Attending a Demonstration School: Its Impact on Students’ Self-Concept and School Motivation
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Introduction

Assistive Technology
Assistive technology (AT) refers to any item, piece of equipment, or product system that is used to increase, maintain, or improve the functional capabilities of an individual (Mead & Bower, 2005).

For individuals with learning disabilities (LD), AT includes computer programs that provide speech-to-text, text-to-speech, graphic organizers, and word prediction capabilities.

Why use Assistive Technology?
AT can remediate the reading, writing, and spelling deficits of children with LD (F steril, & Hanley-Lyon, 2005; Hall, Hughes, & Flanagan, 2003; Honkaniemi, & Stenroos, 2004; Leung, McPhail, Mulhern, & Wylie, 2000).

When students can build on their strengths and compensate for their weaknesses increased motivation, higher rates of learning, and improved achievement may ensue (Forney, 2002).

Self-Concept
Students with LD have lower self-concepts than their non-disabled peers (Mead & Bower, 2005; Keenan, & Cox, 1994; Vales, 1988). 81 percent of students with LD experience decrements in self-concept which occur by grade three and remain fairly stable through high school (Chapman, 1988).

Low self-concepts can be attributed to: (a) repeated school failures; (b) awareness of being different from peers; and (c) problems surrounding social acceptance (Ryan & Starks, 1991).

School Motivation
School motivation refers to students’ energy and drive to learn, work effectively, and achieve to their potential (Ryan, 2010). Students with LD have lower school motivation than their non-disabled peers (Sheldon, Morgan, Borke, Pandeya, & Fuchs, 2008). They may be less motivated to complete class assignments as they expect to do poorly (Barber & Wol, 1994;McIntyre, 2003).

Rationale for the Demonstration School
The demonstration school provides: (a) specialized educational programs for students with LD; (b) students with up-to-date training on the use of AT; and (c) educators that are trained on the use and implementation of AT.

Research Question
Using mixed-methods, this study follows students as they transition from a two-year elementary demonstration school and are re-integrated into high school. This exploratory study examines the impact of assistive technology, and the degree to which attending a demonstration school impacts students’ self-concept and school motivation.

Methods

Participants
Twelve former demonstration school students with severe LDs and their parents consented to participate. These students (4 females and 8 males) were between 14 and 16 years of age (M = 15).

Measures and Procedure

<table>
<thead>
<tr>
<th>Students</th>
<th>Parents</th>
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<tr>
<td>Sept. 2007</td>
<td>Start of demonstration school program. Self-Perception Profile for LD Students</td>
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<tr>
<td>May 2008</td>
<td>End of first year at demonstration school. Self-Perception Profile for LD Students</td>
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<tr>
<td>May 2009</td>
<td>End of demonstration school program. Self-Perception Profile for LD Students</td>
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<tr>
<td>June 2009</td>
<td>End of second semester in high school. Ssemi-structured interviews with students. Motivation and Engagement Scale Psychosocial Impact of Assistive Devices Scale Self-Perception Profile for LD Students</td>
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Self-Concept
A one-way repeated measures analysis of variance was conducted with data from the Self-Perception Profile for LD Students (Ryan & Harter, 1988).

Results

General intellectual ability differed significantly
Wilks’ Lambda = .33, F(3, 9) = 6.60, p = .05, partial eta squared = .87.
Reading competence differed significantly
Wilks’ Lambda = .06, F(3, 9) = 7.80, p = .05, partial eta squared = .72.
Writing competence differed significantly
Wilks’ Lambda = .26, F(3, 9) = 8.71, p = .05, partial eta squared = .74.
Spelling competence differed significantly
Wilks’ Lambda = .13, F(3, 9) = 20.06, p = .05, partial eta squared = .87.
Math competence differed significantly
Wilks’ Lambda = .40, F(3, 9) = 4.58, p = .05, partial eta squared = .60.
Global self-worth did not differ significantly
Wilks’ Lambda = .73, F(3, 9) = 1.11, p = .55.

“I used to think I wasn’t that smart in school. But since going to the demonstration school, I know I am smart, I can be one of the top students in my class.”

“Before I’d get frustrated and need sports to get me through the day. But now being at the demonstration school, learning different technology, different ways, it’s easy.”

School Motivation
Paired-samples t-tests were conducted with data from the Motivation and Engagement Scale (Ryan, 2010).

No significant differences were found in students’ perceived impact of the AT at the demonstration school and at high school.

“Before he didn’t want to go to school. He now wants to be there because he knows he can do the work — that’s all part of the technology.”

“Before he would just give up. Things didn’t get done in class and then he would come home and throw a fit and say, ‘I don’t understand it.’ Now he’s more likely to study it and see if he can understand it or ask for help.”

“Everything goes back to the technology because it’s there. I can go to it whenever I want, and I can always help myself.”

Discussion

Students with LD may experience a cycle of failure. Early failures may lead to a lowered sense of academic competence, which in turn contributes to lowered expectations for future success and reduced achievement efforts, which then contributes to further failure (Duntum, Cunningham, & Walker, 1995).

When used in a supportive environment, AT enables students to obtain success in reading and writing, thus having a positive impact on students’ self-concept, motivation towards school, learning experiences, and chances of succeeding academically and socially (Feingold & Hanley-Lyon, 2005).

AT allows students to compensate for their learning difficulties, provides a means for students to excel in school, and thus has the potential to help students break out of cycles of failure.

References


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