

CHANGES IN THE USE OF RESOURCES IN TEACHING PHYSICS DUE TO THE INFLUENCE OF DISTANCE LEARNING

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INTRODUCTION

During the COVID-19 pandemic, schools in many countries switched to distance learning. However, in Slovakia, schools were closed for a relatively long time. Within Europe, Slovakia is among the worst countries in terms of the number of days with closed schools (Hajdúchová, 2021). Several organizations, such as Nadácia Dionýza Ilkoviča (2020) have addressed, how teachers in Slovakia coped with online teaching. As a part of the MaTeK project (MaTeK, 2022), in which countries including Slovakia, the Czech Republic, Italy, Norway and Turkey are involved, we conducted research focused on the use of resources by teachers of mathematics for the preparation and implementation of their lessons. As a part of the research, one question asked teachers if their use of resources had changed due to COVID-19. Since several teachers answered that they discovered new resources thanks to COVID-19, we decided to pay more attention to this topic.

METHODOLOGY

As a part of our research, in cooperation with the Czech Republic, we will focus on the use of resources before, during, and after the distance teaching. Our research is focused on teaching of mathematics and physics in primary and secondary schools. In this contribution, we will only deal with the use of resources in physics lessons in Slovakia. Our goal is to find out what resources physics teachers used before distance teaching, what new resources they discovered during online teaching, and we are also interested in the question of which resources they continued to use even though distance teaching ended, so currently during face-to-face teaching. For this reason, we set the following research questions:

RQ1: Which methods did teachers find useful and working for pupils during the lockdown?

RQ2: What changed in teachers' use of resources during and after the lockdown?

RQ3: Do teachers still use new methods or approaches from RQ1 now? If so when, why, and for what?

Research is currently underway. Data collection has been ongoing since July 2022, and the expected end date of data collection is September 2022. The data is collected by a questionnaire that we sent to the teachers of mathematics and/or physics. The questionnaire consists of two parts: in the first part, based on whether the respondent teaches mathematics, physics, or both subjects, we ask about the use of resources before, during, and after the distance learning. The second part of the questionnaire contains demographic questions. The questionnaire consists of open, semi-open, and closed questions. In the questionnaire, respondents can sign up for an interview, in the framework of which we will find out more about the use of their resources.

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