

Article

Knowledge Management in Entrepreneurship Education as the Basis for Creative Business Development

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Abstract: Despite numerous studies dedicated to business and entrepreneurship education, there is a lack of research dedicated to students studying creativity in entrepreneurial and business-related disciplines through knowledge management tools and practices. The objectives of the study were to determine the key factors of creative motivation for entrepreneurship among students, to build an appropriate universal practical model of learner creativity motivation, and to create a knowledge management concept based on this model. By way of comparative, descriptive, qualitative, and quantitative analysis methods, we investigated previous research in the field of motivation, educational approaches, and methodologies, together with the data of the Program for International Student Assessment of the Organization for Economic Co-operation and Development. In order to compare international experience of knowledge management in modern approaches to education, we analyzed the curricular of business and entrepreneurship programs in three higher education entities from different countries: the Russian Presidential Academy of National Economy and Public Administration, KIMEP University, and Al Ain University. As a result of the research, we developed knowledge management that can be used for the learner creativity and motivation model. Recommendations developed in the course of the study would allow for the ability to make business and entrepreneurship education more sustainable.

Keywords: business competitiveness; creativity; entrepreneurship education; knowledge management; sustainable development



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1. Introduction

1.1. Entrepreneurship Education Concept

The development of knowledge-based society and sustainable economy significantly depends on the ability of businesses to produce competitive goods and services and to distribute them in the global market [1]. A critical trait for businesses in a digital, globalized competitive environment is creativity and knowledge management, which must create the conditions for the formation of natural creativity [2]. Business based on the learning organization concept approach to sustainability strategies goes out of rigid compliance and anticipates knowledge management as an element of its culture and competitive strategies. Thus, creativity in knowledge management practices as a significant element in a competitive environment makes such business highly competitive in conditions of application of information policy [3,4], meaning that it produces and provides products or services to the market much more effectively than similar companies in the same or other region(s) or country(-ies) [5,6].

Applying the knowledge spiral begins the most important preconditions of successful development of financially healthy and sustainable business enterprise. Creativity develops in the learning process in the presence of a sufficient number of various learning

situations, with the maximum connection between learning and solving real life problems and the development of thinking flexibility. The flexibility of thinking of staff and future entrepreneurs is ensured by the grammar implementation of scaffolding during training and the implementation of the knowledge spiral in the organization already during work [5,7,8]. In order to react properly to changes in external environment, adjustment of the company's knowledge structure to alternative scenarios is taken into account. Thus, sustainable development of entrepreneurial companies requires skillful and creative workforce and management [8,9]. Sustainable development of business is significantly dependent on the development of intellectual capital of potential workforce and entrepreneurs, especially young people, mainly university students and graduates [10,11].

The level of creativity of skilled workforce and entrepreneurs directly impacts speed and flexibility of the knowledge management process, and the educational standards of a society have the most significant impact on promoting sustainable development [12,13]. Quality business and entrepreneurship education aims not only to provide inclusive and equitable education, but also to promote learning opportunities for further application within the framework of company knowledge management [14]. The voluminous summing up of the results of 12 years of research on the impact of entrepreneurship education in higher education has shown that most learning models are focused on short-term and subjective outcome measures [15]. Therefore, we propose novel impact indicators related to emotion and mindset of students and related to the intention-to-behavior transition.

Student preparation for modern business environment and entrepreneurship has become a key strategic goal in the knowledge economy over the past decade. Young entrepreneurs represent the potential for successful start-ups, their innovative development, and sustainable growth [16]. From a psychological point of view, a person selecting a job full of uncertainties such as entrepreneurship should generally have character traits such as creativity, emotional stability, conscientiousness, extraversion, and good interpersonal relatability [17,18]. The same features determine the implementation of the concept of continuous and lifelong learning, which makes knowledge management effective [4].

The formation of creative intention is closely related to the need to solve problems and make decisions in conditions of limited awareness [19,20]. The problem-solving skills applied and required by companies will be shaped by and directly dependent on international and national information policy. The guarantee of sustainable business development lies in the flexibility of applying the knowledge spiral in management practice [8]. Moreover, the creation of a spiral of knowledge in the company contributes to the manifestation and maintenance of personnel creativity [21]. Critical and analytical thinking, communication, listening and speaking, willingness to learn, interpersonal skills and teamwork, reliability, initiative, adaptability, risks, integrity, professionalism, science and technology, ethics, and mathematics are the most important entrepreneurial competences for a successful business. On the other hand, ambitions, ethics, adaptability and flexibility, learning to learn, critical and analytical thinking, integrity, reliability, and communication have been shown to be, as the most frequently cited factors, important to success. Creativity is part of natural collaboration when tasks are solved simultaneously by a group and as a result of intra-group coordination of efforts. This effect is especially pronounced in collaboration in entrepreneurial groups [7,22]. All these key business competences should be taken into account when designing entrepreneurial study programs [16].

In addition to the aforementioned skills and competences, entrepreneurs must be driven by intrinsic and prosocial motivation and self-efficacy, and they must perceive that they are capable of performing the tasks required to pursue sustainable business goals [23]. Given the crucial role that creative and sustainability entrepreneurs play in sustainable development of any country, the fostering of knowledge-oriented entrepreneurial thinking is one of the primary tasks for business and entrepreneurship education [24].

1.2. The Evolution of Concepts

Developed motivation has always been viewed as the most important factor in the training of entrepreneurs. The connection between creativity and motivation for entrepreneurship is recognized as quite close in many studies [17,21,25]. Within the framework of knowledge management as a technology, questions of motivation are practically not investigated, although they are very important. At the same time, the connection between knowledge management and creativity is considered in several significant works [2,5,26]. When studying the problem of linkage between motivation and creativeness in the context of entrepreneurship, it is necessary to address the principle of determinism and not to lend weight to biological or social aspect alone [27,28]. Therefore, learner motivation fuses both external (goals to achieve) and internal drive. The marker of high learning motivation is the acceptance of learning goals and objectives as personally meaningful and necessary [29].

Learning motivation and creativity both play a significant role in the competency-based approach, and the curriculum is compiled on the basis of an analysis of the assumed or actual role in modern society and tries to confirm student performance on the basis of demonstrated performance in some or all aspects of this role [30]. In the future, this process naturally integrates into the company's knowledge spiral [31].

A comprehensive study of socio-psychological factors of learner motivation in the 21st century involves a deep understanding of both its formation and a digital path to a better education system [32]. The system should also take into account the characteristics of a younger generation that entrepreneurship education establishments enroll today. Their strong side is multitasking and native creativity, while the weak side includes the inability to concentrate and analyze, which requires the delivery of short and clear information [33]. The personalities of recent generations are more naturally integrated into 21st century skills. The so-called 21st century skills, among which the most important are the ability to continuously learn and learn throughout life, are becoming the foundation for knowledge management in companies. At the same time, management is shifting from searching for the application of the competencies of an individual employee to changing the profile of his competencies in accordance with the needs of the market and information policy [34].

These people are talented and creative, can handle large volumes of information, but are indolent and self-centered. Digital learners can be motivated through interesting and easily achievable assignments and the boring ones are beyond their interest. Social networks contribute to the active participation of the students, with a high number of comments, links, websites, files, or videos. Such a tool, associated with people's free time, allows modern students to assimilate information in an easier way with no space–time barriers and over a continuous period of time [35]. Generation Z students are usually not primed for a career and money to them is nothing more than a source for entertainment and travel. They do not like long-term planning but are interested in immediate results [36]. The aforementioned features of new generations of students in themselves require the use of knowledge management in the learning process in order to achieve the necessary indicators of professionalism, mastering skills, and academic achievements. Learning the concepts and practical use of knowledge management in the practice of entrepreneurship or within the framework of an existing company is possible by applying such management in relation to students in the process of their training in parallel with mastering the corresponding educational material [34,37]. This methodology also partially simulates the application of a formal information policy to which company policies must conform.

At this point, the motivational and creative sphere of first-year students is as important as guidance through the period of adaptation, given the requirements for a future knowledge-based Industry 4.0 professionalism and entrepreneurship. These two constituents are prerequisites to successful sustainable learning, entrepreneurship, and professional personality development, which implies the Industry 4.0 competencies such as creativity, critical thinking, problem-solving, management, teamwork, social and cultural initiative, and competencies that help in cases of uncertainty and rapid technological changes [16,38]. Thus, investigating knowledge management in student motivation to

learn entrepreneurship and business-related disciplines is relevant from both theoretical and practical perspectives because this allows for improvement of the effectiveness of entrepreneurship education. In addition, it allows for the improvement of younger generation creativeness among entrepreneurs and business professionals, ensuring sustainable business and country development in social, cultural, and economic dimensions.

The aim of the study was to develop a universal learner creativeness motivation model appropriate for using knowledge management concept, which could be applied in entrepreneurship education curricula. The research objectives of this study were to determine the key factors of creative motivation for entrepreneurship education among students, to build an appropriate practical useful model, and to create a knowledge management concept based on this model.

1.3. Relative Works

The social and psychological analysis of learner creativity within the knowledge management perspective demonstrates that, despite the existing results in numerous related studies, the problem is still relevant, especially when it comes to entrepreneurship education. Differences in views on learner motivation are linked to the choice of psychological, pedagogical, and social factors that form the core of the existing methods [26]. Motivation for entrepreneurial learning is also stimulated by socially and economically determined factors and the situation on the labor market. Barba-Sánchez and Atienza-Sahuquillo [39] concluded that the need for independence is crucial for future engineers in developing entrepreneurial intentions. Learning motivation and creativeness is tied to a number of education-specific factors such as the system of education and educational establishment, process organization, student and lecturer personalities, lecturer's attitude towards students and one's own profession, and features of the discipline being taught [17,21]. Another study of Barba-Sánchez and Atienza-Sahuquillo indicates that motivation and educational instrumentalization also plays a decisive role in successful self-employment, and not just the availability of the opportunity and the means to run your own business [40].

Building up (digital) partnership-networks could lead to long-term cooperation in the knowledge management services for sustainability entrepreneurship. Social networks, new mobile applications, and cutting-edge technologies can also help students develop the knowledge management skills, be "on-line", and build interrelations [35]. The models of professional competency postulate both cognitive and non-cognitive elements as crucial for completing professional tasks and successful entrepreneur activities [9]. Lecturer's knowledge is considered multidimensional, which means that it has several domains (i.e., content knowledge, pedagogical content knowledge, and general pedagogical knowledge). It is believed that non-cognitive elements contain different constructions, such as creativeness, learning motivation, inclinations, and self-efficacy [41,42].

In recent years, the theory of self-determination applied to knowledge management mechanisms in companies is gaining popularity, especially in Europe. Many studies regarding learner creativeness and motivation that were published in the last decade rest upon this particular theory. Its core provisions can be simplified as follows—to be motivated and function at an optimal level and to satisfy a specific set of psychological needs (i.e., competency, autonomy, and relatedness) [37,43]. Practical research according to the theory of self-determination and the theory of planned behavior shows that the basic needs of autonomy, competence, and relatedness largely shape the attitudes and intentions of university students regarding entrepreneurial learning [44]. Interest-provoking is the theory of transformative experience, which was first mentioned in 2011–2013. The theory focuses on how learning can enrich practical business experiences and thus expand perceptions, contribute to the understanding of and to acquiring values for future entrepreneurial experience, and transform the relationship between students and the world [11]. Such experience directly meets the needs of the constantly changing knowledge economy and allows individuals to quickly translate the knowledge spiral for a specific company into practice [8,20].

Zampetakis [18] found a direct relationship between the manifestation of innovative thinking and entrepreneurial intention and the development of creativity. Creating an effective environment that fosters creativity and builds relevant skills is directly reflected in the intention to do business and solve real problems. The theory covers the ideas of aesthetics and educational philosophy and is defined in terms of three characteristics: motivated use (i.e., application of school content in everyday business experience when not required to do so), expansion of perception (i.e., seeing the aspects of everyday economic life through the lens of school content), and experiential value (i.e., valuing school content for the way it enriches everyday entrepreneurial experience) [16]. Within the framework of the transformative experience theory, scientists explored the influence of certain interventions that encourage lecturers to rethink learning so as to increase the value of daily learning content through various educational strategies [16,25,38]. Entrepreneurial intention has become an increasingly important focus of research over the past 15 years of research. The systematization undertaken by Liñán and Fayolle [45] made it possible to identify 5 main areas of research and 60 main topics that were explored in relation to understanding the mechanisms of entrepreneurial intention, its formation, and role in further productive activity.

The vital parts of business and entrepreneur education in terms of knowledge management are real business cases and meetings with entrepreneurs from the industry, which can form a real-world adjunct classroom specifically in entrepreneurial education. The important learning outcomes are not just that guest speakers share practical knowledge and experience, but that student opinion may also change by seeing a successful entrepreneur. Moreover, students may idealize them and get inspiration from the very start of their schooling, and thus their motivation will be influenced to be one of their ideal entrepreneur personalities [46]. The importance of using real cases in the training of entrepreneurs is also confirmed by research on the successful development of entrepreneurial learning based on the use of a successful entrepreneurial role model. It is emphasized that such a successful role model is built on the basis of real experience and cases [47].

Note that the present study suggests and tries an approach that is somewhat different from the traditional theories mentioned above. This study is devoted to the influence of social and psychological factors on motivation in a framework of implementing knowledge management, and the approach used here is based on findings from the study of an interaction between acmeology and leadership. The choice was made in favor of this approach given the inefficiency of traditional teaching methods and motivation techniques used to manage the representatives of young generations, which will make up more than 60% of entrepreneurs and the working population in many countries of the world in the next few years. Thus, millennials (Gen Y) are currently becoming leaders, successful entrepreneurs, and experienced professionals. The youngest representatives of Gen Y and the eldest representatives of Gen Z are ambitious young professionals and starting businesspeople who need interesting tasks, a feeling of engagement, a flexible work schedule, and space for both professional and personal growth. The way people understand the life values and choose a profession has changed. They have different life goals, habits, and behavior [33]. To survive and become successful in the climate of digital transformations and rapid changes in business environment, an individual has to be a leader—to be a few steps ahead of his/her peers. Representatives of young generations sincerely believe that new technologies will help them achieve this [10,48]. For representatives of these and subsequent generations, it seems practically effective to create a primary entrepreneurial experience while still in school. Practical research and pilot experience of instilling entrepreneurial skills in school demonstrates an increase in the relevant competencies and the future potential of students to create start-ups [49].

The suggested implementing knowledge management mechanism of interaction between the elements of a new professional and entrepreneurship culture describes this very process. It represents a guide to the motivation of young generations (Y and Z) in business and in the workplace through the manipulation with their mindset, ambitions, and

habits. The motivation model provides an understanding of which tools may be used to shape and maintain the psycho-emotional profile of entrepreneurs, their “mood”, and way of thinking so that they could perform effectively and be successful in business [2]. This model also specifies how such a style of knowledge management can affect an organization in general. This model serves a level of control over the professional development and career success of a young specialist or an entrepreneur. Any person will be able to manage it directly, otherwise he/she will miss the opportunity to become a leader and will be replaced by a more organized and purposeful peer. The corporate culture and knowledge management of a company should contribute to self-management and self-motivation. Moreover, this function should be embedded in the “DNA”, the business model of the company [3]. Thus, the corporate and entrepreneurship culture should also contribute to the creation of a model of intrinsically motivated business creative development, which will focus on his/her mindset, emotional intelligence, aspirations, and ambitions. This will influence his/her behavior significantly and will improve the company’s efficiency and market position [1].

To make the mechanism function properly, the one using it must develop the necessary skills, culture, and knowledge before becoming employed or starting his/her business in the course of business or entrepreneurship education [6]. Continuing our line of research in the field under study, this study offers a practically significant model of motivating students’ entrepreneurial interest in order to increase the effectiveness of learning in this field. Thus, research attempts to fill the gap in the presence of similar practically applicable generalizing models based on the research already done. Analytical findings (see Section 3.1) show that the world’s most powerful corporations that operate in different fields (e.g., manufacturing, finance, engineering, and technology) are located in countries that invest most in education and science—the USA, Western Europe, Japan, and China. These corporations are that powerful because they implement the best knowledge management systems and employ well-motivated, flexible professionals with a high level of business and entrepreneurship culture, and this facilitates the process of managing an employee through the impact on his/her mindset, emotions, and behavior. The present findings demonstrate that, in general, the consequences of making individuals motivated include better performance; more successful entrepreneurship activities; and, as a result, a meaningful life [23].

2. Materials and Methods

The study is built around the strategies in the context of knowledge management that is able to boost learner creativeness, generate interest in knowledge, lay focus on education with creative component for sustainable business development, and set goals and achieve them [14,34]. The study focuses on the psychological and psycho-emotional peculiarities of world perception by Gen Y and Z to link motivational principles and stimulators with their outlook and demands. This, in turn, benefits the identification of creativeness drive. It also necessary to consider the education level of students from different regions, such as Europe, the USA, Australia, Russia, and CIS (The Commonwealth of Independent States) countries. This allows identifying factors that influence the quality of business and entrepreneurship education in different countries and lays the groundwork for student creativity to acquire sustainable business and entrepreneurship education. In the long term, these factors may positively impact the national sustainable development [50]. The related data are available from regional and global analytical reports.

With the purposes of the study of previous research in the field of knowledge management and creativity, we investigated educational approaches and methodologies on the principles of using works containing analysis and generalization of achievements in the field under study over the past 5 years. In order to compare the international experience in modern approaches to education, the curricular of business and entrepreneurship programs in 3 higher education entities from 3 different countries were analyzed (in alphabetical order):

1. Al Ain University, Abu Dhabi (the United Arab Emirates);

2. KIMEP University, Almaty (the Republic of Kazakhstan);
3. The Russian Presidential Academy of National Economy and Public Administration (RANEPA), Moscow (the Russian Federation).

The following data of the Program for International Student Assessment (PISA) of the Organization for Economic Co-operation and Development (OECD) and the Statistical office of the European Union (Eurostat) was analyzed:

1. Collaborative problem-solving skills of students in OECD, partner, and neighbor countries;
2. Annual expenditure per student of OECD, partner, and neighbor countries.

PISA data for collaborative problem-solving skills of students in the OECD, partner, and neighbor countries is available for the year 2015 only.

3. Results

3.1. Data Analysis

The effective formation and development of competencies in business and entrepreneurship education provides for the wide use in the educational process of interactive forms of learning: lectures and seminars in interactive mode, discussions, meetings with representatives of operating companies, state and public organizations, master classes by experts and specialist computer simulations, business and role-playing games, analysis of specific situations, and psychological and other forms of training in combination with extracurricular work. The analysis of business and entrepreneurship education curricula in three universities researched in this study showed that the share of classes conducted in interactive forms comprise more than 30% of the total volume of curricula, namely,

1. The Russian Presidential Academy of National Economy and Public Administration (RANEPA), Moscow (the Russian Federation): 35.2% [51];
2. KIMEP University, Almaty (the Republic of Kazakhstan): 33.4% [52];
3. Al Ain University, Abu Dhabi (the United Arab Emirates): 31.6% [53].

Except for certain somewhat similar disciplines in KIMEP University such as Organizational Behavior and Leadership Ethics, no business education curriculum in the aforementioned universities contained courses on motivational psychology, which would allow future graduates to apply psychology in solving specific business and entrepreneurship problems (Figure 1).

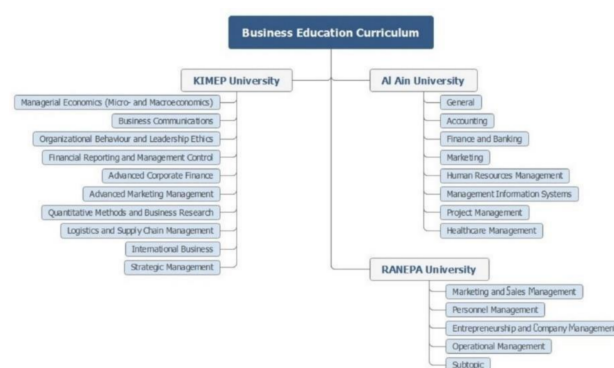


Figure 1. Business education curricula in Russian Presidential Academy of National Economy and Public Administration (RANEPA) University, KIMEP University, and Al Ain University. Source: developed by the authors on the basis of [51–53].

As shown on Figure 1, business education curricula in all three higher education entities reflect traditional curricula, although the curricula in KIMEP University is somewhat more detailed. Lecturers are constantly confronted with a variety of methodologies that promise an improvement on both instructional strategies and student learning through the organization of original classes, as well as special extra-curricular activities, meetings with practicing entrepreneurs, seminars, business cases analysis, and through the use of media.

However, such an upgrade is fraught with difficulties; for example, most methodologies or guides have little or no empirical evidence on effectiveness. In such cases, it is advisable to address analytical and statistical sources of information so that lecturers could develop techniques independently using specific framework.

At the end of 2018, the Coalition for Psychology in Schools and Education (CPSE), a group of psychologists within the American Psychological Association (APA), published a review of the top 20 principles from psychology to improve student motivation. The Top 20 document describes five areas of psychological functioning: cognition and learning, motivation, social and emotional dimensions, context and learning, and assessment. The core principles include mastery goals, growth mindset, feedback, and practice. From data in “Students’ Drive and Motivation” and “The Nature of Learning” reviews, it is evident that thus far, business and entrepreneurship students believe that a salary proposal is an effective drive for high performance.

However, they do not take into account that the level of payment is directly proportional to the results of performance, rather than to positions or abilities [54,55]. In 2017, the Berlin Institute for Advanced Studies conducted a sociological survey among citizens to settle the top things needed to be motivated in the workplace. The survey results show that people who have private business are geared towards revenue and only then towards comfort in the workplace. By contract, their employees have different priorities, which, in the order from more to less important, are the recognition of professional performance, the understanding of company’s orientation, satisfaction of personal needs, and stability in the workplace. This list is completed with good salary and good working conditions.

This study shows that underperformance is not a result of insufficient salary alone. The survey involved part-time students who combined classes with work. Their opinion on this issue, as showed, coincides with the opinion of employees. This suggests that in developed countries, such as Germany, the younger generation is reorienting—people change their priorities in life and professional values. They come to the understanding that intensive professional development at the beginning of the career path is needed to earn high incomes [50,56].

The world experts provide ambiguous data on the quality of education, including business and entrepreneurship education, as well as the education level in Russia and CIS countries. On the one hand, many foreign analysts emphasize a decline in the level of knowledge, qualification skills, and intellectual potential compared to other countries. According to the OECD’s PISA 2015 survey, Russia achieved only 27th place in country rankings, while the top five places in the ranking belonged to Singapore, Japan, South Korea, Estonia, and Canada. The United States occupied the 10th place, and the United Arab Emirates occupied the 40th place, while Kazakhstan was not included in the PISA 2015 results.

On the other hand, the achievements of Russian scientists are still considerable, but a continuing decline in education quality has a demolishing effect on them [50,54,57,58]. Eric Hanushek and Luger Wessman associate the outperformance of top OECD countries with the technology-induced economic and sustainable development. In turn, any positive tendencies in economy and sustainable development are a total effort of high professional and educated residents. The collaborative problem-solving assessment explores the level of student readiness for collaboration and skills to solve complex problems in more than 130 countries of the world. Figure 2 shows the related PISA results, which were discussed above [54].

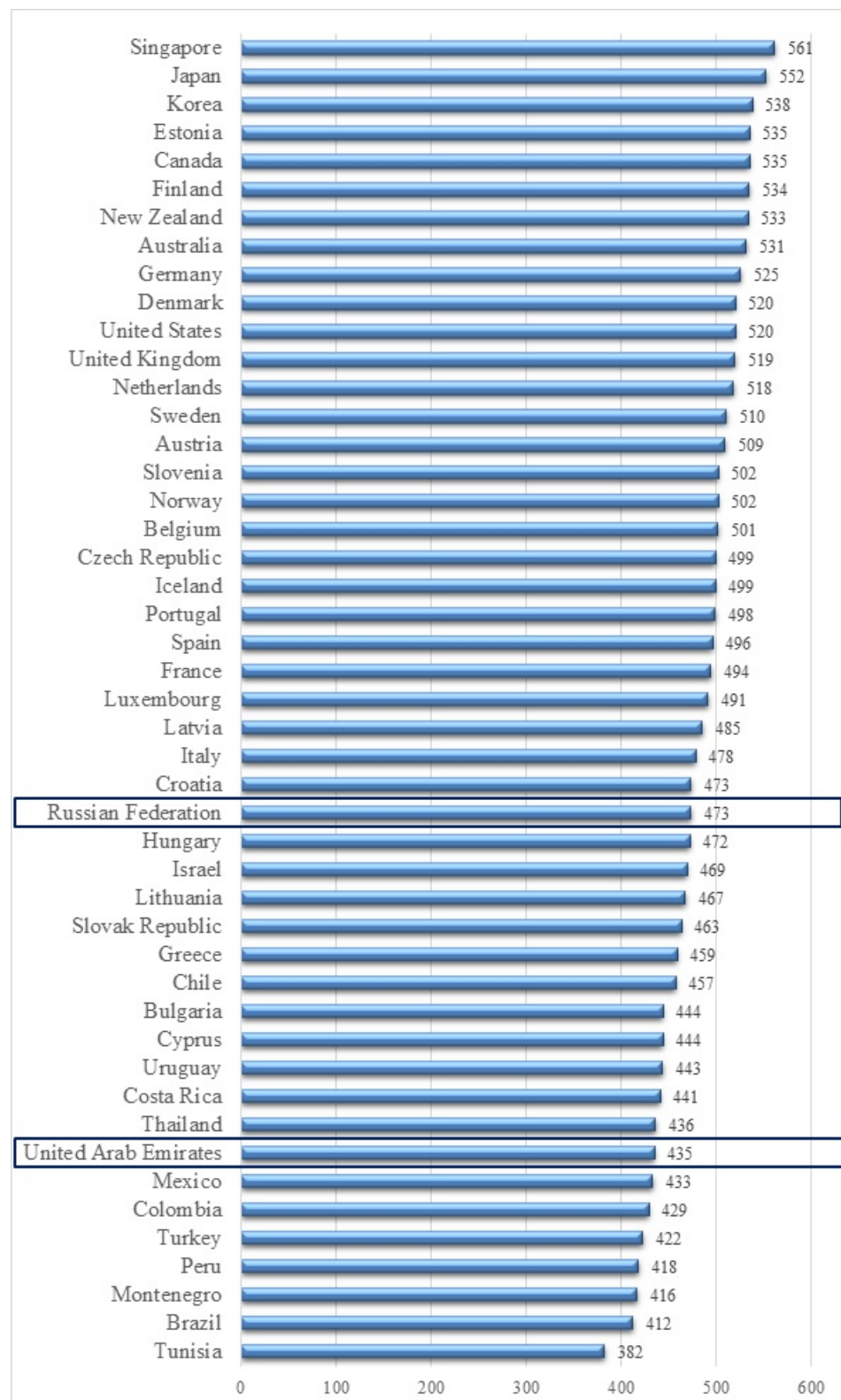


Figure 2. Comparing student's collaborative problem-solving skills. Source: Organization for Economic Co-operation and Development (OECD) [50,57] and Eurostat [56].

According to scientists, business and entrepreneurship education is a powerful tool to create long-term forecasts of national strength and sustainable development [9,14]. Undereffective education policy and poor education lead many countries to the point of permanent recession. The idea of OECD surveys is to give as many countries as possible,

both rich and poor, the opportunity to compare the state of their education with world leaders, determine their strengths and weaknesses, and see what the long-term economic benefits of improving education quality will be. The experts compiling draft rankings put forward a thesis that the quality of education, both in general and business-oriented, is dependent upon national welfare (Figure 3).

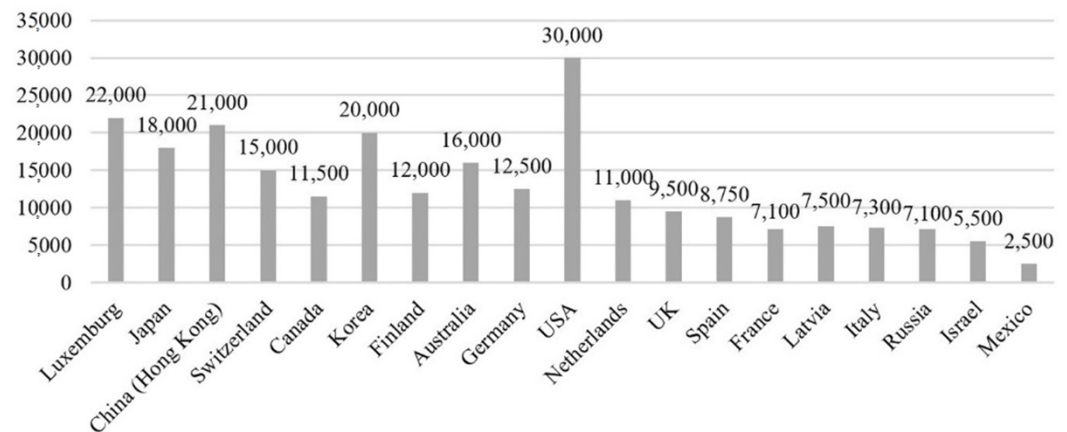


Figure 3. Countries' annual expenditure per student, OECD, partner, and neighbor countries. Source: OECD [50,57] and Eurostat [56].

Countries with the highest education spending also show the highest student achievement in collaborative problem solving (Figures 2 and 3). The position of the Russian Federation and the UAE in the rating of the quality of problem solving by students is relatively low (Figure 2), which may be closely related to the lack of specialized courses in motivation, entrepreneurial disciplines, and low use of real cases (Figure 1). Thus, using the example of the studied higher educational institutions and methods of teaching entrepreneurial disciplines, the researchers traced the relationship between government spending on education, the comparative level of problem-solving skills among students from different countries, and the training programs used. On the basis of the experience of the more favored countries, we propose the model shown in Figure 4.

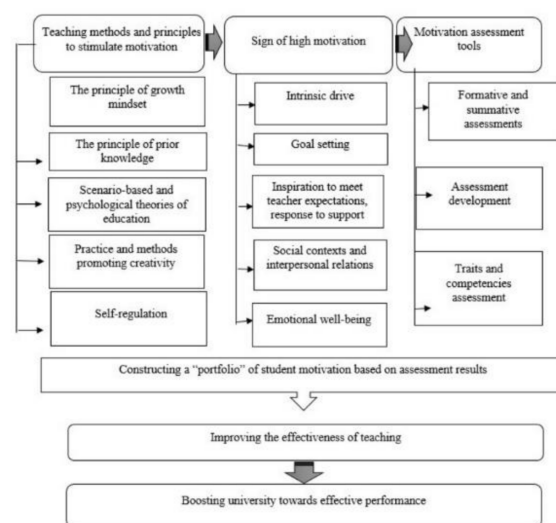


Figure 4. A business and entrepreneurship student motivation model. Source: developed by the authors.

Rich countries, such as the United States, Luxembourg, China, South Korea, and Japan, spend the most on education. The theoretical framework (methods and approaches to socio-

psychological analysis of learner motivation, as well as data from analytical and statistical reports) is the basis of a model of business and entrepreneurship learner motivation and its assessment (Figure 4). Unlike the existing models, this undertaking implies a synergistic interaction between lecturers, who use the existing methods/principles of motivation, and students, who demonstrate signs of motivation as evidence of response. The model utilizes comprehensive tools of motivation assessment that take into account the required personal (acmeological) characteristics and competencies of students.

The use of this model will allow for the improvement on education efficiency. The model will allow teachers, on the basis of an individual assessment of the student's motivational and personal characteristics, to choose the points and theory, on the basis of methods of optimal impact that increase the effectiveness of learning.

3.2. The Structural Components of Motivation Model

The teacher's work in the cycle of increasing student motivation requires effective tools for assessing motivation (formative, development and competencies, and personality traits: see column 3 of Figure 4), which have been developed by many studies [40,43,55]. The signs and further utilization of signs of high motivation are also well researched (second column of Figure 4) [28,35,36,44]. Our study does not suggest specific teaching methods but suggests summarizing these methods (column 1 in Figure 4) in accordance with the formation of the student's personal "portfolio" to optimize the impact on both personal motivation and creativity, and to improve the quality of learning practical skills based on real case studies and the ability to solve real business problems [2,4,5,15,16,47].

The essential part of business and entrepreneurship education covers the use of teaching methods that enhance intellectual growth and creativeness and that provide feedback from Gen Y and Z (millennial) students who have a specific worldview and needs. Such a narrow definition of a teaching method comes from the fact that beliefs or ideas that students have about intelligence and abilities affecting their cognitive functioning and academic performance. Thus, students who believe that intelligence is malleable and success is related to effort level are more likely to remain focused on goals and persist despite setbacks. Unlike strategies that focus on teaching a fixed mindset, psycho-emotional techniques of thinking management are able to lay ground for growth and thus help students understand the relationship between their beliefs about intelligence and their own academic successes.

Student growth is developed when lecturers help students increase their creativity by transfer learning from one context to another. One method of developing this skill is to have students use their understanding of a particular unit to generate potential solutions for real-world problems. The principle of competence acquisition through practice details empirically based strategies that will help students more effectively encode learned materials into long-term memory [48]. By issuing formative assessment frequently through practice problems, activities, and sample tests, lecturers can help students increase their knowledge, skills, and confidence.

In addition, lecturers who break up the practice into a number of short sessions (distributed practice) will help students achieve greater increases in long-term retrieval ability. Practice tests should include open-ended questions that require both the retrieval of existing knowledge and the challenge of applying that information to new situations or contexts. Providing students with clear, explanatory, and timely feedback is important for creative business and entrepreneurship education.

Lecturers can model various business situations and assist students in creative learning goals mastery and educational process management. Creativity in business and entrepreneurship education is considered a critical skill for the technology driven world of the 21st century and because it is not a stable trait, it can be taught, nurtured, and increased. This principle describes specific methods of structuring assignments to increase creativity and ideas for how to model creative problem solving. Creativity can include opportunities

for student-designed research projects, video projects, demonstrations, meetings with practicing entrepreneurs, business case, and business model building [41,46].

We conclude by stating that in order to ensure the engagement of young specialists and entrepreneurs in the current labor ecosystem and business environment, it is important to forecast and develop skills of the future, to manage their involvement and satisfaction in the workplace, and to have the ability to foresee and react to the changing business environment. Figure 5 shows how different components of modern professional and entrepreneurship culture interact with each other in the context of suggested changes and approaches. The mechanism of this interaction highlights the sequence in which a young specialist has to acquire the general skills and necessary competencies.

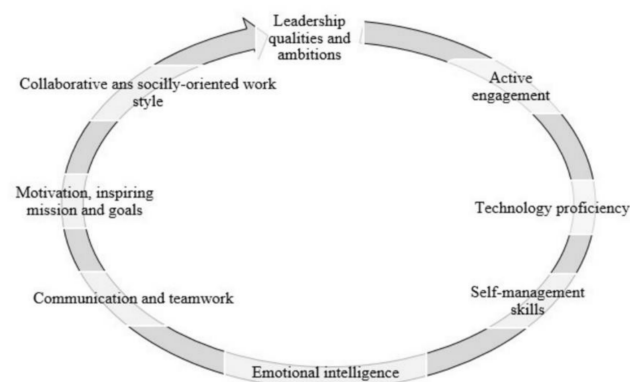


Figure 5. A schematic representation of interaction between components of professional and entrepreneurship culture. Source: developed by the authors.

To be motivated and acquire self-management skills, future professionals and entrepreneurs should be educated in an educational setting incorporated with the concept of succession. If earlier a lecturer was associated with organizing and controlling roles, today students want to see him/her in concept of knowledge management practice as a leader, an idea personality, who inspires and supports others and cares for their psycho-emotional well-being. Students must be actively engaged in the workplace, business, or be within a specific frame of mind that motivates, encourages, and inspires them to learn with maximum effort. One of the main functions of modern lecturers is to motivate and inspire students and colleagues by using their strengths and reducing their weaknesses. Therefore, in addition to professional competencies, an effective lecturer needs to develop emotional intelligence and other skills for effective interaction with the learners.

4. Conclusions

From the results of this study, it can be concluded that debates on the best practices, evaluations, and principles of modern students in terms of knowledge, management, and creativity will continue. A great number of R&D practices along with business and entrepreneurship education will digitalize and develop through technology. This study offers a learner creativity motivation model that implies a synergistic interaction between lecturers who use the existing methods/principles of motivation, as well as students who demonstrate signs of motivation as evidence of response. The model utilizes comprehensive tools of motivation assessment that take into account the required personal (acmeological) characteristics and competencies of students. This model is expected to improve business and entrepreneurship education efficiency. The study also introduces a basic model of interaction between components of modern professional and entrepreneurship culture, which applies to generations Y and Z and allows motivation management. The model takes into account the need of Gens Y and Z for consuming large volumes of information daily and their growing enthusiasm for rapidly developing their businesses and careers. This will lay groundwork for updating HR (Human Resource) strategies with an approach towards the principles of learner motivation and motivation assessment.

In order to make business and entrepreneurship education more creative, we developed the following recommendations. Universities and lecturers should take into account motivation of new generations Y and Z, as well as future generations, in terms of learning curriculum development. The curriculum should include more practical lessons and tasks (business case review and modelling, meetings with practicing entrepreneurs, etc.). The universities should include courses on knowledge management into the business and entrepreneurship curriculum to teach how applied psychology can be used to solve real business problems by knowledge management instruments. Business and entrepreneurship teaching methodologies should pay more attention to synergistic interaction between lecturers, who use the existing methods/principles of creativity, and students, implementing knowledge management practices in learning curriculums. Motivation models used in the course of business and entrepreneurship program development shall apply comprehensive tools of motivation assessment that take into consideration acmeological characteristics and competencies of students.

The findings may serve as an addition to the business and entrepreneurship curriculum in knowledge management sphere. The universities may be interested in designing special courses on knowledge management to teach how applied psychology interrogating with intellectual resources can be used to solve real business problems through knowledge management instruments.

5. Research Limitation and Further Research

This study draws on an overview of the concepts and research in the field of entrepreneurial education, compared with statistical data to judge the effectiveness of learning systems in different countries. The results are limited and practically useful for a number of developing countries with relatively low levels of entrepreneurial education. Moreover, future studies should, using quantitative studies of the effectiveness of the proposed model of motivation, demonstrate the boundaries of the effectiveness of this model and comparative effectiveness with similar approaches. It should be recognized that comparative studies of entrepreneurial motivation and creativity in different countries with different methods of education and in different economic conditions are necessary.

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