

Pre-service physics teachers' practical training under pandemic restrictions

Monday 13 December 2021 11:40 (20 minutes)

Abstract. The paper presents challenges caused by COVID-19 pandemic situation and lockdowns of pre-service teachers' practical training between March 2020 and May 2021. The standard structure of practical training is introduced and the impact of pandemic restrictions on practical training from pre-service teachers' and supervising teachers' views are described. Suggestions for future design of practical training are formulated.

1 Introduction

Practical training of pre-service teachers is crucial part of their professional identity development [1]. Pre-service physics teachers undergo their practical training at lower and upper secondary schools under the supervision of experienced physics teachers. Students of the Faculty of mathematics, physics and informatics, Comenius University in Bratislava (FMPhI CU) complete their training in Bratislava, regardless of which part of Slovakia they come from. The training consists of three parts as characterized in Tab.1., terms are fixed in the Study schedule.

Table 1. Standard structure of pre-service physics teachers' practical training FMPhI CU

Practical training Phase of the study Duration and term of the practical training Form of the training

Part I. 3rd year

of bachelor study 1 week (April) Observation, 2x micro-teaching (short teaching episode), analysis of lessons with supervising teacher

Part II. 1st year

of master study 2 weeks (February-March) Observation, 2x micro-teaching, teaching 4 complete lessons, analysis of lessons with supervising teacher

Part III. 2nd year

of master study 3 weeks (September –October) Observation, teaching 12 complete lessons (at least 8 different), analysis of lessons with supervising teacher

2 Organizing practical training under pandemic restrictions

The main problem in organizing the practical training in March 2020 was the uncertainty of the way schools work. Upper secondary schools in Bratislava region were closed. Lower secondary schools were open, but school-managements feared the health consequences of pre-service teachers' presence in the school and canceled the agreed practical trainings. Therefore, students who had a practical training scheduled for March, completed it in an alternative form under the guidance of a university teacher. From April 2020 schools switched to distance education and the practical training took place online. Several supervising teachers canceled the agreed practical training because they did not feel confident in online teaching. (In general, less than 31% of Slovak teachers felt confident in their own readiness to teach distantly.) Other experienced teachers were contacted instead.

In September 2020, the schools were opened. However, the general closure of schools and the transition to distance education were expected. All pre-service teachers studying at FMPhI CU had their training in face-to-face form at lower secondary schools in their place of residence. In several cases, small size of school caused reduction of lessons completely taught by the pre-service teacher.

From the middle of October schools 2020 switched to distance education again. All pre-service teachers studying at FMPhI CU had their Part I. or Part II. of practical training in distance online form.

3 Pre-service teachers' view

All FMPhI CU students use distance learning in the form of asynchronous supportive courses in the learning management system Moodle and multimedia materials. However, this is not sufficient preparation for full-fledged distance learning, and not at all for effective online teaching. In March 2020 pre-service physics teachers had no experience with online synchronous education.

The pre-service physics teachers were glad that they had practical training at all. Many of them welcomed that they could have training in their place of residence, in schools where they had previously studied, so they were in a familiar environment.

4 Supervising teachers' view

Several teachers canceled the agreed practical training because they did not feel confident in online teaching. Those, who agreed to supervise pre-service teachers, rated the experience positively. Pre-service teachers brought to practice of online physics education some new resources and teaching methods (e.g. simulations, applets and video-measurements), which supervising teachers had not used before. Pre-service teachers were helpful in solving some technical problems and actively contributed to the creation of online learning content.

5 Conclusion

Realization of practical training in familiar environment of a school in students' place of residence is an opportunity to meet pre-service teachers' needs. At the same time, it is a challenge to find inspiring experienced supervising teachers in different regions of the country. Online introductory meeting of the pre-service teacher and the supervising teacher before visiting the school is a new opportunity to improve quality and effectivity of practical training.

Acknowledgements

This work has been supported by the Scientific Grant Agency of the Ministry of Education, under the contract VEGA 1/0273/19 "Tutoring and Scaffolding in the Preparation of Pre-Service Physics Teachers".

References

[1] H. Zhao, X. Zhang The influence of Field Teaching Practice on Pre-service Teachers' Professional Identity: A Mixed Method Study, *Front. Psychol.* 8 (2017), doi: 10.3389/fpsych.2017.01264

Primary authors: Dr HORVATH, Peter (Comenius University in Bratislava, Faculty of Mathematics, Physics and Informatics); Dr HAVERLIKOVÁ, Viera (Comenius University in Bratislava, Faculty of mathematics, Physics and Informatics)

Presenters: Dr HAVERLIKOVÁ, Viera (Comenius University in Bratislava, Faculty of mathematics, Physics and Informatics); HAVERLÍKOVÁ, Viera (associate professor)

Session Classification: Parallel 1 - Wrocław

Track Classification: 9. Initial teacher education, teacher professional development and Technological Pedagogical Content Knowledge