

Pass rate of students of Chemistry teaching at final state exam: Case study analysing influences of success rate of students with stress on distance learning during Covid-19 pandemic

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Abstract

Students of all chemically focused study programmes at Faculty of Science of Masaryk University in Brno finish their bachelor studies by defending the final thesis and passing the final state exam. This exam has a form of a written achievement test. The test is composed of five parts where each part covers different area of chemistry – inorganic, analytical, physical, organic chemistry, and biochemistry. In the spring term 2022, the abnormally low pass rate of bachelor student of Chemistry teaching at final state exam occurred. For this reason, the inquiry was launched to map a situation and identify the causation.

Within the case study, a statistical analysis of the tests was carried out for Chemistry teaching students. This involved determining the location and scale parameters of the test and its individual parts. And it also included determining difficulty and sensitivity of the single tasks. Another used research method was a questionnaire survey for involved students. Respondents should express their experience, opinions and feelings related to their present study at the university. Some of the questions were focused on implementation of distant learning during the Covid-19 pandemic.

The results obtained from both research methods were compared and summarised. Subsequently, several modifications concerning organisation of final exam and content of the test were suggested. Some of the proposed changes were accepted and introduced. In this and following years, we are planning to continue gathering data to evaluate impact of implemented changes and formulate further optimisations.

References

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Keywords

chemistry education; case study; final state exam; distant learning