



WAVES National Pilot Study

Critical Thinking & Student Writing

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INTRODUCTION

Bowie State University (BSU) is one of eight institutions participating in a U.S. Dept. of Education (DOEd)/Educational Testing Services (ETS) grant called WAVES. This project is studying critical thinking and writing to ascertain how achievement in these areas relates to student success in college. Students take two on-line assessments to measure skills in critical thinking and writing, as well as a writing attitudes survey. They also upload three writing assignments, which are reviewed with an Automated Writing Evaluation (AWE) program.

The Center for Academic Programs Assessment (CAPA) is administering these assessments at BSU. Assessing freshmen students allows CAPA to determine whether student performance in writing, and the relationship to academic success during the student's college career, changes from freshman to senior year.

RESEARCH METHODS

The pilot focuses on conventions, topicality, coherence, organization, and source use/integration. Researchers are also analyzing whether critical thinking skills correlate with writing ability and whether the student's interest, engagement, goal-setting and motivation in writing correlate with the student's writing ability.

RESULTS

In fall 2017, CAPA tested 76 freshmen in critical thinking, with 514 tested nationally, and 101 in writing, with 929 tested nationally. An additional 76 freshmen have taken the critical thinking assessment, and the writing assessment is scheduled to be completed later in the spring semester.

Table 1 shows fall 2017 BSU participation rates in critical thinking and writing. Bowie State is the only HBCU represented in the study.

Preliminary results are expected in the summer of 2018 and will be analyzed summer and fall 2018. National and institutional data are expected by December 2018. Results will be analyzed and shared with BSU administrators and faculty.

TABLE 1: BSU Participation Rates

<i>Fall 2017 BSU WAVES Participation Rates</i>	
BSU - Critical Thinking	15%
BSU – Writing	11%

CONCLUSION

Overall initial findings from the ETS' analysis of all student writing samples via the Automated Writing Evaluation (AWE) program suggest that:

"...features from essays were found to be predictors of broader outcome measures: college success indicators and learning outcome measures" (Burstein, p. 101).

Complete data analysis will be available from ETS late 2018. Further analysis of the results of the critical thinking and writing assessments for BSU students will be conducted by BSU assessment staff, and findings will be presented at the 2019 Research Expo.

DISCUSSION

The WAVES data will be triangulated with other national standardized assessments. The findings from further analysis of the data will be used by assessment staff and English faculty to inform future practice.

ACKNOWLEDGEMENTS

Thank you to the faculty members who volunteered their class time so that the WAVES study of critical thinking and writing could be administered to their students.

Burstein, J., McCaffrey, D., Klebanov, B. and Ling, G. (2017). In *Proceedings of the 12th Workshop on Innovative Use of NLP for Building Educational Applications*, p. 101–108: Copenhagen, Denmark, September 8, 2017.