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**IMPLEMENTATION OF PROFESSIONAL TASKS IN PROJECT No. TÁMOP-4.1.2.B.2-13/1-2013-0002
TITLED “DEVELOPMENT OF VOCATIONAL TEACHER TRAINING AND TRAINERS’ NETWORK IN THE
TECHNICAL AND THE SOCIAL FIELD”**

Project period: 22. 04. 2014. – 22. 10. 2015.

The tasks undertaken by the Teacher Training Centre of Budapest University of Technology and Economics (BME) and its consortial Partner, the University of Óbuda within the Project No. TÁMOP-4.1.2.B.2-13/1-2013-0002 titled “Development of Vocational Teacher Training and Trainers’ Network in the Technical and the Social Field” – national methodological and training development component – in relation to the training programmes of the engineer teacher MA, vocational teacher training, health care teacher, teacher of special pedagogy and teacher of pedagogy were as follows: development of digital curricula, elaboration of materials of new specializations and of contents-methodological recommendations, development of ICT tools, elaboration of teachers’ further training programmes, researches, trainers’ training and network development.

Further participants having contributed to the implementation of the Project were the higher education institutions involved in the training of engineer teachers and vocational teachers, namely: the Bárczi Gusztáv Faculty of Special Pedagogy of the Eötvös Loránd University of Budapest (ELTE BGGyK), the Faculty of Pedagogy and Psychology of the Eötvös Loránd University of Budapest (ELTE PPK), and the Faculty of Engineering and the Faculty of Health Care of the University of Pécs (PTE MK and EÜK).

As an output of the *professional workshop* established within the frames of the Project, domestic vocational teacher training has been renewed in function and content, vocational teachers’ training widened in scope and a recommendation on the training and outcome requirements of the specialization called School Vocational Teacher as well as materials necessary to start new specializations were elaborated. The professional workshop involved the representatives of higher education institutions offering vocational teachers’ training in various fields (technical, agricultural and business) and of higher education institutions conducting trainings in fields ranked by the latest legal regulations into the group of vocational teacher training: teacher of special pedagogy, teacher of health care and teacher of pedagogy.

Contents-methodological recommendations have been formed on the systems of pedagogical practical training within the undivided and divided vocational teacher training, the two-semester individual school practice and the preparation of e-portfolios. The table below presents the list of theme.

1.	Establishment of a new School Vocational Teacher specialization, new training and outcome requirements
2.	The system and documents of practical training in pedagogy within the divided and the undivided systems of vocational teacher training
3.	The possible way of implementation of the two-semester continuous

	personal school practice, which is part of the practical training in pedagogy, in the divided-system vocational teacher training
4.	A guide to support the preparation of the thesis, the portfolio and the process of defending the portfolio
5.	Pedagogical community activities in the system of vocational teacher training
6.	The harmonization of the portfolio and e-portfolio with the content required in teachers' qualification
7.	The dual system of engineer teacher training
8.	Recommendation to gauge the competences of trainers of engineer teacher training
9.	A study guide for using Moodle and e-curricula
10.	Methodological recommendations for the individual continuous practice in teacher training in pedagogy specialization

A major part of the project tasks implied the elaboration of the documents of the new specializations. Those elaborated were the materials needed to start the specializations of health care teacher, teacher of special pedagogy, teacher of pedagogy and the divided-system engineer teacher specialization which fits into the training profile of the Teacher Training Centre of BME.

Most of the project tasks were the *development of digital curricula*. This was completed by the training of trainers, which served the preparation of curricula writers for digital content development as well as mentor training. The trainings were backed by an electronic learning management system, the front page of which can be seen below.

The screenshot displays the 'Szakped' LMS interface. On the left, there is a navigation menu with 'Navigáció' and 'Adminisztráció' sections. The main content area is titled 'Szakped' and features a 'Kurzusok' (Courses) section with a list of course categories: 'Publikusan elérhető tananyagok', 'Projektmenedzsment tanlapja', 'Elkészült digitális tananyagok', 'Tananyagok kezelése szerzők_ektorok számára', and 'Digitális tananyagok standardjai Tamop412B'. Below this is a 'Felvehető kurzusok' (Available courses) section listing five courses with their respective teachers: 'Publikusan elérhető tananyagok' (Publicus tananyagok), 'Projektmenedzsment tanlapja' (Projektmenedzsment tanlapja), 'Elkészült digitális tananyagok' (Elkészült digitális tananyagok) by Román Gábor and Zarka Dénes, 'Tananyagok kezelése szerzők_ektorok számára' (Tananyagok kezelése szerzők_ektorok számára) by Benedek András, Molnár György, Szabóné Berki Éva, and Zarka Dénes, and 'Digitális tananyagok standardjai Tamop412B' (Digitanstand412B) by Benedek András, Horváth Csinger János, Molnár György, Román Gábor, Szabóné Berki Éva, and Zarka Dénes. On the right side, there is a 'Naptár' (Calendar) for December 2015, showing dates from 1 to 31.

Digital content development produced 54 digital curricula, the greatest part of which might be useful for a wider target group of vocational teacher training. The group of the digital curriculum writers was partly made of the representatives of the Applicant and the Consortium Partner and partly of the Partner Institutions cooperating in the Project.

Some of the curricula made can be used in each of the vocational teacher specializations amongst compulsory subjects or electives. These are:

1. Tendencies in the development of European and domestic vocational training,
2. Basic knowledge of the fields of vocational teacher training,
3. The theoretical and methodological aspects of talent management in vocational teacher training,
4. Psychological and pedagogical bases of forming personally tailored and effective teacher role models,
5. Traditional and ICT supported measurement and evaluation in VET,
6. VET for adults,
7. Compensation and talent management,
8. Didactics and educational organization,
9. E-learning,
10. Lifelong learning,
11. Complex Instruction Program in vocational training schools,
12. Measurement and quality in VET,
13. Pedagogy,
14. The way to the world of work,
15. Pedagogical research methodology,
16. Psychology and personality development I.,
17. Psychology and personality development II.,
18. Systems in VET,
19. Learners with special needs in VET,
20. Vocational linguistics,
21. VET and economy,
22. The history of VET,
23. Teachers' communication,
24. Learning methods,
25. Development of leadership competencies in vocational teacher training.

Other parts of the materials developed can be used in certain teacher specializations of vocational teacher training or in the training of vocational trainers in compulsory or elective subjects. These are:

1. The science of disability in everyday life,
2. The legal background of health care education,
3. The possibilities of developing space-perception in technical education,
4. Health care methodologies,
5. Methodological lecture notes for wood industry engineer teachers,
6. Digital manual of management theory,
7. Transportation operations,
8. Transportation informatics,
9. Traffic flow,
10. Application of mathematical software in technical computing,
11. The history of engineer teachers' training,
12. Methodological handbook of training teachers of pedagogy,
13. Methodology of operations performance measurement for vocational trainers,
14. Methodological handbook of teaching Building structures for engineer teacher students,
15. Methodologies for trade group electronic engineers,

16. Methodologies for wood industry engineer teacher students,
17. Methodologies for engineer teachers of informatics,
18. Methodologies for engineer teachers of transportation,
19. Methodologies – light industry specialization,
20. Methodologies – technical-economic specialization,
21. Methodologies – electronics – electrotechnology specialization,
22. Methodologies – civic and security defence specialization,
23. Methodologies – mechanics-mechatronics specialization,
24. Personal transportation.

Some of the materials elaborated can be used in mentor training. These are:

1. Methodology of mentoring in vocational teachers' training,
2. The renewal of teachers' training,
3. Methodology of mentoring,
4. Pedagogy of mentoring,
5. Teachers' pedagogical knowledge.

The digital curricula by author institutions are indicated in the table below.

BME		ÓÉ	
1.	Lifelong learning (BME TK)	1.	Didactics and educational organization (ÓÉ)
2.	Methodology of operations performance measurement for vocational trainers (BME TK)	2.	Methodologies – light industry specialization, (ÓÉ)
3.	Methodological handbook of teaching Building structures for engineer teacher students (BME, vocational institute)	3.	Methodology of mentoring in vocational teachers' training (ÓÉ)
4.	Transportation informatics (BME, vocational institute)	4.	Methodologies – technical-economic specialization (ÓÉ)
5.	Tendencies in the development of European and domestic vocational training (BME TK)	5.	Compensation and talent management (ÓÉ)
6.	Methodologies for wood industry engineer teacher students (NyME)	6.	Teachers' communication (ÓÉ)
7.	The science of disability in everyday life (ELTE BGGyK)	7.	Selection of mentors (ÓÉ)
8.	Traffic flow (BME, vocational institute)	8.	VET and economy (ÓÉ)
9.	Learners with special needs in VET – Proposals for vocational trainers (ELTE BGGyK)	9.	Methodologies – mechanics-mechatronics specialization (ÓÉ)
10.	Vocational linguistics (BME TK)	10.	The history of VET
11.	Basic knowledge of the fields of vocational teacher training (BME TK)	11.	Psychology and personality development I. (ÓÉ)
12.	The history of engineer teachers' training (BME TK)	12.	Development of leadership competencies in vocational teacher training (ÓÉ)
13.	Methodologies for engineer teachers of informatics (SZE)	13.	The renewal of teachers' training (ÓÉ)
14.	The possibilities of developing space-perception in technical education (DE)	14.	Methodologies – civic and security defence specialization (ÓÉ)
15.	Personal transportation (BME, vocational institute)	15.	Pedagogy of mentoring (ÓÉ)
16.	Application of mathematical software in technical computing (DE)	16.	Pedagogy (ÓÉ)
17.	Methodologies for engineer teachers of transportation	17.	E-learning (ÓÉ)

18.	Complex Instruction Program in vocational training schools (ME)	18.	Methodologies – electronics – electrotechnology specialization (ÓE)
19.	Traditional and ICT supported measurement and evaluation in VET (PTE MK)	19.	Measurement and quality in VET (ÓE)
20.	The legal background of health care education (PTE EK)	20.	Learning methods (ÓE)
21.	The theoretical and methodological aspects of talent management in vocational teacher training (BME TK)	21.	Psychology and personality development II. (ÓE)
22.	The way to the world of work (ELTE BGGyK)	22.	Psychological and pedagogical bases of forming personally tailored and effective teacher role model (ÓE)
23.	Transportation operations (BME, vocational institute)	23.	VET for adults (ÓE)
24.	Systems in VET (BME TK)	24.	Teachers' pedagogical knowledge (ÓE)
25.	Modern technologies in education (BME TK)	25.	Pedagogical research methodology (ÓE)
26.	Methodologies for trade group electronic engineers (BME TK)		
27.	Methodological handbook of training teachers of pedagogy (ELTE PTK)		
28.	Health care methodologies (PTE EÜK)		
29.	Digital manual of management theory (BME, vocational institute)		

	Title	Accessibility
10.	The science of disability in everyday life	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_a_fogyatekossagtudomany_a_mindennapi_eletben/adatok.html Volume 3, Number 2, 2016
16.	Traditional and ICT supported measurement and evaluation in VET	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_a_hagyomanyos_es_az_ikt-vel_tamogatott_meres_es_ertekeles_a_szakkepzesben/adatok.html
19.	Methodology of teaching transportation subjects	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_a_kozlekedes_tantargycsoport_oktatasanak_modszertana/adatok.html
37.	Methodology of mentoring in vocational teachers' training	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_mentoralas_modszertana/adatok.html
38.	Pedagogy of mentoring	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_mentoralas_pedagogiaja/adatok.html
4.	The Hungarian history of engineer teachers' training	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_a_mernoktanarkepzes_magyarorszagi_tortenete_a_mernok_tanartol_a_mernoktanarig/adatok.html
30.	The renewal of teachers' training	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_a_pedagoguskepzes_megujitasa/adatok.html
2.	Basics of vocational linguistics	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_a_szakmai_nyelvmueves_alapjai/adatok.html
5.	Basic knowledge of the fields of vocational teacher training	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_a_szakmai_tanarkepzes_szakteruleti_alapismeretei/adatok.html
20.	The theoretical and methodological aspects of talent management in vocational teacher training	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_a_tehetseggondozas_elmeleti_es_modszertani_kerdesei_a_szakmai_pedagoguskepzesben/adatok.html
17.	The possibilities of developing space-perception in technical education	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_a_tersemelet_fejlesztésenek_lehetosegei_a_muszaki_kepzes_kereteben/adatok.html
15.	The legal background of health care education	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_az_egeszsegugyi_kepzesek_jogi_szabalyozasa/adatok.html
1.	Tendencies in the development of European and domestic vocational training	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_az_europai_es_hazai_szakkepzesi_rendszer_fejlodesenek_tendenciai/adatok.html
31.	Educational technology of classroom teaching	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_az_osztalytermi_tanitas_oktatastechnologiaja/adatok.html
32.	Didactics and educational organization	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_didaktika/adatok.html
14.	Health care methodologies	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_egeszsegugyi_szakmodszertan/adatok.html
33.	E-learning	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_elektronikus_tanulas/adatok.html
3.	Lifelong learning	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_elettavu_tanulas/adatok.html
34.	Developing assessment	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_fejlesztő_ertekeles/adatok.html

35.	VET for adults	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_felnottek_szakkepzeseadatok.html
36.	Compensation and talent management	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_felzarkoztatas_es_tehetseggondozas/adatok.html
28.	Management theory	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_iranyitaselmelet/IR/sirs362g.htm
24.	Complex Instruction Program in vocational training schools	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_komplex_instrukcios_program_a_szakkepzo_iskolakban/adatok.html
23.	Modern technologies in education	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_korszaru_tehnologiak_az_oktatasban/adatok.html
9.	Traffic flow	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_kozlekedesi_aramlatok/adatok.html
8.	Transportation informatics	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_kozlekedesi_informatika/adatok.html
27.	Transportation operations	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_kozlekedesi_uzemtan/adatok.html
18.	Application of mathematical software in technical computing	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_matematikai_szoftverek_alkalmazasa_muszaki_szamitasokban/adatok.html
39.	Selection of mentors	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_mentorkivalasztas/adatok.html
13.	Methodological handbook of training teachers of pedagogy	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_modszertani_kezikonyv_a_pedagogia_szakos_tanari_kepzeshez/adatok.html
40.	Pedagogy	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_nevelestan/adatok.html
41.	Pedagogical research methodology	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_pedagogiai_kutatasmodszertan/adatok.html
42.	Teachers' knowledge and thinking	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_pedagogusok_tudasa/adatok.html
43.	Psychology and personality development I.	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_pszichologia_es_szemelyisegfejlesztes_i/adatok.html
44.	Psychology and personality development II.	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_pszichologia_es_szemelyisegfejlesztes_ii/adatok.html
22.	Systems in VET	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_rendszerek_a_szakkepzesben/adatok.html
11.	Learners with special needs in VET. Recommendations for vocational trainers	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_sajatos_nevelesi_igenyu_tanulok_fiatalok_a_szakkepzesben_ajanlasok_szakkapzok_szamara/adatok.html
45.	VET and economy	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_szakkepzes_es_gazdasag/adatok.html
46.	The history of VET	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_szakkepzesstortenet/adatok.html
48.	Methodologies – mechanics-mechatronics specialization	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_szakmodszertan_gepeszet_mechatronika/adatok.html

50.	Methodologies – light industry specialization	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_szakmodszertan-konnyuipari_szakirany/adatok.html
51.	Methodologies – technical-economic specialization	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_szakmodszertan-muszaki-gazdasagi_szakirany/adatok.html
49.	Methodologies – civic and security defence specialization	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_szakmodszertan_had-es_biztonsagvedelem/adatok.html
47.	Methodologies – electronics – electrotechnology specialization	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_szakmodszertan_elektrotechnika_elektronika_szakirany/adatok.html
12.	Methodologies for wood industry engineer teacher students	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_szakmodszertan_faipari_mernoktanar_szakiranyos_hallgatoknak/adatok.html
21.	Methodologies for engineer teachers of informatics	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_szakmodszertan_informatika_szakos_mernoktanarok_szamara/adatok.html
25.	Methodologies for trade group electronic engineers	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_szakmodszertani_ismeretek_villamos_szakmacsoportos_mernokok_szamara/SV/ssves523g.htm
7.	Methodological handbook of teaching Building structures for engineer teacher students	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_szakmodszertani_segedlet_epuletszerkezetek_oktatasahoz_mernoktanar_hallgatok_szamara/SE/ssejs6103g.htm
26.	Personal transportation	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_szemelykozlekedes/SK/sskjs333g.htm
52.	Teachers' communication	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_tanari_kommunikacio/adatok.html
53.	Learning methods	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_tanulasmodszertan/adatok.html
29.	The way to the world of work	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_ut_a_munka_vilagaba/MV/smvjb33g.htm
6.	Operations performance measurement	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_uzemteni_meresek/adatok.html
54.	Development of leadership competencies in vocational teacher training	http://www.tankonyvtar.hu/hu/tartalom/tamop412b2/2013-0002_vezetes/adatok.html

The following chart summarizes the accessibility of the digital curricula that are openly accessible at tankonyvtar.hu.

The print screen below shows an example from the above curriculum package (accessible at www.tankonyvtar.hu).

The screenshot shows the website interface for 'Digitális Tankönyvtár'. At the top, there is a search bar with 'Keresés' and navigation links for 'Belépés', 'Információ', 'Kapcsolat', and 'English'. Below the header, there are tabs for 'Kezdőoldal', 'Hírek', and 'Böngészés'. The main content area displays the title 'Az európai és hazai szakképzési rendszer fejlődésének tendenciái' by Benedek András (2015), published by BME Tanárképző Központ. A 'Tweet' and 'Beágyazás' button are visible. The main text area shows a section titled '3. A magyar szakképzés és felnőttképzés nemzetközi pozíciója'. On the right, a 'tartalomjegyzék' (table of contents) sidebar is open, listing sections such as 'Összefoglaló', '1. Szakképzés az európai művelődés- és gazdaságtörténetben', '2. A szakképzés általános és nemzeti sajátosságai', '3. A magyar szakképzés és felnőttképzés nemzetközi pozíciója', '4. A szakképzés nemzetközivé válása', '5. Ajánlott irodalom – Források – Háttérinformációk', 'Függelék I. Az összehasonlító elemzés háttere', 'Függelék II. Dokumentumtár – internetes felületek, források', 'Függelék III. Nemzetközi szervezetek – tematikus kapcsolódások', 'Függelék IV. Statisztikák, adatbázisok', and 'Tesztek'.

A major part of the project tasks consisted of *researches related to vocational teachers and VET*.

The purpose of the research examining the methodological culture of vocational teachers was to map the methodological culture of the students of engineer teacher training and that of in-service VET teachers by surveying. Some parts of the research aimed at determining the quality indicators of VET teachers elaborated the domestic and international literature on teacher quality, while some other parts gave a multi-aspect empiric examination of the topic (examination of the quality of secondary school and university VET teachers on the basis of students' opinions, collection of data about secondary school and university VET teachers, field work and data processing) and gave a comparative analysis of the gained results. The examination of the methodological competences necessary for using interactive whiteboards was focused on the methodological paradigm shift of VET and in the attitudes towards educational technologies as well as training content development offering preparation for the methodological use of the interactive board. Besides the multi-group measurement of competences and knowledge, the implementation of the comparative analysis and the introduction of the experiences of experimental education, there was a longitudinal competence measurement and a survey of the differences between the

competency profiles of the users and non-users of the interactive board conducted, as well. The research examining the possibilities in the development of teacher competences in engineer teacher training was aimed at surveying the competences and development demands of the students of engineer teacher training and of field practitioners as well as the conformity of these competences with the learning outcomes. By drawing the competence profile of the engineer teacher students, the possible development trends were described for the training institutions. The research intended to underlie the methodology of teachers' competence development was focused on examining the components of the efficiency and effectiveness of teaching. The answers to these questions were sought by inquiring the students as experimentees. The research strove to provide the base of the methodology of competence development by mapping the successes and difficulties in learning, the motives of learning and the circumstance variables. Within the frames of examining the career interests and career attitudes of vocational secondary school students, the professional literature on career interests and attitudes and vocational value preferences that are of decisive importance in vocational education and training was elaborated; measurement tools and a research methodology were developed and the tool used in measuring the secondary school students' attitudes was adapted. To help the elaboration of the data gained from the high number of experimentees, online measurement tools were developed. Relying on the results of the empiric researches some recommendations effectively applicable in the modernization of the contents and methodologies of VET teacher training by way of developing the problem solving competence were worded. The examination of learning strategies and distinctive characteristics of VET was intended to identify, on the basis of the learning model, the variables that influence the efficiency and effectiveness of learning on one hand and may serve as a base for an adaptive educational approach, which makes the process of learning and teaching possible to be planned while considering these differences on the other hand. The possibilities of utilizing the results of the empiric survey having involved a relatively wide range of vocational secondary school students might reckon on the interest of VET teacher trainers. In the examination of scopal-visual capacities in VET, partly on the basis of the relevant literature, the scopal-visual capacity was clarified, certain components were identified and an online measurement tool applicable in measuring the scopal-visual capabilities was developed. The development level of scopal-visual capabilities was mapped through an examination of vocational secondary school students. The methods of capacity development in mechanical drawing lessons, which are of basic importance in most of the technical vocations (concept building and depiction, the methodological aspects of concept building at drawing lessons, deductive and inductive thinking, development of algorithmic thinking at drawing lessons and the development of visual cognitive capacity) were also identified during the research. The experience based research examining the newest features of the pedagogical and professional development of VET teachers searched the extent to which teachers perceive learning as necessary, the way they experience professional duality, the extent to which pedagogical and vocational development influence each other or are separated, the answer to whether professional mobility exists, the role of independent learning, their personal development strategies and the main motifs of their learning.

The *development of ICT* applications was partly focused on the developments related to the operative preparation and organization of personal continuous school practices implemented within the frames of pedagogical practical training, especially within the

national VET network, and partly at the creation of a new platform, which coordinated these professional and administrative tasks electronically. The print screen below shows the entry page of this platform.

Határidők	
Második hír	
Pótlások beadási határideje	2014.10.21
Kelt: 2014-08-30 10:31:31 balu	
Ez egy új hír	
Kérelmek beadási határideje	2014.09.30
Kelt: 2014-08-30 10:30:25 balu	

The informatics service platform is built of 4 main modules, each of which represents a kind of practical role:

- administration module
- student module
- career practitioner module
- mentor teacher module

The print screen below shows the menu system of the administration module, which allows, importing users' data in groups, as well in addition to uploading and editing data,.

Határidők	
Második hír	
Pótlások beadási határideje	2014.10.21
Kelt: 2014-08-30 10:31:31 balu	
Ez egy új hír	
Kérelmek beadási határideje	2014.09.30
Kelt: 2014-08-30 10:30:25 balu	

Relying on the preliminaries, we prepared several electronic document samples for the developed system, the form-based filling of which means a rapid solution for those

concerned. The print screen below is a part of this sample, and it serves the assessment of previous knowledge and the necessary number of lessons.

Gyakorlat Szakmai Pedagógusok Modul

BME Tanárképző központ

SZÉCHÉNYI

Bejelentkezési neve, státusza:
Molnár Péter
hallgató
2015-03-05 16:08:26

Kezdőlap
Felhasználó adatok
Hallgatói dokumentumok

Határidők

Második hír
Pótlások beadási határideje
2014.10.21
Ké: 2014-08-30 10:31:31 baba
Ez egy új hír
Kérelmek beadási határideje
2014.09.30
Ké: 2014-08-30 10:30:25 baba

M Ű E G Y E T E M 1 7 8 2

BME Tanárképző Központ
Közgazdász tanár MA hallgató
A hallgató neve: Molnár Péter
A hallgató tanári szakja/szakirányja: környezetmérnök

Kérelem
előzetesen megszerzett tanári szakképzettség/tanári munkatapasztalat beszámítására
az egyéni összefüggő szakmai gyakorlat követelményeinek teljesítésében

ET-1 dokumentum

Az előzetesen megszerzett szakképzettség/tanári munkatapasztalat meglétét tanúsító és mellékelt dokumentumok alapján kérem az előzetes tudás beszámítását az egyéni összefüggő szakmai gyakorlat teljesítése során.

	Igen/Nem	Előzetes tudásbeszámítást kér	
		II	III
<input checked="" type="checkbox"/> Előtanulmányok / <input type="checkbox"/> munkatapasztalat [1]			
A) tanári szakképzettséggel rendelkező, tanulmányok ideje alatt tanárként foglalkoztatott tanárjelölt	I	N	N
B) tanári szakképzettséggel nem rendelkező, tanulmányok ideje	I	I	I

The reviewed online journal titled OPUS ET EDUCATION launched within the frames of the Project offers a possibility of wide-range publicity for both teacher trainees and former, graduated students. The reviewed journal is accessible here: www.opuseteducatio.hu Some of the *further training programs for teachers* developed within the Project are short-term training programmes for career practitioners, technical vocational teachers, qualified vocational teachers and mentor teachers; others are longer further training programmes including special examinations, as well. The chart below gives a summary of them.

1.	Further training of technical vocational teachers (80 lessons)
2.	Further training of career practitioners (40 lessons)
3.	Adult educator (special examination)
4.	Mentor teachers' workshop (30 lessons)
5.	Public education master leader (further training of those having passed the special exam)
6.	Digital competencies in engineer teachers' work (30 lessons)

Network development within the Project was partly implemented through active participation in the events of the Projects of the national component and the regions, and partly through the narrower and wider circle of the teacher training institutions having participated in fulfilling the tasks of the Project no. TÁMOP-4.1.2.B.2-13/1-2013-0002 titled "Development of vocational teacher training and trainers' network in the technical and the social field" and with the partner schools working in the field of engineer teachers' training. The institutions having participated as partners are indicated in the chart below:

I.	National research, institution maintenance and strategic partner
1.	Klebelsberg Institution Maintenance Centre (KLIK)
2.	Education Research and Development Institute (OFI)
3.	ELTE PPK strategic partner
II.	Institutions offering vocational/arts teacher training
1.	University of Debrecen
2.	College of Dunaújváros
3.	ELTE BGGyK
4.	University of Miskolc
5.	University of Western Hungary
6.	University of Pécs
7.	Széchenyi István University
III.	Vocational training institutions
1.	Donát Bánki Transportation Engineering Vocational Secondary School
2.	Gábor Bethlen Transportation and Economic Vocational Secondary School
3.	János Bolyai Vocational Secondary School
4.	Lajos Kossuth Dual Language Practice Vocational Secondary and Training School of Budapest
5.	MODELL Fashion School
6.	Lajos Petrik Vocational Secondary School
7.	Tivadar Puskás Telecommunication Vocational Secondary School
8.	Frigyes Schulek Dual Language Builders' Vocational Secondary School
9.	Trading Vocational Training School of Terézváros, Budapest
10.	Ágoston Trefort Dual Language Vocational Secondary School of Budapest
11.	Miklós Ybl Builders' Vocational Training School
IV.	Vocational organizations
1.	Hungarian Association of Content Industry
2.	Hungarian Association of Pedagogy

The project web page is available at <http://szakped.mpt.bme.hu> , see print screen below.



TÁMOP-4.1.2.B.2-13/1-2013-0002

A műszaki és humán szakterület szakmai pedagógusképzésének és képzők hálózatának fejlesztése

[Kezdőoldal](#)[Rólunk](#)[Hírlevelek](#)[Elkészült tananyagok](#)[Letöltések](#)[Képek](#)[Nyitó konferencia](#)[Záró konferencia](#)[APPI konferencia](#)[Moodle](#)[Oktatási Hivatal levele](#)

Pedagógusképzést segítő szolgáltató és kutatóhálózatok továbbfejlesztése és kiszélesítése

UNIÓS TÁMOGATÁSSAL MEGVALÓSULÓ KÉPZÉSFEJLESZTÉS A MÉRNÖKTANÁRKÉPZÉSben, A MŰSZAKI SZAKOKTATÓKÉPZÉSben ÉS A HUMÁN SZAKTERÜLETI TANÁRKÉPZÉSben

A projekt futamideje: 2014.04.24. – 2015.10.22

A **Budapesti Műszaki és Gazdaságtudományi Egyetem Tanárképző Központja** és az **Óbudai Egyetem** alkotta konzorcium 138.280.760,- Ft uniós támogatást nyert a „Pedagógusképzést segítő szolgáltató és kutatóhálózatok továbbfejlesztése és kiszélesítése” című pályázati kiírás keretében, az Új Széchenyi Terv Társadalmi Megújulás Operatív program keretében. A projekt eredményeként várható a műszaki szakképzésben oktató tanárok és az egészségügyi-, a gyógypedagógiai-, és pedagógiai szakos tanárok új típusú képzéseinek tartalmi és módszertani fejlesztése, a Szakmai Pedagógusképző és Szolgáltató Központ szolgáltatásainak kiszélesítése, a pedagógusképzők országos hálózati együttműködésének továbbfejlesztése.

A pályázat keretében tervezett szakmai fejlesztések fókuszai: a mérnöktanár, műszaki szakoktató, az egészségügyi-, a gyógypedagógiai-, és pedagógiai szakos tanárképzés módszertani támogatása, a képzők képzése, és a tartalomfejlesztés; a szakmai gyakorlat indításához szükséges fejlesztések kialakítása; a pedagógusképző kutató- és szolgáltató központok hálózatának fejlesztése, valamint a szakképző és felsőoktatási intézmények közötti