

Abstract

This diploma thesis describes practical activities and related topics during forced distant education due to COVID-19 pandemic. In the theoretical part of thesis, the distant education is defined. I also described some of its features, which includes absence of physical contact, use of communication platforms, synchrony and asynchrony form of lesson, need for some degree of independence and digital competence. Anonymous questionnaires were made to collect the data from students and their science subjects' teachers (biology, chemistry, and physics). The questions were with free answers, closed answers with choices or scale values. Respondents consisted of 543 students and 24 teachers from Prague and Central Bohemian Region. The answers were categorized and frequencies calculated. The values of numeric answers such as mean, median, minimum and maximum were measured. The relationship between data was analysed by Pearson's chi squared test of independence. This study shows that teachers used practical activities such as experiments, observation or creating something less in distance lessons, compared to their face to face lessons. On the contrary tasks based on text work were used more often. The analysis showed that students preferred tasks containing creating something. Most teachers taught in both ways: synchronous and asynchronous. School management's support of teachers was perceived as sufficient. Even though the analysis revealed that students prefer face to face form of practical activities, at the same time it showed the usefulness of distance practical activities as motivation or possibility to take a break from computer.

Key words: distance, practical exercises, practicum, online, biology, laboratory exercises, distance education, online learning, practical activities, pandemic, COVID-19, teaching, elementary school, high school