Current Trends in the Training and use of Assistive Technology in School-aged Children with Learning Disorders

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Supported by a Mitacs grant

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Idawe • Learning Disabilities Association of Windsor-Essex County

Abstract

Assistive Technology (AT) allows children with Specific Learning Disorders (LDs) to access school curriculum. There is a paucity of literature addressing the use, perception of use, and training of students who qualify for AT. The few studies completed suggest that children with AT like their devices and find them useful. The current exploratory study examined the grade level of children provided AT devices, the types of AT hardware and software used by children with various learning limitations in a school environment, and children's perception of their AT devices. Analysed was the archival data collected by the LDAWE from 656 school children over the span of four school years (September 2012 – June 2016). Reported are descriptive statistics for grade level, school board attended, hardware and software programs used, perceptions of training, proportion of children receiving supplemental (in addition to initial) training, and number of children trained each school year. Results of the current study increases the understanding of current practices of AT training and utilization by school children.

Introduction

- AT enables children with LDs to access school curriculum
- AT increases: comprehension (Rapp, 2005; MacArthur & Haynes, 1995), acquisition of knowledge & academic skills (Rapp, 2005), opportunities & independence (Garner & Campbell, 1987), and general intellectual & academic abilities (Chiang & Jacobs, 2009; Chiang & Jacobs, 2010)
- Lack of training is a barrier to accessibility (Chmiliar, 2007), limiting the benefit of AT
- The current study examined children's perceptions of AT training, hardware, and software

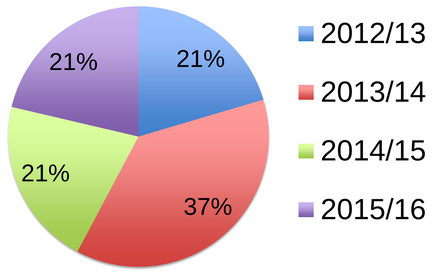
Method

- **Participants**: 656 children (grades 2 – 12) referred to the LDAWE for AT training
- **Measures & Procedure**: Children completed surveys developed by the LDAWE after AT training sessions

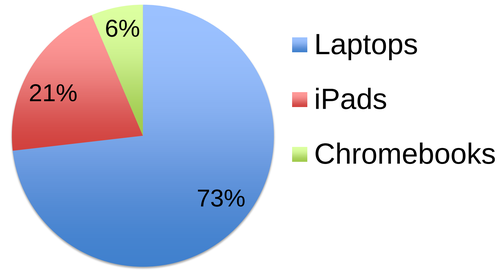
Results

Grade Level	
Grade	**n (%)**
2	5 (1)
3	33 (5)
4	77 (12)
5	98 (15)
6	132 (21)
7	108 (17)
8	87 (14)
9	63 (10)
10	18 (3)
11	15 (2)
12	6 (1)

Surveys each Year



AT Hardware



- Proportion of students from each city school board was roughly equivalent to board enrollment (Public = 62%, Catholic = 37%)
- Majority of training was initial (initial = 86%, supplementary = 12%)

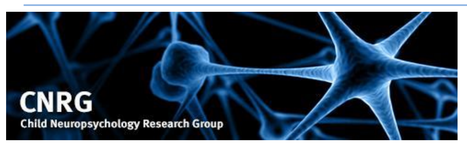
Responses to Survey Questions			
Question	**Yes (%)**	**Maybe (%)**	**No (%)**
I enjoyed training	586 (90)	54 (8)	13 (2)
I think training was helpful	613 (94)	37 (6)	2 (1)
I feel that training was a good use of my time	534 (82)	95 (15)	25 (4)
I am interested in learning more about my device and apps	433 (66)	155 (24)	65 (10)

Speech-to-Text Software Perceptions (all Years)				
App	**n**	**Yes (%)**	**Maybe (%)**	**No (%)**
iPad Dictation Feature	38	29 (76)	7 (18)	2 (5)
Read&Write	23	17 (74)	6 (26)	0 (0)
Dragon Naturally Speaking	71	50 (70)	14 (20)	7 (10)
Voicenote II	36	22 (61)	11 (31)	3 (8)

Text-to-Speech Software Perceptions (all Years)				
App	**n**	**Yes (%)**	**Maybe (%)**	**No (%)**
ClaroPDF	13	12 (92)	0 (0)	1 (8)
iPad Speak Selection Feature	122	104 (85)	11 (9)	7 (6)
Read&Write	41	32 (78)	7 (17)	2 (5)
Prizmo	98	75 (77)	19 (19)	4 (4)
Premier Literacy	307	208 (68)	86 (28)	13 (4)
Kurzweil 3000	47	29 (62)	12 (26)	6 (13)

Conclusions

- Although the results provide empirical data regarding the distribution and utilization of AT for children, more research is needed to establish best practices
- The findings can inform distributors (e.g. school boards) and trainers of AT perceptions and preferences



Presented at the 78th Annual Convention of the Canadian Psychological Association
Toronto, Ontario, June 2017

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