

Assessment and test analytics service

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The project aims create a web-based analytical tool for lecturers to help them create tests and evaluate the questions included in the tests. The assessment systems that are widely used nowadays are mainly focused on student evaluation and pay less attention to analyzing how well the test was balanced in terms of questions of different difficulty levels. The service developed within this project will make it easier for lecturers to identify well-constructed questions, evaluate them and see how students perform on each question type.

To achieve this, the system automatically evaluates each question based on student performance data and classifies it as easy, medium and difficult. It will also provide information on how well do low and high achieving students handle each question. This will be accomplished using two methods: Classical Test Theory (CTT) [1] and Discrimination Index (DI) [1]. Based on this data, the lecturer will be able to track trends over time and reuse high-quality questions.

The project's final goal is to build a functional, extensible web service that provides lecturers with objective information on the level of questions included in the test and helps them design balanced tests using the questions in the database.

References

[1] David Baidoo-Anu “ Understanding Multiple Choice Test Item Analysis Report from DataLink” <https://tlconestoga.ca/understanding-multiple-choice-test-item-analysis-report-from-datalink/>