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Multiplatform software tool to disaggregate and adjust value-added learning scores

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MULTIPLATFORM SOFTWARE TOOL TO DISAGGREGATE AND ADJUST VALUE-ADDED LEARNING SCORES

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URL: https://tazzben.github.io/WW/

In 2016, Walstad and Wagner released an article that suggested practitioners should disaggregate value-added learning scores into four categories: positive, negative, retained, and zero learning. Positive learning is said to occur when a student answers a question incorrectly on the pre-test and correctly on the post-test. Negative learning is said to occur when the student correctly answers the question on the pre-test but incorrectly on the post-test. Retained learning is said to occur when the student answers the question correctly on both exams and zero learning is said to occur when the student answers the question incorrectly on both exams. Smith and Wagner (2017) improved on this work by adjusting the learning categories for guessing.

These distinct learning types provide the instructor with fundamentally different information and yet are intermixed in the traditional flow of knowledge measurement (post-test minus pre-test). Therefore, the interested instructor might disaggregate their class test results for pedagogical improvement reasons. While a procedure in Excel can be used to perform this disaggregation (Walstad 2016), it's time-consuming and does not scale when the disaggregation needs to be calculated for every class within a department or college. The Assessment Disaggregation software solves this problem. The program reads standard CSV Scantron output files usually produced by the institution's testing center and provides both the original Walstad

and Wagner (2016) learning values and adjusted estimates by Smith and Wagner (2017). Further, by supplying an assessment map file, the questions need not appear in the same order on the pre- and post-test. Because there is both a graphical and command line version of the software, the procedure can be incorporated into batch processing or folder actions when the disaggregation is part of a large assessment procedure. Both Windows and Mac versions of the tools are available for download on the Web site.

REFERENCES

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