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150-year Vocational Teacher Training at Budapest University of Technology and Economics

The Collection of Scientific Essays of a Conference



The vocational teacher training whose history is related to the initiation (1870) of József Eötvös has already been in progress at Budapest University of Technology and Economics for 150 years. One of the departments of this University, the Technological Pedagogy Department, is one of the most significant vocational teacher training institutions in the field of engineering and economic teacher training.

On this occasion, there has been launched a conference series organized every year. It aims to create a forum that provides an opportunity, in the procedure of the constant renewal of professional training and education, for common thoughts and further corporation involving new partners. The target group is primarily researchers, developers, and decision-makers participating in vocational teacher training. The highlighted mission of the forum is for Carpathian institutions' teachers and researchers to teach in the Hungarian language to be able to introduce their latest research results and exchange their thoughts and experience with their

colleagues from Hungary. Besides, it can ensure a possibility for doctoral candidates to present their research work, which promotes their scientific development.

The first event of the conference series, titled **1st International Conference on VET and Education: Today and Tomorrow**, was taken place on 20-21 November 2019. The conference was held in Hungarian and English and was organized in the buildings of the University of Technology and Economics. The conference was opened by the Chancellor of Budapest University of Technology and Economics, *Attila Kotán* who greeted the participants then *Gáborné Pölöskei*, Deputy Secretary of State responsible for Vocational Training and Adult Learning, made a speech about the strategy of vocational training 4.0 and the actions/ measures of the development of the vocational education system.

There will be released an online collection of scientific essays from the presentation of the conference sent in by the performers who are high authorities and practiced in teacher training and participated in the conference. Altogether 70 studies which are classified in 6 thematic units have arrived in:

1. Development of History of Vocational Training
2. Pedagogy of Higher Education
3. Teacher Training
4. Pedagogy of Subjects
5. Methodological Innovation
6. Research & Innovation. Studies in English

The first section of the online collection of scientific essays was titled as **Development of History of Vocational Training**, in which seven lecturers' studies were classified. The volume of essays and studies and the first section were started by the study of *András Benedek*. In his introduction, he referred to the objectives of the conference series and the mission of the segment led by him. In this part, the authors targeted the introduction of the development of the history of vocational training as the title marked. Professor Benedek took a fling at determining the main period of development of the history of professional practice during the last one and a half-century, and he divided it into four periods. The author reckons that there would be needed more research for analyzing the theme thoroughly. The work of *Zoltán Sturcz* traced back into 1848 when József Eötvös during his ministerial years made a short study about the formation of teacher training construction and the professional system. Historical events did not make it possible for his thoughts to be materialized. During József Eötvös's second ministerial period in 1869, the organizational work which led to the opening of such an institute starting vocational teacher training could be launched involving of Budapest University of Technology.

The second section of the volume of essays and studies was titled as **Pedagogy of Higher Education**. This part involves thirteen lecturers' researches. *Péter Tóth* as the guest lecturer of János Selye University and his co-author *Kinga Horváth* also from János Selye University describe the results of university students' inductive reflectiveness test. The topicality of their research is that the early school leaving is significant, referring to mainly science subjects in Higher Education in the East-Central Europe region. In the background, there is abstract thinking of the students with different development levels. The most important target of the research was to identify competencies that can be related to early school leaving and to prognosticate them, which are significant in the working life.

The study of *Magdolna Daruka* and *Olga Csillik* introduced the marking learning process training, curriculum development, and the innovative education processes at Budapest Corvinus University. In the project EFOP-3.4.3-16, twelve training modernization processes took place at the university. In their studies, they presented how these development processes carried out then and nowadays, and they examined how the attitude towards the teaching-learning process of the teachers participating had changed due to the curriculum development and the education innovative processes.

The third section is **Teacher Training**, which contains seventeen studies. As the title shows, it involves publications about mainly learning-teaching methods. *Katarína Szarka* and *György Juhász* examined the role and the practice of a developing and formative assessment in their publication. Schleicher (2018) said the students could not become lifelong learners if they did not see their teachers as lifelong learners. The authors think that it is true in the case of new teacher generations as they do not possess innovative and proactive teacher attitudes referred to the profession if they do not see the same on the part of their teachers during their studies. They applied focus-group interviews in their research, where they examined how the teacher trainees were practiced and open-minded towards using innovative assessment methods.

Rita Pletl is looking for the answer in her work, *Linking points between secondary education and teacher training*, what kind of situation is in the Hungarian secondary education in Romania, and is trying to map what kind of opportunities are available in the field of teacher training. The target of the research is to plan improvements needed in teacher training taking into consideration the needs of secondary education.

The fourth section is **Subject Pedagogy**, in which there can be found eleven publications. In this part, studies related to didactics can be read. *Barnabás Vajda's* work primarily analyzed and described the current status of history didactics academically. First, he described the conception of history didactic then he wrote about its international and scientific institutions. After it, he described what the

difference was between history didactics and history methodology. Finally, he outlined existing and potential research orientations of history didactics.

Improving different abilities is very grateful but also a challenging task at the same time. Professor *Péter Tóth* is writing in his work about the improvement of perceptibility on draft lessons. According to the author, there is not such a thing that we need to improve only one ability. The solution for each task requires a complex activity. The pedagogue has to possess such attitudes and knowledge by which he or she can recognize which tasks, what abilities the student has to have. The aware and technical skill development is the highlighted task for draft teachers. The author traversed the method of the improvement of perceptibility in his study.

The fifth section is **Methodological Innovations**, in which there can be found thirteen publications. In this part, the studies about modernistic and innovative methods were included. It can be heard more that students are not motivated in the acquirement of the curriculum as it is required. It means a big challenge for pedagogues to find such modernistic methods on their lessons by which students can be encouraged for the acquirement of the curriculum to help their improvement there through.

At the end of 2018, *Benedek Forrai, Bence Sipos, Brigitta Szilágyi*, started to develop such an innovative and optional subject by which they can motivate junior mechatronics and energetic engineering students in their mathematics studies. They looked for the answer in their research on what expectations can emerge about this subject. In their work, we can get an answer to the point of their advanced method. *Katalin Harangus's* study, *The Available Info-Communication Equipment in Education*, has an actuality because people who possess the knowledge of ICT devices application predominate on the labor market. Without computers, mobile phones, and digital technologies skills, we do not have a chance on the labor market. The author referred to the requirement of the European Parliament that using ICT devices should be involved better in education. The author described two types of research in her study. In her first survey, she examined the situation and problems of native-language vocational training in the teaching-learning process in secondary schools. In the second survey, she examined the situation and problems of native-language vocational training regarding the conditions and people in education in vocational schools.

As the conference held both in Hungarian and English, English publications were involved in the volume of essays and studies. The publications (nine pieces) titled *Research & Innovation, Studies in English*, which were performed and written in English at the conference, were put into the last, sixth section. *Előd Gógh* and *Attila Kővári* in their publication examined self-regulating learning in some technical secondary schools in Budapest. The target of their research was to estimate how the students are aware of self-regulating learning, how they know learning methods, and which one they prefer during their learning. The research is some kind of orientation because the young have to be coached for lifelong learning, and self-regulating learning is an essential criterion of it. In the volume of essays, there was a lot written about digital teaching, the importance of improving the use of ICT devices in education. In the study of *György Molnár*, the topic is approached from a new perspective. The author described the specific components and characteristics of the digital learning environment and the role of digital competence these days. After this, he presented his short research whose aim was to reveal which modern digital devices based on web 2.0 are used by students.

I tried to choose from 70 publications of the volume of essays that the readers have a comprehensive overview of this edition concerning the content, and they feel like reading it. The online collection of scientific essays will be found from May on the website of the Technological Pedagogy Department <http://www.mpt.bme.hu/>. The next conference will be sometime in autumn, depending on the crisis.