

Kinga Kurowska

Warsaw University of Technology (Politechnika Warszawska)

Jacek Lewicki

SGH Warsaw School of Economics (Szkoła Główna Handlowa w Warszawie)

Does the practical profile of studies require a new organization of curricula and innovative methods of education?*

ABSTRACT: A socio-economic change in the modern world, related to the development of science and technology, requires new and innovative approaches to education, including higher education. Egalitarianism manifested primarily by mass scale of higher education (HE) accessibility. This process forces universities to develop, in addition to elite academic courses, vocational-oriented programs. The need to use new educational tools and methods becomes clear. This article outlines the legal basis for the profile of practical studies against academic ones in Poland after the 2014 reform of HE, and a context of vocational education and training in European Qualification Framework and Polish Qualification Framework for lifelong learning (LLL). It also presents examples of new forms of education useful in developing competencies and skills required of today's HE graduates by employers.

KEYWORDS: profile of studies, practical profile, vocational higher education, modern methods of education.

* Artykuł powstał na podstawie referatu wygłoszonego podczas międzynarodowej konferencji *The ways of lifelong learning. Towards socially relevant quality in European universities*, 22–24.06. 2016 r., organizowanej przez Dolnośląską Szkołę Wyższą, w ramach projektu EDUPRO – Promoting LLL in HE by implementing innovative practices in RPL, 2014-1-PL01-KA203-003629, Program Erasmus+, Szkolnictwo wyższe – akcja 2 „Partnerstwa Strategiczne” (przypis redakcji).

Kontakt:	Kinga Kurowska kinga.k.kurowska@gmail.com
	Jacek Lewicki lewicki.jacek@gmail.com
Jak cytować:	Lewicki, J., Kurowska, K. (2017). Does the practical profile of studies require a new organization of curricula and innovative methods of education? <i>Forum Oświatowe</i> , 29(1), 79–89. Pobrano z: http://forumoswiatowe.pl/index.php/czasopismo/article/view/571
How to cite:	Lewicki, J., Kurowska, K. (2017). Does the practical profile of studies require a new organization of curricula and innovative methods of education? <i>Forum Oświatowe</i> , 29(1), 79–89. Retrieved from http://forumoswiatowe.pl/index.php/czasopismo/article/view/571

INTRODUCTION

Socio-economic changes in last decades have significantly changed the role of education. A significant increase in the schooling rate at the tertiary level, employers' expectations with respect to graduates' skills and, finally, the expectations and opportunities of the students themselves forced academics and policymakers to search for new solutions for the university (Kolasa, 2015). In addition to the Bologna process and the two-cycle of studies (Bachelor + Master), diversifying profiles of education has become one solution. The new foundation for practical training or higher vocational training requires changes not only in curricula, but also in organizational and new teaching methods.

PRACTICAL PROFILE OF STUDIES – REGULATIONS IN POLAND¹

Poland's Act on Higher Education (*Ustawa Prawo o Szkolnictwie Wyższym*, or PSW) with the 2014 amendment (PSW 2014) defines two profiles of studies: (1) practical and (2) academic (art. 2 paragraph 1 point 18 e). The practical profile should consist of classes “for the acquisition by the student of practical skills and social competence,” and more than half the curriculum (calculated in ECTS) should include practical classes, including workshops conducted by instructors with professional experience gained outside higher education institutions (HEI) (point 18ea), while the student practices adopted minimum size of three months (art. 11 paragraph 9). In contrast, the academic profile should consist of activities related to “ongoing university research,” while more than half the classes should serve “the acquisition by the student of in-depth knowledge” (point 18eb).

At the same time, through the Minister's regulation (NQF Ordinance 2011) area, learning outcomes for the eight areas of education were defined (separately for a first and a second cycle of studies and for each profile). Profile of study is also associated with the requirements of organizational and human resources for the HEI unit (fac-

ulty, institute, etc.) leading the course of study. The Act on Higher Education (Art. 9a paragraphs 1-4) assumes that for the practical profile, instead of one teacher with the title of professor or the degree of habilitated doctor, there can be two, one with a doctorate and one with significant professional experience gained outside a university. Similarly, two with master's degrees and considerable professional experience gained outside HEI may be substituted for a teacher with a doctorate. In both cases, the teachers' experience must be related to the field of study, and the number of such teachers may not exceed 50 percent in each group (professors and Ph.D.s). The minimum dimension of employment for them is one-fourth of full time.

It is worth noting that the practical profile of studies does not need to be a vocational one. Just as two cycle of studies does not mean that, for example, first cycle is vocational only. In this aspect, Polish law respects the foundation of Bologna process. Of course the characteristics (esp. learning outcomes) of the practical profile respond, in particular, to the needs of vocational/professionally oriented studies. As noted by A. Kraśniewski practical profile basically includes additional learning outcomes for skills that can only be achieved as a result of the experience gained in the workplace (Kraśniewski, 2012). While the academic profile should have in-depth knowledge and skills characteristic of traditional academic education.

HIGHER EDUCATION, VOCATIONAL EDUCATION AND TRAINING

The European Commission, the European Centre for the Development of Vocational Training (CEDEFOP) and the Organization for Economic Co-operation and Development (OECD) distinguish vocational education and training, (VET) at the highest levels of qualifications frameworks of professional higher education. In the first case, CEDEFOP as well as OECD are pointing to the wide range of educational entities other than higher education institutions, while in the second on the traditional form of studies for specific professions (e.g. legal, medical, some technical studies, or MBA). According to the CEDEFOP the aim of professional education and training is "to equip people with knowledge, know-how, skills and/or competences required in particular occupations or more broadly on the labour market" (CEDEFOP, 2011, p. 7).

Describing the issues of practical studies, and in particular vocationally oriented ones, educators should pay attention to curriculum design. For the traditional form of study, the expected learning outcomes (and before introducing National Qualification Frameworks for Higher Education in 2011, "a graduate profile") are implemented through classes in various forms – lectures, laboratory, etc. – and through practice, such as apprenticeship training. Learning outcomes are therefore arranged according to a schedule of classes. However, in vocational education and training, attention is paid to education for selected professional tasks, operations or processes. The key change in Polish vocational education (at vocational schools and secondary technical schools), but also partly in the craft, was the 2012 reform. (See examples: KOWEŻiU, n.d.). The new core curriculum for vocational education learning out-

comes is based on units of learning outcomes corresponding to professional tasks. Similarly, some programs in non-formal education are designed to aim obtaining, completing or improving professional or general qualifications.

The modular nature of the curriculum, which even in the practical part referred to the professional tasks (or processes), takes on special significance also because of another solution (approved by PSW 2014): dual studies and the validation (recognition) of prior learning (VPL or RPL). In the case of dual studies carried out jointly with external stakeholders (entrepreneurs), part of the program is implemented with the employer in the form of apprenticeship. Capabilities and needs of companies receiving students have a major impact on the form of dual studies. Adoption of trainees requires proper preparation of the company itself, and excluding a group of students from classes is a challenge for an HEI. For the enterprise, participation in the project means adoption of student-trainees who will be in the company for over two years. An important challenge is to provide a reliable assessment of learning outcomes that are expected for apprenticeship. Despite the agreement with the company, ultimately a university is responsible for the quality of the diploma (Lewicki, 2016).

Although RPL is a new solution in the Polish legal system (called “validation of learning outcomes”), some universities participating in various pilot projects have gained interesting experience. One example is the pilot project of transfer and accumulation of achievements at the State Higher Vocational School in Elbląg (*Państwowa Wyższa Szkoła Zawodowa w Elblągu*) in 2013. The project was conducted at the request of the Educational Research Institute (*Instytut Badań Edukacyjnych*, or *IBE*). In the project, the key professional tasks typical in IT and administration were identified by analyzing the jobs. Then the identified units of learning outcomes were extracted from these qualifications. Finally, there was an analysis of the conditions for recognition of learning outcomes achieved through non-formal learning, including (1) the definition of sets of learning outcomes (stored in the analyzed curricula) obtained in non-formal education (in the workplace), which the HEI can recognize; and (2) an indication of the necessary conditions and barriers to recognition of learning outcomes achieved through non-formal learning by vocational colleges. As a result, the work highlights two important elements affecting the recognition of learning outcomes (Piotrowska, 2013):

- » Achieving learning outcomes in formal education usually leads to learning units of greater workload [measured in ECTS – JL, KK] compared to professional tasks [with similar learning outcomes – JL, KK].
- » Practical profile of HE courses is much wider than training for a specific profession (job).

The pilot project results are a valuable clue for HEI planners to implement solutions for RPL. In addition to organizational and legal changes, HEI should revise curriculum. In particular, for courses of the practical profile, it is worth considering designing some classes linked to professional tasks or processes. Choice of learning outcomes for individual subjects (modules) seems important, since an excessive number of choices may significantly impede their validation.

Another project for IBE, “Universities in the role of integrator of lifetime learning,” was conducted in parallel at five universities² based on desk research of international documents, foreign study visits to institutions with experience in validating non-formal and informal learning, etc. Its authors have set the scope of necessary organizational changes in universities, developing exemplary solutions and recommendations for conducting of the process of recognizing learning outcomes (at the institutional level, as in the context of the whole system of higher education). In particular, attention was paid to the integration of university educational offerings with the needs of the socio-economic development. In summary, the results of this project also postulated development of modular education, in which the module is part of the training program, logically coherent and syntactically suitable for compilation (links, integration). Such training may be the whole course, a group of objects or a single module (course) (Maniak, 2013).

STUDENT – CENTERED LEARNING AND INNOVATIVE TEACHING METHODS

For effective achievement of students’ intended learning outcomes, in particular of the practical worth of using modern teaching methods. Innovative forms of education should include both those recently introduced and those that, were not applied in the Polish higher education system despite being used elsewhere for some time.

New forms of education may be divided into those directed at the education problem and design team, and those using modern solutions/distance education.

Implemented in the European Union idea, Student-Centered Learning (SCL) perfectly applies to vocational training and formal and informal learning as discussed above, and to the recognition of learning outcomes in a non-formal training in which the student taking a different road acquires knowledge, skills and social competence.

Although SCL had been discussed for years, it was strongly emphasized in the Bologna Process documents in 2009 through the Leuven/Louvain-la-Neuve Ministerial Communiqué: (Kurowska and Kraśniewski, 2015):

We reassert the importance of the teaching mission of higher education institutions and the necessity for ongoing curricular reform geared toward the development of learning outcomes. Student-centered learning requires empowering individual learners, new approaches to teaching and learning, effective support and guidance structures, and a curriculum focused more clearly on the learner in all three cycles. Curricular reform will thus be an ongoing process leading to high-quality, flexible and more individually tailored education paths. Academics, in close cooperation with student and employer representatives, will continue to develop learning outcomes and international reference points for a growing number of subject areas. We ask the higher education institutions to pay particular attention to improving the teaching

quality of their study programs at all levels. This should be a priority in the further implementation of the European Standards and Guidelines for quality assurance (The Bologna Process, 2009).

In the search for the definition of student-centered learning, it was found that “(...) students are not empty vessels waiting to be filled with knowledge” (ESU, 2015). For several years the European Students Union (ESU) has been trying to promote and implement SCL, which was first mentioned in 1905 by Hayward (Kurowska and Kraśniewski, 2015).

Student-Centered Learning represents both a mind-set and a culture within a given higher education institution and is a learning approach which is broadly related to, and supported by, constructivist theories of learning. It is characterized by innovative methods of teaching which aim to promote learning in communication with teachers and other learners and which take students seriously as active participants in their own learning, fostering transferable skills such as problem-solving, critical thinking and reflective thinking (ESU, 2015).

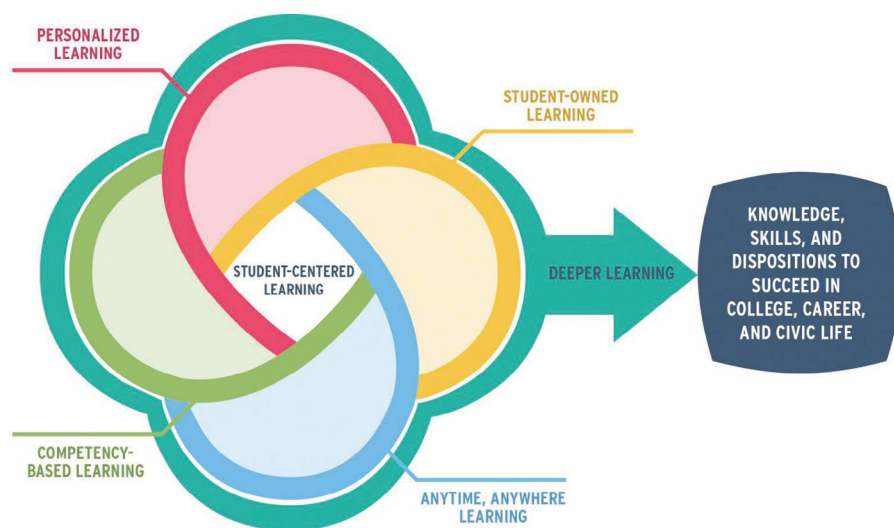
Leo Jones (2007) describes a Student-Centered Classroom:

It's a place where we consider the needs of the students, as a group and as individuals, and encourage them to participate in the learning process all the time. The teacher's role is more that of a facilitator than instructor; the students are active participants in the learning process.

In summary, we can introduce the four tenets of student-centered approaches to learning: Learning Is Personalized; Learning Is Competency-Based; Learning Takes Place Anytime, Anywhere; and Students Exert Ownership Over Their Learning (Figure 1.) (Kurowska and Kraśniewski, 2015).

Figure 1

The four tenets of student-centered approaches to learning (Jobs for the Future, 2015).



METHODS AND TOOLS TO SUPPORT STUDENT-CENTERED LEARNING

To implement properly as described below, defined by ESU 9 bases SCL, it is necessary to use new tools and methods of education. (Lewicki and Kurowska, 2016).

9 principles SCL by ESU (ESU 2010):

- » SCL requires an ongoing reflexive process;
- » SCL does not have a one-size-fits-all solution;
- » Students have different learning styles;
- » Students have different needs and interests; choice is central to effective learning in SCL;
- » Students have different experiences and background knowledge;
- » Students should have control over their learning;
- » SCL is about enabling, not telling;
- » Learning needs cooperation between students and staff.

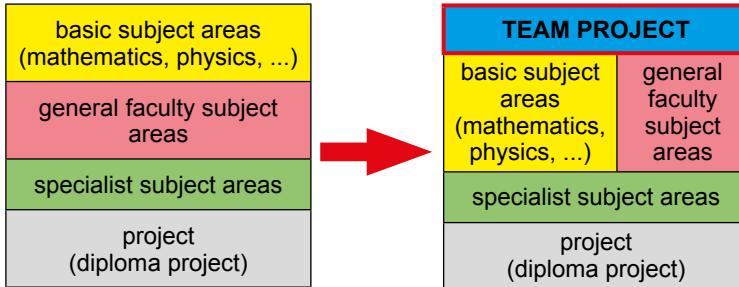
Problem-Based Learning (PBL)

Problem-Based Learning is one of the most popular modern teaching methods, especially in technical universities worldwide. Problem-Based Learning (PBL) is “solving by students real-life problems or projects, given in advance by the teacher, by formulating hypotheses and verifying them in the course of mental and practical operations, with the support of a teacher” (Hofman-Kozłowska, 2013).

More and more universities around the world are trying to include the PBL method permanently in their curricula. For this purpose, the changes in the structure

of degree programs are implemented with the majority of universities introducing a semester project (Figure 2) (Lewicki and Kurowska, 2016).

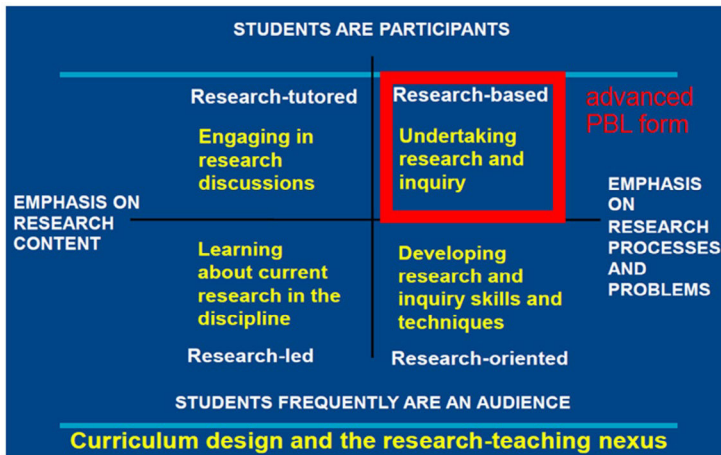
Figure 2
Changes in the 'structure' of curricula (Kraśniewski, 2014).



Research-Based Learning (RBL)

The advanced form of PBL aimed at learning through study is Research-Based Learning (RBL), shown in Figure 3.

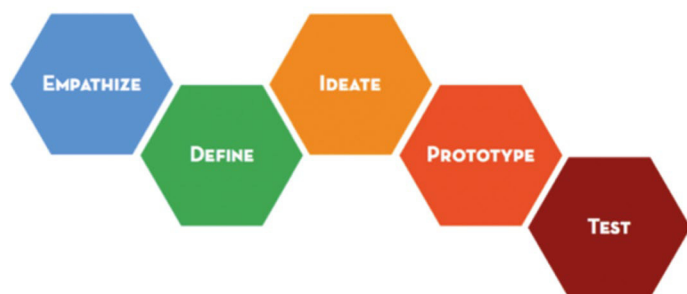
Figure 3
Research Based Learning (Healey, 2012).



Design Thinking (DT)

The Design Thinking method, developed in the 1960s, has been successfully used by Harvard Business School and Stanford University, among others. Design Thinking is based on developing creativity and searching for innovative, non-trivial solutions to the problem (Kurowska and Kraśniewski, 2015). The DT method is based on five steps outlined below (Figure 4).

Figure 4
Five steps of Design Thinking (Dschool, 2015).



MOOCs

The most common and open method of modern teaching is widely available virtual courses: Massive Open Online Courses (MOOCs). These classes are designed to allow participants interactive, open and easy online access. In addition to traditional training materials such as videos, manuals and task sets, MOOCs provide an interactive forum that helps build a community of students, professors and assistants. The actual history of MOOC facilities dates back to 2007, when the Advance Learning Interactive Systems Online (ALISON) system was developed in Ireland. Later, MOOCs began deriving from open educational resources. The New York Times called 2012 the “MOOCs year,” and MOOCs have since become one of the hottest topics in education. In the last two years, we can observe a great increase in the number of courses, and the “rate of growth in the number of users is larger than that of Facebook” (Kurowska, 2015).

SUMMARY

The main challenge of the Polish higher education system is an attempt to equal – apparently – approach to all HEIs and all participants in the educational market. Introducing two profiles of studies as well as a system of qualifications framework for higher education is another attempt to answer the demands of the labor market. It should be noted that the practical profile study does not necessarily mean a vocational nature (training for a particular profession/job). There are many opportunities for development of practical tertiary education. Many of the solutions are already officially available in the Polish higher education system, but they require significant effort and commitment on the part of universities and stakeholders. Learning outcomes that are crucial to the practical profile require a new (other) organization of the education process (curriculum), as well as new teaching methods and techniques. It is worth noting that the introduction of practical studies or, for example, RPL may also provide a basis for the improvement of other degree programs. In each case, the key is to determine the appropriateness of studies, consistent with the HEI’s mission.

REFERENCES

- European Centre for the Development of Vocational Training. (2011). *Vocational education and training at higher qualification levels*. Research Paper No 15. Luxembourg: Publications Office of the European Union. Retrieved from: <http://dschool.stanford.edu/dgift/>
- The European Students' Union (2015). *Overview on Student-Centered Learning in higher education in Europe. Research study*. Brussels. Retrieved from: <https://www.esu-online.org/wp-content/uploads/2016/07/Overview-on-Student-Centred-Learning-in-Higher-Education-in-Europe.pdf>
- The European Students' Union (2010). *Student-Centered Learning Toolkit for students, staff and higher education institutions*. Brussels. Retrieved from: http://www.aic.lv/bolona/2010/Reports/SCL_toolkit_ESU_EI.pdf
- Healey, M. (2012). *Paper presented at the UNICA Student Conference*. Retrieved from: <http://www.unica-network.eu/>
- Hofman-Kozłowska, D. (2013). Educational models in digital Times. In M. Wiczorek-Tomaszewska (Ed.), *Digital teaching of smartphone Times. Analyses of digital aspects of teaching at junior high and high-school*. Expert report: Association "Cities online." Jobs for the future, Students at the centre. Retrieved from: <http://www.studentsatthecenter.org/>
- Jones, L. (2007). *The Student-Centered Classroom*, Cambridge: University Press. Retrieved from: <http://www.brettwilkin.com/phocadownload/StudentCentredClassroom/jones-student-centered.pdf>
- Kolasa, A. (2015). Uwarunkowania prawne i formalne kształcenia zawodowego jako trwałego segmentu systemu szkolnictwa wyższego w Polsce. In J. Woźnicki (Ed.), *Deregulacja w systemie szkolnictwa wyższego. Program rozwoju szkolnictwa wyższego do 2020 roku* (pp. 99–107). Warszawa: FRP, KRASP.
- Krajowy Ośrodek Wspierania Edukacji Zawodowej i Ustawicznej. (2015). *Podstawa programowa kształcenia w zawodach*. Retrieved from: <http://www.koweziu.edu.pl/kziu-ppkwz>
- Kraśniewski, A. (2014). *Innovations in teaching*, paper presented. REA Conference. Gdańsk: Wydawnictwo Uniwersytetu Gdańskiego.
- Kraśniewski, A. (2012). Development of the National Qualifications Framework for Higher Education in Poland, *Journal of the European Higher Education Area*, 1/2012, 19–48.
- Kurowska, K., Kraśniewski, A. (2015). In Student Centred-Learning in learning outcomes based curricula. In L. Gómez Chova, A. López Martínez, I. Candel Torres (Eds.), *ICERI2015 Proceedings. 8th International Conference of Education, Research and Innovation, ICERI Proceedings, IATED* (pp. 1629–1638). Seville: ICERI.
- Kurowska, K. (2015). *Modele studiów zaawansowanych w zarządzaniu instytucją akademicką*. Doctoral thesis. Warszawa: Warsaw University of Technology (unpublished).
- Lewicki, J., Kurowska, K. (2016). Practical profile of studies in Poland after the 2014 reform. In *INTED2016 Proceedings, 10th International Technology, Education and Development Conference Valencia, 2930–2939*. doi: 10.21125/inted.2016.1662

- Lewicki, J. (2016). *Między teorią a praktyką – jak wykształcić studenta na potrzeby rynku*. Retrieved from: <http://www.obserwatorfinansowy.pl/tematyka/makroekonomia/miedzy-teoria-a-praktyka-jak-wykszaltalic-studenta-na-potrzeby-ryнку-pracy>
- Maniak, G. (2013). *Szkoły wyższe w roli integratora uczenia się przez całe życie – finalny raport podsumowujący wyniki przeprowadzonych badań*. Warszawa: Instytut Badań Edukacyjnych (unpublished report).
- NQF Ordinance. (2011). *Rozporządzenie Ministra Nauki i Szkolnictwa Wyższego z dnia 2 listopada 2011 r. w sprawie Krajowych Ram Kwalifikacji dla Szkolnictwa Wyższego*. Dz. U. 2011 r., nr 253, poz. 1520. Warszawa.
- PSW. (2014). *Ustawa z dnia 27 lipca 2005 r. Prawo o szkolnictwie wyższym*. Dz. U. 2012 r. poz. 572, 742, 1544, z 2013 r. poz. 675, 829, 1005, 1588, 1650, z 2014 r. poz. 7, 768, 821, 1004, 1146, 1198, z 2015 r. poz. 357, 860, 1187, 1240, 1268.
- Piotrowska, D. (2013). *Pilotaż koncepcji systemu przenoszenia i akumulowania osiągnięć w Państwowej Wyższej Szkole Zawodowej w Elblągu*. Warszawa: Instytut Badań Edukacyjnych (unpublished report).
- The Bologna Process 2020. The European Higher Education Area in the new decade. (2009). *Communiqué of the Conference of European Ministers Responsible for Higher Education*. Leuven and Louvain-la-Neuve.

CZY PRAKTYCZNY PROFIL STUDIÓW WYMAGA NOWEJ ORGANIZACJI PROGRAMÓW NAUCZANIA I INNOWACYJNYCH METOD EDUKACJI?

ABSTRAKT: Zmiany społeczno-gospodarcze, jakie zachodzą we współczesnym świecie, związane z rozwojem nauki i technologii, wymagają nowych, innowacyjnych podejść do edukacji, a w tym do szkolnictwa wyższego. Egalitaryzm przejawia się przede wszystkim masową dostępnością do szkolnictwa wyższego. Proces ten zmusza szkoły wyższe do rozwijania, nie tylko elitarnych kursów akademickich, lecz także programów zorientowanych zawodowo. Konieczność wykorzystania nowych narzędzi i metod edukacyjnych staje się oczywistością. W artykule przedstawiono podstawy prawne profilu studiów praktycznych na kierunki akademickie w Polsce po reformie szkolnictwa wyższego w 2014 r., a także kontekst kształcenia i szkolenia zawodowego w zakresie europejskich oraz polskich ram kwalifikacji odnośnie uczenia się przez całe życie (LLL). Przedstawiono także przykłady nowych form edukacji przydatnych w rozwijaniu kompetencji i umiejętności wymaganych od dzisiejszych absolwentów szkół wyższych.

SŁOWA KLUCZOWE: profil studiów, profil praktyczny, szkolnictwo wyższe, nowoczesne metody kształcenia.

-
1. This article uses some excerpts from the author's paper entitled "Practical profile of studies in Poland after 2014 Reform", INTED2016 Proceedings.
 2. The University of Warsaw, SGH Warsaw School of Economics, Warsaw University of Technology, State Higher Vocational School in Elbląg and West Pomeranian Business School in Szczecin.