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RB-714
*A Preliminary Study of MY Access!™ Use
in an Urban At-Risk Summer School Program*



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Introduction

This document is one of a series of Vantage Learning Research Briefs discussing technical and conceptual issues related to IntelliMetric™ and the MY Access! portfolio-based, online writing application based on the IntelliMetric automated essay scoring engine. IntelliMetric has been shown to be an effective tool for scoring essay-type, constructed response questions across K-12, higher education and professional training environments as well as within a variety of content areas and assessment purposes.

This document summarizes a preliminary study exploring the efficacy of MY Access! as a tool to develop student writing skills. This study reports on one class' MY Access! experience. A broader study of the impact of MY Access! use will be completed in the Summer of 2002 and will report on MY ACCESS! use in urban, suburban, and rural environments under a variety of instructional conditions.

This study is based on 25 MY Access! student writing portfolios created during the Summer of 2001 as part of a Summer School writing development program for at risk students in an urban environment. Twenty five students enrolled in the Summer School Program used MY Access! as a central component of their developmental writing program over the course of the summer.

Overview of MY Access! and IntelliMetric. IntelliMetric is an intelligent scoring system that emulates the process carried out by human scorers. The system is "trained" with a set of previously scored responses containing "known score" marker papers for each score point. These papers are used as a basis for the system to infer the rubric and the pooled judgments of the human scorers. Relying on Vantage Technologies' proprietary CogniSearch™ and Quantum Reasoning™ Technologies, the IntelliMetric system internalizes the characteristics of the responses associated with each score point and applies this intelligence in subsequent scoring. The approach is consistent with typical K-12 and higher education expert scoring models.

IntelliMetric creates a unique solution for each stimulus or prompt. This is conceptually similar to prompt-specific training for human scorers. For this reason, IntelliMetric is able to achieve impressive correlations with the scores of human readers and high matching percentages with scores awarded by humans.

Previous studies across a variety of environments and purposes have shown IntelliMetric to be an effective tool for scoring responses to open-ended,



essay-type questions.

MY Access! is an instructional writing product developed based on the IntelliMetric engine. MY Access! provides students with the ability to write to several grade level appropriate prompts, receive immediate feedback on their writing and revise their writing as appropriate. Students maintain their work in an online portfolio that contains their initial draft, evaluation scores and subsequent revisions. Similarly, teachers can view any individual student's portfolio, provide comments and track the overall class portfolio to manage writing instruction.

Study Design

This preliminary study provides an initial view of the efficacy of MY Access! for use in improving student writing as part of developmental K-12 coursework. A single class of 25 students was selected to participate in the study.

Participants. Twenty five grade nine students participated in the study. These students were part of a Summer school program offered in an urban school district for at risk students. At risk students were those who performed poorly academically, exhibited poor writing and/or had poor standardized test results in the language arts area. These students were seen as at risk for continued poor academic success and potential failure on statewide writing assessments.

Design. The study was conducted from July 1, 2001 to August 18, 2001. All twenty five students were provided with passwords and access to MY Access! and were informed that MY Access! would be used as a core component of the Summer School program with the goal of improving their writing skills. Students were provided with specific writing assignments on an approximately weekly basis and were also encouraged to do additional writing at their own discretion. Approximately 4 writing prompts were assigned over the course of the study. Students typically did between 2 and 5 revisions of each of the assigned prompts.

Student performance on their first response was compared to their performance on their last submission as a measure of writing improvement. Student performance was compared overall as well as on five dimensions of writing (see below).

Feedback/Scoring. Students were provided feedback on a four-point scale based on the MY Access! rubric. For each response submitted, students received an overall score, as well as a score in focus, organization, development, sentence structure and mechanics. Students also had access to sample high quality responses and additional instructional information through the MY Access! application.

Results

The average score obtained initially by students and the final score obtained as described above were compared as a measure of writing improvement.

Student Improvement. Twenty one of the twenty five students showed some improvement in their writing performance. Seventeen of the twenty one students showing improvement showed growth in their overall score, while the remaining four showed growth in one or more aspects of their

writing as reflected in the dimensional score.

Overall Score Results. The average overall score at the beginning of the program was 2.00. At the conclusion of the program, the overall average score was 2.84. Students showed an overall improvement in writing of nearly a point on the four point scale.

Focus Score Results. The average focus score at the beginning of the program was 1.96. At the conclusion of the program, the average focus score was 2.44. Students showed an improvement in focus of nearly one half point on the four point scale.

Development Score Results. The average development score at the beginning of the program was 1.92. At the conclusion of the program, the average development score was 2.80. Students showed an improvement in development of nearly a point on the four point scale.

Organization Score Results. The average organization score at the beginning of the program was 1.92. At the conclusion of the program, the average organization score was 2.64. Students showed an improvement in organization of nearly a point on the four point scale.

Sentence Structure Score Results. The average sentence structure score at the beginning of the program was 1.92. At the conclusion of the program, the average sentence structure score was 2.48. Students showed an improvement in sentence structure of just over one half point on the four point scale.

Mechanics Score Results. The average mechanics score at the beginning of the program was 1.96. At the conclusion of the program, the average mechanics score was 2.60. Students showed an improvement in mechanics of nearly two thirds of a point on the four point scale.

Discussion

In a span of just over 6 weeks, students showed significant gains in writing performance. Students gained, on average, between one half and one full point on the four point scale. Given the narrow range of the scale (1-4) this represents substantial growth. One point represents 25% improvement in performance. Perhaps more importantly, students moved from about the “2” point on the scale to the “3” Point on the scale; in typical statewide student assessments this often represents the difference between failing and passing.

At risk students in Summer school programs such as this represent a significant instructional challenge. Minimal growth is generally seen in such programs. The magnitude of the growth seen in this preliminary study suggests that MY Access! is a valuable tool for writing development instruction.





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