Using Assistive Technology to Reduce the Graduation Gap: A Reconsideration of the Legal Framework

Authors: Andrew Siske; Maureen van Stone, JD, MS; Mallory Finn, JD; Christopher Smith, PhD

Background

- The Individuals with Disabilities Education Act (IDEA) defines assistive technology (AT) as "any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of a child with a disability."

- AT is a broad spectrum of devices, ranging from no- or low-tech to high-tech, which can enable students to succeed in the general education curriculum when their disabilities would otherwise prevent them from doing so.

- While there is a legal mandate for individualized educational program (IEP) team members to consider whether a student with a disability requires AT in order to progress academically, AT is underutilized by school systems (Stead, 2009).

- In light of the achievement gap between students with disabilities and their non-disabled peers, it is evident that more must be done to improve post-secondary outcomes for students with disabilities.

- A thorough assessment of a student's potential use of AT is essential for placing a student in the least restrictive environment (LRE), as required by IDEA.

The Graduation Gap

- For the 2013-14 school year, the four-year adjusted cohort graduation rate (ACGR) was 82.6 percent for all public high school students, while only 63.1 percent for students with disabilities.

- Since the 2010-11 school year, the four-year ACGR has increased at about the same rate for all public high school students and students with disabilities.

- This suggests that while graduation rates are increasing, the gap between students with disabilities and those without disabilities is not narrowing.

Assistive Technology	Graduation Gap
• Tools for bypassing barriers • Legally mandated for consideration • Requires thorough assessment • Underutilization by schools	• Students without disabilities: 82.6% graduation rate • Students with disabilities: 63.1% graduation rate • Gap remains constant over time

AT in Special Education

Two meta-analysis studies suggest that children with disabilities who use AT display statistically significant gains in literacy and communication skills. Some of the different diagnoses or conditions enhanced or addressed by appropriate use of assistive technology include:
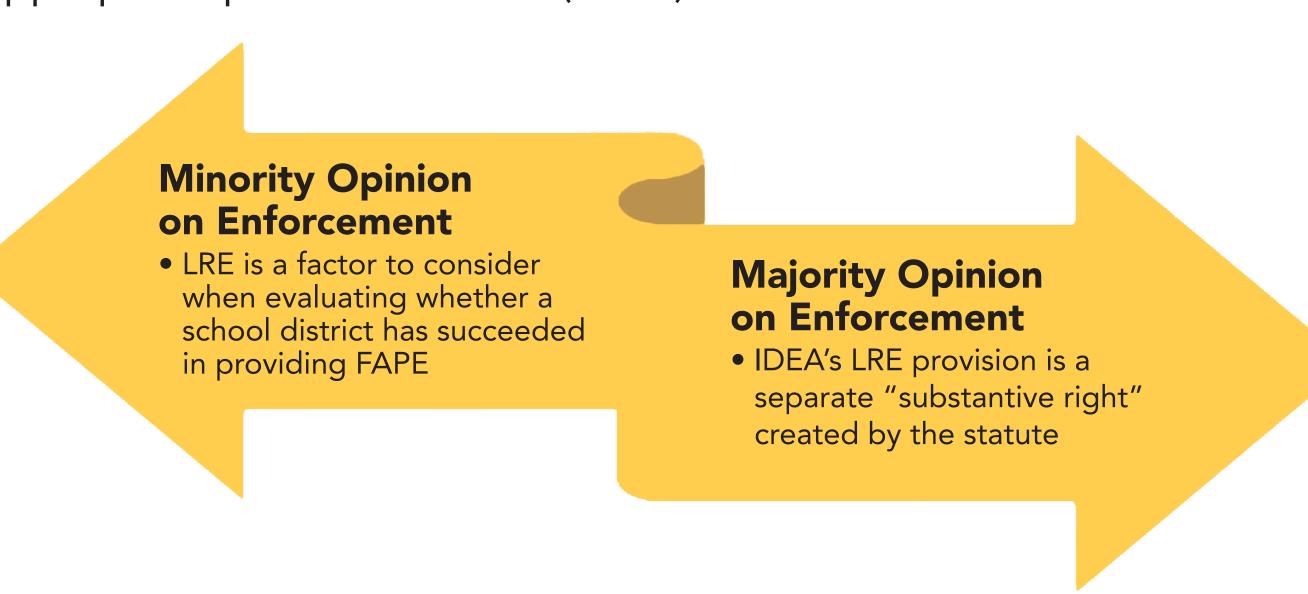
Reading

Written language

Math

Vision

Hearing

Computer access

Augmentative/alternative communication

Learning disabilities

Attention Deficit Hyperactivity Disorder

Least Restrictive Environment as a Separate Right

- IDEA requires that all students with disabilities receive a free appropriate public education (FAPE) in the LRE.

Minority Opinion on Enforcement
- LRE is a factor to consider when evaluating whether a school district has succeeded in providing FAPE

Majority Opinion on Enforcement
- IDEA's LRE provision is a separate "substantive right" created by the statute

- Based on the majority view, a consideration of LRE would not be subjected to the Rowley standard—that an IEP that provides "personalized instruction with sufficient support services to permit the child to benefit educationally from that instruction" satisfies FAPE requirements.

- In other words, whether a student has sufficient access to AT could be considered an LRE issue rather than a FAPE issue.

- Thus, if measures could be taken, such as providing a student with certain AT, which enable a student to be educated in a LRE, then there is a legal mandate to do so.

- Importantly, a recent study suggests that students with disabilities who are fully included in the general curriculum have a significantly higher chance of graduating on time.

Problems

"While policy and research examining the efficacy of AT overwhelmingly supports the notion that all IEP teams should consider AT, implementation by practitioners has been limited due to institutional, situational, and dispositional barriers" (Marino and Beecher, 2008).

- Institutional
  - The broad definition for "assistive technology"
  - Inadequate teacher and staff training
    - On devices required by the student's IEP
    - Lack of awareness about AT they could recommend to assist the student
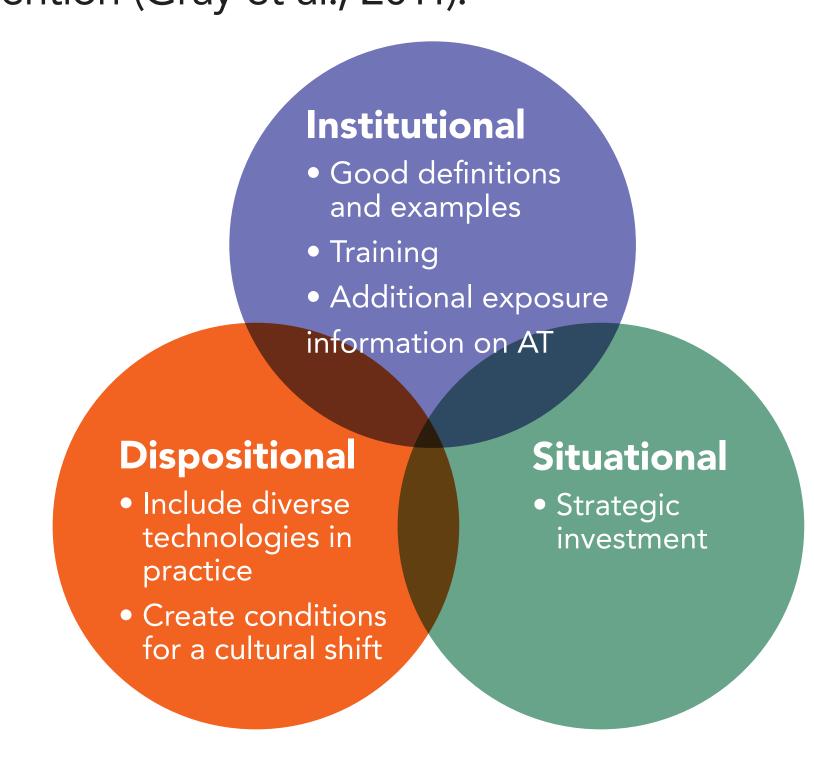- Situational
  - Lack of funding for devices, services, maintenance, and training
- Dispositional
  - Teachers' beliefs about AT for cognitive impairments
    - Teachers often struggle when considering how to evaluate a student using AT as a "cognitive prosthesis," and generally prefer for students to succeed without technological support.
    - Some scholars have referred to this issue as the notion of "naked independence." The following quote clarifies this idea: "[W]hen AT is used as a cognitive prosthesis (i.e., to compensate for an inability to read or store information that is difficult to remember) it is viewed as undermining standards and high expectations; confounding the educational system which wants to assign a letter grade." (Edyburn, 2004).

Institutional
- Definitions
- Training

Dispositional
- Attitudes
- Expectations

Situational
- Funding

Recommendations

- Institutional
  - School districts should encourage or mandate that:
    - Teachers include a diverse range of technologies in their instruction practice, and not just for teaching students with disabilities.
    - Principals become familiar with AT devices, their importance, and IDEA's mandate for the IEP team to consider AT.
    - AT is part of pre-service training.
      - School systems should increase the number of AT experts.
- Situational
  - School districts should engage in strategic investment. Teachers should be surveyed to identify barriers to learning, so that the school systems can invest in technologies that would most likely benefit many students.
- Dispositional
  - Districts must consider how to create conditions for a cultural shift which recognizes assistive technology as an ecological, enabling tool which can expand an individual's environment, and not just as an intervention (Gray et al., 2011).

Institutional
- Good definitions and examples
- Training
- Additional exposure information on AT

Dispositional
- Include diverse technologies in practice
- Create conditions for a cultural shift

Situational
- Strategic investment

Conclusions

- Though more research is needed, the existing research suggests that (1) AT can improve outcomes in children's literacy and communication abilities, and (2) students with disabilities who participate in the general curriculum are significantly more likely to graduate high school in four years.

- Given that a majority of jurisdictions view a student's right to be educated in the LRE as separate from the right to a FAPE, IEP teams should be sure to consider any and all AT devices which could allow a student to participate in the general curriculum. It is vital that schools begin to assess their own policies and practices regarding AT and consider to what extent they are delivering the protections IDEA guarantees to students with disabilities.

- Even if more funding and resources were available, proper implementation of these policies and practices will require a change in teachers' and principals' familiarity with and perception of AT.

References

Ahmad, F.A. (2015). Use of assistive technology in inclusive education: Making room for diverse learning needs." *Transcience, 6*(2), 62-77. Retrieved from http://www2.hu-berlin.de/transcience/Vol6_No2_62_77.pdf.

Cheung, A.C.K. & Slavin, R.E. (2012, July). Effects of educational technology applications on reading outcomes for struggling readers: A best evidence synthesis. Retrieved from http://www.bestevidence.org/word/tech_strug_read_Jul_18_2012.pdf.

Dunst, C.J., Trivette, C.M., & Hamby, D.W. (2012). Assistive technology and the communication and literacy development of young children with disabilities. *CELLreviews, 5*(7). Retrieved from http://www.earlyliteracylearning.org/cellreviews/cellreviews_v5_n7.pdf.

EDFacts Data Groups 695 and 696, School year 2013–14 (2015, September 4). Retrieved from http://nces.ed.gov/ccd/tables/ACGR_RE_and_characteristics_2013-14.asp.

Edyburn, D.L. (2004, September 29). Assistive Technology in K-12 Schools: Understanding the Impact of the AT Consideration Mandate. Retrieved from https://enablemob.wustl.edu/ATEdConf_files/Edyburn.doc.

Gray, T., Silver-Pacuilla, H., Brann, A., Overton, C., & Reynolds, R. (2011). Converging trends in educational and assistive technology. In T. Gray and H. Silver-Pacuilla (Eds.), *Breakthrough Teaching and Learning: How Educational and Assistive Technologies are Driving Innovation* (pp. 5-24). New York City, New York: Spring Science + Business Media, LLC.

Kena, G., Hussar, W., McFarland, J., de Brey, C., Musu-Gillette, L., Wang, X., Zhang, J., Rathbun, A., Wilkinson-Flicker, S., Diliberti M., Barmer, A., Bullock Mann, F., and Dunlop Velez, E. (2016). The Condition of Education 2016 (NCES 2016-144). U.S. Department of Education, National Center for Education Statistics. Washington, DC. Retrieved from http://nces.ed.gov/pubs2016/2016144.pdf.

Marino, M.T. & Beecher, C.C. (2008). Assistive technology policy: Promoting inclusive education for students with reading disabilities. *Northwest Passage*, 14-23. Retrieved from http://public.wsu.edu/~matthewmarino/documents/NWPassage_Marino_Beecher.pdf.

Regulatory Adjusted Cohort Graduation Rate, Children with Disabilities: 2012-13 (2015, October 16). Retrieved from http://eddataexpress.ed.gov/data-element-explorer.cfm/tab/trend/deid/4542/state/US/).

Stead, J. (2009). Toward true equality of educational opportunity: Unlocking the potential of assistive technology through professional development. *Rutgers Computer & Technology Law Journal, 35*, 224-254.

Schifter, L.A. (2016). Using survival analysis to understand graduation of students with disabilities. *Exceptional Children, 82*(4), 479-496.

20 U.S.C.A. § 1414(d)(3)(III)(v) (West).

20 U.S.C.A. § 1412 (5)(a) (West).

Maryland Center for Developmental Disabilities
at Kennedy Krieger Institute

Building Partnerships. Changing Lives.

For more information, visit our website at **MCDD.KennedyKrieger.org**