



## Requirements for innovative teaching approaches from science and knowledge based business

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### Abstract

*Given the increasing economic globalization and restructuring in the world economic systems, and the requirements for knowledge and information within that system, educational needs (in terms of structure, function, curriculum and approach) at all levels have changed. These educational requirements for the workforce of the future are extremely important.*

*Some of the challenges for knowledge, education and learning will be ability for today's learners to be more familiar and comfortable with abstract concepts and uncertain situations. Much of the academic environment today, presents students with ready-made problems and then asks them to solve them. The reality of the rapid-fire global economy, based on information and knowledge is that problems are rarely that clearly defined. It requires those seeking valuable employment to seek out problems, gather the necessary information, and make decisions and choices based on complex uncertain realities.*

*The main objective of the paper is to analyze the extent to which Bulgarian universities and, particularly, those in economics higher education field can face the demands of knowledge-based business and economy. The research highlighted the key role of universities as main investors in lifelong learning education. More specifically the paper highlights the requirements from the demand side (knowledge based business), as well as the existed bottlenecks in the supply-demand process. The paper presents results based on a structured questionnaire survey conducted among business representatives and economic universities.*

*Keywords: Innovative teaching Approaches, knowledge based business, teaching techniques, investment in lifelong learning education, intellectual capital,*

### 1. Literature preview

Economic studies, strategic and planning documents at national level in the business management field refer to the knowledge-based economy. When economic competition increases essential point is elaboration of innovation education and personnel training. Therefore, developing and implementing innovation education, and cultivating talents who have creative spirit and innovative ability is important policies and strategic initiatives that lead any country to be in a fundamental invincible position [1].

The existing theoretical knowledge covers two major elements: students' motivation as well as innovative teaching/learning methods.

The **motivation problem** is well described and revealed into the behavioristic theories. They describe not just the behavior of the humans in the society but also the hidden factors that drive them into action. The motivation problem could be found by psychological, organizational and managerial approaches. In the educational aspects Lai [2] defines the motivation based on Gredler, Broussard and Garrison as "the attribute that moves us to do or not to do something". Furthermore, Graham and Wiener [3] summarize different motivation theories and identify the model of dependence of motivation by different independent factors of human needs or external influences. They define intrinsic and extrinsic incentives for motivation and set that "one of truism of education is that it is more adaptive to be intrinsically rather than extrinsically motivated". The explanation could be found in Jungert [4] as the motivation is set by the expectations of the students and their perceptions to the study opportunities. So, it is very important to explain the intrinsic motivation incentives.

Shanks [5] according to Manion [6] discussed the intrinsic rewards that lead to motivation and groups them in 5: healthy relationship, meaningful work, competence, choice and progress. The importance of intrinsic rewards for motivated employees are recognized as expected work rewards from the students.

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The **educational problem** is given as the relation between students' expectations and studying environment [4]. According to the given model psychological motivation is influenced by different approaches to learning and studying methods incl. work habits, workload, and feedback (see [7])

In addition, Li [8] presented contemporary learning approaches as the students are smart and they need different learning technics. Thus, the learning/teaching process becomes to account different learning styles [9]. Some basic skills that have been emphasized in the education process are: critical-thinking skills, creative-thinking skills, communication skills and metacognitive ability [10]. In order to establish such skills, students develop their social interactions emerging their individual intellectual and psychological profile. Following Boghici and Boghici [11] we could define 4 different interactive group methods and techniques that cover over 228 learning/teaching technics [12]; [13].

Furthermore, problem-based learning is becoming increasingly popular in educational institutions as a tool to address the inadequacies of traditional teaching. Since these traditional approaches do not encourage representatives from business to question what they have learnt or to associate with previously acquired knowledge [14], problem-based learning is seen as an innovative measure to encourage them to learn how to learn via real-life problems [15].

## 2. Methodological approach

The Universities have to implement these innovative education methods and techniques that are suitable in order to establish needed skills and knowledge from the students. So, the problem of conducting educational methods for knowledge-based business and economy could be divided in three consecutive steps.

**First step:** what is **possessed motivation profile** [16] of the students? Basically, the motivation profile is percept as a starting point of implementation of the innovative education methods and instruments. For example: if the communication skills and information-based knowledge are preferred by students, than the education task are oriented to preparation of oral speech and group discussions. The highest value of preference of self-confidence skills and team-working skills means the usage of team-members constrains methods as "Seven hats game".

**Second step:** what is the **required motivation profile** of the employees/students in order to be highly motivated at work? After the graduation students expected to be highly motivated workforce for the knowledge-based business. This is expressed with the required skills and knowledge that the graduated student to apply at work. In this order, the preferred by business skills and knowledge are based on the practice's needs and the job competencies. For example, the solving problems methods are preferred if the employees have just to finish their job tasks. But the interactive methods have to be used in education of the students that had to be creative and to use their self-improvement skills.

**Third step: comparison** of possessed and required motivation profile. The comparison shows the field that had to be additionally work out during the education process. Not just the most important skills for business needed to be improved, but the highest distance between possession and requirements than the greater methods should be applied. For example, the self-improvement is a good motivation skill, but if the business need best professionals with theoretical and practical knowledge instead of ambitious students, than the solving problems interactive games are preferred than the team-working games.

Fulfilling the given steps are based on the next possessed/required from students' motivation profile's elements:

Table 1 List of possessed/required from students' motivation profile's elements [17, 18]

Ambitiousness	Optimism	Creativity	Theoretical know ledge
Initiative	Work-team skills	Continuity skills	Self-improvement skills
Foresight skills	Communication skills	Information based skills	Skills to suppress weaknesses
Realistic	Responsibility	Intra-firm communication skills	Applied know ledge
Resourcefulness	Adaptiveness	Computer based skills	Foreign languages know ledge
Loyalty	Self-confidence	Skills to use the strengths	

The motivation profile is conducted by evaluation the level of possession/requirements of the listed above elements. The evaluation could be done by usage of different scales, but the 7th grade scale is quite suitable (Table 2).

Table 2. The evaluation scale for students' motivation profile's elements

1	2	3	4	5	6	7
Completely unimportant	Highly unimportant	Unimportant	Neither	Important	Highly important	Completely important

### 3. Practical results

The practical research is done by implementing the given 3 stages of methodological approach. The educational needs and requirements for innovative teaching/learning approaches from knowledge-based business are underlined according to practical research done in social and economic field that covers 355 students in different Bulgarian Universities. The research was conducted in the midterm of the 2016/2017 academic year.

**First step: possessed motivation profile** of the students (Figure 1):

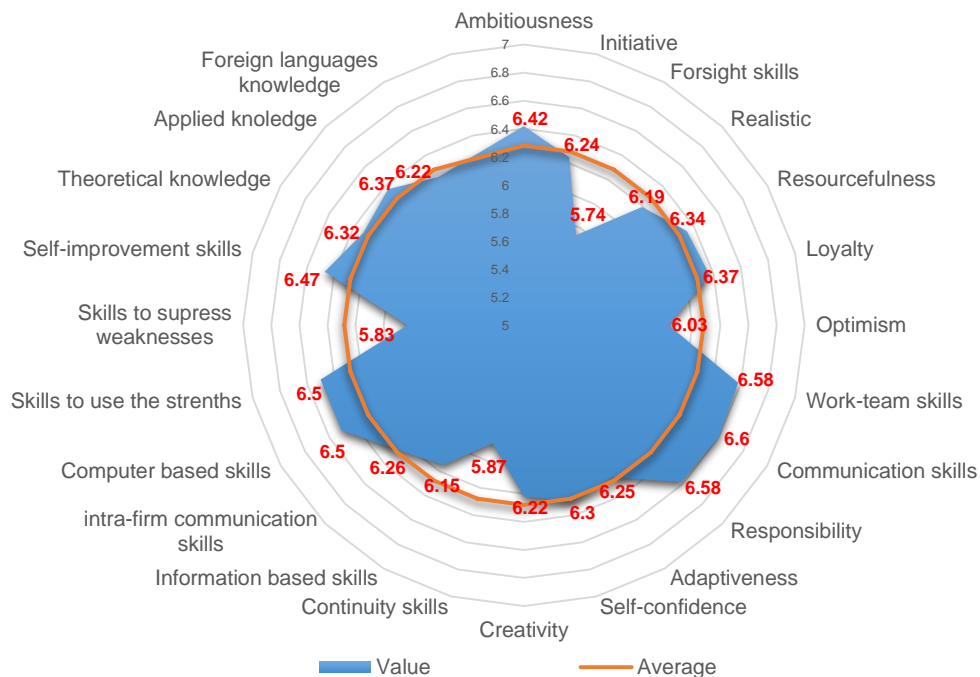


Figure 1 Possessed motivation profile

- The most important skills are: communication skills, work-team skills and responsibility. They are very important for the improvement of social inclusion in employment of students. In addition, very close to these figures are: computer –based skills, skills to use personal strengths and self-improvement skills. The combination of these skills expresses that students are limited in their interests to those that could bring them success at work.

- The most unimportant skills are: foresight skills, skills to suppress impersonal weakness and continuity skills. They are related to their ability to plan ahead their self-development and shows that students are not sufficiently capable to learn from their mistakes! The final result is the lower score of their optimism for the future.

**Second step: required motivation profile** (Figure 2):

- The most important required skills are: communication skills, work-team skills and responsibility. They are important for staff to be well presented at work. In addition, very close to these figures are: theoretical and applied knowledge, and computer-based skills. The combination of these skills expresses that students needed skills to do routine operations but not the adaptive skills in changing circumstances.

- The most unimportant skills are: foresight skills, skills to suppress weaknesses, continuity skills and optimism. They are related to their ability to plan their self-improvement at work. The final result is the lower score of their initiatives to take responsibility and defend their own decisions.

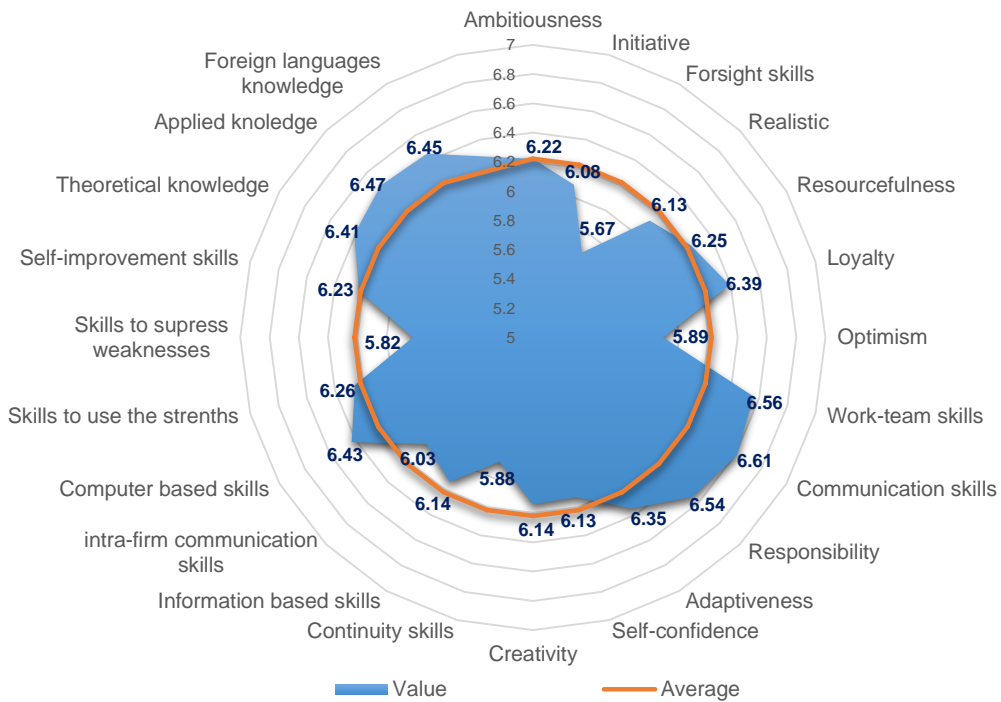


Figure 2 Required motivation profile

**Third step: comparison** of possessed and required motivation profile (Figure 3).

- The difference in theoretical and practical knowledge, and communication and adaptive skills to changing conditions are highest negative. They require specific teaching/learning games to enforce not just knowledge but to enforce skill to adapt knowledge to solvation of the real problems.
- The difference in self-improvement skills and skills to use impersonal strengths, and ambitiousness and self-confidence are highest positive. They require specific teaching/learning games to suppress the artificial confidence based on free internet information.

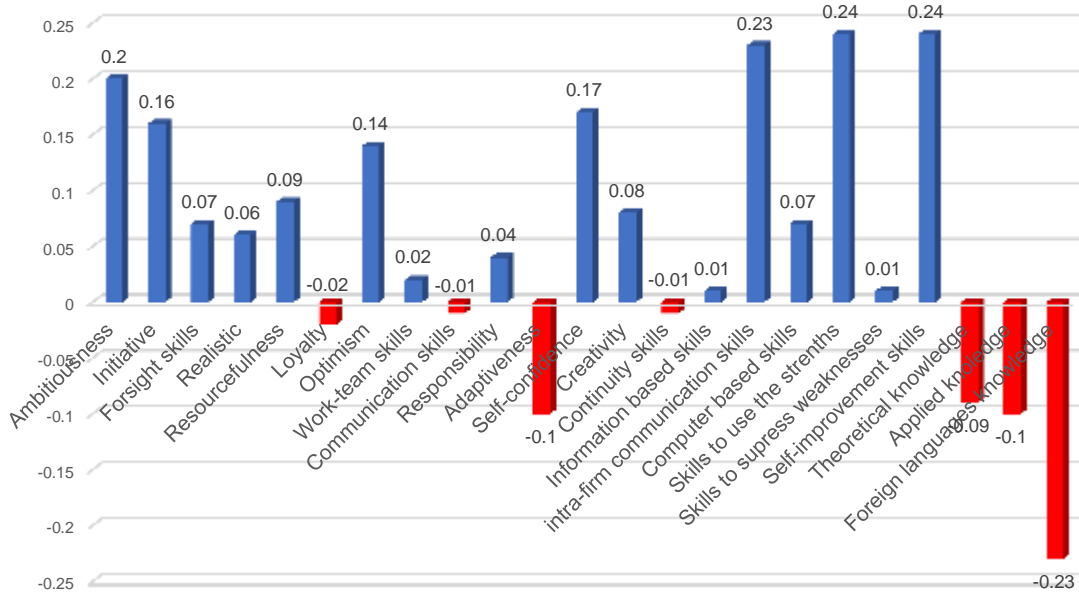


Figure 3 Differences between possessed and required motivation profile



#### 4. Conclusions

However, the global economy and knowledge based business requires a holistic understanding of systems thinking. Thus inter-disciplinary research approaches are seen as critical to achieving a more comprehensive understanding the complex reality currently facing the world system.

Some of the challenges for universities is the ability for teachers to be more familiar and comfortable with students' motivation concepts and interactive teaching approaches. This will reduce the problem that students meet with ready-made problems and they had to solve them. The knowledge about work expectations of students and their motivation profile could help the learners to receive more intrinsic rewards in education process by introducing them suitable set of teaching/learning interactive methods and technics.

#### References

- [1] Cowan, R. at all. Innovation Policy in a Knowledge-Based Economy, 2000. EU
- [2] Lai ER, Motivation: A literature review, Research report: Pearson Assessments, 2011
- [3] Graham S. and B.Wiener, Theories and principles of motivation, ch.4, pp.63-84, 1996
- [4] Jungert T., Self-efficacy, motivation and approaches to studying, Linköping Studies in Arts and Science No. 485, 2009
- [5] Buchbinder SB and NH.Shanks, Introduction to Health Care Management, chapter 2: Management and motivation, Jones & Bartlett Learning, 2007
- [6] Manion J., From management to leadership, San Francisco: Jossey-Bass , 2005
- [7] Entwistle, N. and C.Smith, Personal understanding and target understanding: Mapping influences on the outcomes of learning. British Journal of Educational Psychology, 72(3), 321–342, 2002
- [8] Li, N., Approaches to learning: Literature review, IB research paper, International Baccalaureate Organization, 2012
- [9] Hudson JP., Pathways between Eastern and Western education. Charlotte, NC, USA. Information Age Publishing Inc, 2009
- [10] Li, K., A comparative study of the curriculum guidelines of high school in Taiwan and Japan, pp 55–77, 2010
- [11] Boghici C. and ST.Boghici, The interactive methods and techniques stimulating creativity – crucial components of the didactic strategies, Bulletin of the Transilvania University of Braşov, Series VIII: Performing Arts • Vol. 6 (55) No. 2 – 2013
- [12] Yee K., 101 Interactive Techniques, [www.usf.edu/atle/.../handout-interactive-techniques.pdf](http://www.usf.edu/atle/.../handout-interactive-techniques.pdf)
- [13] VanGundy, Arthur. 101 Activities for Teaching Creativity and Problem Solving. Pfeiffer: San Francisco, 2005.
- [14] Teo, R. & Wong, A., Does Problem Based Learning Create A Better Student: A Refelection? Paper presented at the 2nd Asia Pacific Conference, Singapore, 2000
- [15] Boud, D. & Feletti, G. The Challenge of Problem-Based Learning, (2nd Ed.), Kogan Page, 1999
- [16] Kopeva D, N Shterev, D Blagoev, A business motivational profile: comparing the attitudes of the business, administration and young people, Business Management Journal, Issue 4/2015, pp.25-46
- [17] Sterev N., D.Blagoev, D.Kopeva, Motivation of Staff and the Heads of Municipal Administration, paper presented at GliR 2016 Conference, Wroclav, Poland
- [18] Blagoev D., Development of competency models and profiles of managers in Bulgarian industrial organizations, Economic Alternatives Journal, №1/2010