**Objectives**

An increasing amount of assistive technology (AT) interventions exist for adolescents and adults with learning disabilities (LD). The aims of this review were to:

1. Survey both quantitative and qualitative research to determine
   - Whether interventions are effective
   - How they affect lived experience
2. Formally assess the quality of available studies

**Methods**

**Literature search:**
1. PubMed queries
2. Google Scholar (2 methods)
3. ERIC
4. Citations of related reviews
5. Recent articles of related journals

We located:
- 32 quantitative intervention studies
- 11 qualitative studies
- 5 survey studies

Almost all conducted in educational settings.

**Qualitative Studies**

Qualitative studies were also sorted by topic (listed from general to specific):

1. AT as one component of accommodations: 4 publications
2. Perspectives about AT: 1 publication
3. Technological course supports: 4 publications
4. Specific assistive supports: 2 publications

We created a qualitative summary. Some points:

- Students did not necessarily like or use institution-provided AT
- Regular AT users often set up their AT using their own resources
- Customization is very important
- Negative emotions connected to:
  - Technical difficulties
  - Insufficient support
  - AT use perceived as stigmatizing
- Non-self-reported and self-reported data similar → asking AT users often easiest!

**Intervention Studies**

We sorted intervention studies by topic:

1. Text-to-speech systems: 10 publications
2. Speech-to-text systems: 6 publications
3. Word processing: 5 publications
4. Multimedia & hypertext: 4 publications
5. Smart pens: 4 publications
6. Other computer-based: 3 publications

We performed meta-analyses by topic group where possible (reasonable study quality scores, comparable outcomes...)

**Qualitative Studies**

**Survey Studies**

Limited conclusions due to:

- Small amount of studies despite ease of access (through disability services)
- Only 2 studies w. quantitative evaluation
- Data from different countries
- Data not cumulative, distinct topics:
  - Different technology use profile from ADHD / TD
  - AT use related to more hopeful outlook

**Conclusions**

Convergent results from both quantitative and qualitative data: AT supports can be effective, but they need to be customized to the person. Some forms of AT can be unhelpful or harmful for some participants. Word processor interventions like spell and grammar checking were most effective. Methods varied considerably; in the future it would be important to use comparable designs and similar outcome variables across studies. Study quality was comparable to research on other interventions (Justice et al., 2008).

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**References**


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