EXECUTIVE SUMMARY
Noreen Moore and Charles MacArthur

Review of Literature

There is a growing body of research to support the validity and reliability of automated essay scoring (AES) technology in scoring writing quality (Shermis, Burstein, & Leacock, 2006). Research has shown that there are different types of AES systems, some of which have the capability of evaluating the semantic quality of texts (Landauer, Laham, & Foltz, 2003). More recently, AES technology has been integrated into K-12 classrooms and is being utilized as an instructional tool; however, research is just beginning to explore the instructional capability of these systems. Two studies have examined the effects of a program designed to help students write summaries by giving them feedback on content coverage and length. Students who received the feedback spent longer revising their work and received higher content and quality scores than students who worked without feedback (Franzke, et. al, 2005; Wade-Stein & Kintsch, 2004). Other studies have focused on teachers’ and students’ use of various aspects of AES technologies. For example, Grimes and Warschauer (2006) examined how teachers and students made use of the automated feedback in MY Access! . Although teachers had positive opinions of the software, they did not use it often, and students generally did not use it to make revisions. Finally, Attali (2004) analyzed a set of 30,000 essays submitted as part of the instructional use of a particular AES system. Of the essays that were revised, average improvements were noted on the traits that were evaluated. However, only about 30% of the essays were revised.

None of the cited studies examined how AES technology is being used to support writing instruction and learning in the classroom; instead previous research used the reporting features within the AES systems to gather data. The current study aims to address this gap in the
literature by providing a rich case study of how a teacher and his students use AES technology in the classroom on a daily basis to support writing, with a specific emphasis on revision.

Research on composing processes suggests that developing writers do not engage in revision often whereas proficient writers revise frequently and extensively (Bereiter & Scardamalia, 1987; Hayes, 1996; Hayes, 2004). One reason developing writers may not engage in revision more frequently is that revision is a cognitively challenging task that requires writers to read their writing critically, evaluate, and rewrite if necessary (McCutchen, 2006). Despite it being a challenging task, revision is an important skill for developing writers to learn because it leads to better overall quality texts and provides a time during which writers can improve their skills (Fitzgerald, 1987; MacArthur, 2007). One way to encourage revision is through teacher response. However, it is often difficult for teachers to single-handedly supply students with feedback on multiple drafts of the same assignment. Peer feedback is one solution to this problem. Automated essay scoring is another way to provide more frequent feedback to individual students and it may lead to increased revision activity.

Several instructional techniques that support revision have been found to be effective. These include teaching students evaluation criteria and providing written feedback. In general, knowledge of evaluation criteria leads to increased revision and overall writing quality (Hillocks, 1986, MacArthur, 2007). Specifically, peer revision can help students learn and apply evaluation criteria (Boscolo & Ascorti, 2004; MacArthur, et al., 1991). White (1998) suggests that when writers can internalize a set of evaluation criteria, they can improve their skills as writers. Broad (2003) advises that evaluation criteria be context specific. Another related instructional technique that fosters revision is teacher and peer feedback (Hillocks, 1986). Research suggests that teachers tend to make editorial comments, which lead to grammatical and spelling revisions
(Matsumura, et al., 2002). However, certain types of feedback, such as reader-based feedback, help students learn to self-evaluate and formulate revisions on their own (Beach, 1976; Ferris, 1997). Student writers also prefer specific comments that provide clear explanations (Ferris, 2003). Finally, Broad (2003) suggests that teacher feedback is more effective when it complements instruction. The feedback given by automated essay scoring technologies is typically based on analytic or holistic rubrics based on one, several or all of the six traits of writing: focus, content and ideas, organization, language use, conventions, voice.

Overall more research is needed to understand the potential of AES systems as instructional tools to support developing writers’ revision processes. That is, can AES systems provide valid feedback at a level that is specific enough for students to use? Can students use it to improve their papers? How can classroom instruction be designed to achieve these ends? Previous research on AES systems as instructional tools focused on data collected by the AES systems themselves (i.e., number of submissions, writing scores, written texts). Research needs to examine the use of AES systems in real classroom contexts to understand how instruction interacts with the use of the technology. Research also needs to examine students’ writing processes as they use the technology to understand the potential of AES in supporting the development of writing skills.

Research Questions

Three research questions guided the present study:

1. How do teachers use AES technology to support writing instruction with a specific emphasis on revision?

2. How do students use AES technology to support learning with a particular emphasis on revision?
3. What are teachers’ and students’ perceptions of the AES technology?

Method

Participants and Setting

The current study included data from one classroom at one elementary school. The site was selected based on several criteria: 1) the school must already be using AES technology; 2) the classroom teacher of focus must have used the AES technology for at least one year; 3) the classroom teacher of focus must be recommended by the principal as an exemplary teacher of writing. The focus school was located in a large suburban school district in the northeast part of the United States. It served approximately 520 children in kindergarten through fifth grade. The school is diverse in race/ethnicity, English proficiency level, socioeconomic status, and disability.

All of the four, fifth-grade classrooms at the school were using the MY Access! program, an AES technology, as part of their school-wide writing program, which was based on a Six + 1 writing traits model (henceforth referred to as Six + 1 Writing Traits program). The data collection for this study took place during the second year the school was using MY Access!.

Prior to the adoption of the MY Access! program, the fifth grade classroom used the Six + 1 Writing Traits program as their primary writing instructional materials. With the adoption of MY Access!, the fifth grade classes continued to use Six + 1 Writing Traits, but also worked on MY Access!. The fifth-grade students worked on the MY Access! program in the school computer lab, which had 30 desktop computers with Internet connection.

The classroom of focus for data collection was a group of twenty-three, normally achieving fifth-grade students (13=female; 10 male) ranging in age from 10 to 11 years. 70% of the students were white, 13% were African American, and 17% were Hispanic. The primary
language of 13% of the students was Spanish and the remaining students’ primary language was English. The fifth grade teacher, Michael, is certified in elementary education, has more than 20 years of teaching experience, and was recommended by his principal as an exemplary teacher of writing. Within the target classroom, six students of varying writing abilities were selected to participate in concurrent and retrospective think aloud interviews about their use of the program.

In addition to the target classroom, the school principal, two additional fifth-grade teachers using the MY Access! program in their classrooms, and the computer teacher were interviewed about their use of the program. The principal had over 20 years of teaching experience and a total of 10 years experience as an assistant principal and a principal. All teachers had more than 10 years of experience teaching a range of grade levels.

**MY Access! Program**

The AES program the school selected to use was MY Access!. The MY Access! program is prompt based; students log on and write to existing prompts (narrative, informative, persuasive, text-based, literary) or teacher-created prompts. Students can compose their essays directly in the program using the on-line word processor and tools. Students receive an immediate score (holistic) and/or a series of trait scores (analytic) depending on the setting the teacher selects. In addition, students are scored on a 6-point or 4-point rubric depending upon the setting the teacher selects. Students also receive feedback to help them improve their writing. MY Tutor feedback is general feedback tied to the trait, score, and genre. MY Editor feedback is in-line feedback on grammar and spelling. All students’ writing with scores and feedback is stored in an online portfolio and can be accessed at anytime. More information and a demonstration of the technology can be found at [www.vantagelearning.com](http://www.vantagelearning.com).

**Data Collection**
Qualitative methods were used for the case study in order to provide rich descriptions of teacher and student use of the AES technology in their writing classroom as well as to provide detailed insights on teachers’ and students’ perceptions of the AES technology. Data included classroom observations over several weeks (ten hour-long observations took place over the course of two and a half months). In addition, instructional artifacts (i.e., worksheets, handouts, etc.) were collected and the teacher kept a detailed writing log of the content of each day’s writing lesson for the duration of the study. During classroom observations, informal interviews with teachers and students were recorded. Six students participated individually in think-alouds and semi-structured interviews with a researcher. Each of the six students participated in one 45-minute think-aloud session followed by a 15 minute retrospective, semi-structured interview. The target students’ writing folders were also collected. These folders contained prewriting, multiple draft, and revisions of MY Access! writing assignments, and other writing assignments that the target students were working on during the time the study took place. Finally, formal interviews were conducted with the target classroom teachers, the principal, and several additional classroom teachers using the AES technology at each site.

Data Analysis

There were three phases of analyses. The first phase included re-reading all data and making memos about overall impressions. During the second phase, codes were developed inductively using constant comparative analysis (Merriam, 2002). All observational data, instructional artifacts, think-aloud and semi-structured interview data, and teacher and principal interviews were coded. The third phase included an in-depth analysis of the revisions and revision processes evident during student think-alouds and semi-structured interviews. All changes made to a text during a think aloud session were counted as revisions. Two researchers identified
revisions and coded each revision according to the following four categories: level, operation, success, purpose, and source. Level referred to the syntactic level of the revision and could be categorized into surface (mechanics, spelling) and non-surface (sentence, word, phrase) revisions. Operation referred to the action taken when carrying out the revision: adding, deleting, substituting, rewriting, etc. The success of a revision fell into one of three categories: major improvement, minor local improvement, or no improvement. Using students’ think aloud and semi-structured interview data, we traced revisions to students’ purpose for making the revision if possible. In addition, we used the think aloud data to trace revisions back to the source (i.e., MY Access! feedback, peers, teacher) of the reason for making a change if possible.

Results

How does one fifth grade teacher use automated essay scoring to support writing instruction?

Analysis of teacher interviews, classroom observations, and instructional artifacts show that Michael uses the MY Access! program to support his writing instruction in several ways. First, Michael uses a combination of teacher-created and MY Access! resources to support instruction about genre, writing strategies, and processes. However, a larger proportion of these resources come directly from the MY Access! program. For example, units were structured around MY Access! writing prompts and instruction included introduction of prompts and genre, introduction and completion of MY Access! graphic organizers during planning, reviewing and evaluating MY Access! anchor papers, and the assignment of revision tasks using the feedback in the program.

Secondly, Michael used the class report feature from MY Access! to focus his revision instruction. This report allowed Michael to see the traits where his students scored the lowest;
using this information, Michael planned a mini lesson and peer-revision activity to help his students improve their papers in the trait area.

Third, My Access! afforded Michael time to meet individually with students about their writing. Although MY Access! resources are used to support Michael’s instruction, his main instruction does not take place while students are working on the MY Access! program in the computer lab. Instead, students learn about, plan, compose and revise on paper in the classroom before entering their essays into MY Access! in the computer lab. As a result, the primary use of the MY Access! computer program for the students is to enter already written and revised writing for evaluation and feedback. However, when students are entering their essays into MY Access!, Michael is able to walk around the lab and read his students writing on the computer screens. In addition, he has time to meet individually with students about their writing in this setting.

How do fifth grade students use MY Access to support writing?

This section will focus more closely on student interaction with the program. As such, it is organized to take the reader through the steps students complete as they use the program, with a particular focus on their revision activity. These steps are: submitting, receiving scores, and reading and using feedback.

Submitting

Students submit their essays to MY Access! for scoring and feedback only after they believe they have written their best draft. Talking to the teacher and using the spelling and grammar tools are ways for students to confirm that they have their best draft and are ready to submit their essays for evaluation.

Scoring
When students submit their papers, they immediately receive six scores: one holistic score and five analytic scores. The analytic traits on which students are evaluated are: focus and meaning, organization, content and development, language use and style, and grammar and mechanics. In general, students attended to the numeric score above and beyond the meaning behind the scores. However, scoring seemed to play several roles in motivating students’ writing and revising. First, during think alouds and in classroom observations, frequent emotional exclamations such as “wow,” “whoa” “uggh…that’s pretty bad” were heard from students who just received scores from MY Access!. Secondly, students note that scores help them gauge how they are doing on her writing. One student remarked, “I think it’s better [than not getting a score] because it shows me what I need to improve on my story and if I stay on topic.” Third, scores led students to spend more time revising. This is evident in students’ think-alouds. One student reported, “wait…I’m gonna add some details here…trying to at least get to a 5…and still add some more.” Finally, scores also motivated students to set goals for future revisions. For example, on student explained, “I got a 4.6. And my weakest is my organization, and my content and development. So those are the ones I’m really gonna work on.”

When asked what the scores represent, it is apparent that the students do not understand the criteria by which they are being evaluated. In fact, when asked what each trait on which they were evaluated meant, students could not answer. When asked about conventions, one student admitted that he really did not know what it meant, “and conventions…I really…I didn’t really get a lot about that um…it just happened I really don’t know what goes on with that.” Other students define the criteria with the word itself. When asked what focus meant, one student said, “how much focus you’re putting into your writing.” And some other students create their own definitions, “Content and development is when you…I didn’t really understand this that well, but
the way I think of content and development is like in a statue...usually they put a framing on it like a metal framing then they put the whatever they are going to put on top of it.”

When asked if they agreed with the scores that *MY Access!* gave them, students either agreed or disagreed; there did not appear to be a general trend towards agreement or disagreement. However, it is interesting to note the rationale that students gave for either agreeing or disagreeing with their scores. Students who agreed with their scores usually scored high and believed they received the correct score because of their hard work; students rarely mentioned specific characteristics of their writing that may have led to a high score. For example, Hailey remarked that she agreed with her scores because “I put a lot of effort into it and like I would be up some nights until and I didn’t have to be lights out and everything until 9:00 so some nights I would be up just with my TV on watching it working on this.” When students disagreed with their scores, they usually attributed it to *MY Access!* being unfair. For example, one student disagrees with her scores because she believes it is unfair to take points off when she doesn’t understand the feedback. In addition, she believes that MY Access! is incorrectly taking points off for spelling mistakes that are not there.

Beth: I thought I would actually get higher than a 4.6 but...I think I should be at a 5 maybe. Researcher: You think your paper deserves a five? Why do you think that? Beth: I tried to do my punctuation and sometimes I didn’t know what it [*MY Access!*] meant. And I know some of the spelling errors I have in there they [*MY Access!*] didn’t think were right but I knew they were right because...like Negril is in Jamaica and [that’s] how to spell it.

In fact, many students believed that the more grammar and spelling error flags they had in their essay, the lower their score would be. Therefore, when students believed the grammar and spelling checker was wrong, they were frustrated by their scores. Because of this belief that incorrect flags would affect their scores, some students try to figure out ways to beat the system.
For example, one student reports that if you click “Ignore” when you believe that a spelling error that *MY Access!* flagged is not wrong, then the system believes it is right. Thus, your score is more accurate, and higher.

In addition, sometimes students don’t agree with their scores because even though they went up in some areas they did not go up in the area in which they made revisions. For example, Hailey revised her narrative using what she learned in a mini-lesson on figurative language in her classroom and based upon the *MY Access!* suggestion to work on her language use and style. Specifically, she added a hyperbole to paint a picture of how surprised she was in her story: “My jaw dropped so far down you could drive a car into my mouth and down my throat!” After re-submitting her writing with revisions, she is visibly confused by her score.

Gary: I tried revising based on what *MY Access!* told me…I put in a simile and a hyperbole like my teacher told me and I added more details….Well I mean my overall score went from 4.2 to 4.7 but my language use and style score went down!

Similarly, Mandy worked on improving her organization, but her scores went up on every other trait. She is confused by this outcome.

Mandy: [submits essay and receives scores] I went up.....???
Researcher: you did but you were trying to get it up in organization, but it went up in different in other places?
Mandy: yeah...
Researcher: okay, why do you think that happened?
Mandy: I don’t know.

Even though students are motivated by receiving a score, it is clear that they are not sure what the scores mean and that they do not always agree with them. Students’ agreements and disagreements with scores show little consistency. In addition, the mysteries behind how the program scores are of source of frustration and confusion.

*Written Feedback*
In this program, written feedback (i.e., not numeric scores) is available to students in several forms as they write. For example, students can consult grammar and spelling feedback or generic feedback on the trait areas on which they will be evaluated. Students did not typically consult the generic trait feedback (MY Tutor) before submitting their essays for the first time; however, students consulted the grammar (MY Editor) and spelling feedback prior to their first submission. Students do look at the trait feedback after receiving their scores for the first time.

In general, after receiving scores, the next steps for students was to read the trait feedback directly associated with their lowest scores. Thus, the scores helped students set goals for revision. Evidence from think alouds and classroom observations confirms that students consulted the MY Access! feedback on their one or two lowest scores first regardless of if they ever applied the feedback.

Classroom observations and think aloud data reveal that only a few students actually used the trait feedback to make revisions. Most made comments like, “I’ll go back to my strategy,” after reading the trait feedback or “but I don’t really use it a lot …” after accessing and viewing the feedback, but not reading it. Moreover, students preferred using the editing feedback. For example, one student stated that he would not use the trait feedback, but he would use the grammar and spelling feedback: “well, I don’t think I would do that…I don’t really go look at MY Tutor [trait feedback] that much I do like MY Editor [grammar feedback] and stuff and comments.”

When students did read the trait feedback, several themes emerge. Students did not read all parts of the trait feedback; instead, students mostly focused on the revision goals and the before and after examples as a way to get ideas about what changes to make. Students rarely read the procedural steps in the feedback (e.g., never followed the series of steps to carry out the
The procedural steps, which listed the steps students should take while carrying out changes, were confusing for students. For example, one student simply highlighted the parts of her writing the system told her to highlight (part 2 of the trait feedback), but never carried out the revision. Overall, students had difficulty understanding how they should use the feedback.

Although students consulted the grammar feedback more often than the trait feedback, they did not always understand it. Lack of understanding stemmed from unfamiliarity with vocabulary (i.e., clause, preposition), particularly with the grammar feedback. This confusion resulted in students guessing ways to correct their grammar and spelling mistakes.

In summary, students tend to use the grammar feedback more often than the trait feedback. The trait feedback is overwhelming without support from the teacher on how to use it effectively; students were able to use the feedback in class during a revision mini-lesson with support from Michael. Students do not understand the grammar feedback due to the technical vocabulary used and do to its inaccuracies. Lack of understanding results in students’ theorizing about how to “beat the system” either by guessing in order to make the error flag disappear or by clicking ignore.

What types of revisions do students make on MY Access and why?

The analysis of revisions made by students illustrated that students used MY Access! grammar and spelling feedback to guide their editing, or surface, revisions; however, students were more likely to use peer feedback or ideas from themselves to revise their writing on a global, non-surface level. For non-surface level revisions (i.e., global changes to enhance meaning, organization of writing), the analysis showed that students’ dominant revision strategy was to add more information or details for the purpose of clarifying their main points for the reader. In addition, revision activity occurred above the word level (i.e., phrase and sentence(s)) and led to
minor improvements in students’ writing. For surface level revisions (i.e., editing, spelling changes), the analysis showed that students’ were more reliant on the feedback provided from the *MY Access!* system, but were not very successful in applying it to make changes that improved their writing. The results are presented in the tables below.

Table 1

Non-Surface Revisions

<table>
<thead>
<tr>
<th>Total Non-Surface Level Revisions</th>
<th>55 (2 different writing assignments)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level</strong></td>
<td></td>
</tr>
<tr>
<td>Sentences</td>
<td>12.73%</td>
</tr>
<tr>
<td>Sentence</td>
<td>16.36%</td>
</tr>
<tr>
<td>Word</td>
<td>23.64%</td>
</tr>
<tr>
<td>Phrase</td>
<td>47.27%</td>
</tr>
<tr>
<td><strong>Operation</strong></td>
<td></td>
</tr>
<tr>
<td>Add</td>
<td>45.45%</td>
</tr>
<tr>
<td>Delete</td>
<td>10.91%</td>
</tr>
<tr>
<td>Rewrite</td>
<td>43.64%</td>
</tr>
<tr>
<td><strong>Purpose</strong></td>
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</tr>
<tr>
<td>Provide more detail</td>
<td>16.36%</td>
</tr>
<tr>
<td>Narrow focus</td>
<td>9.09%</td>
</tr>
<tr>
<td>Clarify</td>
<td>43.64%</td>
</tr>
<tr>
<td>Engage audience</td>
<td>5.45%</td>
</tr>
<tr>
<td>Vary word choice</td>
<td>12.73%</td>
</tr>
<tr>
<td>Form complete sentences</td>
<td>3.64%</td>
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<tr>
<td>Transition</td>
<td>9.09%</td>
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<tr>
<td><strong>Source</strong></td>
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<tr>
<td>Peers and Self</td>
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<td><em>MY Access!</em> feedback</td>
<td>38.18%</td>
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<tr>
<td>Teacher</td>
<td>3.64%</td>
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<tr>
<td>Audience</td>
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<tr>
<td><strong>Success</strong></td>
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<tr>
<td>Major Improvement</td>
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<tr>
<td>Minor Improvement</td>
<td>69.09%</td>
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<tr>
<td>No Improvement</td>
<td>21.82%</td>
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Table 2

*Note: Revision summary based upon 6 students selected for think alouds and interviews

Surface Level Revisions

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<tr>
<th>Level</th>
<th>Spelling</th>
<th>Punctuation</th>
<th>Word level-grammar</th>
<th>Phrase level-grammar</th>
<th>Capitalization</th>
<th>Deletion</th>
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<tbody>
<tr>
<td>Self</td>
<td>45.83%</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MY Access! feedback</td>
<td>41.67%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self and MY Access! feedback</td>
<td>4.17%</td>
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<table>
<thead>
<tr>
<th>Success</th>
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<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Success</td>
<td>27.27%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Success</td>
<td>66.67%</td>
<td></td>
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</tbody>
</table>

*Note: Revision summary based upon six students selected for think alouds and interviews

What are student and teacher perceptions of the AES technology?

Teacher Perceptions

In reflecting on his use of MY Access!, Michael identifies opportunities and challenges with the MY Access! program to support instruction and his students’ writing development. Michael states that his students are more motivated, “I have seen them more focused on the task…and I do believe that part of that motivation comes from being able to use a computer program. I mean they do like that…and they like that feedback.” In addition, he has noticed students spending more time revising, “I think they do more revisions because they’ve seen that when they do revise it does have an effect on their score.” Moreover, Michael believes the use
of the program helps their instruction in certain ways. He explains, “It helps me…it keeps me more structured…it helps me to see writing through to a conclusion…there are times [before MY Access!] when I would not totally finish a piece and just say now I am finished it.”

Despite the positives, Michael and the other teachers at the school note that the use of the program could be improved in some ways. First, there are obstacles preventing the full use of the program in the school, “Lab time…and kids not coming with the requisite computer skills [i.e., typing skills],” which limits the amount of time students have to interact with and become familiar with the program. Another teacher commented, “you know what by the time you…get access to the lab, because it’s limited, it takes about a month to thoroughly do one prompt. I mean, if we had access to the lab three or four days in a row, we could do [finish] it.” Therefore, a typical MY Access! writing assignment takes about one month to complete.

Secondly, linking MY Access! to the Six + 1 Writing Traits program was challenging, yet rewarding. Some teachers found that MY Access! did “synch” well with the existing program, explaining, “you can use the same language,” or vocabulary to teach writing and that these two complementary programs “just smooth[s] their [students] writing” better than one program can. However, at the same time teachers do not believe linking the programs is as a seamless process. Teachers admit that in some ways “it’s more work for the teacher,” and that “it’s a balancing act.” Teachers also believe that using both programs may be overwhelming for struggling writers, explaining “to try to synch 6 + 1 with the My Access! for my kids [struggling writers], you know, sometimes it’s just too much for them…too much…And if they are reluctant readers and writers, and you bog them down with all sorts of lingo…they are less willing to want to write.” Third, certain aspects of the program are challenging for students, “I honestly don’t think they are savvy enough to pull up a MY Tutor [trait feedback] and use it” independently. Finally,
Michael generally agreed with the holistic scores that *MY Access!* gave his students; however, he consistently disagreed with some of the individual trait scores that *MY Access!* gave.

**Student Perceptions**

Despite their infrequent use of feedback and tools and their general lack of understanding of the evaluation criteria and feedback, students report that they enjoy using the program. The teachers and principal consistently noted that they observed children being motivated to write when using the *MY Access!* program. In fact, the computer teacher noted that one child even wrote about using the *MY Access!* program for the school newspaper, stating that he “wished all children could use the *MY Access!* program.” Interview data supports the teachers and the principal’s observation. All children reported that they liked the program. Students reported several reasons for liking the program. One student found the program helpful in general, “I think it helps me in places where I’m weak and places where I’m strong…and different kinds of pieces like narrative and persuasive.” Another student found that the feedback in the program actually helped him improve his overall score, or grade: “because it …of my editor and my tutor…it actually helps you get up your grade…and it helps you with writing.” Finally, another students reported that it was fun to use the program: “It’s fun…Cause you get to like explore my tutor and my editor and you get to write a lot of fun stories and use your imagination a lot of times.” When asked if they liked getting scores on their writing, students noted that they would be upset if they did not have the ability to get a score.

**Conclusion**

Overall, the students and teachers enjoyed using the *MY Access!* program; the resources were helpful for teacher instruction and students were motivated by receiving immediate feedback on their writing. On the other hand, there were a few challenges to using the program
effectively. Limited computer lab time and low typing skills interfered with students’ full use of
the program and the features it offers. One implication of limited access is that it reduces
students’ interaction with the *MY Access!* program and reduces the amount of different writing
assignments to which students are exposed. Students’ lack of understanding of the traits and
feedback also limited students’ ability to use the program independently to improve their writing
skills. Positive effects of using the program in conjunction with a strong writing curriculum
could be maximized if students understood the evaluation criteria and feedback in the program.
Despite the challenges, however, the motivating effects of the program did seem to encourage
students to spend more time revising and therefore students put more thought into their revisions
and tended to make revisions at a higher level than simply editing and word level changes.
References


