

István SIMONICS

Vocational Training Pedagogical Scientific Publications



The first issue of *Vocational Training Pedagogical Scientific Publications* (*Szakképzés-Pedagógiai Tudományos Közlemények*) edited by András Benedek has been published. Budapest University of Technology and Economics Faculty of Economic and Social Sciences Technological Pedagogy Department has a new initiative. The aim of publishing the new series of professional books is to give possibilities to authors to present research results that can raise other professionals' interests, excite discussions or induce further research activities. There are four main topics:

- Analyses of Vocational Training History
- Theory and Methodology
- Teacher Training
- Studies of students' research

The authors could submit their papers from the Carpathian Basin's institutions. The foreword was written by Professor Peter Tóth, the head of the Department of Technical Education. He described the aims and gave an excellent historical background of vocational training. He introduced the authors and summarized their works. Finally, he thanks Professor András Benedek for giving the idea of publishing this new series of professional books on vocational training and congratulating him on his 70 year birthday.

In the first chapter, **Analyses of Vocational Training History**, we can read three studies. It is interesting how the first two authors divided the history of Vocational training into two eras.

Zoltán Sturcz, in *'From Eötvös József's Leading Idea to the First Institution of Vocational Teacher Training (1848-1870)'*, traced back into 1848, when József Eötvös during his ministerial years had 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. However, during József Eötvös's second ministerial period in 1869, a successful preparation led to the opening of an institute where vocational teacher training could be launched involving Budapest University of Technology.

András Benedek's study, *'Stages of Vocational Training Development in Hungary (1870-2020)'*, in connection with the 150th anniversary of vocational teacher training, undertakes to review the development stages of the Hungarian vocational training system. Professor András Benedek divided these 150 years into four stages:

- The beginning of the establishment of complex institutions (1870-1918)
- Trauma and revitalization (1919-1938)
- Moving away from tradition (1945-1990)
- Dealing with transformational dilemmas (1990-2020)

The author emphasized the roles and impacts of Vocational Training Laws (1993, 2011) and the establishment of the National Qualification System. The study ends with how the new strategical Vocational Training Law (2019) inspires the coming changes. It will give a challenge to next-generation researchers to analyze the results.

Monika Pogátsnik, in *'Developing 21st Century Skills in Engineering Education'*, writes about the 21st-century labour market changes requiring a shift from a one-track, one-way career model. It is no longer enough to have professional knowledge; transversal skills are crucial in career building and good employability. The author's comprehensive literature review reveals several employability skills that recent graduates need to enter the labour market. In addition, she presented the tool system of competence measurement developed at Óbuda University and the first results of the measurements performed with it.

In the second chapter, **Theory and Methodology**, there are five studies. In **Péter Tóth's** *'Fundamentals of Visual Cognition from the Perspective of Engineering Pedagogy'*, according to Rudolf Arnheim, when we perceive an object, "With an invisible finger we move through the space around us, go out to the distant places where things are found, touch them, catch them, scan their surfaces, trace their borders, explore their texture." (Arnheim, 1960, p28). Professor Péter Tóth stated that vision is an active exploration aimed at grasping the essential parts while ignoring the details. In the study, concepts such as shape form and structure and their main features are interpreted from the technical representations' point of view. In the second part, the issues of form analyses and design are illustrated from a methodological point of view, with many examples.

The following two papers were submitted from János Selye University, Slovakia. In *'Analyses of Physics and Chemistry Tasks Assessing Scientific thinking'* by **Zoltán Fehér, Ladislav Jaruska and Katarína Szarka**, the authors dealt with the presentation of Physics and Chemistry tests and the evaluation of the preliminary survey. They examined the validity and reliability of the tests and analyzed the effectiveness of the tasks according to scientific skills.

Barnabás Vajda wrote *'History Didactic and Research of History Books'*; the primary purpose of his history textbook research is to provide a scientific basis for better history textbooks. The author argued that for any textbook researcher who consistently applies the History Didactic point of view, the concept of 'content' does not merely involve the descriptive text. Nevertheless, the didactical apparatus has to be involved as well.

In **Alice Bredács's** *'What is Positive Pedagogy, an Educational, Methodical Collection or a Pedagogical System?'*, besides the transfer studies, the new trends initiate to develop both the researches and innovations to present the aspect and the modelling of the system. Within this framework, we can discover and examine the results that indicate the development and further innovation of the content and methodology of musical education. The author presented best practices from the Department of Special Talents at the University of Pécs Faculty of Art and Music.

According to **Boglárka Tóth**, in *'What are the Criteria for Good Children's Book Illustrations Based on Parents' Opinions?'*, to communicate at the appropriate level, the signs and symbols used in written and pictorial language must correspond to the children's intellectual and emotional characteristics. The authors and illustrators of storybooks try to take it into account in their works. The author of the paper surveyed parents and presented the results. She summarised the features of good illustrations and how they can support the emotional development of children.

The third chapter is **Teacher Training**, which contains three studies. **Anetta Bacsa-Bán**, in *'Alternative ways to Overcome Teacher Shortages'*, describes that the Hungarian education system is fighting with a structural teacher shortage, as there are fewer and fewer teachers with sufficient qualifications, and the number of applicants for teacher training has steadily decreased in the recent years. In order to address teacher shortages, many countries are trying to make it easier to enter the profession also for those whose previous experience comes from an area outside education. The author presented international best practices that could give solutions to overcome teacher shortages.

'The Pedagogical Practice of the Three-colour-Quiz Worksheet as a Formative Assessment Tool in Teacher Education' study by **Katarína Szarka and György Juhász** focuses on the formative assessment and its pedagogical practice. The authors characterized the aspects of formative assessment and its importance. They presented an excellent pedagogical practice of the selected formative assessment strategy.

Judit Vereckei's 'Dynamics of changes in our Education System in the Light of Institutional Leadership Tasks, Selection and Training' paper tried to track the changes in the education system and to explore the impacts of changes in the selection and training of the leaders of educational institutions. The author selected the 1993-2013 period because then the selection, tasks and authority of leaders were on a high level, and the accredited leader training was established. The conclusion of the study is: When the dynamics of changes in the education system strengthen – like in 1993 and nowadays –, the importance of institutional leaders' training increases; however, it can be valuable if we define the development trends.

The fourth chapter, **Studies of students' research**, consists of five studies. **Péter Tóth and Kinga Horváth's** 'Examination of the Thinking Ability of Pedagogical Students at János Selye University', is a study of inductive, and in particular abstract reasoning pervasive very extensive literature. However, putting these competencies into the context of dropout research is less typical. Therefore, the authors put the focus of the research directly on this area. The main objective was to analyze the components of abstract reasoning in terms of students who had achieved good results, and the overall sample and its connection to time were also examined. The authors stated that the time spent on the solution, the division, the course and parents' highest education could form three well-separable groups in the whole sample. In contrast, among the best-performing students, only two distinct groups could be classified.

According to 'Using Linguistic Mathematical Test to Evaluate Freshmen' by **Tibor Oláh, Szabolcs Berezvai, Bence Sipos and Brigitta Szilágyi**, there is a possibility to formulate multiple goals when students entering university education are tested. One of these may be whether the student has the knowledge required to complete a particular course. If not, we can recommend unsuccessful performers special catch-up courses to prevent them from falling out. The authors presented a complex test, which was completed by the few hundreds of first-year students. The proposed test included linguistic and mathematical questions, served as the basis for exploring the relationships between linguistic and mathematical cognition as well.

Agáta Csehiova and Katalin Nagy Kanczné's study, "Degree of Experience Seeking" the Results and Edification of the Research in Teacher Education, is part of the research conducted among students at János Selye University. The authors concluded that teacher candidates need influences in addition to acquiring academic knowledge, which strengthens their self-esteem, increases their ability to cope successfully, and positively influence their commitment to the teaching profession.

According to 'University Students and Sustainability Pilot Study among the Pedagogical Students of Selye University' by **Sarolta Darvay, Melinda Nagy, Éva Tar Tóth, Iveta Szenczi and Pál Balázs**, the main task of teacher training is to form health- and environment-conscious behaviour, as well as behaviour that recognizes current environmental problems. The authors conducted research based on a questionnaire assessing environmental awareness. Comparing the research results at the beginning and the end of teacher training, authors could receive an adequate picture of the effectiveness of the change of attitude and behaviour formation among the students during the university years.

Gábor Mácsár writes in 'Dropout Context Problem of Life-Goal and Motoric Ability Investigation among Law Enforcement Students' that dropout is a real problem for Law Enforcement students in university training. The author surveyed the National University of Public Service in 2018. Every first-grade student had completed a comprehensive test. The evaluation of the results led to general conclusions.

These 16 studies have met the expectations of the series of professional books: Vocational Training Pedagogical Scientific Publications. Therefore, the readers can look forward to the following publication.