How to change the education?

Marta Kis

Budapest Metropolitan University, Institute of Methodology
mkis@metropolitan.hu

Abstract — In the title included question is emerged more and more often at all levels and it is becoming more and more urgent to answer. There are many answers, but it is also clear that there is no single solution that works well in all areas. The reason for this is not only that needs, conditions, and resources are very heterogeneous, but to designate the best course is also difficult and all around us is very accelerated and there is often no time for finalizing each method, because new demands appear already in the middle of the process. Not to mention that we cannot even see exactly what we want to prepare our students. Most of students will be expected to find employment in professions, will be performing tasks that do not even exist today. Everyone agrees that change is needed in education. Consensus begins to emerge, that skills and abilities such as logic thinking, collaboration, ability to think critically, creativity, the need and methods for lifelong learning should be given a prominent role against the transfer of lexical knowledge. In the article, typically occurring in the domestic economic initiatives in higher education is too innovative analysis of a - portfolio-based - model is presented. That the whole approach to training for career development side and adjusts the whole process of education, highlighted the main directions and milestones, while leaving the necessary flexibility in the system.

Keywords: portfolio, higher education, methodology, flipped classroom

I. INTRODUCTION

In the 21st century it cannot longer be taught with the tools and methodologies of the past or earlier centuries only. In today's Hungarian education, frontal education still plays a decisive role. Almost everybody agrees that activity based, providing occupational on individual needs and abilities, considering the practical knowledge educational forms should enter to the place of frontal education, which can attract and retain the student's interest and motivation, or which is most conducive to the stands the knowledge so gained later in the labor market and in everyday life. However, implementation is not nearly as easy task.

II. HIGHER EDUCATION EXPERIENCES

Several initiatives have been converting for higher education, but all of these changes result also depend on many factors. There are methods which have worked well in some situations, in others they do not live up to expectations.

A. Labor market expectations

Labor market expectations are increasingly important factors in higher education. The home universities will need to respond to the challenges of the market. In such an environment, innovation is up to value. For this, it is indispensable to attract attitudes of educators, to expand their methodological knowledge, to integrate digital tools into the teaching-learning process [8].

The labor market attributes more and more importance so-called soft skills besides to the knowledge acquired from textbooks.

Figure 1. Main soft skills [10]

The collaborative skills, problem solving, critical thinking, communication skills (Figure 1) must be given a key role in training. Innovative learning and teaching methods should be used to integrate competences [10].

B. Good practices

The activity-based, providing individual needs, occupational skills and practical knowledge educational forms must be used. They are suitable for the students' interest and motivation to attract and maintain, and what is most conducive to the stands the knowledge so gained later in the labor market and in everyday life.

The common feature of good practices is that the students are increasingly involved in the learning process; they are actively involved in learning, or may be able to shape certain elements of their interest, according to their own learning style. The teacher is more a supporter than the leader of the whole learning process.

Time management is a top priority in all methodologies. It is most common in higher education, but partly in public education, the methodology referred to as the **flipped classroom**. The essence of this is to transfer the knowledge of the curriculum to home preparation for pre-school time, thus freeing up valuable

time on the lesson, for deepening knowledge and practical application (Figure 2).

Figure 2. Traditional classroom vs. Flipped classroom [4]

The **project-based education** can be perfectly matched to the flipped classroom method, which, together, can provide a complex solution to achieve the goals outlined previously.

C. Successfulness

The success of introduction of a new method would not necessarily guarantee, even we are committed, enthusiastic, deliberate. There are so many circumstances that can affect the outcome, which we could not measure at the beginning.

There was some higher education institution where the project method was introduced for so many subjects that were at the expense of efficiency. Students were almost incapable of paying due attention to each project. They tried to absolve the tasks as quickly as possible, and they missed all the opportunities that they had provided for a well-crafted high-quality project, both in ability, skill, experience and knowledge.

In many cases it is difficult, if not due to the synergy between the objects, so that the skills learned are not together in a round whole.

Figure 3. Linking Knowledge Elements [21]

The success of the new method depends not only on the instructor or subject. The student and certain external circumstances also greatly influence the success of the method.

Figure 4. Main factors of success (author's own editing)

One of the most important factors here is the appropriate level of student attitudes, motivation, prior knowledge and skills. However, fitting the method to the whole educational environment is decisive.

III. APPLIED KNOWLEDGE

When assessing the teaching method, it is important to know: is in focus the acquisition of the subject / lexical knowledge or does appear the higher levels of knowledge? Can be develop other abilities and skills? Do the students have access to self-employed, level of creation?

A. Bloom's Taxonomy

When we evaluate the used methodology, we can rely on the modified Bloom Taxonomy [6], which illustrates the different levels of knowledge (Figure 5). In this way, it is possible to determine what levels can be achieved with each of the teaching methodologies and subject programs so that the acquired knowledge can be regarded as applied knowledge.

Figure 5. Bloom's Taxonomy [22]

The revised Bloom Taxonomy compared to the, written by Benjamin Bloom in 1956 original classification, has a far more dynamic effect, adapts more to the present environment and challenges.

- Remember
 - Recognizing
 - Recalling
- Understand
 - Interpreting
 - Exemplifying
 - Classifying
 - Summarizing
 - Inferring
 - Comparing

- Explaining
- Apply
 - Executing
 - Implementing
- Analyze
 - Differentiating
 - Organizing
 - Attributing
- Evaluate
 - Checking
 - Critiquing
- Create
 - Generating
 - Planning
 - Producing

This model can also be thought of as a map of the journey leading to the mere reproduction of knowledge to competence [7].

Of course, education would be aimed at achieving a higher level of achievement, but accomplishing this is not an easy task, and not all subjects are suitable for this. This is worth considering when developing the teaching methodology.

Teachers have several digital applications that they can incorporate into their pedagogical practice, combining new and traditional methods. In the Figure 6. you are assigned to each level to see which tools the instructor can choose to achieve his goals.

Figure 6. Bloom's Taxonomy Pyramid [23]

The richer a teacher's digital pencil case, the more likely he/she can find the most effective teaching method in the concrete circumstances.

User-friendly solutions for new applications make it a great help for the teachers to acquire tools at a skill level. However, the key to success is finding effective organizational and didactic solutions. This is the openness, flexibility, creativity assumes from the teacher's side.

B. Active teaching

In order to be able to achieve the higher levels of Bloom's Taxonomy, a key application of active learning techniques in education.

The active learning approach integrates a student-centered learning method such as cooperative learning,

problem and project-based learning, peer learning [1] [2] [3].

Not mastering lexical knowledge is the main goal but a flexible, creative knowledge base / skill that can be applied well in different fields.

Figure 7. Venn diagram of several student-centered learning theories and methods [5]

C. Efficiency

It is often seen that by introducing a new methodology, students become the more active, part of learning process. However, the teacher often has a lack of sense. It is not necessarily apparent that the students have completed all the changes we have set for them. It is not primarily left craving for knowledge transfer, more appropriate in the development of soft skills. It is also often the case that when a complex project task, the student is not intended to more perfect end result, but rather strives to achieve the minimum level.

In many cases, the above problems are results of inadequate preparation, lack of motivation and lack of conscious learning organization. Often the objectives are missing, and the acquired knowledge is not always properly stored. All this is related to the problems of the evaluation system.

Solution can be described in the next chapter educational model, where the development of internal motivation plays a prominent role, where the student acquires sufficient autonomy in the learning process and, at the same time, has proper responsibility.

The learner can deepen in some areas, develop his creativity and build a professional portfolio that will be of great help to him in the labor market.

IV. PORTFOLIO BASED EDUCATION MODEL

The importance of building a professional portfolio has already been recognized in several higher education institutions. But the Budapest Metropolitan University introduce comprehensive educational model in more specialty – business administration and management, commerce and marketing, tourism and catering, finance and accounting, international business economics, international relations, communication and media science bachelor's – and form of education – full and part time – from 2018/2019 academic years.

A. Portfolio based education

The essence of the method is that the student is working on the portfolio building throughout his / her academic

life, which includes valid for all relevant to the labor market academic and non-academic activities.

The portfolio building is designed for student's side to get an advantage in the job market.

This is done continuously from the beginning of the studies, which will receive regular support and confirmation.

Figure 8. The three most important questions from student's and lecturer's aide

Essence of this educational model is formulated in the three most important questions (Figure 9). It means that the instructor supports student with various methods in the construction of the portfolio [9], the student is expected to be more motivated in their own learning process, which can improve the effectiveness of the education.

The methodology for achieving the goals can be trained by trainers at specific training, and they can continue to think of institutional, subject-specific professional discussions or exchange experience at regular workshops.

B. Process of portfolio building

The first step in portfolio building is the extensive collection of content in structured form. The next step is to create the right electronic environment and visualization. The third step is publishing to the appropriate target group (Figure 9).

Figure 9. Portfolio building [24]

Portfolio building is a continuous cyclical process, in fact it never ends. If students learn this way of thinking, it not only provides a suitable framework during the study period, but much easier they can find their proper place in the labor market, and it can also help in lifelong learning.

V. SUMMARY

Not an easy situation for education: educated in the past teachers must teach the present's students for the future labor market.

The key players of this controversy are the instructors. If they have enough openness, flexibility and creativity in front of the new methodologies, a system can be developed in which students learn how to effectively collect, systemize, and apply knowledge in practice. They identify what they want to develop and have a proper self-assessment, which is indispensable in this ever-changing environment.

The model outlined in article is in line with the current system of higher education, in addition, lifelong learning theory also follows logically from it, so designate a direction for education, which offers a suitable solution to the challenges of the present age.

REFERENCES

- [1] Freeman, S., Eddy, S. L., McDonough, M., Smith, M. K., Okoroafor, N., Jordt, H., & Wenderoth, M. P.: Active learning increases student performance in science, engineering, and mathematics, *Proceedings of the National Academy of Sciences* 111(23) (2014), 8410-8415.
- [2] Prince, M.: Does active learning work? A review of the research, *Journal of Engineering Education* 93(3) (2004), 223-231., DOI: [10.1002/j.2168-9830.2004.tb00809.x](https://doi.org/10.1002/j.2168-9830.2004.tb00809.x).
- [3] Michael, J.: Where's the evidence that active learning works?, *Advances in Physiology Education* 30(4) (2006), 159-167., DOI: [10.1152/advan.00053.2006](https://doi.org/10.1152/advan.00053.2006).
- [4] Jensen, J. L., Kummer, T. A., Godoy P. D. D. M. (2015) Improvements from a Flipped Classroom May Simply Be the Fruits of Active Learning, *CBE—Life Sciences*, Vol. 14, 1–12, Spring 2015, <http://www.lifescied.org/content/14/1/ar5.full.pdf+html/> (last access January 15. 2017)., DOI: [10.1187/cbe.14-08-0129](https://doi.org/10.1187/cbe.14-08-0129).
- [5] Bishop, J. L., and Verleger, M. A., "The flipped classroom: A survey of the research," Paper presented at the 120th American Society for Engineering Education Annual Conference and Exposition, Atlanta, GA, 2013.
- [6] Anderson, L. W., & Krathwohl, D. R. (2001). A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives. New York: Longman. ISBN 0130801313 ISBN 13: 9780130801313.
- [7] A tanítás mestersége <http://tanmester.tanarkepzo.hu/ismeret>.
- [8] Bodnár Éva, Csillik Olga, Daruka Magdolna, Sass Judit: *Varázsszer-e a tükrözött osztályterem?*, Budapesti Corvinus Egyetem, ISBN 978-963-503-651-6, Budapest, 2017.
- [9] Kis Márta-Seres György: Portfolio approach in higher education, *Journal of Applied Multimedia* 3./XII./2017 http://www.jampaper.eu/Jampaper_E-ARC/No.3_XII_2017.
- [10] Ilona Beres-Marta Kis: Flipped classroom method combined with project based group work, In: *Teaching and Learning in a Digital World Proceedings of the 20th International Conference on Interactive Collaborative Learning*, Springer Print ISBN: 978-3-319-73209-1, Electronic ISBN: 978-3-319-73210-7.
- [11] Bárdossy I. – Dudás M. – Pethőné Nagy Cs. – Priskinné Rizner E. (2002): A kritikai gondolkodás fejlesztése. Az interaktív és reflektív tanulás lehetőségei, tanulási segédlet, Pécsi Tudományegyetem.
- [12] Carl R. Rogers-H.Jerome Freiberg (2013): *A tanulás szabadsága*. Edge 2000 Kiadó, Budapest.
- [13] Falus Iván - Kimmel Magdolna (2009): *A portfólió*. Gondolat Kiadói Kör Kft.
- [14] Kis-Tóth, L., Komló, Cs. (2008): Az elektronikus oktatási portfólió a gyakorlatban, *Pedagógusképzés*, 6: (3). 63 – 77. o. https://issuu.com/heju/docs/pedag_gusk_pz_s_2008-3, (last access February 25. 2017).

- [15] Komló Csaba (2017): A tanári mesterszakos hallgatók elektronikus portfóliójának vizsgálata az Eszterházy Károly Egyetemen. PhD disszertáció.
- [16] Lévai Dóra (2013): A digitális állampolgárság és digitális műveltség kompetenciája a pedagógus tevékenységéhez kapcsolódóan, Oktatás-Informatika, 2013/ 1-2. szám.
- [17] Prievara Tibor (2015): A 21. századi tanár. Neteducatio Kft., Budapest.
- [18] Tratnyek Magdolna (2013): A portfólió, mint a személyes és szakmai bemutatkozás eszköze. 2013. <https://www.hrportal.hu/c/a-portfolio-mint-a-szemelyes-es-szakmai-bemutakozas-eszkoze-20121228.html>.
- [19] Zubizaretta, J. (2009): The Learning Portfolio: reflective practice for improving student learning, Jossey-Bass Publishing, San Francisco.
- [20] ePortfolio System model <https://mahara.org/artefact/artefact.php?artefact=166063&view=47442&block=199260> (last access January 10. 2018).
- [21] Peter Newbury <http://peternewbury.org>.
- [22] Vanderbilt University Center for Teaching, <https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/> (last access May 10. 2018).
- [23] Samantha Penney: Bloom's Taxonomy Pyramid <http://faculty.indstate.edu/spenney/bdt.htm> (last access May 22. 2018).
- [24] Chip Houston: Digital portfolio <http://chiphouston.com> (last access May 12. 2018).