

# Text-to-Speech (TtS) and Accessible Instructional Materials (AIM)



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Diane Golden, MO-CASE

Angie Logel, Jackson School District

Betty Starke, Jackson School District



# The Problem

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Print disabilities and lack of AIM limit transition options for secondary students with LD

Use of AIM and TtS assistive technology that compensates for poor reading skills is underutilized

- Reluctance to compensate for reading deficits

- Anxiety about scope of students who benefit

- Lack of resources -- funding, technical expertise, etc



# The Questions to be Answered

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Does AIM & TtS have a positive impact on –

- Graduation on time (decrease drop-out potential)
- Academic achievement
- Time in regular education – decrease in special education
- Need for human assistance (increased independence)
- Parent satisfaction
- Transition goals and outcomes

(Note: These are SPP outcomes)

# TtS and AIM Project Overview



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Pilot 1

Began 2006-07 School Year

End Data 2007-08 School Year

Phase 2

Began 2008-09 School Year

Data Collection through 2009-10 School Year

Replication Toolkit Developed based on Pilot and Phase 2



## Pilot Students, Schools and Set-up

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20 students in 5 districts

Each student had laptop/tablet with TtS software

Each student had access to textbooks, supplemental reading and other materials in e-text

- Use NIMAS file sets and Bookshare e-text repository

- Use scanner to create e-text when not otherwise available

Each student received training on AIM & TtS

- Groups at each school developed into peer support groups

- Expertise increased rapidly



## Pilot Results

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95% graduated on time

1 completed trade program (construction work)

85% had improved academic achievement

Improved grades, work completed on time, etc.

55% had increased time in regular education

95% had decreased reliance on human assistance

55% had increased parent satisfaction

100% had a successful transition outcome

75% to post-secondary, 25% to employment



# Individual Outcomes

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Tiffany scored a perfect score on the English Literature test on *Frankenstein*. The teacher reports she's NEVER had a student get every question correct.

Dan had a part-time paraprofessional who provided "oral reading" support in his academic classes. By his senior year the school re-assigned the paraprofessional as he didn't need that service with AIM and TtS.

Phil had athletic scholarship offers to Division I colleges but turned them down due to concern about the academic work load. With AIM and TtS he now feel confident he can handle the work load at a major college.

Ryan's parents indicate he no longer dreads going to school with access to AIM and TtS. He is able to complete his homework in a quarter of the time it used to take and has a "fire in his belly" about learning for the first time in years.



# Factors Critical for Success

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Equipment/Materials – comprehensive access to  
Computer and TtS software (other reader supplements)  
Accessible instructional materials, e-text

## School

Assistive technology expertise in district  
Support for and acceptance of compensatory accommodations  
Flexibility for students (able to go to scanner, etc.)

## Students

Motivated to learn about and willing to use AIM and TtS  
Average or good oral language skills  
Very poor reading (-.7 correlation reading & benefit)  
Prior use of technology not critical (no correlation)



# Phase 2

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Replicated in 4 additional Missouri districts (some in Illinois also)

Did not limit to LD, other disability groups were included

Began earlier than junior year

Refined data collection

- Added instrument to measure self-esteem/self-confidence change

- Standardized achievement measures

Developed supportive materials for implementation

- Validated implementation materials

- DVD “infomercial” for district buy-in



# Unresolved Policy Issues

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## Standardized testing accommodations

- NCLB regulations

- State assessments/accessible versions

- When does TtS “invalidate” the construct assessed?

## Copyright exemption

- Restrictions in access to existing e-text

- Limited pool of e-text, multiple repositories



# Jackson School District TtS Implementation

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Began Spring Semester 2009

Administrative support gained

Inservices for teachers were offered to gain their support

10 students identified

Parent/student informative meeting

Parents gave written consent for student participation

Students signed technology agreements and were given printed guidelines for participation in program

Student training

All day training initially

Follow up meetings to trouble shoot



# Jackson School District Successes

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Academic

Personal Growth and Independence

Improved Staff Awareness/Involvement

Parent Perspectives

Staff Perspectives



# Jackson School District Challenges

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Time

Staff

Materials

Ongoing training

Student Self Advocacy



# Implementation Guide

<http://aim.cast.org>

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Narrative Implementation Description

Implementation Tools, Data Collection Tools

DVD - Checklists – Staff Expectations – Data Forms

Product Overviews

References

Policy Resources