Using iPads in the Classroom to Help Improve Academic Gains for Students with Disabilities

Nicole Quick
University of Rochester

Abstract

Students with disabilities have a difficult time making academic progress in the classroom. Depending on the type of disability, students need various modifications and support to assist with academic tasks. This literature review examines the effectiveness of the use of iPads to help improve achievement for students with disabilities. Both benefits and difficulties of using iPads in the classroom are explored with an emphasis on how iPads can be used to improve instruction for students receiving special education services. The findings of this literature review confirm that iPads are an effective piece of technology in the classroom, and suggestions for implementing iPads into daily classroom instruction are provided. In addition, areas of further investigation and research are identified.

Background

- Today’s students are known as iGeneration students due to the escalating use of technology both inside and outside of school (Bouck, Flanagan, Miller, & Bassette, 2012).
- School districts across the nation are embracing the technology age and incorporating students’ personal devices into the classroom.
- Teachers need to find ways to promote the use of technology in the classroom, especially in an age where technology is so accessible to students.
- It is important to teach students how to use technology responsibly.
- Students with disabilities may need support in the realms of communication, academic tasks, and daily living skills.
- iPads are a tool that can help in all of these areas.

Understanding Disability

Most of the research related to students using iPads in the classroom has focused on intellectual disability, autism and emotionally and behavioral disorders.

- Intellectual Disability
  - Have an IQ at least one standard deviation below the mean
  - Need to help support a student become more included in school and society as a whole
  - The student’s educational goals are defined in what areas of functioning the student may need assistance with in order to fully participate in school and to help transition into post-secondary life
- Research on person-centered planning, self-determination and the use of devices such as iPads have allowed students to choose their own apps that help promote self-determination (Helps & Herborg, 2013)

- Autism
  - Typically require some type of intervention to help with social skill development
  - Rely heavily on visual cues to help teach skills and remind students of increasingly learned skills
  - Students with autism have shown to benefit from using iPads in the classroom to create videos used as social stories to help teach students with autism new skills

- Emotional and Behavioral Disorders
  - Have lower amounts of creativity received in high school
  - Lower GPAs
  - Have less involvement in school-related tasks
  - More likely to fail a class
  - Lack of engagement in school-related tasks

Assistive Technology vs. Instructional Technology

<table>
<thead>
<tr>
<th>Assistive Technology</th>
<th>Instructional Technology</th>
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</thead>
<tbody>
<tr>
<td>Requires direct support</td>
<td>Requires minimal support</td>
</tr>
<tr>
<td>Uses a variety of tools</td>
<td>Uses a single tool</td>
</tr>
<tr>
<td>Supports individual needs</td>
<td>Supports group needs</td>
</tr>
<tr>
<td>Helps with social skills</td>
<td>Helps with academic skills</td>
</tr>
</tbody>
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Rationale for using iPads

Do iPads fill the role of Assistive Technology and Instructional Technology for students with disabilities?

- Research has shown that using iPads in the classroom does increase motivation
- iPads shift the control to the students
- Offer instant gratification
- Students who may have attentional difficulties can complete a problem on an iPad that can receive feedback immediately
- Students with sensory integration struggles may respond better to touch screens, rather than using a computer and a mouse
- iPads also help students bridge the gap between school and home
- Students can be introduced to educational apps at school, and continue to use them at home
- AT or instructional technology that does not make the student stand out
- AT and other education professionals are noting that students are embracing the use of mobile devices because they easily blend into the mass of other students with the signature white earbuds hanging around their necks or stuck in their ears (Newton & Dell, 2011, p. 45)

Benefits of Using iPads

- Many teachers already know how to use iPads - training to use the equipment as AT or IT is easy
- Many of my students found games they enjoyed playing and continue to use them at home
- Students can create subjects and dividers based on their academic needs
- Students and how the iPads can assist with students developing self-determination and the ability to fully participate in society as a whole
- Students with sensory integration struggles may respond better to touch screens

Notability App – Virtual notebook for students and teachers

Students can create subjects and dividers.

Personal Experience

- I became part of an iPad pilot program where the students in my 12:1:1 Algebra class are all provided with iPads
- Students use iPads at school and can also take them home with them
- District provides education apps
- Students can download their own apps with their individual apple IDs

Sample of the apps on my iPad: "Help with planning, instruction and individual skills for individual students"

Analysis: My Experience

- It was my hope to make the iPads the center of my classroom instruction
- The students all had notebooks set up on their iPads so no paper copies of notes were provided anymore
- All of my assignments were completed on the iPad and then submitted to me through the iPads
- I used apps as formative assessment tools and was able to do quick checks of understanding
- Each student had different lessons and practices on the iPad based on their academic needs
- Many of my students found games they enjoyed playing and sometimes it became difficult to get them off their own apps to focus on academic tasks

Conclusion

- More research should be done on what apps are most effective at improving academic skills in specific subjects
- More research is needed on how special educators can flip their classrooms and use technology to the fullest potential to help students achieve academic goals
- While some students may not make academic gains, I did not find any studies, including my own experiences, where students’ skills decreased

Limitations

- I have not had enough time to explore self-determination with students and how the iPads can assist with students developing their own goals
- No comprehensive lists of various apps – may be more apps that myself or researchers are not aware of

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