his model of entrepreneurial management. Cognitive factors also appear in the same model, as identified by Shapero & Sokol (1982). Moreover, the Ajzen model (1991) indicates the perception of entrepreneurial behaviour control, or effectiveness of action, which indicates the presence of cognitive determinants. Cognitive factors are strongly emphasized by Boyd & Vozikis (1994) in the expanded Bird model. We may also describe as supply factors the cognitive factors that encourage the creation of new ventures resulting from psychological and non-material conditions of individual persons. We may define situational impulses that result from external conditions, be it positive or negative, as demand factors (Dean et al., 1993).

Determinants of Entrepreneurial Intentions

Situational Conitive

Individual Organizational Environmental

Endogenous Exogenous
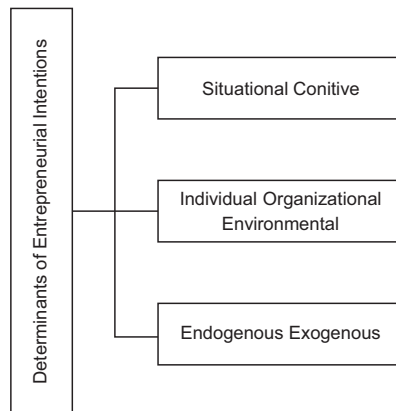
Figure 5. Typology of the determinants of entrepreneurial intentions
Source: own elaboration based on Shaver & Scott, 1992; Boyd & Vozikis, 1994; Dutta & Thornhill, 2008.

Dutta & Thornhill (2008) propose a three-level division of factors that stimulate entrepreneurial intentions by differentiating them into individual, organisational, and environmental factors. The first level comprises individual factors of a person like education, gender, qualifications, skills, and experiences. The organizational level gathers such factors as availability of resources (financial, human, or material), comprehensiveness of management, action as cooperation in a group. We should indicate in this group the factors that Chattopadhyay & Ghosh (2008) describe as cultural, which include work ethos, attitude towards individual or collective activities, and materialism. The third level of determinants of entrepreneurial intentions refers to the individual's environment. Therefore, these are macro and micro environmental factors on which the individual has very limited influence. Environmental factors are most visible in the model of entrepreneurial management, in which the entrepreneurial event is attributed, among others, to the influence of social and environmental factors. In a similar trend, Gaweł (2011) classifies determinants of entrepreneurial intentions. Gaweł (2011) proposes to distinguish macroeconomic (structure of the economy, development dynamics), regional (region conditions for running a business and founding a new company), microeconomic determinants (personal characteristics and individual conditions).

We should order the above factors according to their source of origin. Therefore, we may speak here about external (exogenous) and internal (endogenous) factors. Endogenous determinants result solely from the attitudes, values, and personality traits of the individual who undertakes to create an entrepreneurial process. This can happen in the subconscious sphere, but also in the conscious decision to act. Scholars assume that there are certain features associated with the occurrence of endogenous factors (Boyd, Vozikis, 1994): (a) the need to achieve goals and feel achievements, (b) propensity to risk and tolerance of uncertainty, (c) intuition and precaution, (d) creativity and innovation, and (e) the belief that

"a man makes his own luck." The group of exogenous factors refers to the broadly understood environment, both at the macro and micro level. In this case, the reason for undertaking entrepreneurial activities is the stimulus independent of the individual. So far, a number of approaches to distinguishing exogenous factors have been developed (Tubbs, Ekeberg, 1991; Uddin, Bose, 2012). Scholars most often indicate that these are issues related to (a) political, social, economic, and cultural conditions, (b) education and experience, (c) family environment, and (d) the job market.

The typology of factors that determine entrepreneurial intentions is not identical or autonomous from external factors. Particular groups of factors overlap and complement each other. Many studies indicate the coexistence of numerous factors that stimulate entrepreneurial intentions, which is warranted by a complex entrepreneurial process (Heur, 2012).

3. Linking entrepreneurship education and entrepreneurial intentions: a synthesis of existing theoretical models

Theoretical foundations for combining education with entrepreneurship and entrepreneurial intentions contributed to combining models of entrepreneurial intentions with education. Fretschner (2014) introduced external variables into the TPB model by defining them as "background factors" among which he mentions: (1) personal factors (general attitude, personal characteristics, values, emotions, intelligence), (2) social factors (age, gender, religion, formal education, income), and (3) informational factors (experience, knowledge, skills, media exposure). Background factors in this enhanced TPB model may influence people's beliefs, expectations, and behaviours. However, we should note that these variables indirectly influence entrepreneurial intentions through behavioural, normative, and control beliefs (Fretschner, 2014). Liñán (2004) remarks that when considering the implementation of a given entrepreneurial behaviour, individuals use behavioural control, which we may understand as a sense of easiness or difficulty in implementing a given behaviour. Thus, we see an analogy to the sense of self-efficacy and perceived feasibility from the Shapero & Sokol model (1982). Moreover, we should also mention here Liñán's (2004) suggestion about realistic perceptions. Some individuals can have misconceptions about their ability for entrepreneurial behaviour, which may arise from different circumstances or new emerging phenomena. As a result, it may lead these individuals to act without the possibility of success, and vice versa, to distance themselves from entrepreneurship despite objective premises of success. At this point, what is particularly important is specific knowledge that would shape realistic perceptions. Following this line of reasoning, Liñán (2004) compares the variables that explain entrepreneurial intentions from the Ajzen model (1991) with the variables considered in the Shapero & Sokol model (1982) to observe that perceived
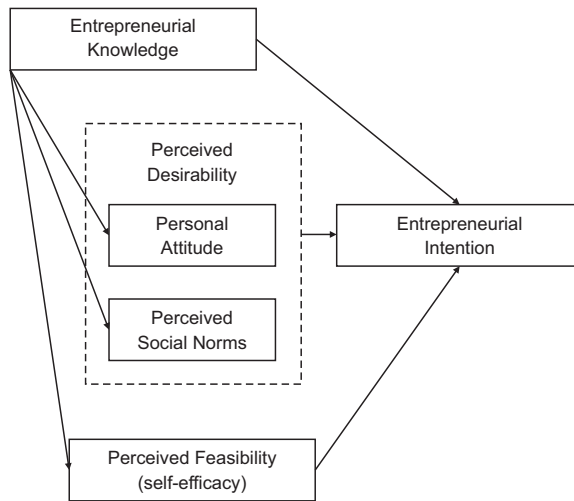
Figure 6. Entrepreneurial Intention Model with Education
Source: adapted from Liñán, 2004.

feasibility corresponds to perceived behavioural control. On the other hand, perceived desire can be understood as a component of subjective norms, which in the Shapero & Sokol model (1982) explains the understanding of purposefulness as a result of social and cultural influences. The presence of role models may be relevant to perceived self-esteem and desirability. Moreover, broader knowledge of entrepreneurial environment also implies its perception, which may ultimately determine the individual's entrepreneurial process. Thus, Liñán (2004) enhances Ajzen (1991) and Shapero & Sokol (1982) models with an important component of entrepreneurial knowledge.

4. Overview of prior empirical studies and results

Research on entrepreneurial intentions mainly boils down to empirical verification of models of entrepreneurial intentions. Schlaegel & Koening (2014) examine all determinants indicated in the TPB and EEM models to demonstrate that different variables from both concepts positively impact entrepreneurial intentions. Pfeifer, Šarlija & Zekić Sušac (2016) state that the main predictors of entrepreneurial intentions are the power of aspirations in terms of entrepreneurial identity and efficiency. Sieger & Monsen (2015) discover that young people from different European countries perceive academic employment as an entrepreneurial career path (Perlman et al., 1988). Esfandiar, Sharifi – Tehrani, Pratt, & Altinay (2019) offer own integrated structural model based on models of classic entrepreneurial intentions, which verifies that desirability is the main determinant of entrepreneurial intentions, followed by effectiveness, feasibility, opportunity, attitude, and

so-called collective effectiveness. The authors indicate that social norms do not influence entrepreneurial intentions. In turn, the perception of opportunity increases when a given individual is highly inclined to act. Thus, Esfandiar et al., (2019) recommend that we should consider the results they achieved as an important contribution to the shaping of educational programs. Some studies indicate that education plays the role of a moderator between assumed determinants and entrepreneurial intentions (Valliere, 2015; Sondari, 2014). The TPB model considers education an intermediate factor among attitudes, subjective norms, control, and entrepreneurial intentions. Gaweł & Pietrzykowski (2015) note that two opposing attitudes clash in empirical research on education as a variable that explains entrepreneurial intentions. One attitude has entrepreneurship shaped by formal education. On the other hand, the other attitude stresses that entrepreneurship is an innate feature of an individual, which deems education irrelevant. There also appear opinions that even if entrepreneurship education does not directly influence decisions on the entrepreneurial process, it still may greatly contribute to the development of entrepreneurial skills. To confirm the first attitude indicated by Gaweł & Pietrzykowski (2015), we may use the research of Davey, Plewa & Struwig (2011) along with that by Jones, Coviello & Tang (2011). Both groups of authors underline that entrepreneurship education increases entrepreneurial intentions and improves knowledge and skills of individuals. It is intentional, justified, and rational to meet certain subjective norms and obtain resources, whose lack may constitute a barrier in creating a new enterprise. Moreover, scholarship verified that entrepreneurship education leads to a perception of higher entrepreneurial motivation than education without entrepreneurship courses (Solesvik, 2013). Scholars explain this effect by the fact that entrepreneurship education increases the entrepreneurial awareness among students, encourages them to choose it as their career path, and start new business ventures (Israr, Saleem, 2018). Stephen, Urbano & van Hemmen (2009) indicate that formal and institutional support may be very important for the entrepreneurship of natural persons. We may certainly refer this conclusion to formal education. Educational programs, training, and institutions supporting entrepreneurs are the key elements in the process of "top-down" stimulation of entrepreneurship and motivation to start businesses. West & Hore (1989) directly highlight three dimensions of the impact of education on entrepreneurial intentions: (1) personal development, including changes in values and attitudes, (2) perceived abilities, and (3) perceived social consequences.

On the other hand, studies by Oosterbeeketal, Praag & Ijsselstein (2010) as well as von Graevenitzet, Harhoff & Weber (2010) report the lack of connection between education and entrepreneurship or even its negative impact. Based on the model that combines many numbers explaining the entrepreneur's intentions, von Graevenitzet, Harhoff & Weber (2010) show that participation in entrepreneurial programs can influence students in diverse ways. After completing the program, students with lower predispositions towards entrepreneurship had even fewer entrepreneurial intentions and vice versa. Hence, entrepreneurship education does not shape entrepreneurial intentions, but only impacts their development, as entrepreneurial intentions stem from social predispositions. Karlan & Valdivia (2011)

empirically verify the positive impact of education on entrepreneurial knowledge but no impact on business effects. Huber, Sloof & van Praag (2014) indicate that the results of scientific research are very different, which results from diversified research samples and – above all – the level of education under study.

Most studies consider the impact of entrepreneurial intentions on education among university students. A study by Wach & Wojciechowski (2016) on a group of students in Poland confirms that three independent variables in the Ajzen model – attitude towards the behaviour, subjective norms, and perceived behavioural control – determine entrepreneurial intentions in the studied group. Moreover, the authors prove that approach towards risk has a similar effect. However, Wach & Wojciechowski (2016) differentiate the results of research between students of business faculties and non-business faculties. Kristiansen & Indarti (2004) scrutinize factors of entrepreneurial intention among Norwegian and Indonesian students to show that the high level of entrepreneurship of Indonesian students mostly effects from the economic conditions in Indonesia. Therefore, the main determinants of entrepreneurial intentions of Indonesian students were external factors related to the economic environment. Meanwhile, Norwegian showed low levels of entrepreneurship, which also resulted from market conditions, that is, high wages for wage labour. In turn, the culture and perception of entrepreneurship along with the positive image of an entrepreneur are important determinants of entrepreneurship among American and French students (Boissin et al., 2009; Wach, 2015a). Gerba (2012) shows that students who completed entrepreneurship education have stronger intentions in entrepreneurial activity than other students. Moreover, scholars found that men are more interested in entrepreneurship as a career path than women. Such factors as subjective norms, self-efficacy, and the need for self-fulfilment are to be more important for male students. According to Maresh, Harms, Kailer & Wimmer-Wurm (2015), entrepreneurship education influences entrepreneurial intentions on two levels. On the first level, entrepreneurship education strengthens students' positive attitude to entrepreneurial intentions. On the second level, entrepreneurship education broadens the knowledge and thus the worldview of entrepreneurship, which facilitates students' decisions. Furthermore, education helps students develop skills and competencies that can be useful to utilise entrepreneurial opportunities. As a result, students become more confident in their skills in controlling entrepreneurial behaviour, thus strengthening their entrepreneurial intentions.

5. Conclusions

Recent years witnessed increased interest in entrepreneurship education among scholars, especially among entrepreneurship researchers, although articles on this subject already appeared for several decades. This is evidenced not only by the fact that entrepreneurship education appears in various journals on both

economics and education but also that high-scoring journals in economics recently publish special thematic issues exclusively devoted to entrepreneurship education.

We should mention a few selected examples that demonstrate the exceptional popularity of this subject in the recent two decades (Wach, 2019b):

1) In 2016 appeared a special double issue of the journal *Education and Training* (indexed in JCR / Web of Science), published by Emerald, with 14 articles on enterprise and entrepreneurship education.
2) In July 2013 appeared a thematic issue of the *Journal of Small Business Management* (indexed in JCR / Web of Science), published by ICSB in cooperation with Wiley Blackwell, with ten articles devoted to measuring the effects of entrepreneurship education.
3) In 2012 appeared a thematic issue of the *Entrepreneurship & Regional Development* journal (indexed in JCR / Web of Science), published by Routledge and Taylor & Francis, with five articles on the regional context of entrepreneurship education.
4) In July 2005 appeared a thematic issue of *Entrepreneurship: Theory and Practice* journal (indexed in JCR / Web of Science), published by Wiley Blackwell, with seven articles on entrepreneurial learning.
5) Since 1989, the yearly *Journal of Entrepreneurship Education*, published by Allied Academies, has printed articles exclusively devoted to the subject of entrepreneurship education.

Moreover, almost every major global business magazine prints articles devoted to entrepreneurship education appear with varying frequency.

The lack of an unequivocal position on the relationship between education and entrepreneurial intentions and the results of research on the determinants of entrepreneurial intentions among students justifies and calls for further research in this area.

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Marketing in Online Sales Funnels

Introduction

The Internet has influenced how consumers make shopping decisions, how they communicate, how they look for recommendations (Elms et al., 2016; Faulds et al., 2018; Fu et al., 2020; Zhang et al., 2018). This applies to both B2B and B2C relations. The Internet is a source of knowledge and information for consumers, but also a communication tool. Communication that is implemented in a one-to-one and many-to-many model. Such differentiation of communication has a fuzzy character because both the direct and the message, e.g. as an e-mail or message in the communicator can take on a group character. Similarly, it can be pointed out that social media can be characterized by open communication, focused on unspecified recipients or be carried out within closed groups. The second element affecting the need to revise the perception of the Internet and sales tools based on Internet communication is their access to data. Access to the Internet from the customer's perspective, refers in particular to the ease of comparing the offer, getting to know it in a convenient place and time. From a business perspective, in the absence of territorial barriers, it is particularly possible to collect and use data about the consumer, their preferences, interests, past history and relations with the company. Data that can be codified by employees as part of CRM systems is supplemented with data on consumer activity regarding content the sender of which is an enterprise or which the enterprise can manage.

This contributes to blurring the boundary between marketing and online sales (Arnett & Wittmann, 2014; Homburg et al., 2017; Keszey & Biemans, 2016). The problem is not the possibility of defining individual actions or assigning to sales

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or marketing, but from the permanent coexistence of these two elements. At the root of this coexistence are concepts such as optimization and synergy. If we assume that sales activities are generally activities directly focused on the increase of revenues, and marketing activities are indirectly directed at sales through the increase of recognition or, for example, the perceived quality of offered products, it can be assumed that these are the stages of one process. In traditional terms, the first phase is not obligatory. The effort based on the active search for customers by sales department employees and direct contact can be the only and exclusive element needed to conclude a transaction. Access to data and the evolution of consumer decision-making, which is more based on independent search for information, extends this process. This applies to the number of actions taken by the consumer. The additional number of actions, however, does not correlate linearly with the time needed for the consumer to make decisions. This is due to almost instant access to information. The consumer reads, assesses, evaluates and makes the final decision. In addition, he can decide on the need for further search for information.

This access to information is the basis of the revolution that came with the digital world. This applies to both consumers and entrepreneurs. For consumers, this means the possibility of using all sources at the stage of product and / or seller selection, and for entrepreneurs conducting sales activities based on marketing activities tailored to individual customers. The purpose of the chapter is to characterize the changes resulting from the digitization of marketing and sales activities as well as tools supporting and optimizing the discussed activity.

1. Traditional approach to the AIDA model

The awareness of entrepreneurs' knowledge of the complexity of consumer decision-making processes influences the way they communicate with consumers and the tools they use. Selection depends on the immediate goal and is related to the stage at which the consumer is. There are many models characterizing the consumer purchasing process. The AIDA model is one of most frequently used in marketing communications (Boisen et al., 2018). It characterizes the way advertising impacts the consumer. It is based on psychological conditions of action (purchase), which is preceded by: attention, interest in the product and willingness to purchase it. This model in a narrow sense refers to a single advertising message and is also a guideline (Sharifi et al., 2019). It illustrates that the purchase is preceded by an attitude towards the advertisement and the advertised product. In this case, the perception of the content of the ad affects all areas in a set sequence. This sequence is imposed by the order of images, content, information as part of audio-visual material presented, e.g. on television, or as advertising spots on the radio (Yeh et al., 2017). For static materials, these principles are incorporated into the content. This also applies to the level of arrangement of elements or the use of appropriate graphic elements. The final

composition takes into account the knowledge of the consumer and the mechanisms that determine how he reads, for example, an advertising poster.

This approach to understanding the operating conditions can be used not as part of a single advertising message but as part of a series of messages. This idea is limited in scope to be used in the promotion by means of mass media or even in the case of deliberately selected target groups. This is due to a lack of knowledge about what was previously presented to the recipient, i.e. what stage the consumer is at. In this situation, the message will not have an effect, understood as moving to the next stage because the message will be duplicated, or may relate to a goal that has already been achieved earlier. If the consumer on the basis of the content previously presented to him shows interest in the purchase of products, but instead of information about the possibility of purchasing information that is no longer relevant to him, it can even cause frustration, which will have the opposite effect.

This type of problem can be overcome by synchronizing messages in accordance with the adopted schedule plan, focusing at one time on a single aspect. One of the first Polish brands, which on a nationwide scale and successfully used the discussed idea was a new brand of mobile services Heyah with a series of promotional campaigns (Gazeta.pl, 2005). In the first stage, symbols of the red hand on a black background were presented in the urban space, which attracted attention, which in connection with the ambiguity of the message and the mass nature of the event turned into interest. Only at the next stage was the concept of the new product being introduced, and finally information related to the conditions in force in the new telephony. A gradual shift from attention to decision enabled 446% sales plan and 54% visibility in the target group.

The use of such a scheme was possible thanks to the certainty that consumers have no prior knowledge about the brand. Thus, each subsequent message was based on homogeneous previously publicized information. This means that all consumers reached by the message were at the same level throughout the campaign cycle. What constitutes a limitation on traditional forms of promotion is not it in internet marketing. The technical ability to collect data and analyze it in an aggregated manner but also for an individual user creates business conditions that were previously unavailable. Each user can be considered individually and analyzed for the effectiveness of various methods of interaction.

2. Adjusting AIDA to online sales funnels

2.1. Attention recipients

In keeping with the nomenclature of the AIDA model first element conditioning any relationship, there is a potential consumer attention to your product. Attention is not the same as interest (Xu, Schrier, 2019). In internet marketing,

an example of advertising that triggers involuntary interest is, for example, banners that obscure the entire content of the website that the consumer is visiting. Therefore, in the case of attention, in addition to involuntary attention, one should highlight voluntary attention, conditioned e.g. by the general interest in the product category promoted. Content that has been displayed autonomously and which has not been triggered by a particular user activity is only a measure of the extent of the impact. Attention can refer to potential customers as well as existing ones by promoting a new one or which the consumer has not yet purchased. Separating these two cases is associated with the possibilities that the company has in each of them. These possibilities are conditioned by the previously developed relationship and knowledge about the client. In the case of the first contact with a brand or product, the impact is based on creating the conditions so that the customer can express their interest on their own. The measurable effect of this interest is measurable interaction, confirming that the recipient of the message is familiar with the advertisement. Such a measure can be clicking on a promotional ad that transfers to the target website, brand company or dedicated subpage as a landing page. In the event that the first contact is not caused by graphic advertising, and for example is the result of an interest in the thematic article, the source of the page visit is an indication of what was the basis of the behaviour. Another form of impact is also broadly understood advertising in social media (Hassan et al., 2015). Promotional activities using portals such as Facebook or Instagram allow narrowing the audience to the desired target group. It is therefore possible to adapt the message to the target group. What's more, thanks to the characteristics of the group of recipients, it is possible to exclude from it people who are not defined by the company as potential customers. At this stage, the risk that the promoted message will not arouse the expected interest is the greatest. This means that the effectiveness is the lowest. Consequently, to attract a sufficiently large number of people, it is necessary to reach the largest number of people with promotional material. The use of sales department employees for direct contacts with potential customers at the first stage is unprofitable. This is due to limitations resulting from the time needed to search and make the first contact, personal or via email or phone. This expenditure of time and resources is optimized in part with support tools. An example of such tools is automatic dialing systems and only when the conversation begins to assign an employee to it. In the case of e-mails, the message initiating contact, e.g. a request to send an offer, is stylized as a personal message, although it is sent automatically to the addresses of potential recipients (legally or illegally). Cited examples of sales activities, when the first contact of the customer with the company occurs, in the era of digitalization is an anachronism, if it concerns the target group not excluded from technological progress. This is due to the difference in form, time and place of arousing interest. In traditional terms, it is based on the principles or conditions imposed on the client, at a time and place that may promote the desire to read the offer or just the opposite. In the case of building interest based on internet marketing, this contact can also take place on similar principles or be presented in a certain context and at a time adapted to it. The basic example of such

activities based on Internet tools are the results presented to users in response to a search query embedded in the search engine. The user receives content in the form of search results that are a response to what he is looking for. Therefore, it is assumed by default that he is interested in the matter in this case. However, the way the query is formulated determines what it will see in the results. This means that mere presence in search results is not an indicator of interest. It is through the place in these results, the description of the page, its name that the struggle for the attention of the recipient. The same criteria are a key element for promoted advertising on the Internet: as a paid media presence in the search engine or social media. Ads tailored to the circumstances of its display are called contextual ads. It is the context that makes the ad more effective. This is due not only to the involuntary comment referred to above, but any, because the user is interested in a given issue and, most importantly, he is interested in the given time when the advertisement is displayed.

2.2. Interest in the offer and seller

The first contact of the client may not bring the expected effect from the company's perspective. In the event that contact would be based on direct contact, retrying the phone or message could be perceived as bothering. In the event of a negative consumer response to the submitted question, subsequent attempts would be burdened with a decision already made, which would entail an even more difficult task for the seller. In the case of advertising presented on the Internet, such negation is not relative to the offer but only to the marketing message. However, it should be noted that the attention of the recipient of online content is exposed to numerous threats that cause greater difficulty with cognitive efficiency. Numerous contents presented almost simultaneously, distract and cause difficulty in assessing reliable and valuable information. Information processing is limited (Lang, 2000) and attention is selective. However, if the content for the recipient is not new, less effort is needed to process the previously known content. This property is of great importance not only for attention but also for interest.

According to mere-exposure effect, there is a higher preference for content that was previously seen (Zizak, Reber, 2004). This means that similar advertising may be rated better by the respondent with the number of exposures, and thus he will be more likely to be interested in the promoted offer. This interest, as it was previously mentioned may mean, clicking on an advertisement or searching for additional information or recommendations about a promoted product. The effect of each of the cited examples of reactions is greater customer awareness by product or brand. As in the case of attention, interest in the context of the sales process is not a homogeneous measure.

Interest may be based on prior consideration of purchasing a product, interest in a category, and be associated with the decision-making process, or arise out of curiosity. The complexity of the decision-making process results, among others, from the time pressure when making decisions, the importance of the product

sought for the buyer, its perceived value, previous knowledge about production or previous experience of the buyer. Each of these dimensions can automatically translate into the fact that the consumer will make a careful decision, i.e. based on the information obtained. More importantly, he will seek and be interested in this information. Sources of information may be materials published on the seller's website and elsewhere. In the case of a website, the basic area is the description or characteristics of the product. However, in some situations, the product card typical of online stores is insufficient. An example of alternatively presented content about products on the website is the preparation of a thematic article (Lin & Huang, 2006), describing various types of products indicating the pros and cons of each of them, or indicating the criteria to which the user should pay attention and justification. Another source of information, whose creator is the seller, are external portals through which the seller distributes content. Such content can be movies showing key product attributes on YouTube.com or materials prepared rankings or case studies distributed on social media or on thematic portals. The third group consists of content prepared by individual users. They can be such extensive materials, ideologically similar to the content published by the enterprise, characterized by a greater level of objectivity and independence. In addition, the content of this type can be published as expert articles or in the form of video reviews. This group may include less formal content such as Internet entries, comments, or reviews. Word-of-mouth is particularly important for customers. This is due to the limited confidence in marketing content the sender is an enterprise. Enterprises, apart from the situation resulting from the deliberate use of influencers in marketing communications, have a limited possibility of influencing the content of published content and thus creating mechanisms to strengthen the flow of users from external websites to the target site of the seller. For this reason, sales funnels do not isolate content that is beyond the company's management capabilities.

The above-mentioned examples of various ways of influencing the consumer interest are part of the available options. Another way to shape interest is to build customer awareness through email marketing. In contrast to the one mentioned in the first part of this type, using this tool as a way of initiating contact, in the case of interest building, contact results from voluntary subscription to the newsletter or the desire to receive a series of messages that have a training character or deepening a given topic. Creating an account on the website or adding a consumer to the database creates new opportunities for the entrepreneur. Thanks to this, the enterprise has the ability to manage marketing communication with greater precision and react to user activity with respect to the content being sent.

2.3. Desire and willingness to purchase a product

Shaping interest can be the result of a single event that resonates strongly enough. However, in the case of goods that are not a basic product or of low importance to the recipient, interest is the effect of long-term impact on the consumer. The

need to include a time stamp forces the company to use technology to fine-tune the messages. Collecting data on activity in relation to available content is the basis for inferring a potential customer's interest in an offer or precisely a single product. This stage is sensitive, because misinterpretation of consumer behaviour and on this basis preparation of a poorly matched message may not bring the expected effect and at the same time be an unused opportunity that may not be repeated.

Progressing automation also in the area of marketing requires defining turning points that the company will understand the desire to buy. However, each measure or event adopted is a certain assumption resulting from an attempt to understand the motivation of the consumer to this or that behaviour. In the case of online stores, such a situation may be adding the product to the cart in the absence of finalizing the transaction. From one perspective, this is an expression of shopping intentions that may have been interrupted due to technical reasons, a presentation of a summary of added products together with the total price. The abandonment of the basket could also be due to a lack of sufficient funds or a lack of preferred delivery methods. These are elements limiting the willingness to buy, however, not imposing it and the final attitude will depend on the attitude of the seller. This contact can be based on a direct response from the sales department or be based on marketing messages or automatic e-mails trying to solve the problem. Alternatively, the buyer, despite the fact that he added the product to the basket, could make the purchase elsewhere, therefore attempts to complete the transaction are pointless and the funds spent on marketing communication wasted. Therefore, the question of profitability and purposefulness of individual activities becomes justified. However, this should be compared with the alternative costs, i.e. in this case the cost of employees' work, the effectiveness of individual activities and potential financial benefits. Other possible measures may be the presence on a given product or, for example, the price list or the time spent on it, which may indicate that the purchase is being considered. In the case of e-mail communication, such a hint can be information about the activity within the message or the number of re-openings of previous e-mails.

2.4. Purchase decision as customer action

The effectiveness of marketing and sales activities in the final settlement is the number of customers acquired, the value of orders and repeatability of purchases. If the previous stage led to the situation that the consumer is not only willing but also wants to make a transaction, then favourable conditions should be created. The last stage can be implemented autonomously by the customer through an electronically available procedure or through contact with an employee of the enterprise. The ability to make transactions at any time convenient for the consumer and the lack of communication problems or related to codification and execution of the order encourages favouring electronic solutions. Appropriately prepared systems may also propose complementary products while placing the

order, increasing the transaction value for the entrepreneur. Satisfaction resulting from the implementation of the contract as expected, is not the same as building a long-term relationship. The implementation of the last stage through direct contact with the employee extends the procedure, however, it creates the possibility of influencing the customer, but also creates the opportunity to obtain additional information about the decision-making process and factors having a particular impact on the choice of product and seller. This can be used in the future to tailor messages and offers individually using existing history and individual preferences.

3. Conclusion

Digital marketing creates conditions in which mass communication can be personalized based on individual consumer behaviour. Compared to the activities of sellers initiating direct contact, online advertising can take on a neutral and natural character. It can be a response to customer needs, shape them through awareness. Data on customer behaviour on the entrepreneur's website or in relation to information sent by the company are an important source for marketing activities. Such actions may spontaneously affect the consumer at all decision stages or complement sales activities, providing knowledge about consumer preferences. The practical implications of the mechanisms described above can be translated into the design of consumer experience, taking into account the gradual desire to buy. The four phases indicated are only a general structure, which may consist of numerous elements. Adjustment and assessment of effectiveness can be made by the percentage of people who have passed to the next level of sale funnel. The presented article also prompts further research on the assessment of the legitimacy of the use of various tools at different levels and for different purposes. In addition, it is worth referring the research to various categories of products or services and taking into account the characteristics of the target group.

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Art of Sales – Dilemmas of Modern Student Education[1]

You have to learn the rules of the game, and then you have to play better than anyone else.

Albert Einstein

Introduction

Defining the ways of modern, modern education of students of economics universities is not an easy task. The experience of the author of the article shows that students (especially extramural studies, but also more often full-time) – in a more or less veiled way – demand that the topic of classes refer more strongly to the so-called business practice, best business practices and market case studies. They are interested in the practical aspects of the business on an international scale, which meet in their work – as it often despite the relatively young age are already working, are on employee internships or have contact with people who who have already started working.

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The objectives of this chapter are:
- present the results of the survey (234 survey participants, which consisted of 20 questions) conducted among students of 2nd and 3rd year of full-time studies and extramural studies at the faculty of International Economic Relations at the Cracow University of Economics,
- and an attempt to share comments and thoughts on the subject and methodology of teaching in broadly understood international trade issues – with particular emphasis on foreign sales issues.

In university economic education programs we can find many purely theoretical areas, which in the International Economics major means familiarizing students with foreign trade theories, models of international exchange, the theory of economic integration and international economic relations. The survey concerned only one trade direction: sales (mainly export sales, although some questions referred to domestic sales). The author deliberately chose this issue to survey, because in the report of the well-known in Poland site www.pracuj.pl (pracuj.pl, 2019) are research results regarding the number of ads for various types of professionals. In the first half of the year 2019, 295,257 job offers were posted. What's interesting – the most sought specialists from the trade and the sale was – as many as 29% of all ads, or 86,993 jobs. Subsequently, employees were sought for customer service (22% and 64,674 job offers), IT departments (15% and 43,404 job offers) and finance (13% and 38,297 job offers).

This chapter defines the following research hypotheses related to the subject of art of sales:
- H 1 – women and men same often consider selling as art of sales,
- H 2 – extramural students (more often active on the labor market) have more experience related to foreign sales more often consider sales as art of sales,
- H 3 – extramural students (more often active on the labor market) have more experience related to conducting domestic sales more often consider sales as art of sales,
- H 4 – students who want to have more practical classes dedicated to improving practical skills related to sales in foreign markets more often consider sales as art of sales,
- H 5 – students who want to have more practical classes dedicated to improving the practical skills related to sales in the domestic market often consider selling the art of sales,
- H 6 – students who want to have practical classes in the foreign sales teaching process with experienced managers/salespeople more often consider sales as art of sales,
- H 7 – students with experience in foreign sales more often consider selling the art of sales,
- H 8 – students with experience in national sales often consider selling the art of sales,
- H 9 – students who think that a manager should have a commission-based salary are more likely to consider sales as art of sales,

- H 10 – students who are aware of the fact that "everyone lives by selling something" (in the sense of goods, services, work) more often consider sales as art of sales,
- H 11 – students with a higher level of general knowledge about sales (e-commerce, the future of sales, the role of sharing economy, awareness of the importance of the "Insight Selling" method) are more likely to consider sales as art of sales,
- H 12 – students who think that sales can be learned are more likely to consider sales as art of sales,
- H 13 – students who find it difficult to manage sales in foreign markets (exports) are more likely to consider sales as art of sales,
- H 14 – students who find it difficult to manage sales on domestic markets are more likely to consider sales as art of sales.

For the purposes of verifying these research hypotheses, the said survey was conducted on a sample of 234 students. Below are the results of the survey and an attempt to interpret them.

1. Art of sales in the economic literature

There are not many studies dedicated to art of sales in the ecomomic literature. We can find a business guides, such as "The art of selling, design success" written by David Mc Corman from the year 1995 (Mc Corman, 1995), the book written by S. Gillespie, M.V. Testa & S. Ramakrishnan "Lean for Sales: Bringing the Science of Lean to the Art of Selling" (Gillespie et al., 2016) or other items of this type (Bednarski, 2012; Tojanowski, 2013; Ciechomski, 2008; Burnett, 2002; Szumilak (ed.), 2004; Schenk, 2006). The issue of art of sales is relatively – interestingly – rarely found in published economic literature. When the Google Scholar search engine was used, popular in the scientific community, after entering the term "art of sales"[2] we only receive 269 (sic!) search results. However, after entering "export", we receive 7,440,000 search results. Using the well-known site of the social network of the scientific world – Academia.edu – a place to share and follow research – after entering the word "art of sales" we get 39,977 results Academia Basic Search (search paper titles) and 264,598 results Academia Advanced Search (search paper titles, search full text of papers). However, after entering the word "export" and using Advanced Search, we receive 608,045 papers containing this word.

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[2] Quotation marks were used in the search. For example: searching for 'wojciech profit' will give us results as if we combined the words 'wojciech' and 'profit' with the logical conjunction OR. Query "wojciech profit" (quotation marks) will give us only those results that contain the string "wojciech profit" in any part of the article or metadata.

When the Web of Science was used, which is highly valued in the scientific community, after entering "art of sales" we will receive one (sic!) scientific article from 1992 (UEK, 2019a). However, when we enter the word "export" – we will receive 106,577 publications (UEK, 2019b). In our local database "Achievements" at the Cracow University of Economics, after entering the entry "art of sales" we also receive only one scientific article taking into account this issue, in addition from the year 1989. After entering the entry "export" we will receive a list of 557 scientific articles.

Therefore, it can be concluded – despite a cursory analysis – that the subject of "art of sales" is definitely less popular in scientific research than the issue of export. Despite this, few authors attempt to define this issue. For example: "The art of sales is not a random process with a 'pitch' as it may have been described years ago. The art of selling is a process which is taught, learned, and utilized in the field. Therefore, individual sales people and those directly involved in the sales management process today should be appreciated and respected" (Mosca et al., 2010, p. 116) and "The art of sales force management is to influence salespeople's objectives and activities in the right direction" (Darmon, Martin, 2011). Specific skills are required that come down to building relationships[3], raising awareness of the needs, the art of showing that it is possible to meet them with the features of a good or service. This process may be short or very long, depending on the subject of the sale (product specificity), sales channel, cultural differences, national mentality, company strategy (price policy) or market trends. The key skill of the so-called closing sales (Gillespie et al., 2016, p. 2).

As Al Davidson, President of Strategic Sales & Marketing, Inc. & Group Owner of ManageYourLeads writes: "There are a few elements of sales that are more like an art. Good sales people need to have creativity, initiative and drive. Just like artists need to bring something new into the world, starting from nothing, sales people have to start from zero and make things happen. Artists are fueled by passion and self-belief. In the same way, some of the best sales people have a strong spirit of passion and self-confidence – they believe in what they're doing, and they inspire confidence in the people around them. Being in the presence of a great sales person is like being with an artist – they are charismatic people who make ripples in the universe around them" (https://www.business2community.com).

Whereas managers (leaders, managers) of art of sales processes should be characterized by skills such as coaching, followed by collaborating, championing, and customer engaging. A key sales leader behaviors and identify four potential mediating variables (trust, confidence, optimism, and resilience), from which emerges a conceptual framework of sales leader behaviors perceived to enable salesperson performance (Peesker et al., 2019).

Specific competences are necessary to achieve sales tasks and goals. We distinguish between basic (universal, also called soft) and specialist (professional, scientific, related to knowledge – also university; otherwise hard) competences. The soft are: communication skills, organization of work and teamwork, results

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[3] What is important is the division of a business/transactional and relational sales.

orientation, customer focus, teamwork, leadership, planning and organization, commercial awareness, flexibility, stimulation of other people's development and ability to solve problems (Armstrong, 2000, pp. 241–242).

According to the author of this study art of sales should be based on successive levels of advancement:

a) customer purchases product,
b) customer uses purchased product,
c) customer comes to us again to re-purchase (cross selling, up selling),
d) customer gives us written recommendations as a reliable supplier,
e) customer leads us to the next customers, who makes purchases,
f) customers come from recommended other satisfied customers.

At the time you can summarize such stages as good sales – art of sales.

It is worth to add that in the Internet era the model of buying has changed a lot – not only by individual customers, but also by enterprises, so sales models must also change, especially in e-business.

2. Methodical assumptions of the research

The adopted research method was a questionnaire consisting of 20 original assertion in the survey research (see Annex). Each assertion had two possible answers: "I agree" or "I do not agree". In addition, with each answer, the option of assigning a given number of points by digits from 1 to 7 was introduced, i.e. determining how much the person surveyed agrees or disagrees with the essence of a given assertion (the author's intention was to give "weight" to the given answer).The respondent also indicated whether he was a woman or a man and in what mode of study: full-time studies or extramural. The study was anonymous and lasted about a quarter of an hour.

The examined persons studied at the 2nd or 3rd year in the foreign trade specialization in the field of International Economic Relations at the Cracow University of Economics. In total, 241 surveys were carried out, but several authors rejected 7 copies due to incorrect answers (e.g. selecting the option "I agree" and "I do not agree" in the same assertion). 234 correctly completed surveys were classified for the study.

Two research methods were used to analyze the obtained survey results. The statistical system R^4 (permutation test) was used to verify the H 1, H 2 and H 3 hypotheses and incidentally – Microsoft Excel, and statistical verification was performed using Microsoft Excel to verify the H 4 – H 14 hypotheses.

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[4] The author thanks Prof. S. Śmiech from the Department of Statistics at the Cracow Univerisity of Economics for help and consultation on part of the results of statistical calculations.

3. Research results and their interpretation

The first research method was used to examine the first three hypotheses:
- H 1 – women and men same often consider selling as art of sales (in connection with point No. 11 of the survey),
- H 2 – extramural students (more often active on the labor market) have more experience related to foreign sales more often consider sales as art of sales (in connection with point No. 14 of the survey)
- H 3 – extramural students (more often active on the labor market) have more experience related to conducting domestic sales more often consider sales as art of sales (in connection with point No. 15 of the survey).

A permutation test was performed[5] for the average of the numbers assigned for responses to individual assertions (10,000 permutations. To make such calculations possible (obtaining only one variable with two signs), the numbers next to the answer "I do not agree" have a minus sign "-". Table 1 presents the results of calculations.

Table 1. Verification of H 1, H 2 and H 3 – results of p-value calculations

hypothesis / name	p_value_women_men	p_value_full-time_extra-mural
H 1	0.01693	not applicable
H 2	not applicable	0.18385
H 3	not applicable	0.70577

Source: calculations made using the R statistical system.

Values below 0.05 mean a significant difference (conventional level of significance α = 0.05.). Values of α between 0.05 and 0.1 mean that the difference exists, but is smaller. As we can see in the first column (on the first hypothesis) the result 0.01693 means a significant difference, i.e. women and men have different distributions of answers. After additional calculations using Excel, it turned out that in the case of female students 82 people marked "I agree" with a total answer value of 341 points. In the case of students, it was 101 people with a total answer value of 447 points. Therefore, the surveyed men more often consider sales as art of sales than the surveyed women, i.e. H 1 saying that women and men same often recognize sales as art of sales has not been confirmed. According to the author, an in-depth analysis of the literature on the subject is needed, dedicated

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[5] Various statistical tests are used to check that the distributions from which the samples come are the same. A function, called test statistic, is calculated with the arguments given. The result of this function is transformed into p-value, which, when compared with the assumed level of significance, allows us to state the existence or lack of premises to undermine the truth of the hypothesis about equal distribution. Instead of many tests (e.g. Student's t test), the corresponding permutation tests are used, which do not require additional assumptions about the distribution of the compared samples.

to differences in the perception of economic phenomena by both sexes (perhaps in connection with elements of psychology), but going beyond the scope of this chapter.

As can be seen in the third column of the Table (verification of the second and third hypotheses), the results obtained 0.18385 and 0.70577 mean that there are no significant differences (the same distribution of answers). Thus, extramural students (more often active on the labor market) have more experience related to foreign sales more often recognize sales as art of sales and extramural students (more often active on the labor market) have more experience related to domestic sales more often consider sales art of sales. H 2 and H 3 hypotheses have been positively verified.

In order to verify the H 4 – H 14 hypotheses, calculations were made using an Excel spreadsheet. Table 2 presents the results of calculations, which consisted in the fact that:

1) an appropriate survey assertion has been assigned to each hypothesis,
2) the sum of points has been calculated and compared (options from 1 to 7) for the answers "I agree" or "I do not agree" with the appropriate assertion from the survey,
3) the number of people who answered "I agree" or "I do not agree" with the appropriate survey assertion was calculated and compared,
4) the sum of points was calculated and compared (option from 1 to 7) for the answers "I agree" or "I do not agree" with assertion No. 11, which referred to "art of sales",
5) the number of persons was calculated and compared (option from 1 to 7) for the responses "I agree" or "I do not agree" for assertion No.11, which referred to "art of sales".

Then, the results obtained were subjected to a logical analysis and assessment whether a given hypothesis was verified positively or negatively.

As we can see from 11 hypotheses, as many as 10 were positively verified (they were H 4, H 5, H 6, H 8, H 9, H 10, H 11, H 12, H 13 and H 14), and only 1 negative (it was H 7). So students who:

• want to have more practical classes dedicated to improving practical skills related to sales in foreign markets,
• want to have more practical classes dedicated to improving practical skills related to sales on the domestic market,
• want to have practical classes in the foreign sales teaching process with experienced managers/sales people who have experience in domestic sales,
• believe that the manager should have a commission-based remuneration more often they consider sales as art of sales (in connection with point No. 16 of the survey),
• are aware of the fact that "everyone lives by selling something",
• have a higher level of general knowledge about sales (e-commerce, the future of sales, the role of sharing economy, awareness of the importance of the "Insight Selling" method),

Table 2. Verification of H 4 – H 14 – calculation results

Hypothesis number	The serial number of the assertion in the survey	Total points for "agree" on the next issue number versus "disagree"	The number of people who answered "I agree" versus "I do not agree" on the next assertion number	Total points for "I agree" versus "I do not agree" assertion 11 – "Selling is an art (a unique skill) – art of sales"	Number of people who answered "I agree" versus "I do not agree" assertion 11 – "Selling is an art (a unique skill) – art of sales"	Hypothesis verification (positive or negative)
H 4	6	1,329 v. 33	226 v. 8	1,025 v. 11	208 v. 2	positive
H 5	7	1,293 v. 32	225 v. 9	1,012 v. 0	205 v. 0	positive
H 6	19	1,380 v. 22	228 v. 6	1,034 v. 12	210 v. 2	positive
H 7	14	323 v. 818	82 v. 152	394 v. 50	76 v. 13	negative
H 8	15	614 v. 469	140 v. 94	643 v. 21	129 v. 8	positive
H 9	16	1,067 v. 56	213 v. 21	973 v. 18	198 v. 4	positive
H 10	5	1,217 v. 84	211 v. 23	977 v. 21	196 v. 5	positive
H 11 *	17, 18 i 20	1,285+532+387 (2,204) v. 20+363+741 (1,124)	228+137+87 (452) v. 6+97+147 (247)	1,031+647+423 (2,101) v. 4+39+41 (84)	209+129+81 (419) v. 1+10+13 (24)	positive
H 12	10	1,157 v. 47	220 v. 14	976 v. 0	200 v. 0	positive
H 13	8	956 v. 108	202 v. 32	919 v. 31	189 v. 7	positive
H 14	9	753 v. 203	184 v. 50	835 v. 32	171 v. 8	positive

Source: calculations made using Microsoft Excel.

* in the case of hypothesis 11, the sum of points and the number of people were counted in views 17, 18 and 20

- think that sales can be learned,
- think that managing sales on foreign markets (exports) is difficult,
- consider sales management on domestic markets difficult;
- more often consider sales as art of sales.

At the same time, students with experience in foreign sales often do not recognize sales as art of sales. This is an interesting result of the study and, according to the author of the chapter, it may be due to the fact that the respondents were relatively young, so their experience on foreign markets could be small and in positions not directly related to sales.

4. Summary and recommendations

After presenting the results of surveys and verifying hypotheses, it's time to try to share comments and thoughts on the subject and methodology of teaching classes in the broadly understood problems of international trade – with particular emphasis on foreign sales issues. For this purpose, the answers given in relation to assertions 1, 2, 3, 4 and 12 and 13 of the survey will be analyzed. These were the following issues:
- in the process of education at the Cracow University of Economics I received knowledge and skills enabling me to do business on an international scale,
- in the process of education at the Cracow University of Economics I received knowledge and skills enabling foreign sales (exports),
- there were enough practical elements of conducting export sales during classes at the Cracow University of Economics,
- there were too many theories in the educational process at the Cracow University of Economics at the expense of practical elements,
- that is, regarding a kind of assessment of the current didactic process and subsequent ones regarding future education:
- I have a need to learn how to manage foreign sales (exports),
- I need to learn how to manage sales in the domestic market.

Table 3 presents the results of calculations, which consisted in the fact that the number of people who answered "I agree" or "I do not agree" with the appropriate view from the survey was calculated and compared and the sum of points was calculated and compared (option from 1 to 7) for the answers "I agree" or "I do not agree" – which will help to determine the "weight" of given responses.

As we can see in the table above, the respondents confirmed that in the education process at the Cracow University of Economics they received knowledge and skills enabling them to do business on an international scale (185 people from 234 and 796 points), they also received knowledge and skills that allowed them to conduct foreign sales (201 people from 234 and 856 points). To the preview of the fact that there were enough practical elements for conducting export sales during

Table 3. Results of calculations related to assertions 1, 2, 3, 4 and 12 and 13 of the survey

Assertion number in the survey	Total points for "I agree" on the next assertion number versus "I do no agree"	The number of people who answered "I agree" versus "I do not agree" on the next assertion number
1	796 v. 194	185 v. 49
2	856 v. 122	201 v. 33
3	515 v. 421	129 v. 105
4	1,027 v. 110	209 v. 25
12	969 v. 89	199 v. 35
13	965 v. 71	208 v. 26

Source: calculations made using Microsoft Excel.

classes at the Cracow University of Economics, the answers are even – only 129 people out of 234 confirmed, 515 points versus 421 against 105 people who did not confirm this view. However, with the view that there were too many theories in the process of education at the Cracow University of Economics, at the expense of practical elements, we can observe a definite advantage of those who agree with this thesis (209 people out of 234 and up to 1,027 points). This clearly means that students in the didactic process lacked practical knowledge of foreign trade, including certainly issues related to foreign sales. This is confirmed by the results of the last two surveyed views, as many as 199 people out of 234 have the need to learn foreign sales management (969 points), and 208 people out of 234 have the need to learn sales management on the domestic market (965 points). To sum up, it is worth saying that, according to the author of this chapter, universities in Poland may soon face a very important dilemma: university or vocational school?

The realization of student expectations can mean the interpenetration of university general education assumptions based on critical thinking skills, searching for the truth about the world, guaranteeing freedom of thinking and preparing graduates to serve society and elements of so-called "Corporate culture" based on the preparation of professionals (even in sales). It should be emphasized, however, that despite such clearly defined expectations of students, universities should not transform into an entity focused on strictly professional education of graduates and the erosion of the traditionally understood idea of the university will not continue, on the contrary – it will retain its identity and mission (Zysk, 2017).

However, it is worth including more aspects of business practice in academic youth syllabuses, including sales sales teaching as specialist knowledge. It would be interesting to conduct similar research at other economic universities in Poland; perhaps it would be worth conducting similar surveys at economics universities in Europe and in the world.

Importantly, the professional competences of the future have become the topic of debate at the latest World Economic Forum in Davos. Participants distinguished then: comprehensive problem solving, critical thinking, creativity, people management, cooperation with others, emotional intelligence, reasoning

and decision making, service orientation, negotiation and cognitive flexibility (https://www.weforum.org). It is worth considering this list when designing the subject of teaching at universities.

In the document of the Polish Ministry of Science and Higher Education entitled "Program for the development of higher education and science for the years 2015–2030" we can read that: "The development of practical, widely available, specialized and highly embedded studies in the realities of the labor market will be of key importance . Therefore, investment is needed in staff with a different profile: proficient in technology and in areas covered by education, experts and innovators, leaders who can infect passion and reliable "craftsmen" in the scope requiring specialist knowledge and skills" (http://www.bip.nauka.gov.pl). Such statements may mean the aspirations of the ministerial and university authorities – especially after the recently implemented reform – to develop students' professional skills, matching the goals and quality of education to the needs of the developing and increasingly internationalizing Polish economy, i.e. directly to the our labor market.

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Annex

Questionnaire

Man/Woman, | full-time studies | or | extramural studies |

1. In the education process at the Cracow University of Economics, I received knowledge and skills enabling me to do business on an international scale

I agree										I do not agree						
1	2	3	4	5	6	7				1	2	3	4	5	6	7

2. In the education process at the Cracow University of Economics, I received knowledge and skills allowing me to conduct foreign sales (exports)

I agree										I do not agree						
1	2	3	4	5	6	7				1	2	3	4	5	6	7

3. There were enough practical elements of conducting export sales during classes at the Cracow University of Economics

I agree										I do not agree						
1	2	3	4	5	6	7				1	2	3	4	5	6	7

4. There were too many theories in the educational process at the Cracow University of Economics at the expense of practical elements

I agree										I do not agree						
1	2	3	4	5	6	7				1	2	3	4	5	6	7

5. Each one "lives by selling something" (in the sense of goods, services, work)

I agree										I do not agree						
1	2	3	4	5	6	7				1	2	3	4	5	6	7

6. I would like have more practical classes dedicated to improving the practical skills related to sales in foreign markets

I agree										I do not agree						
1	2	3	4	5	6	7				1	2	3	4	5	6	7

7. I would like to have more practical classes dedicated to improving the practical skills related to sales in the domestic market

I agree										I do not agree						
1	2	3	4	5	6	7				1	2	3	4	5	6	7

8. It is difficult to manage sales on foreign markets (exports)

I agree										I do not agree						
1	2	3	4	5	6	7				1	2	3	4	5	6	7

9. It is difficult to manage sales on domestic markets

I agree										I do not agree						
1	2	3	4	5	6	7				1	2	3	4	5	6	7

10. Effective selling can be learned

I agree										I do not agree						
1	2	3	4	5	6	7				1	2	3	4	5	6	7

11. Selling is an art (a unique skill) – Art of sales

I agree										I do not agree						
1	2	3	4	5	6	7				1	2	3	4	5	6	7

12. I have a need to learn how to manage foreign sales (exports)

I agree										I do not agree						
1	2	3	4	5	6	7				1	2	3	4	5	6	7

13. I have a need to learn how to manage sales in the domestic market

	I agree										I do not agree					
1	2	3	4	5	6	7					1	2	3	4	5	6	7

14. I have experience related to foreign sales

	I agree										I do not agree					
1	2	3	4	5	6	7					1	2	3	4	5	6	7

15. I have experience in conducting domestic sales

	I agree										I do not agree					
1	2	3	4	5	6	7					1	2	3	4	5	6	7

16. The person managing sales / the seller should be rewarded with the effects of activities (commission related to the level of performance of sales targets)

	I agree										I do not agree					
1	2	3	4	5	6	7					1	2	3	4	5	6	7

17. The future of sales is e-commerce

	I agree										I do not agree					
1	2	3	4	5	6	7					1	2	3	4	5	6	7

18. Sharing economy can harm sales processes

	I agree										I do not agree					
1	2	3	4	5	6	7					1	2	3	4	5	6	7

19. In the process of teaching foreign sales, I would like to have practical classes with experienced managers / sales representatives

	I agree										I do not agree					
1	2	3	4	5	6	7					1	2	3	4	5	6	7

20. I have already heard about the "Insight Selling" method

	I agree										I do not agree					
1	2	3	4	5	6	7					1	2	3	4	5	6	7

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How to Teach Sustainability to Students of Marketing – "Magazyn Dobra" Charity Shop Case Study

Introduction

The purpose of this chapter is to present an initiative undertaken by the staff and students of the Poznań University of Economics and Business (Poland) in the field of fostering sustainability – setting up a charity shop in order to promote the reuse of products and make people more sensitive to the needs of others. Although Poland is one of the most polluted countries in EU, at the same time people in Poland are not very sensitive to the problems of sustainability and environment protection. So for many reasons it is vital to work on instilling the 5R rule (refuse, reduce, reuse, recycle, repair, repurpose) into people's thinking and behaviour. Students of marketing are a vital group to teach sustainability to as they will be taking part in launching new products onto the market, so building their consciousness in this field is vital for society. Charity shops usually sell used products with the profits being devoted to charity. There are not many charity shops in Poland but there are numerous second hand shops. The majority of them is still seen as inferior to regular ones (selling new products) and associated with poverty, so buying in second hand shops is mainly perceived as a sign of low status (Rybowska 2017). On the other hand it is important to give products a second life and use them for longer, so charity shops could become a good means of changing people's attitude to used products.

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"Magazyn Dobra" is a charity shop that opened on 27 October 2018 in Poznań. The owner of the shop is the foundation "Magazyn Dobra" which was set up by Poznań University of Economics and Business (PUEB) staff members. One of the goals of creating the foundation was to involve students in the whole process of teaching them sustainability, as well as helping them to be more sensitive to the problems connected with environmental pollution, catastrophic global warming and social inequality. Setting up the charity shop took about a year and may be divided into several stages, which will be presented in this chapter. Looking from the methodological point of view, the presented case shows the example of experiential learning which is defined as the process of learning through experience, and more precisely as learning through reflection on doing (Felicia 2011), which is a form of active learning. That form allows people to find themselves in a situation which will force them to act and understand more than in passive forms of learning (like lectures). Experiential teaching is about creating situations which allow students to practice.

1. The reasons for teaching sustainability to students of marketing in Poland

The closer to the point of "no return" we get (perhaps it has been crossed already) the harder it is to understand that some people still deny human civilization has caused the process of catastrophic climate change. The results of research conducted in 2019 on 766 students from 18 Polish universities (including Warsaw, Kraków, Katowice, Lublin, Olsztyn, Poznań) showed that 6.7% of the respondents did not share the view that global warming is caused by human activity (the other 93.3% did – there being only two options as an answer). It is very likely that in groups of older respondents it would be even worse; for example, in a public speech the current Polish president – Andrzej Duda – doubted the influence of human activity on global warming.

At the same time, Poland is among the most polluted countries in Europe. According to a World Health Organization report, published in 2016, out of 50 the most polluted cities in the European Union, 36 are in Poland (Poland: Europe's most polluted country, 2019). The report of the European Environment Agency (Air quality in Europe, 2019) shows that the density of extremely dangerous particles in the air (particulate matter PM_{10} and $PM_{2.5}$, BaP: benzo[a]pyrene) in Poland, is one of the highest in EU countries (Figure 1), as well as above the 2017 average exposure indicators and exposure concentration obligations.

An important factor in this is that the Polish energy system is based on coal – 86% of electrical power is generated through burning coal (Departament Przedsiębiorstw GUS, 2019). What is more, right now, a new coal power station (which will perhaps be the last one built in Europe) is under construction in one of the cities of Poland – Ostrołęka.

Figure 1. Concentrations of PM10 – 2017 daily limit value (red spots are for places with a PM10 above 75 μg/m^3, whereas the daily norm is 20–50 μg/m^3, depending on the length of the exposure time)
Source: Air quality in Europe — 2019 report by the European Environment Agency.

In addition, Poland has a high consumption rate of products the production and/or usage of which is very dangerous for the environment. For example, the consumption of meat is one of the highest in Europe – it is around 70 kg per person (OECD, 2019) – which is more than in Germany, for example (Dyjak, 2019); and the rate of wasted food is very high – from various sources it is about 30% – meaning every year around 9 million tonnes of food are wasted in Poland (Cholewińska, 2019). The country is in a rather shameful 5th place in the European Union (Polska w czołówce państw marnujących żywność, 2019). Also, the usage of plastic bags is extremely high – the average Pole uses 500 plastic bags per year (in comparison – the average Dane uses 4) (Strójwąs, 2019). Although plastic bags are no longer given for free in the shops, the thickest ones still are.

Therefore, the increasing importance of sustainability is a result of numerous problems in today's globalized world that society is constantly struggling with. Among them should be mentioned things such as environmental pollution, the finiteness of natural resources, as well as climate change and poverty (Buerke et al., 2017). In order to categorize all these problems and aspects, it is worth

referring to the dimensions of sustainability model. According to Phipps et al., (2013) there are three core dimensions of sustainability: environmental, social and economic. The first refers primarily to the protection of the natural environment and natural resources; the second relates to social and cultural systems; while the last one is about promoting the economic well-being of society.

Sustainability is a concept which is taught at many universities, PUEB among them. But looking from the perspective of students it might be perceived as somehow abstract. The concept is about the whole planet and future generations; things which are not very close or met with daily in reality, being distant and sometimes hard to imagine. So, based on the principle: tell me – I will forget, show me – I will remember it, and involve me – I will understand it, the PUEB staff wanted to achieve a high level of student understanding and involvement in the sustainability concept.

2. Charity shop as a sustainable retail format

The growing awareness of the need to restrict purchases, especially of new products, creates the basis for the development of such retail formats that allow people to buy used goods (Klouda, 2008). Recently, the number of second-hand shops has grown at about ten times the rate of other stores (Yan et al., 2015). They adopt one of the retail formats referred to as alternative retail formats (Stone et al., 1996). Their common, and at the same time important, distinguishing feature is that they implement the postulate of sustainable development in a much more radical way than traditional formats which sell new products. Their activities help to make better use of manufactured goods, which reduces the extent of product waste. As a result, excessive exploitation of natural resources can be limited, and at the same time it is possible to create an attractive offering for customers seeking unique products.

Charity shops (thrift shops in the USA) are one of the alternative retail formats. Such shops are especially popular in Great Britain and Ireland, their origin dating back to the end of the 19th century. In a book published in 1886, General Booth, the founder of the Salvation Army, expressed the view that there was a lot of goods wastage in wealthy homes and that any unnecessary things should be collected and re-introduced onto the market. He put his idea into practice by organizing groups of people who visited affluent homes and collected used items. These items were then sold from 'salvage stores' in London and provincial centres. The first charity shop in the form that is known today was opened in 1947 in Oxford by Oxfam. It sold surplus goods obtained in response to an appeal for helping Greeks in Great Britain (Horne, 2000). Since the 1990s a dynamic development of charity shops has been observed. In 1992 there were 3,480 such shops in the British Isles, but in 2002 this number had increased to 6,220 (Parsons, 2002), and in 2018 to 11,200. The vast majority of these stores (83%) are located in England. In Ireland there are currently about 400 charity shops (Charity Retail Association 2018).

Charity shops are defined by Parsons (2002) as stores that sell gently-used donated goods where the profits are used for charity. In some charity stores new products are also offered, but they are in the minority (Horne, Broadbridge, 1995). Merchandise that cannot be re-sold is recycled. An important distinctive feature of such shops is the low-price level, which can be achieved thanks to the low costs connected with the involvement of volunteers in running the stores.

Poland has no tradition of charity stores. Most probably, the first charity stores in Poland were established by the Sue Ryder Foundation in the early 1990s. Only a few of them have survived to date. Currently, there are about 20 charity stores run by various organizations – including Caritas, the largest charity organization in Poland connected with the Catholic Church – but also by foundations which operate on a local scale. Some charity stores in Poland operate within the concept of social entrepreneurship. The majority of charity shops were established less than 5 years ago, and an evident growth trend in the number of stores in this format can be observed (Borusiak, Kucharska, 2019).

3. How it was done – the process of setting up "Magazyn Dobra"

3.1. Very first inspiration

In 2017 a European Association for Education and Research in Commercial Distribution conference was hold in Dublin on 4–7 July. The event took place at the Dublin University of Technology, and before the gala dinner which had been organized, the PUEB representative met a professor from Canada in the charity shop near the venue. The Canadian professor proudly displayed a pair of used shoes she had bought in this shop, and wore them to the gala dinner. At that moment the Polish professor's thinking about used products turned around. She realized that there are so many wasted products worldwide; some of them are thrown out while almost new; therefore, a used products distribution system may help in resource waste reduction. At the same time, she understood what may be even more important than setting up a shop selling used products, that this could be an educational opportunity, so she decided to involve students in the whole process.

3.2. First step – looking for the identity of the venture

In October 2017 a new group of marketing and commerce students at PUEB (bachelor level full-time studies in the Faculty of Management) started a lecture on "Distribution Management". They were presented the general idea of setting up a charity store and invited to join the project. Participation in it was not obligatory and a group of 15 students signed up (45% of the whole group). At first, they

were presented with the idea of a charity shop and they learned that this retail format is very popular in the United Kingdom, but also in Ireland. Almost none of them were familiar with this format as at that time there were few of them in Poland (about 15 in the whole country).

The first task was to find a proper formula. All agreed that a charity shop is a good format to facilitate the distribution of used products. This is mainly due to the fact that people must have a good reason to do something good. So, a charity shop formula could reinforce the motivation to get involved in the venture: on one hand, it was about doing something to limit resources waste; on the other, to help other people, sometimes well-known groups. The professor suggested that the identity of a venture could be built on the good image of organizations helping people directly, such as hospices. However, contrary to the idea of the professor, the students suggested that instead of helping one organization (which is the rule in Great Britain and Ireland) it would be better to help many beneficiaries. The reasons they presented were very reasonable: first to avoid any potential risks connected with a crisis in the mother-organization (or even collapse); and second, to have the chance to reach different social groups which could help attract attention. All agreed on the idea that a charity shop should choose new beneficiaries four times a year and that the system of choice should be transparent, democratic and involve numerous people. The best method to meet these requirements is to organize a public vote. So, one of the most important elements in a renewed charity shop formula would be a procedure for new beneficiary choice. First, an announcement concerning a new beneficiary election published on Facebook in the month before the last quarter of the year (i.e. in September before the 4th quarter of the year). Candidates would have 7 days to send applications (containing their financial statements as well as some basic information about their activities). Then the voting would be organized around Facebook profiles, last 14 days and end just before the first quarter of the year; the results to be published at the beginning of the new year.

The next task was to invent a good name for such a shop (and the foundation at the same time). In order to find it, students suggested 6 names and then they organized a vote on Facebook. The entire group of commerce and marketing students took part in this vote, as well as some others also, with a total of 52 voting. The result of the vote is presented in Table 1.

Table 1. Results of the vote for the name of the charity shop

Name	Number of votes
Magazyn Dobra/Store of good (goods)	25
Skład możliwości/Store of opportunities	9
Restore	7
Poznański Fant/Poznań pledge	5
Dobry Fyrtel/Good place	3
Drugie Życie/Second life	3

Source: Authors' own.

"Magazyn Dobra" won. To explain the meaning of this phrase it must said that it is an expression with a double meaning. "Magazyn" means "warehouse", whereas "Dobra" means "good" or simply "goods, products". Therefore "Magazyn Dobra" can be understood as a place where products are stored, but also a place where goodness is done. Both meanings are very natural and reflect the core idea very well. It was time to get a logo.

Figure 2. "Magazyn Dobra" charity store logo
Source (author): Izabela Jasiczak (with permission).

Several options were prepared by graphic artist Izabela Jasiczak; the students voted again and the following one was chosen (Figure 2).

At this stage it was also decided that the "Magazyn Dobra" (MD) charity shop would be a brick-and-mortar shop run by volunteers.

After these steps the formal procedures started. On 12 December 2018 the agreement on setting up the "Magazyn Dobra" foundation was signed by 14 founder members. All of them are PUEB professors (mainly Department of Commerce and Marketing staff) and Ph.D. students. The foundation was registered in court in Poznań on 9 March2018.

3.3. Second step – getting resources

The process of getting resources was complex which is why the task was divided among many students. New project participants were drawn in thanks to the student scientific circle "Marketing", which is a semi-formal organization cooperating closely with the Department of Commerce and Marketing. The students of commerce and marketing are the major participants.

The whole venture of setting up the store was divided among four teams:
- Site team looking for a place where "Magazyn Dobra" could operate,
- Collectors team organising people responsible for collecting products for sale,
- Volunteers team consisting of people (mainly students) working as shop assistants,
- Communications team, responsible for Facebook communications.

Right after signing the agreement setting up the foundation, the students started looking for a place where its activities could be based – a home for the charity shop. They found several sites and they visited them together with a professor. Finally, they chose a small outlet very close to the University (5-minute walk). It required redecoration, which took place mainly in September 2018. Everything was done by volunteers, and the students also helped in painting and cleaning. The furniture (racks, desk, chairs, etc.) was given by a company the students found or donated by private people. In order to have something to

sell it was necessary to collect stock items. The choice of groups of products to collect and sell in "Magazyn Dobra" was one of the most important decisions. The board of the foundation decided to accept used items which are functional, complete, unbroken, clean and generally small. In particular following products are accepted:

- Accessories and haberdashery,
- Household and garden appliances (excluding furniture),
- Small electronic equipment,
- Children's supplies,
- Sports and tourist equipment,
- Culture and entertainment (books, games, etc.),
- Office supplies and stationery,
- Art and collector's items,
- Medical and cosmetic supplies.

For reasons of safety and hygiene, but also the small area of the store, the MD charity shop does not accept food, clothes, shoes, household textiles, medicines, cosmetics, chemicals, furniture, large electronic and household appliances, plants, animals, or automotive parts.

In September 2018 (it was announced on Facebook) MD started to accept products. Both students and professors were involved in this process, which turned out to be very fruitful and a rich set of used products was gathered. Some of the items were quite valuable, like sets of crockery, leather bags, watches, electronics, and sports accessories.

A very important task was to find volunteers who could work as shop-assistants. Several students (also Ph.D. students) decided to devote their time to the charity shop which was planned to be open between 3.30 p.m. and 6.30 p.m. Tuesday to Friday; and between 11 a.m. and 2 p.m. on Saturdays. "Magazyn Dobra" was opened on Saturday, 27 October 2018. The revenue generated on that day was the highest up till now and amounted to 760 PLN.

3.4. Third step – looking for an audience, creating a community

Even before opening, the team responsible for the project decided to create a Facebook profile. Due to a very limited budget it was recognized as the best option to attract the attention of an audience. The profile was created in August 2018 by two students of commerce and marketing who, as volunteers, were its administrators. From the very beginning the students were supported by a professional agency specializing in social media. The aim was to build relationships between the agency and the students to let them learn more practically how to communicate using social media; mainly to develop graphic and copyright skills but also campaign planning, ventures creation and so on. The agency prepared the graphics, including the main banner (consisting of falling blocks) and the general framework of posts (colours, layout and fonts). The Facebook 'fan page'

started on 17 August 2018. A teaser campaign was used: the first post was an announcement saying that someone is looking for a space dedicated to making something good.

The Facebook campaign was planned to achieve the following goals:
- to inform about the store and the actions taken by it,
- to build the trust of donors, beneficiaries and volunteers,
- to attract beneficiaries,
- to build awareness and knowledge in the field of sustainable consumption,
- to build a community around the venture.

In order to attain these objectives several series of posts have been publishing since the very beginning. Their main characteristics are presented in the Table 2.

Informative posts contain three main groups of posts:
- publishing financial data every month. These are published in the first few days (2nd or 3rd) of the following month and contain information about the revenue size, the costs (usually store rent, electric power and accountancy) and the amount of money devoted to a beneficiary (with money being transferred to the beneficiary after each full quarter of the year). This is a very important instrument for building trust on the one hand and motivation on the other;
- delivering some important and practical information about shop operations, like hours of operation, methods of payment (cash only), and special events (meeting with a popular singer, special sales, street name celebration, Zero Waste Fair participation),
- informing about the important initiatives of other organizations and companies (for example the series: News from around the world).

The People of Good series was designed to let people know who is involved in the project, and why, in order to make the people/community feel that the venture is not anonymous and show some of the people who are responsible for the shop. Posts in this series contain a photo, name, surname, function and basic motivation (expressed in one sentence).

The third series of posts is connected with beneficiaries. It contains the following posts:

Table 2. "Magazyn Dobra" Facebook profile activities (up to 23.11.2019)

Series	Number of posts	Number of receivers	Number of reactions	Number of comments	Number of shares
Informative	92	195,861	4,275	229	545
People of Good	17	16,688	778	16	88
Beneficiaries	25	330,064	4,594	1,917	1,775
Occasional	44	43,212	1,225	43	76
Educational	37	53,697	909	42	98
Total	215	639,522	11,781	2,247	2,582

Source: Authors' own.

- informing how to submit applications for a new beneficiary,
- informing about the voting for a new beneficiary,
- presenting the winning organization – the beneficiary for the upcoming quarter of the year,
- reminders about the current beneficiary.

This series is the most involving one: attracting the highest interest and provoking comments. Up till now five beneficiary elections have been conducted. Every time there were two candidates and the winning organizations are presented in Table 3.

Occasional posts are connected with special days like Christmas, Mother's Day or the celebration of the first anniversary of "Magazyn Dobra". They are usually a good opportunity to wish everybody all the best and thank them, but also to present products which may be useful for such times.

Educational posts are devoted to two main topics:

- environment protection; these posts show for example simple methods of product reuse, the consequences of food waste, methods of food waste reduction, and information about the amount of rubbish produced by the average Pole,
- charity involvement; the number of NGO's registered in Poland, their fields of activity, the history of charity shops, the number of charity shops in Great Britain, the gender structure of people engaged as volunteers, and so on.

By the beginning of November 2019, the Magazyn's Facebook 'fan page' had been followed by 2,699 Facebook users. The highest rate of new "likes" per day was at the time of the Magazyn's opening in October 2018. The first thousand

Table 3. The beneficiaries of "Magazyn Dobra"

Name of beneficiary	Field of operation	Period	App. number of people voting (in total)	Winning beneficiary support (%)	Amount of money transferred (PLN)
Drużyna Szpiku	Bone marrow bank	27/10/2018–31/12/2018	4,500	54	3,005.02
Hospicjum Palium	Hospice	1/01/2019–31/03/2019	1,000	56	4,508.42
Fundacja Wózkowicze	Providing help for disabled	1/04/2019–30/06/2019	1,500	56	2,850.43
Fundacja Dzieciaki i Zwierzaki	Providing care for disabled kids	1/07/2019–30/09/2019	3,500	51	3,513.88
Zupa na Głównym	Providing care for homeless	1/10/2019–31/12/2019	2,500	56	5,811.46

Source: Authors' own.

followers were reached in the second half of December 2018. Since then rate of new "likes" has been quite stable amounting to circa 150 new followers per month. It slowed down from May to September 2019, which may have been caused by the holiday break. Since the end of September 2019, the new "like" rate speeded up again. Specific data is presented in Figure 3.

Looking at the structure of the 'fan page' likes, 82% of them come from women and only 18% from men. The huge majority of likes come from Poznań people, but there are also some from other Polish cities like Warsaw, Wrocław, Łódź, Kraków, Katowice, and Szczecin. 3.3% of likes come from foreign countries (most in this group are from Germany and Great Britain).

As the need for communicating with the community in more developed ways is constantly growing, a new channel was opened, and a profile on Instagram was started on 17 April 2019.

The Instagram profile is dedicated to presenting information, and last but not least to educational posts. They may be divided into 2 groups:

- teaching about sustainable consumption; like posts building environmental awareness, and presenting certain useful information such as how to limit detergent usage or how to aim for a zero-waste lifestyle;
- presenting charity activities; like the number of charity shops in Poland, the balance sheet from each month of activity, photos of new products, as well as short films;
- 58 messages have been posted since the beginning of the action. The profile has 233 followers, and in turn follows 22 pages. From 21st to 31st October the posts reached 3,281 Instagram users.

85% of recipients are women and 15% are men, with the largest group of followers being people in the 25–34 age group. As many as 77% users are from Poznań, Warsaw is in second place with 3%, third was Katowice with 1%.
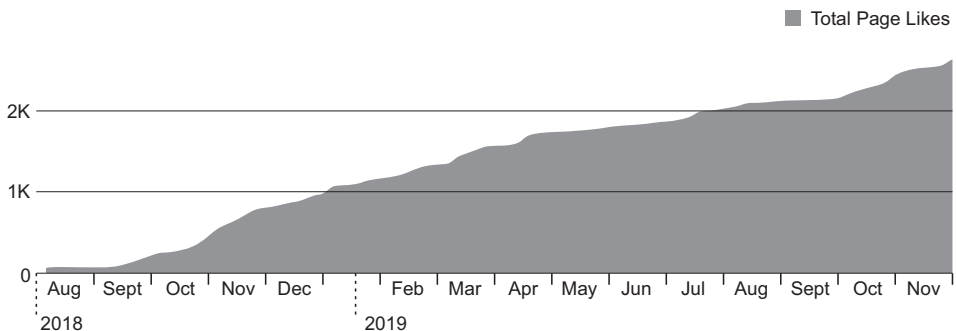

Figure 3. Total number of Magazyn's Facebook 'fan page' likes
Source: Authors' own, using Facebook Insights.

4. The outcomes of "Magazyn Dobra" activity

4.1. Financial outcomes

The most fundamental rule is to make the foundation's financial system as clear and as transparent as possible. This is self-evidently a basic method for building the trust of volunteers, donors and customers. People would only be willing to devote their time and/or money so long as they believe they are not being cheated. In Polish law, the foundation's accounts must be kept using strict book keeping methods. As this requires special software, the work is done by a professional accountant. The financial system of the foundation is based on the rule that the revenue should cover the cost of shop rent, energy and accounting. What is left is donated to a beneficiary with the results of activities being published every month on a Facebook profile. Additionally, confirmations of bank transfers to beneficiaries are placed on the foundation website. Table 4 contains financial results for 12 months.

The above monthly results vary greatly, which is somehow normal for a retail outlet. That is why the revenue in December 2018 was higher than average. This effect may be also observed in March 2019 (before Easter). However, some effects

Table 4. Financial results of "Magazyn Dobra" (October 2018–October 2019)

Month	Revenue (PLN)	Number of transactions	Average value of a transaction (PLN)	Devoted to a beneficiary (PLN)
October 2018	1,038.00	51	20.35	–
November 2018	2,744.50	160	17.15	1,085.46
December 2018	3,471.00	201	17.27	1,919.56
January 2019	2,495.50	178	14.02	1,110.48
February 2019	2,317.00	160	14.48	931.98
March 2019	4,152.00	231	17.97	2,465.96
April 2019	2,442.50	180	13.57	1,057.48
May 2019	2,645.50	191	13.85	1,344.00
June 2019	1,620.50	120	13.50	448.95
July 2019	3,198.00	223	14.34	1,777.08
August 2019	2,052.00	150	13.68	880.45
September 2019	2,167.80	149	14.59	856.35
October 2019	2,737.70	182	15.04	1,352.68
November 2019	3,237.50	211	15.34	1,661.39
December 2019	4,334.00	235	18.44	2,797.39
January 2020	3,818.00	251	15.21	2,432.98
February 2020	3,513.00	250	14.05	2,127.98
Total	47,984.50	3,123	15.36	24,250.17

Source: Authors' own.

may be related to beneficiary involvement, with the Poznań Hospice being the most engaged beneficiary of "Magazyn Dobra". There are many reasons for this fact: it is an organization with a well-developed volunteer network and quite wide scope in terms of groups of people that the hospice takes care of.

The total number of transaction completed by MD is 2,176 and the average number of transactions per month (excluding October 2018 where MD operated for only 2 days) is 177, with the mean value of transactions being 15.20 PLN. Looking at the trend of these values it is a sign of success rather than failure, but the venture still needs a lot of work in every aspect of its activities.

4.2. Student involvement

The number of people involved in the whole project reached 78 in October 2019. The structure of the teams is presented in Table 5.

Looking at the data presented in Table 3 the preponderance of marketing students is visible. They were mainly involved in Internet communications and sales tasks which are consistent with their study profile. As they said, "Magazyn Dobra" gave them new competencies and became something very important to them. They identified strongly with the project and with the idea of sustainable consumption. The whole project influenced their way of thinking so strongly that in many cases they changed their consumption patterns (for example: reducing the number of new fashion products bought, starting to buy more second hand

Table 5. The structure of the teams involved in "Magazyn Dobra"

Type of task	Number of people involved in total	Number of students (of all levels and all fields)	Number of marketing students (bachelor, master and Ph.D. level)
Concept creation	17	15	15
Formal foundation setting up	14	4	3
Store redecoration	11	6	2
Facebook administration	6	5	4
Instagram administration	2	1	1
Zero waste fair (11–12.10.2019)	4	1	–
Volunteers (shop assistants)	25	19	9
Total	79*	51**	34***

* 79 is the sum of the team sizes. The number of people involved in the project after 12 months of activity reached 70 (several people took part in more than one task).

** 51 is the sum of students taking part in different projects. Some students (6) were involved in several projects

*** 34 is the sum of students of marketing taking part in different projects. Some students (5) were involved in several projects

Source: Authors own.

products, limiting meat consumption, reducing the usage of plastic bags and bottles, starting to sort rubbish more precisely).

5. Conclusions

After a year of "Magazyn Dobra" operation it may be considered a success in terms of revenue, money transferred to beneficiaries, the number of Facebook profile likes and the number of people involved in the project. It should be highlighted that the majority of volunteers are students, with students of marketing being the largest group among them. The question is how much the project taught sustainability to students of marketing. Actually no regular study on that topic was conducted but as it was mentioned above, taking the informal talks into account their way of thinking about their careers and personal life has changed. In order to get the more valuable data the double study should be conducted: first at the beginning, before students start to work for a charity store and the second one, after at least three months of involvement. In both stages of the study the student attitude toward global warming, inequalities between people, consumption patterns and chosen business models of global corporations (like fast fashion for example) should be examined. Additionally, students motivation to get involved in the charity store should be revealed.

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The Influence of the Moral Hazard
on the Entrepreneurial Activity

Introduction

Establishing a new company, as the essence of entrepreneurship (Santarelli, Vivarelli, 2007), requires, among other things, identification and acquisition of the initial set of resources. Access to the financial capital is one of the key factors of the new company creation process (Seghers et al., 2012; Grilo, Irigoyen, 2006). The concept of liquidity constraints formulated in the Evans-Janovic model (1989), developed by major researchers (see e.g. Roman et al., 2013; Hanley, Girma, 2006; Kan, Tsai, 2006; Cressy, 1999) constitutes a theoretical background of determining the influence of the financial capital on an enterprise.

With a hypothetically competitive financial market, the amount of loans for newly created enterprises would depend on the characteristics of the market and the company and would allow the capital supply to be adjusted to its price (Colombo, Grilli, 2007). However, in the modern economy, financial markets are not perfect – they are financially hierarchical, and the capital supply curve is highly inflexible, probably even perfectly inflexible (Colombo, Grilli, 2007). The dominant factors explaining the causes of imperfections are as follows: unfavorable selection, moral hazard, asymmetry of information, and the increasing or even vertical shape of the capital supply curve (Hyytinen, Vaananen, 2006; Colombo, Grilli, 2007; Blumberg, Letterie, 2008).

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Moral hazard constitutes a particularly great research and practical challenge. The phenomenon of moral hazard, due to its nature, is more difficult to observe and to limit than other causes of imperfections. Moral hazard results from the fact that the success of a new enterprise depends heavily on the effort that the entrepreneur puts into the running of the company. However, this effort is not being evaluated by the lenders (Keuschnigg, Nielsen, 2004). After receiving external financing, entrepreneurs can avoid making the effort, work less efficiently than was assumed or take a higher risk from the financial point of view, and thus reduce the probability of success for their enterprise (Hyytinen, Vaananen, 2006; Blumberg, Letterie, 2008; Ejrnæs, Hochguertel, 2013; Atolia et al., 2015), exposing lenders to losses. In consequence, moral hazard reduces the optimum level of external investments in creation and development of new companies.

The main aim of this paper is to examine the influence of moral hazard on the process of new company creation and development by determining the areas of the company's operations within which the impact of moral hazard can be observed. The phenomenon of moral hazard is difficult to examine under real life conditions; therefore, an experiment was carried out in the form of a virtual strategy game. The participants of the experiment were Master's degree students at one of business universities in Poland and they were acting as founders and owners of virtual enterprises.

The structure of the chapter is the following: in the next sections the state of the art on the process of new company creation was reviewed and the influence of financial constraints, mostly moral hazard, on the entrepreneurial process. Then, the methodological aspects of the research are presented. The following section describes the results of the experiment and discusses the conclusions.

1. Entrepreneurial process and financial constrains as barriers for creating a new company

In the narrow sense, entrepreneurship is associated with the process of establishing and developing a new enterprise (Santarelli, Vivarelli, 2007). Creating a new business entity is a process resulting from a long series of complex decision-making rather than the single choice of becoming an entrepreneur (Grilo, Thurik, 2008). At the same time, it is a general process, since it includes elements common to all the processes of entrepreneurial character, but it is also a unique process, since it includes individual characteristics of entrepreneurial processes distinguishing them from other processes (Moroz, Hindle, 2012). Establishing a new company requires identification and acquisition of material and non-material resources that are indispensable to running a business. The initial set of resources affects not only the entrepreneurial process, but also has some influence on future access to other key resources (Hormiga et al., 2011).

The research on the establishment of new undertakings focuses on three main areas: the issue of the nascent entrepreneurs, related especially to the difference between future entrepreneurs and the remaining part of the population, and to the typology of future entrepreneurs; the characteristics of the process of creating a new enterprise, including the analysis of issues of perceiving and exploiting market opportunities, activities necessary to start a new business or differentiation at market entry; the results of the process of creating a new company in terms of its market success, durability and progress made at market entry (Davidsson, Gordon, 2012; Hormiga et al.,2011).

The issue of the influence of moral hazard on the entrepreneurial process discussed in this paper is multidimensional. Moral hazard may be understood as a certain attitude of entrepreneurs, occurring when the financial risk is taken by external investors. In this meaning, it is an attribute of entrepreneurs; however, its consequences lead to restricted access to external financing, which is a key resource in the process of creating a company. Making an effort or avoiding it in the scope of moral hazard also affects the process of creating an enterprise and its performance.

In the current literature, moral hazard is explained as a phenomenon of the financial market, where access to financial capital is treated as one of the major determinants of the entrepreneurial process. The concept of liquidity constraints formulated in the Evans-Janovic model (1989), developed by major researchers (see e.g. Roman et al., 2013; Hanley, Girma, 2006; Kan, Tsai, 2006; Cressy, 1999) constitutes a theoretical background of determining the influence of the financial capital on an enterprise. The model indicates that access to financial capital is a key factor in creating a new enterprise, and the existing constraints lead to a situation in which people with access to financial capital may engage it into a new enterprise. The liquidity constraints exclude people who lack financial capital from entrepreneurship (Evans, Jovanovic, 1989).

Decisions on financial expenditures are among the key decisions of entrepreneurial processes (Seghers et al., 2012). According to survey results, most of the respondents consider the lack of sufficient financial capital a significant constraint to starting a new enterprise (Grilo, Irigoyen, 2006). At the same time, the results indicate that a higher financial outlay translates into a better process of creating a new company, its growth and the time it will stay on the market (Reynolds 2011), while helping to overcome other entry barriers, such as regulations within the labor market or company registration (Aghion et al., 2007). Macroeconomic situation related to business cycle also affects the level of operating risk (Kalinowski, Puziak, 2018).

If the financial market was perfectly competitive, the problem of access to the financial capital would not determine the process of creating new enterprises. With a hypothetically competitive financial market, the amount of loans for newly created enterprises would depend on the characteristics of the market and the company. These characteristics determine the shape of the demand curve for capital. There would be a flexible capital supply curve that would allow the capital supply to be adjusted to its price (Colombo, Grilli, 2007). However, in the modern

economy, financial markets are not perfect – they are financially hierarchical, and the capital supply curve is highly inflexible, probably even perfectly inflexible (Colombo, Grilli, 2007).

The literature does not indicate one theory explaining the causes of imperfections in financial markets. The dominant factors explaining the causes of imperfections are as follows: unfavorable selection, moral hazard, asymmetry of information, and the increasing or vertical shape of the capital supply curve (Hyytinen, Vaananen, 2006; Colombo, Grilli, 2007; Blumberg, Letterie, 2008).

The unfavorable selection results from the fact that lenders analyzing the pool of enterprises applying for external financing are not able to distinguish between good and bad companies; therefore, more enterprises are being financed than the financial analysis would indicate. As a result, possible losses from investing in wrong enterprises can be offset by the profits from the right investments (Hyytinen, Vaananen, 2006). However, the price of capital is higher than the market mechanism would suggest, because the financial institutions' profits from the right investments should cover not only the investments they were involved in, but also unsuccessful projects.

Moral hazard results from the behavior of entrepreneurs, which is not being evaluated by lenders. There is a danger that companies using external financing may use the funds received against the intended purpose. The entrepreneur may work less efficiently than was assumed or take higher-than-optimal risks from the financial point of view (Hyytinen, Vaananen, 2006; Blumberg, Letterie, 2008).

In addition, the issue of negative selection and moral hazard may be complementary to each other, i.e. the bad company also behaves in a suboptimal manner (Hyytinen, Vaananen, 2006).

Asymmetry of information occurs when lenders have less knowledge about the quality of the planned enterprise than the potential entrepreneur. It is the result of the process of data collection and its costs, as well as the quality of these data. Gathering information is a time-consuming and costly activity, and in the case of a newly created company, these costs are higher due to the lack of business and credit history (Blumberg, Letterie, 2008).

Barriers in access to finance occur partly due to the supply side of the market. Banks are cautious in granting loans to enterprises, particularly to small and newly created companies (Blumberg, Letterie, 2008). The occurrence of financial barriers is conditioned by the structure of this market, including the number of operating banks and lenders in a given area, which affects competition between them. The relatively high market power of banks may negatively affect the value of granted loans and result in higher interest rates, which increases the cost of loans and reduces their availability for newly-created companies. Such an attitude from the banks may limit the scale of the process of creating new enterprises. On the other hand, the moderately-concentrated banking market positively affects the creation of new enterprises, as competition between banks reduces the negative phenomena (Gagliardi, 2009). The limitation of investments of financial institutions in the newly created enterprises results from the uncertainty of their future success and from the existing risk of failure (Koski, Pajarinen, 2013).

The consequence of the existence of liquidity constraints is that the majority of entrepreneurs starting their own businesses rely on their own financial resources in the early stages of the development of their companies (Stuart, Sorenson 2003), which results in the correlation between the formation of new enterprises and available assets (Hanley, Girma, 2006).

2. Moral hazard in theoretical explanation of financial constrains

Among the phenomena affecting financial constraints, moral hazard constitutes a particularly great research and practical challenge. Other limitations are relatively easily to overcome by improving the efficiency of data collection on new projects (asymmetry of information) and improving project evaluation methods (negative selection) or increasing the support of institutions financing newly-created enterprises. Such actions may be undertaken as part of a policy for promotion of entrepreneurship (supply of financial resources for newly created enterprises). However, the phenomenon of moral hazard, due to its nature, is more difficult to observe and to limit.

Moral hazard results from the fact that the success of a new enterprise depends heavily on the effort that the entrepreneur engages in the running of the company. However, this effort is not being evaluated by the lenders (Keuschnigg, Nielsen, 2004). After receiving external financing, entrepreneurs can avoid making the effort and thus reduce the probability of success for their enterprise (Atolia et al., 2015), exposing lenders to losses.

Moral hazard is a kind of behavior that in the business context involves taking either excessive risks or insufficient precautions against business failure. It is perceived as a lack of effort to prevent business failure, which results from possessing some security measures (Ejrnæs, Hochguertel, 2013). With external financing, the risk of financial loss resulting from the failure of the project is passed onto lenders, despite the fact that it depends on the efforts of entrepreneurs.

The loan restrictions depend on the degree to which lenders are able to identify the entrepreneurial risk and the tendency of entrepreneurs to cheat. The involvement of entrepreneur's own financial capital reduces their inclination to fraud; hence, the wealth of the entrepreneur is positively correlated with their decision to launch a new enterprise. Entrepreneurs' private financial assets have a positive impact on the company's survival through the limitation of financial barriers (Schafer, Talavera, 2009).

Empirical studies supporting the argument of the occurrence of moral hazard indicate that self-employed people who function in a system in which the insurance mechanism partially protects them against the loss of income have a bigger tendency to take on greater risks (Ejrnæs, Hochguertel, 2013).

The theoretical model explaining the mechanism of moral hazard assumes that the future entrepreneur needs external financing to start a new undertaking that is potentially productive and efficient. The efficiency depends on the effort

put in by the entrepreneur, which depends on the terms of the financial contract. If the entrepreneur puts in relatively little effort, then the venture is inefficient, i.e. the expected product does not cover the resources used. With high effort, the enterprise obtains a net product (Reito, 2011), allowing for a return on investment and entrepreneurial success.

The problem of moral hazard can also be considered in the context of principal-agent theory. This theory assumes that one actor (the principal) provides resources, often on the contract basis, to another actor (the agent), whose task is to accomplish the goal, which would be impossible to achieve independently by the principal (Rasmussen, Gulbrandsen, 2012). The entrepreneur is in the position of an agent using financing and providing an effective undertaking, while the lender assumes the role of the principal, providing external financing and awaiting the results of the efforts made by the entrepreneur.

There are three groups of problems indicated within this theory. The first problem concerns the conflict of goals set by the principal and agents, which often contradict each other. The second problem, referred to as adverse selection, is related to finding the right agent to achieve the goal. The third problem is moral hazard: the agent has an incentive not only to perform the agreed task, but also to act in an unacceptable way through undue effort put into a venture (Rasmussen, Gulbrandsen, 2012). Maziarz (2019) proposes to add also tacit factors to moral hazard explanation. In light of the relationship between the entrepreneur and the investor, it can be concluded that the conflict of goals may result from the fact that the goal of the lender is to maximize the return on investment, and the entrepreneur's goal may be to minimize efforts. Adverse selection is due to the fact that a lender can invest in various ventures, generating expected profits on a volatile level and of a different risk of failure. On the other hand, the problem of moral hazard indicates the necessity of entrepreneurial effort in the development of a new venture, which is impossible to observe and control by the lender. However, it is crucial for the success of the undertaking. External financing increases the tendency to behave in a riskier way among entrepreneurs.

Another model referring to this problem is the occupational choice model with financial constraints, tested by Paulson et al., (2006). It assumes that there are two financial constraints: limited liability and moral hazard. What is more, those constraints may influence each other as well. Limited liability arises when a potential entrepreneur has to borrow funds for establishing and running a business. The increase in wealth means that they can borrow a higher amount of money. However, when the phenomenon of moral hazard occurs, the entrepreneurial effort is invisible to the lender and the loan is returned only when the entrepreneur is successful; therefore, the lenders raise the interest rate on loans for less affluent entrepreneurs (Paulson et al., 2006). Research results indicate that moral hazard is a key financial constraint. It affects both entry into entrepreneurship by itself only or jointly with limited liability. Limited liability affects entrepreneurship entries only together with moral hazard, however (Paulson et al., 2006).

3. Methodology: experiments in assessing the influence of moral hazard on entrepreneurial process

Moral hazard is therefore understood as the lack of proper entrepreneurial effort and taking excessive risk after having received external financing. The research problem raised in the paper is to determine the areas of the company's operation within which the impact of moral hazard can be observed. The following research hypotheses were put forward:

- Hypothesis 1: Moral hazard leads to overinvestment in the enterprise.
- Hypothesis 2: Moral hazard results in excessive costs for companies.
- Hypothesis 3: Sales revenues of enterprises are reduced by the impact of moral hazard.
- Hypothesis 4: Moral hazard reduces the company's financial effectiveness.

It was assumed that lack of entrepreneurial effort and excessive risk-taking as manifestations of moral hazard cause entrepreneurs with external financing to invest excessively in their undertakings and incur excessive operating costs. At the same time, they do not attach such importance to gaining customers as they could, because their activities are based more on external financing instead of on sales revenues. The consequence of the above is lower financial efficiency for the company.

Moral hazard is difficult to measure, which also makes it difficult to empirically test it. This phenomenon is difficult or even impossible to observe directly, and for that reason, an indirect form to analyze it was adopted. The present study was based on an experimental method, according to the suggestion that it is the right method to assess theoretical assumptions for those phenomena which are difficult to verify empirically (Di Cagno, Spallone, 2012).

Di Cagno & Spallone (2012) used a lottery-based experiment in their research on the issues related to the fall of entrepreneurial companies due to the occurrence of moral hazard. The same approach was used in the presented study: it was based on the business simulation of running a virtual enterprise. Participants were put in the role of entrepreneurs and asked to run a virtual company through several decision rounds. The experiment was carried out using software: The Strategic Management Game. Thanks to this, all participants of the experiment started with exactly the same possibilities of making entrepreneurial decisions, thus making results comparable. It was also possible to implement research attitudes with different rewarding systems to investigate the importance of moral hazard.

The experiment took place in 2017 and 2018 and was arranged at Poznan University of Economics and Business (PUEB). PUEB is one of the business universities in Poland. Studies and research concentrate only on management and economic sciences which situates its students among business-oriented people, preparing and starting their professional careers in management and entrepreneurship. The experiment was carried out among the 1st year Master's-level

students of economic studies in 2 specializations: Innovation Management and International Business. Students took the course of entrepreneurship based on the strategic management game, a business simulator developed within the Leonardo da Vinci Program, as their mandatory subject.

The students were divided into 2 cohorts: cohort MH, affected by moral hazard (30 students) and cohort no-MH, with reduced moral hazard (33 students). Each cohort was further divided into student groups based on the Belbin Self-Perception Inventory. There were 9 groups in cohort MH and 10 groups in cohort no-MH; each group consisted of 3 to 4 students. During the simulation game, each team of students became virtual entrepreneurs who established and ran virtual companies producing and selling chocolate in 4 markets (Poland, Romania, Austria and Switzerland) and competed against each other for the wallets of 4 target groups with distinct preferences. The players needed to make strategic management decisions covering sales office development, production lines development, product design, operations, pricing, advertising, logistics, and HR, which in the end influenced the sales result of each company. The game consisted of 10 rounds (1 introductory round and 9 sales rounds). The students had no time limits related to making and changing decisions, because the rounds were completed once a week, during which the students had unlimited access to the game. The experiment was designed in such a way that any changes in students' decisions within one decision round did not entail any additional costs.

The moral hazard effect was implemented and tested during the experiment through the system of rewarding points which affected the students' final grade. The assumption was that the final grades received after each course at the university have the most important motivational power for students. With the whole respect to all differences, students' final grades were treated as rewards equivalent to entrepreneurial profits. In general, students' grades in both cohorts depended on two aspects:
1. Results of business simulation game regarding the results of virtual sales (value of sales) and the financial balance gained by the virtual companies – 70% of the grade
2. Additional tasks fulfilled by students during the semester – 30% of the grade.

Each round, each group received points depending on the sales performance (based on the ranking of companies) and game activity. At the end of the game, each group received additional points for the final financial balance on the company accounts. Financial balance in the simulation game is calculated as the cash flow, all revenues and spending influence on it, no matter their source. Every group started the game with the same amount of money – PLN 3,000,000, and the same set of assets: 1 production line, and equal unlimited access to the markets, resources and providers of ingredients.

The phenomenon of moral hazard was introduced in the grading system for two cohorts by different models of gaining points for the final financial balance. Cohort MH, assumed to be influenced by moral hazard, received points based on the companies' ranking of financial balance (max. 7 points, min. 4 points),

whereas cohort no-MH, assumed to have reduced moral hazard, received 1 point for each PLN 1 million collected on the virtual accounts; however, it might have been negative, should they end the game with a negative balance (max. 15 points, min. –15 points). Thus, cohort MH students were not subject to current mechanisms controlling their financial performance activities, and the current negative financial results did not have a direct impact on their final grade. Therefore, it was assumed that the behavior of this group is naturally affected by moral hazard and that these students were more likely to demonstrate excessive risk and avoid making an effort, which was not systematically controlled or did not influence the final grade of the course. On the other hand, students from the cohort no-HM were subject to the current mechanisms of controlling their effort and risk through negative points attributed when they had a financial loss, which affected their final grade. It was assumed that such conduct leads to the limitation of risky behavior and encourages greater effort in the business simulation and, therefore, reduces the scale of moral hazard.

In order to refer to the research hypotheses, the results of groups of students from both cohorts were analyzed. The analysis of the financial reports shows differences in the approach of financial capital management that was obtained externally, and therefore with moral hazard connected to it. The results of the experiment are evaluated in aspects such as investments in sales offices, investments in production lines, investments in product development, human resources, operations, warehousing, sales value and final financial balance.

4. Research results: does moral hazard shape the entrepreneurial process?

The analysis was based on the average result of companies from each cohort. Results gained during the experiment cannot be compared with real life companies, as the simulation game implemented some simplifications to make the game playable. As students took part in the same simulation game with the only difference being the rewarding point system influencing the final grade, the results of the two cohorts can be compared to each other. Final balance is calculated in terms of cash flow, which is why all the spending, including investments, negatively influence the balance, and income, including disinvestments or salvage, influence it positively. The presentation of results follows this logic.

Each team started the game without any sales office and had to make decisions about the location(s) and size of new sales offices. There were 4 locations available (Poland, Romania, Austria and Switzerland) and 3 sizes of the sales offices (small, medium and large). There were no limitations regarding the decisions. The game makes it possible to develop the sales office in later turns: from the small one to the medium or large one, or from the medium one to the large one. It is less expensive to develop the sales offices gradually than to invest in the large one at the
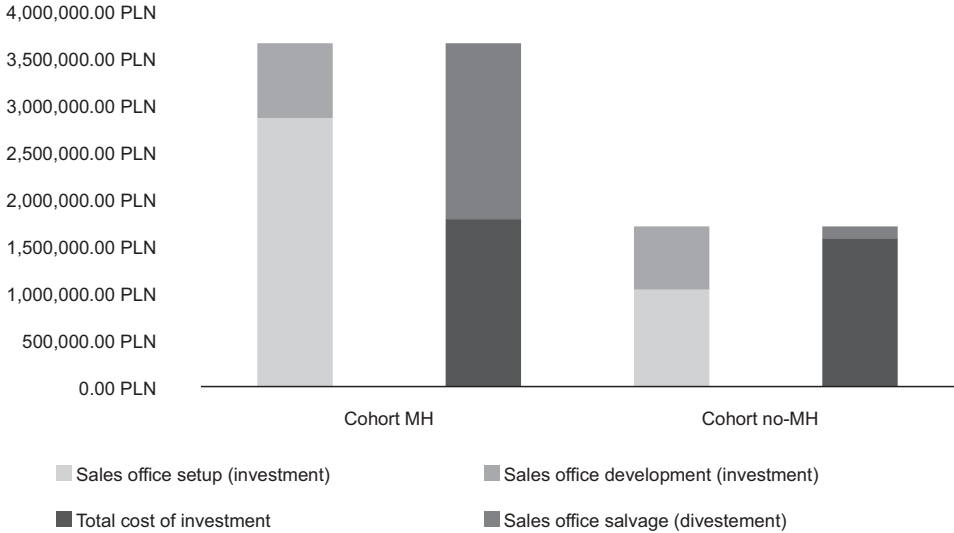
Chart 1. Sales offices – investments and divestments
Source: authors' estimation based on experiment results.

beginning. Although upgrading is possible, downgrading is not. The only possibility is to sell the office and invest in a new smaller one; however, the sales result in the loss of capital – the selling price of the office is lower than the investment.

Cohort MH spent almost 3 times as much as cohort no-MH for setting up the sales offices, which means they opened either more or bigger offices and spent money easier. Cohort MH was 6.5 times more prone to take the risk of opening large offices. Both groups were quite consistent with the enlargement of the sales offices; cohort MH spent on average 18% more than cohort no-MH. What is interesting is the fact that cohort MH sold offices worth almost 15 times more than cohort no-MH. It was the result of overinvestments – they sold 13 offices (including 12 large ones), whereas cohort no-MH sold only 5 offices (no large offices sold). In the end, summing all the investments and divestments, both cohorts spent a similar amount of money, with cohort no-MH spending slightly more (12.87%) than cohort no-MH. However, cohort no-MH was more cautious and spent money in a less risky way.

Opposite to the sales offices, each team started the game with one small basic production line, located in Warsaw, Poland (the default and only possible production location), that could be modified based on volume and product composition. The usage of the production line depends on the products and company strategy. Production lines may be developed in terms of size (small, medium, large) and product compatibility. It is also possible to sell them (again for a lower price).

Cohort MH spent almost 60% more for production line set up, meaning they either opened more lines, developed them to a bigger size or developed their production capacity to a bigger extent. Cohort MH also spent more money on the production line development – 34% more than cohort no-MH. Similarly, to
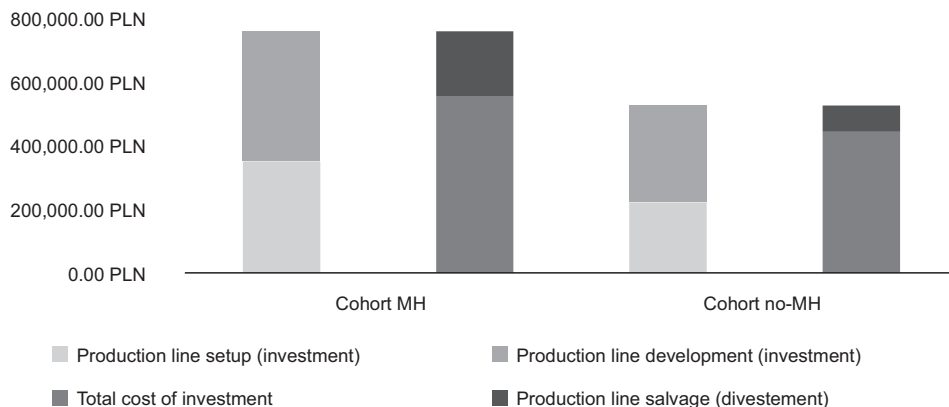
Chart 2. Production lines – investments and divestments Source: authors' estimation based on experiment results.

the case of the sales offices, it is possible to observe overinvestment of companies in cohort MH, as the value of assets sold during the game was 2.5 time higher than in the case of companies in cohort no-MH. All in all, it is again possible to observe that cohort MH was more prone to spend money in a riskier and less efficient way.

All the groups started the game without any products available. Their task was to design products, matching preferences of 4 target groups within 3 parameters describing the quality of the product. The parameters had values from 1 to 10. There were 1,000 different combinations of products possible. The sensitivity of each target group to each parameter and target group composition was
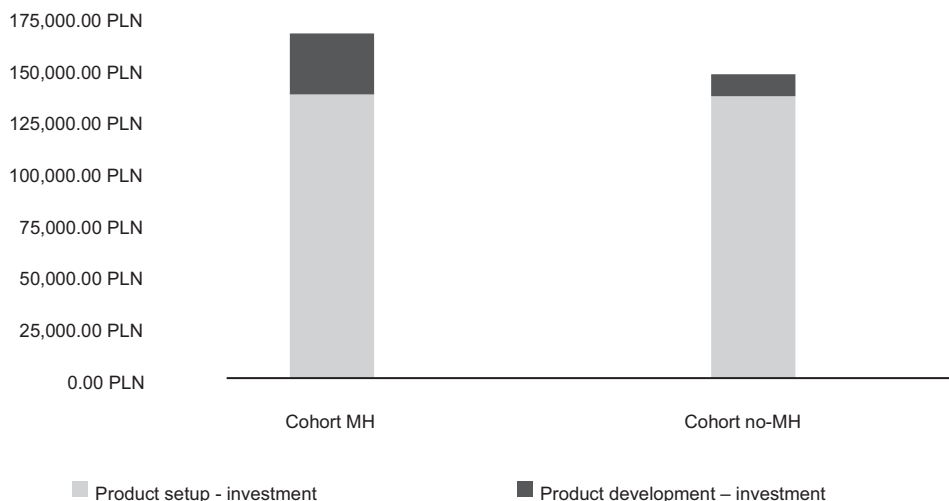

Chart 3. Product development – investments
Source: authors' estimation based on experiment results.

presented to the players in the game scenario, before the game started. Once set up, the products could be also developed in the later rounds.

Even though the total spending for both groups is similar, the spending pattern in the first-round shows differences in approach and behavior.

In order to maximize the profits and chances to fit the target group preferences, as well as to mitigate against the risk of failure, the companies of cohort no-MH introduced more products to the markets.

The range of decisions within human resources included: hiring production workers and sales office employees, setting up their salaries, choosing benefits and trainings. All of these parameters had an influence on the employees' productivity, i.e. the amount of chocolate bars produced and sold within the offered employment conditions. Players should have adjusted those parameters to achieve highest profitability and cost optimization.

Although the costs of training and benefits were similar in both groups, the level of salaries differed significantly – companies in cohort MH spent 50% more on salaries than cohort no-MH, which shows they were less efficient in this respect. Their production and sales facilities were either overemployed or the salaries were too high.

Costs covered by operations include production and product transfers. Production cost depends on the parameters of products, choice of suppliers and volume of production. Product transfer is the cost of transferring chocolate bars units between the factory and sales offices, but also between sales offices. Players may optimize the costs by the choice of the supplier (depending on the product portfolio), calculating the accurate volume of production (e.g. avoiding over-production) and efficient logistics.
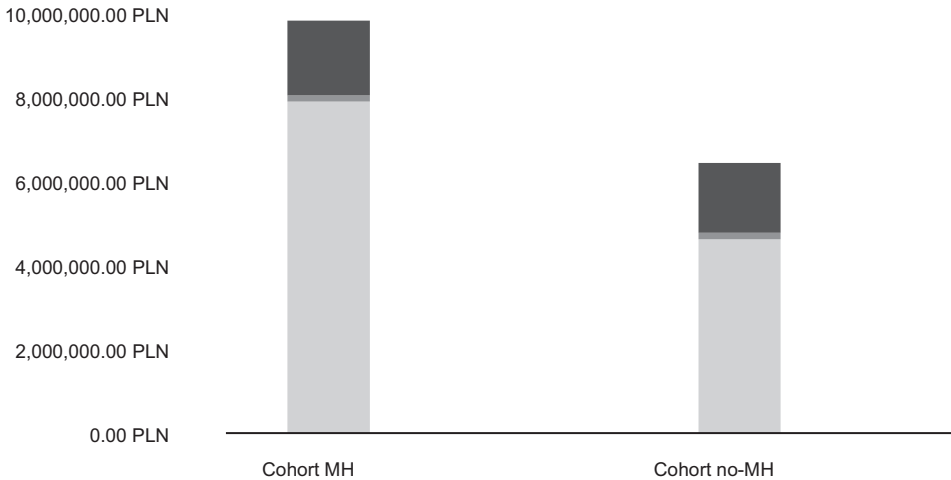

Chart 4. Human resources – costs
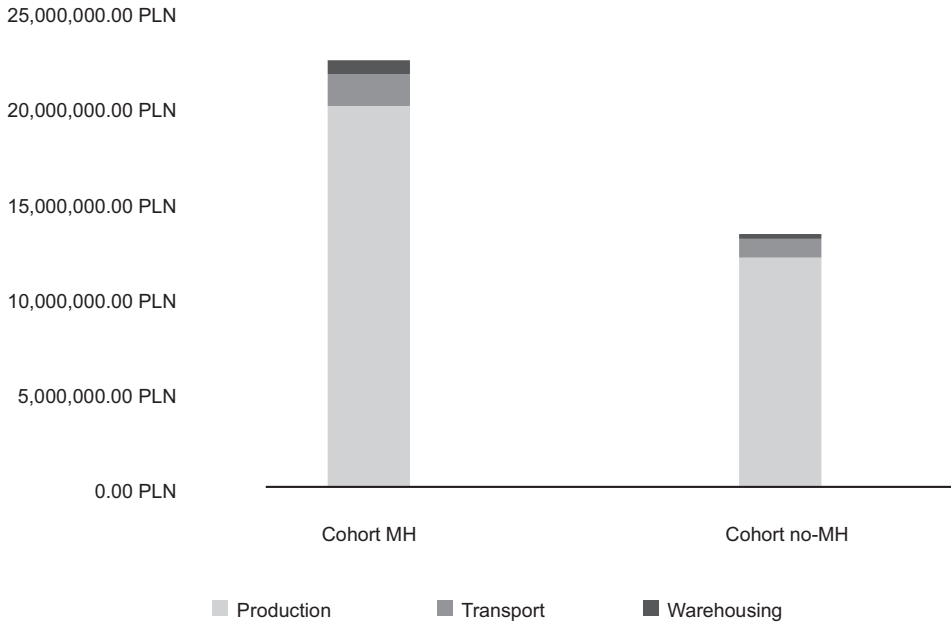Source: authors' estimation based on experiment results.

Chart 5. Production, transport, warehousing – costs
Source: authors' estimation based on experiment results.

Companies of cohort MH were less efficient in operational planning as they spent 66% more on the production (either by choosing suboptimal suppliers or through overproduction) and excessive product transfers (67% more than cohort no-MH).

The average sales capacity (size of the offices per company) was 65% higher in cohort MH – this was a result of overinvestment. However, on average, they produced only 31% chocolate bars per round more than cohort no-MH. The average production to capacity ration was lower by 15% in cohort MH, which indicates that sales offices were filled with products that were not sold in the previous round or the teams were not using their production capabilities to the fullest. The average number of goods that were not sent to the sales offices per round was more than 3 times higher in cohort no-MH, indicating that they were less efficient with stock management.

Every time a chocolate bar is not sold during the round or is left in the main warehouse, the players bear an additional cost of warehousing per each unsold item. The factors influencing the costs of warehousing are as follows: unsatisfied target group preferences, overproduction or unmatched salesforce. The warehousing costs incurred by cohort MH were 189% higher than those incurred by cohort no-MH, which again shows its lower efficiency when compared with the other cohort.

Sales result in terms of value of sales, i.e. the biggest income, was the most important objective for all the groups, as it contributed the most to the final
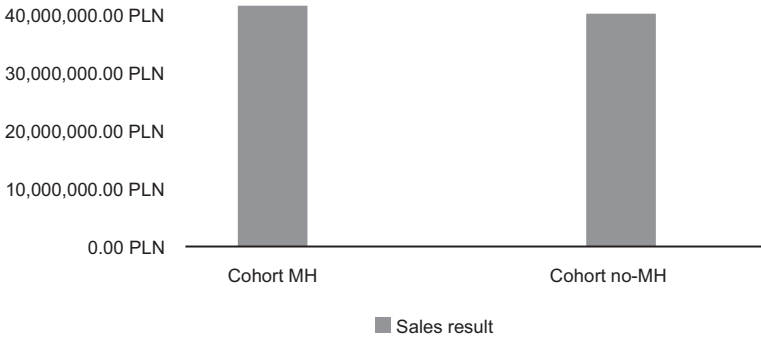
Chart 6. Total average sales result
Source: authors' estimation based on experiment results.

grade. Players earned money based on the fit of their products into target groups' preferences.

With significantly higher costs and riskier approach, companies of cohort MH earned on average only 4 percent more than companies of cohort MH.

Final balance is the amount of money collected on the virtual accounts of companies after the final round had been closed. It is calculated in terms of cash flow, as all revenues and spending have influence on it, disregarding their nature. This is the only component that differed in terms of its influence on the final grade of the students. Students from cohort MH received points disregarding the actual amount of money collected, the only thing that mattered was the ranking among the teams. Students from cohort no-MH received points based on the result of each company independently, and in case of a negative balance, they
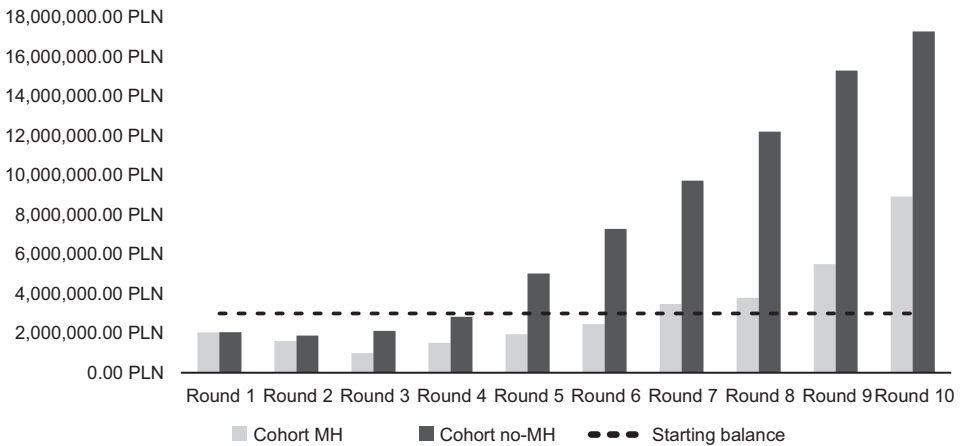

Chart 7. Average financial balance by round
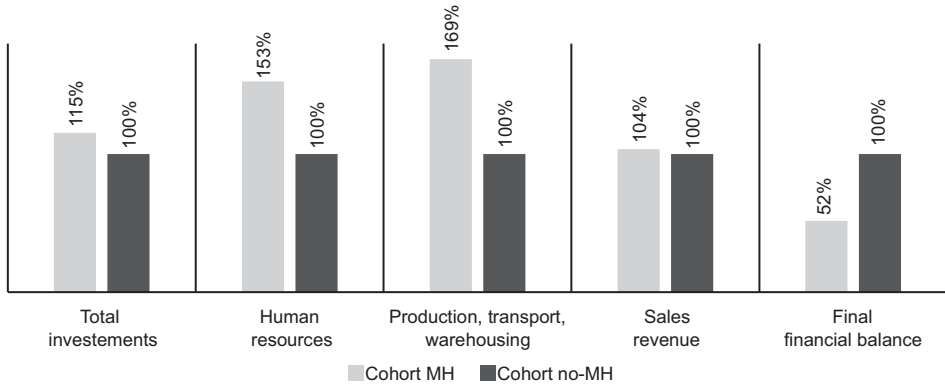Source: authors' estimation based on experiment results.

Chart 8. Main differences in results of experiment between MH and no-MH cohort of students (Cohort no-MH = 100%)
Source: authors' estimation based on experiment results.

received negative points. The difference in the grading approach enabled observation of the influence of moral hazard on both cohorts.

Companies of cohort no-MH risked not only external investors' money, but also their grades (being equivalent to their own contribution to the company). Companies of this cohort, despite slightly lower sales, were able to make a higher profit (on average 94% higher) than companies of cohort MH. What is more, companies of cohort MH were more frequently in debt, and it took them on average 5 rounds to regain the lost capital, whereas companies of cohort MH were able to regain positive balance in the following round. 22% of the companies in cohort MH finished the game with a negative balance, whereas all the companies of cohort no-MH finished the game with a positive balance.

To sum up, the basic comparison of experiment results is presented at chart 8.

Students in cohort no-MH, with moral hazard reduced by more strict controlling activities and penalties for risky behavior, had a final financial balance at the end of simulation game that was almost twice as high as the other cohort's balance. It was achieved thanks to more careful and less risky decisions regarding costs, better adjustment of production and sales capacities together with operational spending. These financial results were gained even though the sales revenues were at quite similar levels.

5. Conclusions

The aim of the paper was to analyze the impact of moral hazard on the entrepreneurial process, based on the experiment as the research method. Moral hazard is a phenomenon raising financial constraints and reducing the level of external investment in newly created and developing companies. The experiment was

conducted in Poland, among students of one of the leading business universities. Poland was chosen for the experiment, as it is a country of a relatively high level of entrepreneurship and a high level of private equity investment.

Addressing the main aim of the paper, experiment results show that moral hazard impacts the process of new company creation and development mostly by shaping less risky and more comprehensive decisions in operational costs and adjustment of operational spending, production and sales capacities. The results of the experiment based on the business simulation game answer the hypotheses of the paper. Moral hazard is correlated with overinvestment, which was observed in the comparative analysis of investment tendencies between cohorts. Cohort MH overinvested in the sales offices, and they were more prone to open bigger and more expensive offices, which were later sold. This triggered overinvestment in production lines to provide production capacity to stock up the offices (these production lines were also sold later) and in production itself – cohort MH produced more goods that were not sold. Hypothesis 1, assuming that moral hazard leads to overinvestment in the enterprise, was supported.

Higher operational costs are strictly connected to overinvestment. Buying bigger offices requires adjusting the volume of production (more or bigger production lines), leads to an increase in salaries (more employees in sales offices and in the factory), costs of logistics (more goods to transport) and warehousing (more unsold goods to stock). The results provided support for accepting the second hypothesis, assuming that moral hazard leads to incurring excessive costs.

Both cohorts achieved similar sales results, which gives a negative answer to the third hypothesis. Moral hazard seems not to affect sale income, as both cohorts of students gained similar sales revenues. In consequence, the most important seems to be the answer for the last research hypothesis about the financial effectiveness. The companies of cohort no-MH were nearly 100% more efficient financially; thanks to less risky investment behavior and higher efficiency, they achieved significantly higher returns on investments than cohort MH, which proves that moral hazard decreases financial effectiveness of a company, supporting hypothesis 4.

The experiment was conducted in Poland, among business students of one of the leading Polish economic and business universities. It can be assumed that both the higher education system and business culture in Poland influenced the behavior of students. To confirm these findings, a similar experiment should be conducted in other countries, including CEE.

Although the research results should be treated as preliminary ones, but they give some indications for entrepreneurial education. Students seems to have a natural tendency to moral hazard, which may lead to too risky business activities in the future. Therefore, responsible entrepreneurial education should be shaped in this way to make students aware of the business risks of moral hazard and reduce its occurrence.

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Video Cases as an Active-Based Approach in Entrepreneurship Teaching

Introduction

Entrepreneurship is seen nowadays as a major driver for economic success and job creation. Entrepreneurial education can be perceived as a response to the more and more uncertain, globalized, and complex world we live in, requiring everybody in society to be increasingly equipped with entrepreneurial competencies.

Can entrepreneurship be taught though? Although it might seem a trivial question considering the number of universities and business schools worldwide that provide courses on entrepreneurship, however it does have a deeper meaning (Zapalska, Perry, 2002, p. 59). Yes, universities do provide their students with theory and conceptual background on the entrepreneurship, however fostering entrepreneurial skills requires much more than just passive-learning approach. Thus, teaching or rather conveying entrepreneurship mindset – especially in globalized world – poses a challenge for the lecturers (Cumming, Zhan, 2018). Classes that were in the past conducted as a lecture for a great number of students are no longer as effective as individualized classes for small groups that require active communication (Russo, 2003, p. 2; Thanopoulos, 2008). Many researchers claim that the best way to make students more entrepreneurial is with use of learning-by-doing approach.

Tan & Ng (2006) suggest that entrepreneurial skills are best conveyed with active-learning approach that includes problem-solving learning tools. By active learning we mean "anything that students do in a classroom other than merely

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passively listening to an instructor's lecture" (Paulson, Faust, 1998, p. 4). "Education", "knowledge" and "learning" went through revolutionary changes in the 21st century. Millennial and centennial students (who dominate the classrooms now) have grown up with and are well-equipped with portable communication devices and require their lecturers to switch from the classroom-focused lectures to the virtual, web-based or at least hybrid-based teaching tools. Their learning habits have been shaped by multimedia, so they insist on dealing with "real life" problems and being engaged in an activity in the learning process (Ditlev-Simonsen, 2017; Akdeniz et al., 2019). They also await digital technologies to be embedded in their education process (Kozinsky, 2017) since they prefer learning through practice and observation instead of just reading and/or listening (Shatto, Erwin, 2016). It is also worth highlighting, that 13% of Gen Z-ers already started their own business. Their entrepreneurial spirit is a driver for changes in college curriculum, as they are highly interested in designing their own classroom path in higher education. According to a survey performed by Barnes and Noble College, Gen Z students do not want to be passive learners, sitting through lectures taking notes and memorizing them for an exam later on. They tend to succeed more easily when given the chance to have as immersive educational experience as possible. In the study, Gen Z students also mentioned they appreciate interactive classroom environments, class discussions and unlimited access to on-demand digital resources over the traditional dissemination teaching methods (Kozinsky, 2017).

It does not mean that virtual teaching has to or will substitute the face-to-face communication, however, it will surely supplement it. The pressure towards the digitalization of education merely follows the transition we have experienced in the "real" world. The credibility of the knowledge taught is higher if students can experience and not merely listen to the information shared.

The number of active-learning tools is increasing. We have started the way with "individual or group exercises where students apply course material to solve problems, study abroad programs, flipped classroom approaches, and other experiential learning exercises" (Akdeniz et al., 2019, p. 96). With the digitalization era we have entered the world of video cases, virtual strategic games and other IT-based, interactive tools. Especially entrepreneurship courses can take advantage of the latter ones, enabling students to learn from their own decision-making processes.

Not always are all teaching tools equally suited for all types of courses. Essentially, it does not mean that various teaching methods cannot be applied into those courses but we should frankly admit that this will depend on the course-level, group size, group dynamics, etc. One of the most frequently used of methods that engages students is the case solving method. Cases – as an illustration of the real-life problems and dilemmas – enable students to detect and analyze the issue in a complex, yet authentic context (Beck et al., 2002). However, the traditional, printed cases – although still most popular – seem to slowly give way to their digitalized version – the video cases.

This chapter focuses on video cases and their usage as interactive and innovative teaching tool in entrepreneurship courses. The main goal is to portray the most essential advantages of introducing this digital form of cases into teaching.

1. Video cases as a teaching tool fostering engagement

Teaching management – widely understood – has a long tradition of using films – in forms of clips, featured shows or video cases. Video case study is a distinctive film as it is "conceptualized, written and shot for a particular learning objective" (de Beule et al., 2019, p. 176). In the era of digitalization, video cases pose some advantage over the traditional written case studies. Since they are normally delivered by the senior management of the company, the narration becomes more credible and thus, the case gains authenticity. It enables students to view a corporate environment that would be difficult for them to visit otherwise (Beck et al., 2002; de Beule, 2019). The stand-alone video cases are open to interpretation as they lack the writer's point-of-view and what's possibly most important – the Generation's Z attention is more easily captured by the image than by the text.

Many educators are familiar with the need among today's business students for alternative teaching methods which would actively engage students with the material being taught (Campos et al., 2017; Chavan, 2015). Most researchers agree that teaching a subject with video can stimulate greater critical engagement with the issue and create an emotional relationship that opens up opportunities for deeper learning. The advantages of the use of video in teaching have been supported by numerous education researchers.

Shepard & Cooper (1982) and Mayer & Gallini (1990) connected visual clues, memory process and recall of new knowledge. According to learning theorists in general, images are essential for learning and retaining knowledge. In fact, imagery (visual encoding) is the essence of many memory aids. According to Sexton (2005) video cases provide visual stimuli to reinforce ideas and theories. Since students often store information in visual form, video cases may play a significant role in helping them remember important concepts and retrieve them from their long-term memory. Well-selected video cases that integrate economic theories with everyday life may provide a concrete framework for students to re-membering concepts. Video cases can also provide vivid descriptions to express tacit knowledge and information difficult to articulate through written cases and regular lectures.

Allam (2006) notes that the creative challenge of using moving images and sound to communicate a topic is truly immersive and insightful. His views are supported by the evidence from Girardi's (2008) research that suggests that using media in introductory courses in economics makes students more connected to the subject, raises class attendance, and increases test scores. Willingham (2009), on the other hand, in his research asks a simple question "Why do students

remember everything that's on television and forget what we lecture?". His conclusion is also very straightforward – because visual media fosters learning. Image increases student's ability to transfer information and helps students better remember theories and concepts.

More recently, Willmot et al., (2012, p. 3) have shown the strong evidence that the use of digital video can increase students' engagement and inspiration when incorporated into student-centered learning activities by:

- increased student motivation,
- improved educational experience,
- higher scores,
- improved teamwork and communication skills,
- development potential for deeper learning of the subject,
- educational resources for future groups to use,
- employee development opportunities.

All these benefits of using video to create authentic learning opportunities for students are also supported by Muller et al., (2008). In their study they observed that, "students who watched a video dialogue involving alternative conceptions reported investing greater mental effort and achieved higher posttest scores than students who received a standard lecture-style presentation." Gilinsky & Lawson (2016), on the other hand, argue that video case studies create a lower cognitive load than written cases. Higher cognitive load, that is usually connected to written cases, can lead to students not following the material well and therefore not paying enough attention to the lecture.

Overall, according to this short literature review, using video cases has been perceived positively by many researchers, educators and students. However, it should be noted, that video cases may also have some disadvantages. Although they are easily accessible, the stream does not always allow to gather (or memorize) all the needed information and to make comparisons at the same time. Also, video cases tend not to include as much data as the written cases do. Depending on their structure, that may be cluttered and not designed carefully enough, they may also induce cognitive load in students and prevent them from easy comprehension of the material (Moussiades et al., 2019).

Young & Asensio (2002) developed the Three I's framework (image, interactivity and integration) to assist teachers with the pedagogic design and development of video streaming in their classes. It is supposed to highlight different values of using video cases in classroom and help overcome their disadvantages (see Table 1).

2. Video cases – do they really fit to entrepreneurship teaching?

A study concerning the use of the video cases among IB scholars in different teaching areas was conducted by de Beule et al., (2019) from November 2018

Table 1. The Three I's framework

Image	Interactivity	Integration
– Video is more appealing – Allows me to work outside the classroom and illustrate how theories/ techniques can be applied in real life – People take in more information when it is presented visually compared with text and voice alone – Able to see technical experts / examples / demonstrations – Looks nice – may encourage those lazier users – It grabs attention, it's new – It's a good way to get students ideas across without the need for writing – It adds to the entertainment value – Pictures can quickly give information whereas words can take longer	– Student ideally has control – Students can re-wind, replay in their own time and at their own speed. – Ability to repeat/pause – Can learn anywhere, anytime – Can select what is of use – To provide the personal 'chemistry' between lectures and students that are remote – Students can view in confidence – Greater audience numbers can be reached – Greater access to learning for disabled students – Provides interactive teaching environment	– Allows for dynamic presentations – Adds value to text – Support for teaching and learning, not instead of – Mix of media for students studying at a distance – To widen participants and address different learning styles – Video can work alongside lectures and compliment the students' module – Being able to split video into parts and relate to exercises – Integrating with web resources – Student support and feedback – Feedback to staff etc.

Source: Young & Asencio, 2002.

to January 2019. The survey was part of the Project titled *Open Access Digital Video Case Library for Teaching International Business*: (Project No.2018-1-BE02-KA203-046832) financed by the European Union. The aim of the survey was to establish how digitalization influenced lecturers' and students' view on the contemporary tools used in teaching, with special emphasis laid on video cases. The scope of the study was wider than just entrepreneurship however it also related directly to that particular teaching area. The study was held amongst 116 scholars from all over the world, however 64% of them were located (lived and worked) in Europe.

One of the aspects covered by the survey was the importance of the *international entrepreneurship* in the teaching curriculum of international business. The respondents were very unanimous in that matter with almost 75% of the answers stating that it was very or extremely important subject (Figure 1).

Thus, since *international entrepreneurship* was concluded to be one of the core areas in the international business field, it is worth taking a look at how it is and
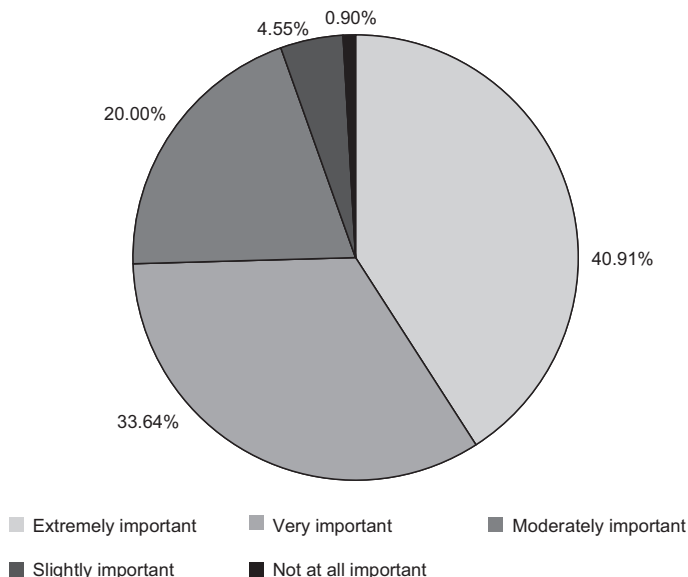
Figure 1. Importance of International entrepreneurship in International Business Curriculum
Source: own elaboration.

it should be taught[1]. One of the open-ended questions of the survey referred to the lecturers' feelings after the completion of the course they had been teaching. According to the responses among the scholars that are involved in teaching international entrepreneurship, they are mostly satisfied with the content of their classes, however they are worried over students' engagement and that the material is too distant from practice and too reliant on economic theories. They highlight the need for more interactive teaching tools to be used to effectively communicate with the contemporary students.

Most respondents involved in teaching international entrepreneurship indicated that they use case studies as teaching materials for their classes (50% of respondents always, and 50% most of the time). However, they mostly use written case studies and, in their view, such approach is not sufficient. More than 87% of the respondents stated that they see an urgent need for more digital cases to be implemented to either supplement or preferably substitute the written cases. The survey also touched upon the preferred form of the teaching material and its digitalization (Figure 2).

As indicated in Figure 2 not all digital material[2] is equally preferred. Three of the tools, namely video cases, hand drawn animations and interviews are claimed to be the preferred sort of materials used in classes. However, video cases stand

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[1] The statistics presented in the chapter cover the responses of the lecturers who indicated international entrepreneurship as their main teaching area and not the whole sample of the study.

[2] The survey referred to digital material as any recorded material enabling reproduction of visual images and sound.
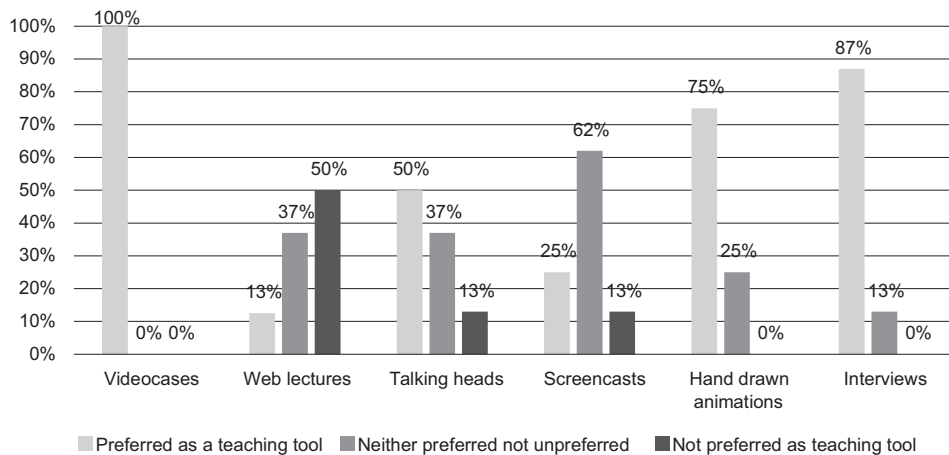
Figure 2. Respondents' preferences towards digital material used in classes
Source: own elaboration.

out as the only tool that all of the respondents were keen on implementing during their classes. A preferred video case is expected to be between 2 and 7 minutes long, in order not to bore or overwhelm students with unnecessary information on the topic. The video case cannot be a random film featuring a company but needs to be well-structured and needs to meet previously defined aims. Therefore, a video case cannot cover all aspects of company's profile but needs to be focused on a particular problem-related topic. Bearing in mind these pre-conditions, the respondents pointed to the need to develop more video cases since the existing sources rarely provide adequate teaching materials. Most of the survey's respondents (ca. 90%) would embark on the task to create or co-create video cases suited to their teaching needs.

The availability of the video case studies is one of the most critical issues that hinders the applicability of this tool into the classes. According to the survey, since lecturers lack financial support from their institutions, they are mostly forced to depend on open source material (Figure 3).

Most of the videos originate from films published in open sources, like YouTube or the TED talks. However, as the lecturers themselves stress, these films are not essentially video case studies but just films that touch upon a certain topic. They are not structured in a form that enables to combine both the practice and the theory that underlies a certain problem. Very few (in total 15%) of the lecturers turn to published video cases, make their own movies or engage students to participate in such venture. Making video cases is a complex task, since it requires both time, resources and motivation to step out of the much easier, traditional mindset.
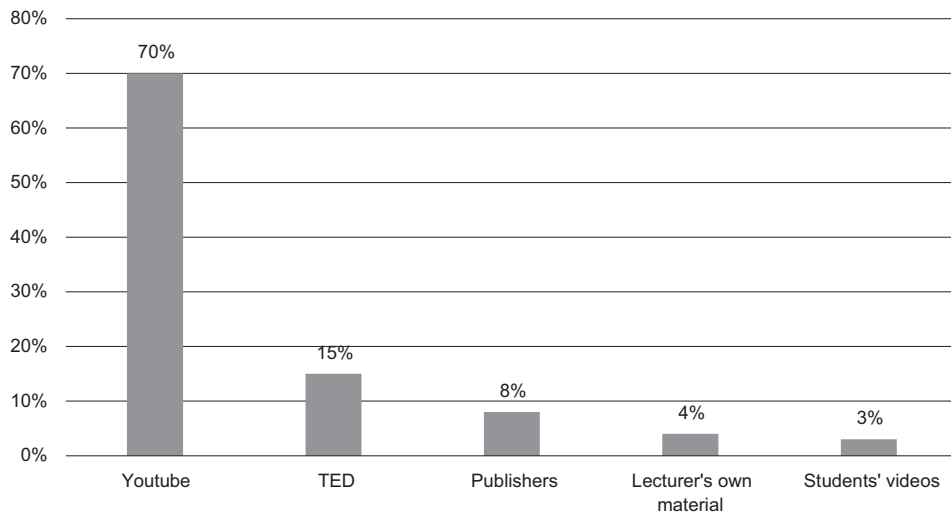
Figure 3. Vide case studies origin
Source: own elaboration.

3. Conclusions

Both the theoretical and empirical studies confirm, that in the era of millennial and centennial students, digitalization of teaching methods is a must. Especially classes that are dedicated to induce critical thinking and decision-making processes, require stimulating techniques that follow the up-to-date trends. Therefore, *international entrepreneurship* – which definitely belongs amongst the classes that require fostering certain skills – would benefit from introducing and spreading modern teaching methods.

Video cases as a substitute for the traditional written cases allow for certain improvements in the problem-solving learning process. As our survey has shown, they are also a desired form of conducting classes which use case studies. However, our research also has some limitations. Firstly, although the response rate was adequate to draw conclusions, the study would definitely benefit from a wider geographical scope. Also, the survey focused mostly on the preferences and since video cases are not that common a method, the sample did not allow for comparisons of experiences. Therefore, to diminish the latter, certain groups of students will be tested and observed in studying with the use of both traditional written and video- cases. The projected observations should allow for comparing how knowledge and skills in problem-solving are acquired with the use of the same tool, however presented in a different form.

Acknowledgments

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The Influence of Gamification Activities on Learning Outcomes in Higher Education

Introduction

Although the overeducation among tertiary educated workers is reported in Poland (Baran, 2018), a significant problem today is that many students lack the motivation and engagement in learning (Alsawaier, 2018). As an attempt to solve this problem, game-based learning is becoming an increasingly common approach to learning being a tool for raising the motivation and engagement of learners by implementing game elements into the educational process. However, as gamification still remains a relatively new concept, research is necessary to allow for full understanding of the contexts within which gamified learning activities are effective (Buckley et al., 2017).

The purpose of the paper is to examine the influence of implementing gamification elements on the outcomes of economics education at university level. The paper bases on the experiment on gamification done with students as they faced the game-based elements as a part of a regular and obligatory *Microeconomics* course at the bachelor level of economics studies. Students' engagement in gamified activities, measured by their attendance rates and the points collected in tests were taken as variables accounting for the gamification.

The paper is organized as follows. First, the essence of gamification is explained. In the second section, constructivism as the pedagogical paradigm for game-based learning is introduced along with the presentation of the implementation of gamification in education. The next section of the paper shows the assumption of the

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experiment of introducing gamified activities into the *Microeconomics* course for students studying economics at the Bachelor level. The final section discusses the results of the research on the impact of gamification on the learning outcomes.

1. The essence of gamification

An increasing number of players observed since the 1940s have worked towards the implementation of games in the business context to achieve various organisational goals, whereas the logical, atmospheric and technical elements of games have found applications in many areas of business and everyday life (Kania, Smolarek, 2017). As games can be applied to various activities that are not strictly related to gaming, in different contexts and scopes, a variety of terms is used to describe the process. One of the most commonly used ones is gamification.

Although no precise definition currently exists, gamification is generally regarded as an activity in which solutions characteristic of entertainment games are used in non-game context (Woźniak, 2017). According to the most popular definition, the essence of gamification lies in using game elements in the non-game context. However, an overview of definitions provided by Shapkova, Dörfler and MacBryde also includes such aspects as implementing game-thinking, game mechanics, game design techniques or gameful experiences to make activities more game-like. The overview implies that the authors perceive differently the different levels of games elements in gamification (cf. Shpakova et al., 2017):

- Mechanics – examples: points, levels, progression bar, leaderboards, badges, challenges, chance, competition, cooperation, feedback, resource acquisition, rewards, transactions, turns, win states, documentation of behaviour, scoring systems, trophies, rankings, ranks, reputation points, group tasks, time pressure, tasks, quests, avatars, virtual worlds, virtual trade,
- Dynamics – examples: pattern recognition, collecting, surprise, creating order, gifting, flirtation, recognition for achievements, leading others, fame, heroism, gaining status, growing, constrains, emotions, narratives, progression, relationship, exploration, collection, competition, acquisition of status, collaboration, challenge, development/organization, motives,
- Aesthetics – examples: sensation, fantasy, narrative, challenge, fellowship, discovery, expression, submission,
- Components – examples: achievements, avatars, badges, boss fights, collections, social graph, virtual goods, combat, content unlocking, gifting, leaderboards, levels, points, quests, teams.

As shown in the above-presented overview, depending on an author, particular gamification elements can be qualified differently. For instance, leaderboards, badges or levels are regarded as mechanics of games as well as game components.

The main reason behind implementing gamification into the non-game context is to increase the motivation and engagement of the participant (Cheong et al.,

2014). Although gamification refers to bringing in game-based mechanics, aesthetics and game thinking in non-game contexts (Furdu et al., 2017), the use of these elements should be consistent and holistic (Cheong et al., 2014), so that the process of gamification is logically sound and can realise the goals that are set.

Gamification is not a simple process of adding common game elements to existing systems but correct implementation can be quite complicated (Cheong et al., 2014). For gamified activities to be introduced successfully, the following attributes must be combined correctly to create a cohesive whole (Buckley et al., 2017):

- a system of prizes, which players receive for achieving goals or overcoming obstacles;
- a system of trial an error, which allows players to practice, experience, reflect and learn;
- objective and specific rules of gamified activities;
- competition as a motivational tool.

The use of gamification in business, marketing and corporate management is continually gaining in popularity. In the area of human resources, gamification is used to improve motivation among course participants, as well as during the recruitment and selection of new employees (Woźniak, 2017, Hauk, 2017). The gamified method is also recommended to support corporate innovation and entrepreneurship processes (Patricio, 2017). It is used to improve sales pitch and build up relationships with clients. Businesses create an environment where the client can communicate and compete with others, win prizes and points, and progress to ever higher levels of involvement. Because of this, the mechanics of the game are applied in order to realise marketing objectives such as increasing sales and improving brand recognition (Radziszewska, 2017). It is also believed that gamification increases the entrepreneurial intentions (Ruiz-Alba et al., 2019).

One of the particularly relevant applications of gamification is education. Game elements are introduced into the teaching process with the aim of stimulating learners and increasing students' engagement and motivation, which in turn causes learning outcomes to improve. The motivational power of gamification comes from the use of a range of mechanisms to encourage students to engage with the activities, mostly because of the pleasure of the game itself and also the possibility of scoring a win (Dicheva et al., 2015). The first documented reference to "gamification" comes from 2008, although gamification elements were used much earlier in the process of teaching to improve the competencies of learners (Çeker, Özdamlı, 2017).

2. Gamification in education

Today, the higher education system is undergoing a reform involving, among other introducing innovation with a view to improving the process of teaching

students. A departure from the linearity of the classic teaching-learning processes with the hierarchical model of knowledge transmission should result in developing a more flexible teaching-learning model (Guardia et al., 2019). One of the challenges of the contemporary educational system, including higher education, is to boost students' motivation and engagement leading to maximizing their learning outcomes in the long run (Smith, Lovgren, 2018).

The application of gamification in the pedagogical context is considered to be a promising approach to the educational process as it can be a partial solution boosting learners' motivation and engagement (Alsawaier, 2018). Game-based teaching and learning is still a relatively young area of research and practice in higher education and many important and exciting insights should be clarified. The multiple ways in which game-based teaching and learning strategies can be used make it difficult to estimate the actual scale of applying this approach in higher education. On top of that, a number of different technologies are used, ranging from digital games, non-digital games to using only particular game elements or mechanisms, such as badges or leaderboards (Holmes, Gee, 2016).

The varying extent to which games are used in education results in a number of definitions of the phenomenon, depending on the complexity of the game elements used (Nowacki, Ryfa, 2015; Ahmed, Sutton, 2017):

- edutainment – a combination of education and entertainment that was especially popular in the 1990s. This approach was used mainly in pre-elementary school education and took the form of simple video games and board games (Nowacki, Ryfa, 2015);
- game-based learning – GBL adapts the educational content to fit the game's story and rules (Furdu et al., 2017). In GBL, students explore relevant aspects of games in the learning context designed by teachers (Ahmed, Sutton 2017);
- serious games – digital games which are used for other purposes than simply entertainment (Looyestyn et al., 2017). Such games have an explicit educational purpose and are not intended to be played for amusement (Ahmed, Sutton 2017). This group of activities includes business and managerial simulations (Nowacki, Ryfa, 2015). Simulation is the imitation of reality, recreating an alternative reality within a controlled environment (Ahmed, Sutton 2017);
- gamification – the process of integrating game theory and design, game elements, game aesthetics, and game mechanics into the educational process (Ahmed, Sutton 2017) to keep students engaged (Furdu et al., 2017).

Gamification and game-based learning are often confused with one another. Gamification adds a design layer of game elements to enhance learning, increase engagement, and encourage positive behaviour (Alsawaier, 2018). In gamification, games are simply a part of the learning process which helps to engage learners. In game-based learning, the educational process progresses mostly by playing games to learn content, which is the main focus, whereas gamification only uses certain game elements (Çeker, Özdamlı, 2017).

Using games in education can also be misleading in terms of the educational paradigms referring to the learner and the teaching process. Wach (2019, p. 20

and next) distinguishes four paradigms: the behaviourist paradigm, the humanistic paradigm, the constructivist paradigm, and the critical-emancipatory paradigm. Under the behaviourist paradigm, a human being is an entity controlled from the outside, and the learning process depends on recognising the relationship between incentives and punishment. According to the humanistic paradigm, a human being is controlled from the inside. Humans are independent, content and consistent, and the learning process arises from one's own drive to develop. The constructivist paradigm sees the human being as a constructor of the world and his or her own self, and the learning process involves modifying previously acquired knowledge by including new information in the existing knowledge structure. Finally, under the critical-emancipatory paradigm, humans are the deconstructors of the world. During the learning process, the learner asks critical questions and reflects on the real world.

Game-based learning and serious games seem to rely on the constructivist paradigm, which puts the student and their involvement at the centre of the didactic process. Under this paradigm learning is an active process and involves individual construction of the processes of discovery, their adaptation to current needs and their addition to the existing knowledge structures. Learners construct their knowledge base in an active manner by utilising their pre-knowledge, making use of various sources of information. Learners are socially engaged and learn from each other, at the same time acting independently. They should solve tasks in a context relevant to them and reflect on their current knowledge and new learning situations (Gaweł, Wach-Kąkolewicz, 2016). Acceptance of the principles of the constructivist approach to learning would mean that traditional teaching methods such as lectures, seminars or readings should be replaced with integrated methods. These include techniques such as problem solving, programming, expository or practical tasks. One such group of problem-solving activities is educational games (Wach, 2014). Game-based and serious games use independent gaming in the educational process. Thus, they create a cognitively interesting context for the learner. Participating in the game, students make use of their pre-knowledge in an active and independent way. Typically, they will carry out their tasks in groups and in social context. Thus, the constructivist paradigm is considered to be the basis for applying this form of education.

Basically, it is more difficult to recognise the pedagogical paradigm in gamification. Then, a number of gamification elements can be linked with constructivism, such as the integration of cognitively interesting game elements or building the social context. On the other hand, some basic assumptions of behaviourism, such as teaching particular behaviours through rewarding or correcting wrong behaviours through no reward or even punishment, can be seen as reminders of such gamification elements as rewarding and penalizing through points and badges, or upgrading and demoting in a game setting (Alsawaier, 2018).

Despite the increasing popularity of gamification and other approaches based on the use of game mechanics in education, there is no conclusive evidence for its effectiveness in the teaching process. Most studies on the use of gamification in education describe certain mechanisms and game dynamics and their possible

application in the educational context; however, studies indicating the effectiveness of introducing game elements to education still remain scarce (Dicheva et al., 2015). There is also a need to explore the long-term effect of gamification on the motivation and engagement levels of learners (Alsawaier, 2018). What is missing is a set of widely accepted standards for gamification and learning outcomes, as well as a set of indicators of the effectiveness of gamification in the teaching process, or methods of measuring its impact.

A part of the research intended to define the effectiveness of gamification in the educational process is survey based, in which learners were asked to give their assessment of the method. According to the results of these surveys, many students prefer gamification to traditional methods such as lectures (Henning et al. 2017). Students assessed positively an educational system which uses game elements. In particular, they valued the social interaction, engagement, feedback and improved learning (Cheong et al., 2014). They are generally open to participating in gamification because of their own involvement, competition with others and the desire to achieve the best results possible (Des Armier et al., 2016).

The influence of gamification on student involvement can be observed not only in relation to face to face teaching, but also in online programmes. However, the positive effect seems to lessen over time as game elements, rewards in particular, wear off after a short period of novelty (Looyestyn et al., 2017).

Research results show that majority of the students found gamification useful and enjoyable but only minority of them noticed a relationship between gamification activities and games. It suggests that well-designed gamification systems can be well-received by students and the success of gamification projects may not lie in their ability to recreate the experience of a video game, but in the strength of the relatedness, competence and autonomy of the student experience (Hitchens, Tulloch, 2018).

An overview of the literature indicates that the use of gamification brings such benefits as a better learning experience by combination of fun and learning, a better learning environment, instant feedback, instigation of behavioural change and fulfilment of most learning needs (Furdu et al., 2017).

It is believed that gamification allows for some activities that are usually considered uninteresting by learners to be adapted to be more acceptable to them. Activities which require hard work and concentrated effort become pleasant, interesting tasks. Owing to gamification learners find it easier to concentrate, they are more active and participate eagerly in the learning process. Learners can make use of media tools to achieve the set goals, and as a result are more aware of these tools and capable of using them. (Çeker, Özdamlı, 2017). An overview of the literature also indicates that the positive impact of gamification is very dependent on the educational context in which it is used as well as on the personalities of the players (Buckley et al., 2017).

Compared to traditional methods of teaching, in which students earn their grades based on a performance of a task, in gamification it is the effort that gets rewarded, not necessarily the result. In a gamified environment, students

are encouraged to engage in the process regardless of their results (Alsawaier 2018).

Gamification as a concept also comes under criticism. The dismissal of applying gamification in education indicates that it is possible to reduce the internal motivation of players in return for developing external motivation (Buckley et al., 2017), because learners are often forced to be active as a result of the tasks imposed upon them, which often also have time limits. If a game is mandatory, it can result in rule-based experiences that feel just like school.

In their research Liu & Wang (2019) did an experiment on two groups of students. Classes with one group included gamification, while the other classes did not. An analysis of the results showed that gamification demotivated participants and led directly to poorer performance.

Another problem may be the rewards system as learners should be rewarded based on their effort, not mastery of the game, and they should learn to see failure as an opportunity (Furdu et al., 2017). Sometimes learners lack prior knowledge, to allow them to fully utilise new educational experiences. They may also lack motivation to learn or show a high level of discomfort (Des Armier et al., 2016).

The context in which gamification is applied is a crucial determinant of its effectiveness, along with factors such as class size, educational level and perceived stakes. Moreover, gamification suits some students and their learning styles better than others (Buckley et al., 2017).

Another problem that concerns bringing gamification into the classroom might be the experience and attitudes of teachers. Research results among business teacher educators show that they do have knowledge of gamification, but are lacking in a clear understanding of it. They also might not be aware of the effectiveness of this teaching strategy (Fisher et al., 2014).

To sum up, gamification does have the potential to improve learning, but in order to achieve success proper design and application are called for (Dicheva et al., 2015). Gamification can be also very destructive if done too hastily, too cheerfully, and without recognising students' needs, school facilities, and our own abilities. It should be dealt with as complex project involving risks, weaknesses, and threats (Sobocinski, 2017). More representative research on the opportunities and obstacles behinds implementing gamification in the learning process is necessary for more effective education process.

3. An experiment with gamification in higher education – a *Microeconomics* course

An overview of research findings obtained so far shows that there is no clear answer to the question of the impact of gamification on the effectiveness of the teaching process. Although the method appears to potentially increase students'

motivation to learn, it also involves a number of risks and limitations. For this reason, the following research questions have been asked:

- Q1: Does gamification affect learning outcomes in higher education?
- Q2: Does showing the students the possibilities to acquire knowledge in a natural way exert more impact on learning outcomes than gamified activities?

In order to find answers to these research questions an experiment was carried out, involving the students of the Poznań University of Economics and Business at the first semester of licentiate studies, the subject of International Business. While running a course in *Microeconomics* in two academic years of 2017/18 and 2018/19, the author implemented gamification activities and assessed the impact of the students' motivation to perform the activities on their final learning outcomes.

A Microeconomics course was selected on purpose as it is often regarded as one of the most challenging courses within economic studies. The difficulty of this subject is accounted for by several factors. It is the first subject in the field of economics that students encounter during their course of studies. Students are often recruited from general grammar schools where the teaching focus is definitely not on economic subjects. Students need to familiarize themselves with specific economic terminology as well as alternative ways of presenting theories, not only through words but also through graphs and mathematical equations. The curriculum is quite extensive, too. Additionally, attending lectures is voluntary, being a standard university policy. This results in students having trouble understanding the material and failing to attend more lectures, which in turn causes ever increasing gaps in their knowledge. The end result is that a significant proportion of students are unable to pass the final exam, or drop out during the semester.

When designing gamification activities, one should consider the practical issues of the activities being implementable in a standard classroom on the one hand, and the basic educational principles, i.e. relatedness, competency and autonomy of learners, on the other hand. Relatedness refers to the need to interact and be connected with others, competence is connected with the need to be effective and master a problem-solving task, and autonomy refers to the need to control one's own life. (Hitchens, Tulloch, 2018). The size and strength of the groups of students attending the lectures of the *Microeconomics* course was a major challenge and limitation – on average, each lecture was attended by as many as 100 students. Furthermore, under the University rulebook, attendance at lectures is not obligatory, which meant that different students showed up to attend each subsequent lecture. Some students were present at almost all lectures, while other students turned up occasionally only. Hence, the activities were designed to accommodate a large number of students in the ever-changing group composition and be attractive to students regardless of their attendance records.

The literature indicates that pedagogical activity may involve such game mechanics as avatars, badges, points, levels, leader boards, virtual rewards, and storyline or quests (Alsawaier, 2018). In the experiment, the following gamification tools were used:

- the points system – every week throughout the semester students answered quiz questions using an online platform and collected points for correct answers. Answering questions was timed, and students received immediate feedback on the correctness of their answers,
- the rewards system – collecting points was rewarded by improving the grade obtained in the final exam,
- reputation levels – there were two levels of reputation as the number of points collected allowed the final grade to be improved accordingly by 0.5 (1st level) or by 1 grade (2nd level) as possible grades of the university grading system are 2.0 (being a failure); 3.0; 3.5; 4.0; 4.5; 5.0,
- leader boards – after each quiz question, the names of the first three students to have answered the question correctly and the fastest were displayed as winners.

Students' participation in this activity was voluntary. Students were assumed to be rational which means they acted to realize their goals consistent of internal hierarchy of preferences (Krstić, 2014). Students could score a total of 13 points, where they would be given two quiz questions to answer after each lecture and each correct answer was worth a half of a point. The data collected during this experiment allowed for three factors to be identified as the variables which account for the results of the learning process. Two of these variables reflect the degree to which students were involved in gamification exercises: the number of points collected through quizzes (P), and frequency of participation (F). Under both variables, the maximum number of points to be earned was 13. To ensure data comparability, points and attendance rates were changed into percentage values, showing how many points students scored and how many lectures they attended translated into percentage figures.

The correctness of answers (A) was used as the control variable which showed how well students acquired and applied new knowledge. This variable was defined as the percentage of correct answers among all the questions answered by particular students. As such, it showed the capability of students to acquire knowledge, regardless of how involved they were in the gamification exercises.

The *Microeconomics* course concluded with a final written exam. Getting credit for the practical part of the course (seminars and workshops) was a conditional to being permitted to take the exam, which meant that not all students were allowed to. A student who failed the final exam or was not allowed to take it on the first date is allowed a retake, but the results of those retake exams were not considered for the purposes of the research. The research took account of only the students entitled to take the final exam at the initial date; the results of retake exams were not taken into consideration.

In the exam, students gave answers in writing to three open questions and could score between 0 and 30 points. To ensure data comparability, the exam results were translated into percentage points representing the maximum number of points to be scored.

In this way, data comparability was ensured as each of the variables is shown as a proportion share in the maximum points to be scored.

Next, econometrical analyses were conducted to answer the research questions. The proportion of the points collected in quizzes (P) and frequency of participation in quizzes (F) were applied as measures of gamification and were treated as independent variables. The accuracy of answers (A) was treated as the control variable, showing students' capabilities to acquire knowledge. The proportion of scores obtained by students during the final written exam was treated as a measure of learning outcomes and dependent variable (LO).

4. The influence of gamification on learning outcomes

A didactic experiment was conducted twice among first year students doing a full-time undergraduate course at the International Economics department at the Poznań University of Economics and Business, during the 2017 and 2018 winter semesters and the 2018 and 2019 academic years. The winter semesters lasted from October to February. At the beginning of the semester, 204 students were enrolled in a *Microeconomics* course in 2017/2018 and 193 students in 2018/2019. In both academic years some students dropped out of the course and did not take the final exam. The students who took up Bachelor studies can be divided into four groups, as shown in Table 1.

During both academic years, more than 83% of students enrolled for the first year of the course took part in activities connected with gamification. The degree of student involvement in gamification activities should be assessed positively given a number of limitations encountered. Participation in lectures is voluntary, as per university policy. In addition, a certain proportion of students do enrol for undergraduate courses and then fail to participate further. They are considered

Table 1. Number of students attending the *Microeconomics* course

Students who	Academic year 2017/2018	Academic year 2018/2019
took part in gamification and were permitted to take the final exam	157 (76.96% of total)	125 (64.77% of total)
took part in gamification at least once, but dropped out or were not present at the exam for other reasons	13 (6.37% of total)	40 (20.73% of total)
did not take part in gamification, but were permitted to take the final exam	14 (6.86% of total)	6 (3.10% of total)
did not take part in gamification plus dropped out of university	20 (9.8% of total)	22 (11.39% of total)
Total	204	193

Source: Author's estimations.

students for the entire first semester, and are only removed from the register of students after the winter exam period has come to an end.

In the next research stage, only the results of the students permitted to take the final exam and who participated in gamification at least once were taken into consideration. This limitation stems from the adopted research objective, i.e. the extent to which gamification impacts students' learning outcomes. For this reason, the researched group of students had to be observed in both the aspects. What is more, in order to linearise the non-linear components and be able to estimate the linear regression function, all variables were changed into natural logarithms, the students with O points score in the final exam were removed from the analysis. Consequently, the size of the researched group was 259 observations.

Table 2 shows a set of descriptive statistics representing the results obtained by students. The percentage of scores obtained by students in the final written exam were treated as a measure of learning outcomes (LO), whereas the percentage of the amount of the points collected in quizzes (P) and frequency of participation in quiz activities (F) as measures of gamification. The accuracy of quiz answers (A) was the control variable.

On average, students earned 38.46% of possible points for the quiz answers and took part in 65.43% of activities connected to gamification. Students gave correct answers to 56.22% of quiz questions while learning outcomes in the final written exam was of 45.57% correctness.

The next step was to analyse the correlation coefficient between the exam results as learning outcomes, and the variables related to gamification and the control variable. As the results in Table 3 show, the correlation coefficient is the highest between the share of gamification points (P) and learning outcomes (LO), being equal to (0.44), whereas the correlation between learning outcomes and others variable is lower (0.32–0.37). This implies that students who scored more points for participating in the quiz also scored more points in the final written exam. At the same time, comparing the coefficients of the correlation between

Table 2. Descriptive statistics of variables

	Number of observations	Average	Minimum	Maximum	Standard deviation
Share of gamification points (P)	259	38.46%	0%	92.31%	22.78
Share of frequency in quiz participation (F)	259	65.43%	7.69%	100%	27.67
Accuracy of quiz answers (A)	259	56.22%	0%	100%	20.12
Learning outcome (LO)	259	45.57%	0%	100%	22.66

Source: Author's estimations.

Table 3. Correlation coefficients among learning outcomes (LO) and gamification varia-
bles (P, F) and control variable (A)

	Share of gamification points (P)	Share of fre-quency in quiz participation (F)	Accuracy of quiz answers (A)	Learning out-come (LO)
Share of gamifi-cation points (P)	1.00	0.86	0.66	0.44
Share of frequen-cy in quiz partici-pation (F)	0.86	1.00	0.30	0.37
Accuracy of quiz answers (A)	0.66	0.30	1.00	0.32
Learning out-come (LO)	0.44	0.37	0.32	1.00

Source: Author's estimations.

gamification variables, the highest value is between share of gamification points (P) and share of frequency in quiz participation (F), being (0.86). This correlation is quite obvious as by participating more often in gamification activities students could also score more points in quizzes.

Yet another step in the research was to estimate the parameter values of the regression function, where learning outcome (LO) is the dependent variable, and the independent variables are the ones connected to gamification (P, F), as well as the control variable (A). As all the variables were changed into percentage points, data comparability was obtained, allowing their joint inclusion in the regression function. Additionally, to enable the estimation of the parameters of the linear regression function, the non-linear components were linearised by changing all variables values into natural logarithms. The initial form of the assumed regres-sion function is equal to function (1).

$$(1) \quad LO = a_0 + a_1 P + a_2 F + a_3 A$$

where:
LO – learning outcomes,
P – Points earned by students in quizzes as a measure of participation in gamified activities,
F – frequency in quiz activities as a measure of participation in gamified activities,
A – Accuracy of answers to quiz questions as a control variable,
a_0, a_1, a_2, a_3 – function parameters.

Estimating the function parameters is performed by using the classic least squares method. A summary of the estimates for the initial function parameters is presented in Table 4.

The values of some regression function parameters presented in Table 4 are not statistically significant. The P value of the two independent variables (share of frequency in quiz participation (F) and accuracy of quiz answers (A)) implies

Table 4. Results of the initial regression function parameters' estimation with LO as dependent variable

Independent variable	Coefficient Value	Standard error	t-Student $(t255)$	P value
Const (a_0)	27.005	7.124	3.791	0.000187
Share of gamification points (P)	0.411	0.197	2.084	0.038114
Share of frequency in quiz participation (F)	-0.004	0.128	-0.033	0.973595
Accuracy of quiz answers (A)	0.054	0.119	0.454	0.650071
Summary of regression	R=0.442; R2=0.196; Corrected R2=0.186; F(3.255)=20.651; p<.00000; standard error of estimation: 20.448			

Source: Author's estimations.

that the results of parameters' value estimation are highly likely to generate random sampling error. Consequently, the next step of the regression function estimation eliminates the percentage of attendance rates as an independent variable giving results presented in Table 5.

As the data in Table 5 indicate, one of the independent variables, accuracy of quiz answers (A), still remains statistically insignificant, therefore it was removed from the regression function after which parameters values were re-set. The parameter values of the final regression function are presented in Table 6.

As the data in Table 6 show, the parameters of the regression function are significant statistically and its form can be accepted as coincident with function (2).

Table 5. Results of next regression function parameters' estimation with LO as dependent variable

Independent variable	Value of coefficient	Standard error	t-Student $(t256)$	P value
Const (a_0)	26.805	3.779	7.093	0.000000
Share of gamification points (P)	0.405	0.074	5.446	0.000000
Accuracy of quiz answers (A)	0.057	0.084	0.673	0.501273
Summary of regression	R=0.442; R2=0.195; Corrected R2=0.189; F(2.256)=31.097; p<.00000; standard error of estimation: 20.408			

Source: Author's estimations.

Table 6. Results of final regression function parameters' estimation with LO as dependent variable

Independent variable	Value of coefficient	Standard error	t-Student (t257)	P value
Const (a_0)	28.718	2.489	11.537	0.000000
Share of gamification points (P)	0.438	0.056	7.866	0.000000
Summary of regression	R=0.440; R2=0.194; Corrected R2=0.191; F(1.257)=61.873; p<.00000; standard error of estimation: 20.386			

Source: Author's estimations.

$$(2)\ LO = 28.718 + 0.438 \cdot P$$

where:
LO – learning outcomes,
P – share of points earned by students in quizzes as a measure of participation in gamified activities.

The results of the estimation of the regression function parameters indicate that among the accepted measures of gamification and control variable, only participation in gamification may be one of the variables that affect positively the academic results achieved by students. Students achieving a higher score through correctly answering quiz questions lead to better learning outcomes. To give the correct answers, students had to gain knowledge in an active way and have an understanding of the material of the microeconomics course, as presented during the lecture cycle. Taking part in gamified activities caused students to have an ongoing contact with the material taught during lectures and the microeconomics curriculum in general, helped the systematic verification of their knowledge and ensured comprehension and long-term retention of that knowledge. Moreover, as much of the microeconomic course content bases on the presentations of variables on charts, many of the quiz questions were based on reading charts. The use of charts in the teaching practice within economics education is a new approach to students, compared to how the teaching content used to be presented in earlier stages of their education. Moreover, students also gained the opportunity to acquire and develop their skill at working with graphic presentations and charts.

In order to get good results in gamification, students had to not only attend lectures, but also remember the material they were taught, plus study for the quizzes on their own. As such, achieving high quiz scores required more involvement than just attending lectures, which in turn led to higher learning outcomes.

Participation in gamified activities turned out to be an independent variable, statistically insignificant in terms of learning outcomes. Owing to the design of the gamification activities participation in activities did not benefit students in any way. Students only benefited by preparing for the quiz. Therefore, the

students who participated in activities without having understood the material did not gain any benefits, and their passive attendance did not impact their ultimate learning outcomes.

The final variable taken into account in the research was the accuracy of quiz answers, which was regarded as control variable. This variable was measured as a percentage of correct answers against all the quiz questions in the gamification activities that were answered. This variable was regarded as a control variable as it shows to a certain degree the natural capabilities of students to master the material regardless of their involvement in gamification. It was assumed that students with the inborn ability to understand and acquire economics knowledge would obtain a high level of accuracy of quiz answers regardless of their participation rates in gamification activities. However, research findings show that the control variable is statistically insignificant in accounting for the learning outcomes. Thus, it can be assumed that the inborn ability to understand and acquire economics knowledge does not translate directly into the ultimate learning outcomes.

Another element in the analysis of the research findings is the value of the coefficient of determination R2. Considering value R2 of the final regression function (2) we can observe that the variable connected to gamification accounts for approximately 20% of the variations in learning outcomes as a dependent variable, which is not a particularly strong relationship. Looking at the value of the R2 variable, the degree to which exam results are accounted for by the control variable might be perceived as quite low.

Such a value of R2 at the level of approximately 20% should not be surprising. The findings of some other research on the impact of deep learning in learning communities on the results of microeconomics exams taken by Bachelor students also account for about 20% of the variance of learning outcomes (Smith, Lovgren, 2018). The learning process is a complicated one being affected by personality and environmental factors. In addition, gamification activities are only one of the many elements of the teaching process. Other elements, such as the curriculum, the organisation of the teaching process and the way lectures are conducted, are just as relevant.

On the other hand, though, if the implementation of gamified elements into the teaching process alone can help boost final results by 20%, it is an increase significant enough for gamification to be implemented in the teaching process.

5. Final remarks

Gamification as game-based learning strategy is widely commented on as a tool for raising the effectiveness of the educational process by increasing the engagement and motivation of learners, but the effectiveness of this approach still requires further testing. The paper raises two research questions regarding the impact of gamification on learning outcomes in higher education and the comparison

of the impact of students' capabilities to acquire knowledge and the influence of gamified activities on learning outcomes. The research based on the experiment on gamification done with students as they faced some game-based elements as a part of a regular *Microeconomics* course, with their engagement levels and results scored adopted as measures of gamification. The employment of such an approach made it possible to estimate the influence of game-based elements on learning outcomes by using parameters of the regression function.

According to the research results, the game-based element measured with the share of collected points in gamification has a positive and statistically significant impact on the learning outcomes. Attendance rates in gamified activities and the accuracy of answers were statistically insignificant. However, the game-based elements are not the only factor influencing the outcomes of the learning process as they do not account for the whole variance of the educational outcomes. As research was limited only to students of one university, further research could investigate the impact of gamification on education output of other courses and at other universities and countries.

Incorporating gamified activities into the education process can raise the effectiveness of the learning process, but it should be strictly combined with the content of the course and the skills and competences required in it. Gamification should be regarded as a valuable part of the education process, which should be carefully designed and compliant with other elements of education.

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