

## MENTOR'S PERCEPTION OF THE FUTURE SCIENCE TEACHER'S TEACHING PRACTICE

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## ABSTRACT

**Aim.** The paper presents feedback on the effects of a new approach to the teaching practice of teacher trainees introduced in Serbia. Verification of the new approach is connected with a mentor training conception which has been under preparation within the frame of *Erasmus+ project 2020-1-SK01-KA201-07825 Mentor training* addressed in mutual cooperation of higher education institutions from Slovakia, Czech Republic, Hungary, and the Republic of Serbia.

**Methods.** Within the frame of the new approach, verification structured interviews were carried out with a research sample of ten mentor teachers – science teachers from primary and secondary schools. The teachers were asked about the teacher trainees' knowledge and skills (competences) they use within the lessons taught by them during their teaching practice, ways to improve the mentoring process, as well as mentors' competences and the ability to self-assess.

**Results.** The researchers collected rather positive opinions of mentors about mentees' knowledge and skills they come to schools with. At the same time, the mentors expressed high satisfaction with their own knowledge about their mentoring role and competences.

**Conclusion.** The paper presents, on the one hand, a good example of synergy of the national school policy strategies, introducing new approaches to the teaching practice of teacher trainees in Serbia. On the other hand, the goals of an international project are presented, which are meant to improve the quality of mentor-teachers at schools in Serbia.

**Key words:** teacher trainees, mentees, mentor-teachers, teacher trainees teaching practice, mentor training, international project, higher education institution

## INTRODUCTION

These days, education is facing many problems. Some authors, such as Mahmoud Azizi et al. (2021), Bonilla and Méndez Rivera (2008), Fatemeh Khonamri et al. (2021), Hedviga Tkáčová et al. (2021), Peter Kuna et al. (2018) and Monika Valentová and Peter Brečka (2020), propose to use some innovations, the generation and introduction of which can help to address the challenges qualified teachers are facing. Therefore, in recent decades, the role of mentors in the education system has become increasingly important (Duse et al., 2017; Gabrhelová & Pasternáková, 2016; Gadušová & Vítečková, 2013; Hrmo et al., 2015; Le & Vásquez, 2011; Whitehead & Fitzgerald, 2006). As the terms "mentor" and "mentee" are quite broad, in this paper, the term "mentor" will indicate an experienced teacher who works at school, has passed the state exam, and signed a special contract with the teacher training higher education institution to work with their teacher trainees, or, in other words, future teachers, i.e. mentees.

The term as well as the position of a mentor-teacher is introduced in the legislation of many countries. However, very little attention in general is paid to the training of teachers for this role. In most countries, there is offered no adequate preparation for teachers to become trained and qualified to act as mentor teachers. The teachers usually act as mentor teachers

only based on their previous practice. This was a reason why in four of the Central European countries an initiative to prepare a programme within the frame of which both in service teachers and mentor teachers could be trained to perform adequately in the mentor teacher position. The partners in the project (Erasmus+ project 2020-1-SK01-KA201-078250 Mentor training) are six higher education institutions from four countries: Constantine the Philosopher University in Nitra and J. Selye University in Komárno from Slovakia, Ostrava University and Prague University of Economics and Business from the Czech Republic, K. Eszterhazy University in Eger from Hungary, and finally, the University of Novi Sad from the Republic of Serbia. All the stated institutions have long-lasting experience and expertise in teacher training and communication with mentors responsible for teaching practice of teacher trainees and induction novices into their teaching practice. Analyses of the gained experience have shown that appointing mentors is done ad hoc and the mentors lack any support or training to perform well in this position. Realising the crucial role of mentors in the process of teacher training and education the project partners' intention is, as it has been stated in the project proposal, within the frame of the project:

- to support mentor teachers' professionalism and equip them with relevant mentoring knowledge and skills: thus, to make them more self-confident about their role;
- to increase the level of their mentoring competences and understanding of their importance;
- to develop an innovative modular mentor training programme for face-to-face and self-study implementation;
- to design and develop mentor training materials in five languages (English, Slovak, Czech, Hungarian, Serbian) reflecting the modular programme;
- to run teaching practice of teacher trainees and induction phase of novices in professional environment and make them more trainee friendly;
- to increase the quality of practical training of future teachers;
- to increase motivation and ensure willingness of young teachers to stay in the teaching profession;
- to strengthen the profile of the teaching profession (project Erasmus+ 2020-1-SK01-KA201-07825 Mentor training, <https://www.mentra.ukf.sk/rs/>).

In the Republic of Serbia, each novice teacher at the beginning of their teaching career is assigned to a more experienced colleague (mentor) who introduces them to the job and facilitates their transition from being a university student-teacher to their real work at school. In addition, to better prepare their students for the teaching profession, teacher training HEIs provide a number of pedagogical, psychological, and subject didactic courses that sum up to 30 ECTS and teaching practice of at least 6 ECTS. The

teaching practice of student-teachers at the Faculty of Sciences in Novi Sad consists of two parts. In its first part, mentees perform simulated lessons with their peers under the supervision of the university subject didactics teacher, to discuss, share and exchange ideas on ways to develop and improve their teaching skills and competences, which has proven to be a positive practice, as mentioned also in the paper of Aysegul Saglam Arslan et al. (2018). Moreover, in this part of their teaching practice, mentees can use different teaching approaches to explore potential improvements in their teaching techniques and procedures. In the second part of teaching practice, mentees go to primary and secondary schools (learners at the age 13-18) for teaching practice. Placing more emphasis on the importance of the mentees' practical work in school and educating more qualified teachers, the Faculty of Sciences in Novi Sad introduced the new system of teaching practice at schools in the 2018/2019 academic year, which is based on a closed system with strictly controlled mentoring conditions. Primary and secondary school teachers must apply for the position of a mentor in writing. In the application (Appendix 1), their competences are assessed by a three-member committee consisting of university experts in subject didactics. When selecting candidates for the position of a mentor, special focus is placed on their excellence and motivation in terms of their abilities to apply modern teaching methods and approaches, to provide feedback and use appropriate feedback techniques, to cooperate and work in teams, and many more. After approval of the application, a contract is concluded between the faculty and the selected teacher (mentor) for three academic years. Compared to the previous way of conducting teaching practice at schools, the novelty is in the legally regulated relationship between the mentor as an individual and the faculty. Previously, contracts were concluded only between the school and the faculty, without considering the competences and personal traits of different mentor-teachers. The new approach places a special emphasis on the importance of personal characteristics because mentors represent role models for their mentees (Embeir, 2003, as cited in Bonilla & Méndez Rivera, 2008, p. 82; Maturkanič, 2021; Zaragoza, 1998, as cited in Bonilla & Méndez Rivera, 2008, p. 82), whose task is to put into practice theoretical concepts that teacher trainees are taught at the faculty (Bonilla & Méndez Rivera, 2008; Ingersoll & Strong, 2011; Petrovská et al., 2018).

During the second part of the teaching practice at schools which is devoted to working with pupils and students, teacher trainees (mentees) have two tasks to complete. The first one is to think carefully before teaching each lesson about how they (mentees) would teach that lesson, and then, to discuss the strategies and teaching approaches and techniques that could be used during the lesson. After the lesson is over, they need to discuss with the mentor the teaching methods and approaches used in the lesson, learners' work, and other aspects of the lesson. The aim of these activities, the joint work of mentors and mentees on the issue of lesson planning, is to use

them for supporting their cooperation and improvement of mentees' preparation for work with learners. For example, when working with a motor disability learner, performing a larger number of hand-on experiments requires more time, so the number of experiments should be adjusted to the dispositions of all learners. The aspect of close cooperation of mentors with mentees is emphasised also by Douglas Larkin (Larkin, 2003, as cited in Mukeredzi, 2017, p. 2).

After observing several lessons taught by mentors, the mentees must teach several lessons under the mentor's supervision. The number of lessons depends on the subject matter taught and the weekly number of lessons for the age category of learners, but it is around 20 lessons in total. After each lesson, the mentor is obliged to give feedback to the mentees about the lesson just taught, so it is important for the mentor to be aware of the techniques of giving feedback in an encouraging way. At the end of the teaching practice at school, the mentor submits a report to the university teacher and, furthermore, the teacher trainees (mentees) must teach a lesson for learners which is observed by the mentor and university teacher. The mentee's lesson is then evaluated by learners, mentors, and university teachers. The mutual evaluation aims to raise the awareness of all participants about the educational process and to contribute to the development of the teacher trainee's professional identity and self-confidence.

Due to the sensitivity and complexity of the mentoring process, it is important to take into consideration the opinion of mentors about the ways to train teacher trainees (mentees), to identify and prevent problematic issues and discrepancies in the mentee's initial teacher training. Therefore, the aim of the research was to find out what are the mentors' opinions about the teacher trainees' pre-service knowledge and skills they come for teaching practice to schools, the ways to improve the mentoring process, and how mentors self-assess their mentoring competences. The research was also focused on potential mentoring problems with obtaining feedback from university teachers in terms of internal control over the evaluation of the success in implementing the new system of school practice.

## METHODS

### Sample

At first, there were 12 respondents, science mentor-teachers. Since two of them did not have experience with mentoring teacher trainees, science will-be-teachers, the opinions of these two respondents were excluded from further analyses. Most of the respondents were women, only two teachers were men. More than half of them teach in primary schools (60%), while the rest of them teach in secondary schools. Within the sample, there were geography, chemistry, biology, and physics teachers. One geography

teacher taught also civics classes. Six teachers have 8-15 years of teaching experience; three have 16-25 years of experience, and one has more than 26 years of teaching experience.

### **Instrument**

As the research instrument, the structured interview was used. For purposes of the structured interview, a set of 16 interview questions was developed. Most of them were open-ended questions (13 of them). The questions were divided into four groups. The first group included questions related to general information about the respondent: teacher's gender, type of school they teach at (primary or secondary school), subject the teachers teach, and the number of years of their teaching experience. The second group of questions included questions related to teachers' satisfaction with mentees' knowledge and competences, and their own knowledge about mentoring and mentoring competences. The third group of questions included questions related to the number of lessons needed to deal with some key subject matter and topics in teacher training in higher education institutions (HEIs). The topics addressed were: theoretical aspects of teaching methods, practical training in schools under the supervision of mentors, practical training at HEIs with their peers' involvement, and practical training in schools with real learners. The fourth group included questions related to different aspects of the mentees' teaching practice. The questions of this group were stated as follows:

- what would you change in the student-teachers' training for their teaching profession?
- did you have any problems with the mentees that could be avoided in the future?
- did you need any help in your work with the mentees? Can you specify what type of help was that?
- what competences do you consider to be crucial for mentors?
- are you interested in developing these competences?
- which of them do you find specifically important to develop?
- would you like to express any other general comments?

### **Procedure**

The data was collected in November 2020 using the Google forms platform. Respondents were informed that their participation was voluntary and that their answers would be anonymous and used only for research purposes. The sampling was convenient based on the number of mentors.

## **RESULTS**

The researchers collected generally positive mentors' opinions about mentees' knowledge and skills they come to schools with. The mentors

expressed high satisfaction with their knowledge about their mentoring role and mentoring competences.

As to the number of lessons needed to deal with theoretical aspects of teaching methods in HEIs, most of the mentors suggested a number in the range of 20 to 60 lessons as their optimal number. As to practical training in schools under the supervision of mentors, most of the mentors suggested a number of 5 to 20 lessons in total as their optimal number. One mentor suggested just two lessons but did not specify whether they mean that number in total or per week. For practical training at HEIs with their peers' involvement, mentors' responses vary from 2 to 40 lessons, but most of them think that more lessons would not harm and that "mentees would become more confident" in their teaching job. Finally, mentors mostly agreed that mentees need more lessons of practical training in schools with real learners. One of the mentors even stated that "mentees should have lessons with learners every day," while three of the mentors stated that five lessons in total were enough.

The fourth group of questions explored different aspects of teaching practice. The answers of mentors are related to two areas. The researchers found that mentors were either fully satisfied with the current state-of-the-art, i.e. they did not suggest any changes or they suggested introducing more lessons of teaching practice at school into teacher training curricula and better coordination of the lesson timetables at schools and at the faculty. They also stated satisfaction with mentees; they did not need any help with mentees, which correlates with the fact that they are satisfied with their awareness of the mentors' role and mentoring competences. They described their relationship with mentees as friendly and not problematic: "mentees are very conscientious, work hard, and are accurate; we come easily to a mutual agreement, and they respect our suggestions."

As for the competences, mentors consider important for their role as mentors, the answers varied a lot—starting with "anything you can think of" to more specified ones—"an ability to organise, communicate, cooperate, and solve problems." Among the latter answers, there could be found ones such as: "knowledge of the subject they teach"; "detailed planning work considering all aspects of teaching at different levels of learner development"; "ability to effectively achieve learning goals and outcomes"; "ability to support the individual development of learner's interests"; "ability to use and provide access to ICT", "materials from other countries, and current knowledge of science and technology"; "ability to apply relevant teaching methods and approaches".

Even though the mentors are aware of the importance of continuous education and development of competences and the need for them to keep up with the current changes in the educational process, three of them did not answer this question, while others said that "all competences should continually be improved." Only a few of them expressed interest in management training, courses in modern online communication,

and ICT. For mentors who did not answer the questions, it may be assumed that the reasons for that can be either the lack of finances and the lack of time while fulfilling combined personal and professional obligations. But despite that, the obtained data shows mentors' willingness to be involved in continuous learning and their commitment to work, which can be demonstrated using one of their comments: "mentees can learn a lot in teaching practice lessons, especially if mentors are dedicated and are properly working with them."

## DISCUSSION

The teaching practice at schools is a fundamental part of teacher training for every novice teacher (Bonilla & Méndez Rivera, 2008; Gadušová & Vitečková, 2013); therefore, the focus of this research was to find out the mentors' opinions about the mentee's prior knowledge and skills, and ways to improve and self-assess their own competences. Realising the importance of the role of mentors in training and shaping mentees as future teachers, the Faculty of Sciences in Novi Sad has created new conditions for mentors to work with mentees. The novelty of this approach is reflected in the new relationship between the mentor as an individual and the faculty. This shows the effort of the faculty to improve the ways of educating and training future teachers by taking into account the competences of mentors and improving the interaction between mentors and mentees. Now, the faculty carries out a selection of mentors based on their abilities and motivation for their mentoring work. Sandra Ximena Bonilla and Pilar Méndez Rivera (2008) highlight mentors' personal characteristics through mentors' sensitivity to guiding mentees on how to self-educate themselves and improve their skills, and how to identify and respond to their own needs. This ensures the development of mentees' competences in a positive atmosphere, reflecting on their identification with the teaching profession.

The research showed that mentors are generally satisfied with the mentees' knowledge base, but some mentors do see the need to increase the number of practical teaching lessons and better coordinate the timetables of lessons at school and at the faculty as ways to improve teaching practice at school. The optimal number of lessons varies and generally coincides with the number of lessons the mentees must attend and teach. It can be assumed that the mentors who stated the need for more lessons of teaching practice wanted to emphasise specific aspects of teaching practice at school and its adaptation to the mentees' needs. Specifically, more lessons of teaching practice provide more chances to teach, to pass knowledge and information to learners, to carry out laboratory work, to assess learners' work and others. Mentees would then be able to apply different teaching methods and approaches, to establish cooperation with other

mentors, and thus, to plan a lesson based on interdisciplinary approach to teaching. Furthermore, increasing the number of lessons affects the mentee's self-confidence and feeling of better preparedness for the teaching job (Ronfeldt et al., 2020).

Even though mentoring requires numerous competences, mentors expressed almost complete satisfaction with their competences, and as the most important competences they listed the ones related to the subject they teach, as well as interpersonal, communicational, and managerial ones. It was interesting to learn that most mentors were highly motivated to work with learners and mentees, but some of them did not mention any interest in developing some additional competences. Possibly, it is due to the lack of finances or the lack of time. Especially in those cases if one mentor guides two mentees, in addition to the regular school and family obligations, they do not have much free time left that they could devote to further education and training. All teachers in the Republic of Serbia are obliged to attend several professional development seminars, and for the development of some specific competences or skills, it would be necessary to allocate additional time. The lack of finances assumption was based on the research results of Sonja Petrovská et al. (2018) which showed that mentors felt they were not paid enough for their job. Nevertheless, this assumption should be further explored in future research.

To summarise the research findings, it is clear that the introduced new approach to sciences teaching school practice has been positively assessed by mentors, but it still needs further improvement.

## CONCLUSIONS

Using qualitative methodology, the opinions about the novel approach to school teaching practice of ten science subjects (geography, biology, chemistry and physics) mentor-teachers were explored and discussed. The research aim was to find out the opinions of mentors about the mentee's prior knowledge with which they come to school for teaching practice, to identify the ways to improve the mentoring process and determine how they self-assess their own mentoring competences. Results showed that mentors were mostly satisfied with all the discussed aspects. They saw mentees as very conscientious, hardworking, and accurate, which indicates a good working atmosphere and relationship between them. Most suggestions for improving school practice were related to introducing more teaching practice lessons, resulting in mentees being more confident in their knowledge and better prepared for their job. Therefore, even with suggestions for improvement, it can be concluded that the novel approach to school teaching practice is well designed.

## APPENDIX 1

Part of the public call for the selection of mentors for the needs of the implementation of school teaching practice for students at the Faculty of Science in Novi Sad:

### III

A person can be appointed as a mentor if they:  
 are employed in an elementary or secondary school as a teacher;  
 completed master or VII1 degree studies [note of the authors: completed master degree study is marked VII2; VII1 means that the person has completed his/her bachelor degree, a 4-year study of a faculty];  
 have at least five years of work experience in performing educational work at the school;  
 have passed the professional exam;  
 have the consent of the institution in which they are employed to be able to conduct professional internships.

### VI

If more candidates meet the conditions for the appointment of mentors, the priority is given to the candidate who has better results in professional development activities, application of acquired knowledge, dissemination and promotion of knowledge, participating in extracurricular activities and increasing the quality of educational work. (Rulebook on the Manner and Procedure of Acquiring the Title and Establishing the Employment Relationship between Teachers and Associates of the Faculty of Natural Sciences, University of Novi Sad, No. 0601-67/9, 2020, [www.pmf.uns.ac.rs](http://www.pmf.uns.ac.rs))

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