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# Listening to Revise: Mainstream Uses of Text-to-Speech Software in the Writing Center

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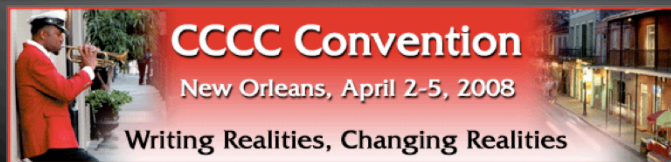
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# Listening to Revise: Mainstream Uses of Text-to-Speech Software in the Writing Center

Tammy Conard-Salvo  
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30 Seconds

Tony Ricks, the session chair, will introduce us with the text we've provided him.

# Presentation Overview

- Background of Kurzweil study
- Results
  - Learning to use Kurzweil
  - Beneficial features
  - Negative attributes
  - Using Kurzweil with a tutor's assistance
- Implications for writing centers

30 Seconds: Tammy

During our presentation, we will provide background on our study of Kurzweil software in the writing center and offer some preliminary results on using the software, its beneficial features, and some negative attributes. We'll also address students' feedback on using Kurzweil with the assistance of a writing center tutor and what implications exist for writing centers when offering and using technology in tutorials to facilitate revision.

## Purpose of the Study

- To investigate mainstream uses of adaptive text-to-speech software, specifically Kurzweil 3000, and the software's accompanying writing tools.
- To determine if Kurzweil allows students to more easily and more substantially revise and edit their texts.

1 minute: Tammy

Our study is an extension of work that began in 2004 when I asked my tutors to provide feedback on a number of text-to-speech software programs like Kurzweil. Our Writing Lab adopted Kurzweil, and John and I began studying students' use of Kurzweil in the writing center.

Although Kurzweil is considered an adaptive technology beneficial for individuals with sight impairments and learning disabilities, we saw potential for its mainstream use. We realize that the term "mainstream" is problematic and carries some baggage, but we use this term to describe students who are not institutionally identified as having disabilities.

We saw benefits for any students using Kurzweil. Its read-aloud feature, along with its highlighting, footnotes, and outlining feature would—in our hypothesis—allow any writer—regardless of ability or disability—to use Kurzweil to facilitate revision and editing.

We also wanted to investigate whether using the software in a writing center environment where tutors would introduce the software to students would make a difference.

# Methodology

- Completed two generations of the study
  - Control group and study group using Kurzweil alone
  - Study group using Kurzweil alone and study group using Kurweil with a tutor
- Received students' drafts
- Collected survey responses
- Held focus groups

1 minute: Tammy

I'll briefly describe our methodology for the study and how we collected our data about students' use of Kurzweil in the writing center. Our study was partially funded by an International Writing Centers Association Research Award.

During the first generation of the study, we worked with a control group who did not use Kurzweil and a study group who used Kurzweil on their own in our Writing Lab. We revised the study to more closely examine the effects of using Kurzweil with a writing consultant during a tutorial session. The second generation of the study included a study group using the software independently and a group using the software with a tutor in the Writing Lab.

During both generations of the study, we collected students' drafts and survey responses that asked students about their experiences with writing, technology, and with Kurzweil. We also held focus groups that collected feedback from students' on their experiences with Kurzweil, and in today's presentation, we will refer to data from the focus groups.

I'll now turn this over to John, who will offer some results of our study.

# Learning to Use Kurzweil

- “Knowing the software first, and then sitting down with a tutor would be beneficial.”
- “If we had someone to teach us techniques or ways to use the software for editing or revising...that [Kurzweil] would be beneficial.”
- “I did this on my own so it was confusing at first, but with some time, I believe this would be a very helpful program.”

1 Minute: John

When asked about their experience with the Kurzweil software, students stated that prior knowledge of Kurzweil would be beneficial for use for revision of their papers.

When we introduced the study to students, we did not offer any formal training sessions on how to use Kurzweil. Instead, we provided user guides at each computer station with instructions and screen shots describing basic features of Kurzweil’s read-aloud feature, as well as its highlighting, footnote, and outlining feature.

As evidenced by students’ comments, additional training on the software would have helped students during the study...and potentially in future writing/revision sessions and would be of benefit. STUDENTS COMMENTED THAT -- **READ STUDENT COMMENTS**

## Benefits of Read-Aloud Feature

- “The voice reader feature [is] helpful in determining how well a paragraph flowed.”
- “Kurzweil was ‘smarter’ .” It read more “human-like” and distinguished between homonyms like “read” and “read.”
- Kurzweil allowed users to find “awkward sentences, typos, things that grammar check didn’ t pick up.”

1 minute: John

Students found read-aloud feature of Kurzweil helpful and mentioned often that it was a good tool for helping them “fix” problems in their papers (edit) , mentioning that the Read-Aloud feature was useful for “surface level” issues (e.g. grammar, punctuation, spelling) .

Students’ responses ranged from a discussion of “flow” to “homonyms” to “typos” ...  
REPORTING THAT -- **READ STUDENT COMMENTS**

For some students, Read-Aloud was the only feature that they used during the study session. The software, at first glance, appears to be based on this feature—being the one that novice users (untrained users...with untrained tutors) might only use—thus, these students only attend to lower-order concerns of revision.

## Benefits of Highlighting and Footnotes

- “The part that helped the most was being able to highlight and use end notes and footnotes [with a tutor present]...and return to it later.”
- “I learned the concept [of highlighting to revise] from using the software.”
- “Kurzweil would be helpful for junior high writers [or for writers with less developed processes] to develop their revision process.”

1 minute: John

Other tools, such as the highlighting feature and the footnotes feature, assisted students during the revision of their essays.

Some students reported that they highlighted parts that needed revision, added footnotes with the tutor adding comments, too...and that the footnote/extraction feature allowed for identification, discussion, (with a tutor) and notation, to which they could return later for revision... This seemed to be one feature of Kurzweil that, at least some, students really valued....ONE STUDENT RESPONDED, STATING THAT -- **READ QUOTE #1**

Students further mentioned —although it isn't represented here—that highlighting was useful for work on transitions in their writing—both with transitions between paragraphs and for transitioning from one idea to the next within paragraphs.

Some of the most interesting response...in our opinion...is the discussion of how students 'revision processes actually changed—or were supplemented by—Kurzweil's features and its use in this study. One student discussed learning a “concept” for revision, one that had never occurred to the student prior to using Kurzweil—The student reported -- **READ COMMENT #2** This seems like one great benefit of using the software for revision—it facilitates a more sophisticated (and potentially better) approach to revision.

Finally, when asked if they would recommend Kurzweil to others, one student (a particularly intellectual and self-assured person), mentioned that **READ LAST QUOTE...**

In this student's opinion, Kurzweil would be useful for students whose writing processes are not as firmly engrained as theirs (freshmen) or first-year comp students) might be. Of course, this student presumed that all freshmen have the same process as that student does.



## Negative Attributes

- Compared to MS Word, Kurzweil's features were “nothing new.”
- “Pretty much all of the features I discovered were not unique to Kurzweil. Microsoft already encompasses most, if not all, of Kurzweil's features, and it is already available on almost any computer on campus.”
- Robotic-sounding voices were frustrating.

2 minutes: John

When asked to discuss aspects of Kurzweil that they didn't like, students commented on a range of issues, many of which focused on the comparison of Kurzweil to—what they perceived as—similar features available in Microsoft Word, reporting that -- **READ QUOTE #1 and QUOTE #2**

It just so happens that Kurzweil is ALSO available on all campus computers (which students don't know about)—and before completing this study we didn't even know about. Kurzweil really isn't advertised as anything other than adaptive technology—if advertised at all. With this study and further use in the writing lab, we hope to change that perception of the software, as we feel there are some benefits for mainstream import.

Further, when discussing the Read-Aloud feature, students seemed “annoyed” by the sound of the computer-generated voices, finding that the **Robotic sounding voices were frustrating.**

But, with further training on Kurzweil—both from a user standpoint and from a tutor standpoint (which will be discussed by Tammy later in the presentation)—students are sure to find the more “natural” sounding voices that exist in Kurzweil...voices we recommend for use in the training manuals we created .

# Helpful Tutorial Sessions

- “It’s easier on the computer [Kurzweil] when your paper is right there and then you have the tutor with you...that made a big difference.”
- “The program alone might not be too useful, but the program with a tutor would be more useful than just a tutor...or just me and the computer.”

1 minute: John

When asked about the specific use of Kurzweil—and potential for future use--Students found that using Kurzweil in a tutorial session was more helpful than using it on their own.

The students who had a good experience (or, possibly, a good tutor) found that using the technology—one in which they can mark up their text and make changes immediately—while meeting with a tutor in a “normal consultation session” was the most beneficial way/combination for revising their essays. One response was, simply, that -- **READ QUOTE #1.**

In fact, one student articulated that **READ QUOTE #2**

Which illustrates their belief in both the usefulness of having a tutor in these revision sessions—that the technology will not REPLACE tutors—and in using the technology while in a tutoring session—that Kurzweil (or some other type of technology) is, in fact, of great benefit when revising. It is the combination of the two that students found to be “better than just a regular pen and paper tutor session”

I will now turn things back to Tammy to discuss things from a Writing Center perspective—training tutors and implications for use in the writing center.

## Extensive Tutor Training Needed

- “When using the software, I felt that the consultant...didn't really understand how to use the software and thus limited my ability to take advantage of its features.”
- “I don't think my tutor was able to fully help me understand the program because she was not fully educated on it herself.”

2 minutes: Tammy

As John mentioned previously, students found the assistance of a tutor helpful when using Kurzweil; however, we learned that we needed to offer more extensive training to our tutors. We offered a single, hour-long workshop to our tutors and encouraged them to explore the software during down time in the Writing Lab. Students' responses indicated that our tutors didn't appear knowledgeable about Kurzweil, even after training.

Read comments.

Obviously, a disparity exists between students' comments and what we envisioned for the students when we provided the training workshop to our tutors.

Integrating technology like Kurzweil takes time—time with training, time to get used to the technology, and time to incorporate it into “normal” tutoring practice.

## Implications for Writing Centers

- Kurzweil supports read-aloud techniques and provides additional writing support.
- Students using Kurzweil benefit from tutorials and tutors' knowledge of the software.
- More training and research are necessary.

2 minutes: Tammy

What, then, are the implications for writing centers with regard to offering and using technology like Kurzweil?

Clearly, Kurzweil supports read-aloud techniques that are the foundation of many standard writing center consultations. The software—through its outlining, highlighting, and footnoting tools—provides additional writing support that is helpful for many different kinds of writers and learners.

Furthermore, the added benefit of students using Kurzweil with the assistance of a tutor cannot be ignored. Tutors are often in the role of introducing new resources to students, and Kurzweil is one such resource. Tutors can suggest certain features to students based on students' needs and the context of the tutorial.

Of course, more tutor training with technology is necessary in order for tutors to be comfortable using it in tutorials. And, more research is necessary to further explore how writing centers can benefit from adaptive technologies.

While we're not advocating that all writing center administrators purchase Kurzweil, we do advocate research into such technologies and ask that writing center administrators to consider using such technologies in tutorials to aid students in revision and editing. Despite the "cautionary history" of computers in the writing center, to use Peter Carino's terms, technology like Kurzweil has the potential to support our work in the writing center by giving students more options to examine their text and become better writers.

Offering adaptive technology in a writing center space may be helpful to students, but using it in tutorial sessions may be even more helpful.

# Questions or Comments

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We invite you to ask us questions during our Q&A session, after all the panelists have spoken.