Department for Education

Assistive Technology

Stakeholder report: Administrators

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Contents

Executive Summary

Assistive technologies (AT) are specialised products designed for people with special educational needs and disabilities. This stakeholder report describes the findings of the rapid literature review relevant for administrators.

Additional stakeholder reports for developers, educators, policymakers, and researchers can be found at https://www.knowledge-by-design.com/ukat/

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Introduction

1 The Department for Education's Education Technology Strategy, Realising the Potential for Technology in Education, described 10 EdTech Challenges designed to catalyse activity in specific areas of the EdTech sector in ways that are aligned to the needs of teachers and students. One of these challenges focuses on needing to identify the best technology that helps level the playing field for learners with Special Educational Needs and Difficulties (SEND).

Learn More

Department for Education. (2019). Realising the Potential for Technology in Education. https://www.gov.uk/government/publications/realising-the-potential-of-technology-in-education

2 In order to meet this challenge it is necessary to understand the current landscape of assistive technology (AT) used in education and what impact they have on outcomes for students with special educational needs and disabilities (SEND). To this end, a rapid review of the literature on assistive technology (AT) in education was conducted over a ten-week period in February – April 2020. A final report from the project describing the findings is available for download.

Learn More

Rapid Literature Review on Assistive Technology in Education
http://www.knowledge-by-design.com/ukat/

3 The purpose of this stakeholder report is to provide administrators with insights about the use of AT in educational settings in order to facilitate the effective delivery of AT devices and services for pupils and learners with special educational needs and disabilities. Interested readers are encouraged to visit the project web site to query the interactive data set or contact the Principal Investigator with questions or requests for custom searches of the knowledge base.

Learn More

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Dave Edyburn <edyburn@uwm.edu>

What is Assistive Technology (AT)?

4 The World Health Organization describes AT as follows:

- Assistive technology is an umbrella term covering the systems and services related to the delivery of assistive products and services.
- Assistive products maintain or improve an individual's functioning and independence, thereby promoting their well-being.
- Assistive technology enables people to live healthy, productive, independent, and dignified lives, and to participate in education, the labour market and civic life. Assistive technology reduces the need for formal health and support services, long-term care and the work of caregivers. Without assistive technology, people are often excluded, isolated, and locked into poverty, thereby increasing the impact of disease and disability on a person, their family, and society.

Learn More

World Health Organization. (2018, May 18). Assistive technology.
https://www.who.int/news-room/fact-sheets/detail/assistive-technology

5 Over a lifetime, each of us will experience situations in which we personally, or, someone we know, will encounter limitations due to aging, disease, accident, or disability, that will impact the ability to perform basic life functions such as hearing, seeing, self-care, mobility, working, and participating in education. Whereas some of us may be born with a disability or disease that will require us to overcome limitations throughout our life, others will need to learn how to respond to challenges that arise from an accident or limitations that arise from simply growing older. As a result, AT has the potential to impact everyone, either directly as a personal user of AT, or indirectly, as a means of helping someone we know.

6 Realising the potential of technology in education involves maximising the application of assistive technologies to enhance academic, behavioral, social, and economic benefits

of pupils and students with special educational needs and difficulties. Historically, pupils and students with special educational needs and disabilities have had difficulty accessing the general education curriculum. This means they have been unable to achieve the same benefits from instruction as their peers.

Developing Awareness

7 The essence of AT involves finding appropriate tools that enhance the functional performance of a person with a disability to complete routine tasks that are difficult or impossible. When a person finds the appropriate AT, they are able to complete tasks that they previously could not complete, did slowly, or did poorly. The right AT augments, bypasses, or compensates for a disability. Administrators can foster awareness of AT within their building by creating an AT team and supporting the professional development of all staff to use technology in ways that encourage access and engagement to learning.

Learn More

Akpan, J. P., & Beard, L. A. (2013). Overview of assistive technology possibilities for teachers to enhance academic outcomes of all students. *Universal Journal of Educational Research, 1*(2), 113-118.

Hardesty, C., Warren, W., Arce, F., & Bowser, G. (2017). Fostering communities & professional learning in assistive technology: The opportunity for case specific discussions to increase provider knowledge and application of AT practices. *Closing the Gap, 36*(2), 9-13.

McLaren, E. M., Bausch, M. E., & Ault, M. J. (2007). Collaboration strategies reported by teachers providing assistive technology services. *Journal of Special Education Technology, 22*(4), 16-29.

McMahon, P. J. (2005). Special education assistive technology: A phenomenological study of building administrator knowledge and practices (Doctoral dissertation). Available from *ProQuest Dissertations & Theses Global database*. (UMI No. 3192518)

AT is a High-Leverage Practice

8 AT has been documented as a high-leverage practice for improving outcomes for students with special needs and disabilities. Administrators are encouraged to assist educators in understanding how and why evidence-based practices are necessary to improve student learning outcomes.

Learn More

McLeskey, J. (2017). *High-leverage practices in special education*. Arlington, VA: Council for Exceptional Children.

Support for Struggling Students

9 At this time, AT is an under-utilized intervention to provide pupils and students with special needs and disabilities the means for accessing and engaging in the curriculum in ways that are representative of the ubiquitous nature of technology in society. Educators and administrators are encouraged to look for students who struggle to complete routine academic tasks and request an AT evaluation. There is emerging evidence that educators wait too long before exploring AT solutions that could easily improve performance.

Learn More

Bausch, M. E., & Ault, M. J. (2008). Assistive technology implementation plan: A tool for improving outcomes. *Teaching Exceptional Children, 41*(1), 6-14.

Bausch, M. E., Quinn, B. S., Chung, Y., Ault, M. J., & Behrmann, M. M. (2009). Assistive technology in the individualized education plan: Analysis of policies across ten states. *Journal of Special Education Leadership, 22*(1), 9-23.

Chockalingam, N., Eddison, N., Healy, A. (2019). Orthotic service provision in the United Kingdom: Does everyone get the same service? In N. Layton, & J. Borg, (Eds.), *Global perspectives on assistive technology: Proceedings of the GReAT Consultation 2019, Volume 1* (pp. 515-524). Geneva, Switzerland: World Health Organization.

Cook, A. M. (2009). Ethical issues related to the use/non-use of assistive technologies. *Developmental Disabilities Bulletin, 37*, 127-152.

Learn More (continued)

Hoogerwerf, E., Solander-Gross, A., Mavrou, K., Traina, I, & Hersch, M. (2017). A self-assessment framework for inclusive schools supporting assistive technology users. *Studies in Health Technology and Informatics, 242*, 820-827.

AT Assessment Protocols

10 Administrators should encourage AT teams to use protocols to determine who needs and could benefit from AT. Unfortunately, in many schools, pupils and students who use AT do so because someone championed their special needs by navigating the educational, service delivery, and funding systems in order to secure access to appropriate AT devices and services.

Learn More

Reed, P., & Gierach, J. (2016). Assistive technology assessment: The tried and true and the brand new. *Closing the Gap, 34*(6), 17-20.

Reed, P., Kaplan, M., & Bowser, G. (2009). *The assistive technology trainer's handbook*. Roseburg, OR: National Assistive Technology in Education Network.

Scherer, M. J. (2019). Assistive technology selection to outcome assessment: The benefit of having a service delivery protocol. *Disability and Rehabilitation: Assistive Technology, 14*(8), 762-763.

Zapf, S.A. (2016). Matching assistive technology to the student: An evidence-based assessment process. *Closing the Gap, 35*(2), 22-26.

Universal Accessibility

11 Advances in universal usability have provided access tools on every smartphone, computer tablet, laptop, and desktop computer. Parents and educators are encouraged to explore the accessibility features on their devices as a critical first step in locating appropriate AT to help a struggling student.

Learn More

Barry, M. J. (2009). Ready, set, goal! Universal access. C*losing the Gap, 27*(6), 7-8.

Herlihy, D. (2015a). Read it to me-on the fly! Part 1. *Closing the Gap, 34*(3), 3-7.

Herlihy, D. (2015b). Read it to me-on the fly! Part 2. *Closing the Gap, 34*(4), 3-8.

Hund-Reid, C., & Caissie, B. (2013). Access & beyond: The Alberta smart inclusion pilot project. *Closing the Gap, 32*(1), 21-25.

Ketterlin-Geller, L. R., & Tindal, G. (2007). Embedded technology: Current and future practices for increasing accessibility for all students. *Journal of Special Education Technology, 22*(4), 1-15.

McGuire, J. M. (2014). Universally accessible instruction: Oxymoron or opportunity? *Journal of Postsecondary Education and Disability, 27*(4), 387-398.

Connections Between AT, ICT, and UDL

12 Advocacy for accessible educational materials (AEM) is a necessary component of AT devices and service systems. The importance of AEM cannot be underestimated during the COVID-19 pandemic and the shift to online instruction where pupils and students with special needs and disabilities have experienced (1) barriers in online learning management systems, (2) multimedia, web pages, and/or documents that are not accessible, and (3) barriers within learning activities because they do not have the appropriate AT devices and services to access the curriculum.

Learn More

Advisory Commission on Accessible Instructional Materials in Postsecondary Education for Students with Disabilities. (2011). *Report of the advisory commission on accessible instructional materials in postsecondary education for students with disabilities*. Washington, DC: U.S. Department of Education.

Carl, D. F., Zabala, J., & Karger, J. (2015a). Accessible educational materials in the IEP (Part 1). *Closing the Gap, 34*(3), 13-16.

Carl, D. F., Zabala, J., & Karger, J. (2015b). Accessible educational materials in the IEP (Part 2). *Closing the Gap, 34*(4), 9-13.

Fox, C., & Jones, R. (2018). *Navigating the digital shift 2019: Equitable opportunities for all learners*. Glen Burnie, MD: State Educational Technology Directors Association.

McLaren, R. (2018). Accessible virtual learning environments: Making the most of the new regulations. Retrieved from https://www.policyconnect.org.uk/ research/accessible-virtual-learning-environments-making-most-new-regulations

Action Steps

13 Failure to consider AT means that a pupil or student loses out on valuable learning time. AT should not be the intervention of last resort.

Learn More

Cronin, A. F. (2018). Assistive technology reasoning in rural school-based occupational therapy. *Assistive Technology, 30*(4), 209-217.

14 Realising the potential of assistive technology will require the coordinated efforts of students, parents, educators, administrators, policymakers, developers, service providers, and researchers to scale the number of pupils and students benefitting from AT interventions that have been shown to be effective.

Department for Education

Reference: DFERPPU/2019/038

The views expressed in this report are the authors' and do not necessarily reflect those of the Department for Education.

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