

· - ·

110

· : -1

· : -2

533



-3

-4

-5

:

(Behrmann, & Schaff, 2001, Edwards, 1995, (Scherer, 2005, 2004)

(Ladner, 2008, Johnson,2004, Belcastro, 2004)

.

.

.

.

.(2008)

)

.(2005

.(2007)

)

.(21 2005

: Assistive Technology

.(Bradley & Poppen,2003)

Assistive Listening Devices (ALDs)

Hearing Technology

Hearing Aids ()

(Frequency-Modulated FM)

Cochlear

Implant

(Smith, 2004,

.Ladner, 2008)

Equipment Devices Daily

.(Smith, 2004, RNID, 2010)

Telecommunication

Text Phone

Devices For The Deaf (TDD)

.(RNID, 2010)

Video Phones

(RNID, 2010)

.(Ladner, 2008) MobileASL

Automatic Speech

(Kirk, et al, 2003) Recognition (ASR)

(Johnson, 2004) Videoconferencing Model

Baldi

()

.(2007)

" " . " "
" " .
.(2007)

2001

.
)

.(2001

:

.(Stead ,2002)

.(Shery, 2003)

(Polson, 2000, Noaks, 2003)

.(Shery , 2003)

(Bradley & Popper ,2003, Augusto &

.Schroeder, 1995)

(Copel, 1991)

.(Shery , 2003)

(Bobbie & Azar ,2003)

(Jacobs , et al, 2003)

:



·
·
·

·

:

·

:

:

-1
-2

-3
-4

-5

:

:

.1

.2

.3

.4

.5

:



:

.1

.

.2

.

.3

:

:

Education For All

:

1975

Handicapped Children Act (P.L. 94-142)

1997 1990

Hearing Impairment

:

.(Hallahan &, Kuffman,2009) Deafness

: Hearing Impairment

)

(2000

:Deafness

.(2000

)

:

.(2008)

:

.(2008)

:

:



-1

-2

:

:

:

(2006)

60

(2005)

()

(20)

(17)

:

(13)

(16)

(2002)

($0,01 = \alpha$)

()

(2002)

48

.(24 24)

:

43

210

(Temple, 2006)

(Pape et al , 2002)

81

:

300

(Hegarty ,2001)

546

(Sax et al, 1997)

1543

23

(Clinton, 1995)

:

:

()

125

(110)

.(%88)

(1) .2009

547

) ()
 .() ()
 (1)

76	23	53
34	10	24
110	33	77
55	15	40
37	7	30
11	5	6
7	6	1
110	33	77

:

:

:

(1)

:

(2)
16

(2008)

:

:

1,2,3

:

:

(2008)

15

:

.()

(2008)

(0,73)

.(0,83) ()

) :

:(3)

12 (2008)

1,2,3 :

:

:

(2008)

11

:

()

.(0,94)

.(0,93) ()

) :
 (

110 .

.(SPSS)

(2)

(2)

%			
41,8	46		-1
30,90	34		-2
26,36	29		-3
20	22		-4

%			
16,36	18		-5
11,81	13		-6
5,45	6		-7
5,45	6		-8
4,54	5		-9
2,72	3		-10

$$100 \times \quad / \quad = \quad \bullet$$

(2)

$$2,72 \quad 41,8$$

%41,8

%30,90

.%26,36

%16,36

.%2,72

":

"

(3)

(3)

	0,26	2,70	
	0,23	2,96	
	0,23	2,96	
	0,28	2,94	
	0,39	2,85	
	0,40	2,83	
	0,43	2,79	
	0,41	2,79	
	0,43	2,79	
	0,47	2,76	
	0,47	2,73	
	0,54	2,64	
	0,59	2,62	
	0,59	2,60	
	0,64	2,59	
	0,83	1,70	

(3)

.1,70 2,96

.2,70

:

/

-

=

$$0,66 = 3 / 1 - 3 =$$

:

$$1,66 = 1 + 0,66 =$$

$$2,33 = 0,66 + 1,67 =$$

$$3 = 0,66 + 2,34 =$$

:

1,66 1

-1

2,33 1,67

-2

3 2,34

-3

:

1 .(2,70)

.3 2,34

:

.

:

3 2,34

.2,33

1,67

":

"

(4)

(4)

	0,24	2,89		
	0,25	2,94		-2
	0,26	2,93		-1
	0,29	2,91		-11
	0,30	2,90		-10
	0,31	2,89		-7
	0,31	2,89		-6
	0,31	2,89		-3
	0,32	2,88		-4
	0,33	2,87		-9
	0,34	2,86		-8
	0,36	2,84		-5

(4)

.2,84 2,94

.2,89

/ - = :

$$0,66=3 /1-3 =$$

:

$$1,66 =1 + 0,66 =$$

$$2,33= 0,66 + 1,67 =$$

$$3 = 0,66 + 2,34 =$$

:

1,66 1

-1

2,33 1,67

-2

3 2,34

-3

:

.2,89

.3 2,34

(4)

:

:

.3 2,34

":

"

(5)

.(

)

(5)

0,248	2.750	8			
0	2.666	1			
0,481	2.521	11			
0,047	2.766	2			
0,249	2.666	4			
0,192	2.622	3			
0	2.400	1			
0,086	2.833	4			

0,237	2.737	32			
0,223	2.814	14			
0,241	2.684	19			
0,086	2.786	5			
0,377	2.466	2			
0,094	2.666	2			
0	0	0			
0,047	2.566	2			

(5)

(0,05= ∞)

(6)

(6)

0.583	0,382	0.0265856	1	0.0265856	
0.211	1,531	0.1064980	3	0.319494128	
0.061	3.604	0.2506995	1	0.2506995	
0,345	1.120	0.0778672	3	0.233601743	*
0.788	0.073	0.0050507	1	0.0050507	*
0.618	0.588	0.0416078	3	0.124823664	*
		0.0695545	97	6.746787856	
			109	7.648525252	

(0.05 ≥ α)

(6)

":

"

(7) .((7))

0,463	2.875	8			
0,463	2.663	1			
0,111	2.917	11			
0,707	2.500	2			
0,216	2.863	4			
0,532	2.606	3			
0	2.636	1			
0,500	2.750	4			
0,323	2.812	34			
0,248	2.894	32			
0,092	2.948	14			
0,173	2.933	19			
0	3.000	5			
0	3.000	2			
0,128	2.909	2			
0	0	0			
0	3.000	2			
0,189	2.927	76			

(7)

(0,05= ∞)

(8)

(8)

* 0.019	5.66	0.328	1	0.328	
0.929	0.151	0.0087522	3	0.026256699	
0.739	0.112	0.0064670	1	0.0064670	
0,966	0.089	0.0051260	3	0.015378282	*
0.057	3.696	0.214	1	0.214	*
0.556	0.697	0.0403505	3	0.121	*
		0.0579071	97	5.61	
			109	6.43	

0.05 ≥ α *

(0.05 ≥ α)

(8)

(7)

(2.927)

.(2.812)

.(0.05 ≥ α)

:

:

"

.

.

.

.

.

.

:

.

.

:

"

.

.

:

(Polson,

2000, Noaks, 2003, Shery, 2003)

Bradley & Poppen, 2003, Augusto & Schroeder,

.1995)

(Hegarty, 2001)

(Temple, 2006)

:

"

"

(Bobbie & Azar, 2003)

(Jacobs et al., 2003)

(Pape et al., 2002)

(Jacobs et al., 2003)

(Clinton, 1995)

(Sax et al., 1997)

∴
"

$(0.05 \geq \alpha)$

($0.05 \geq \alpha$)

∴
"

.($0.05 \geq \alpha$)

(55)
(7)

(77)

:

:

-1

-2

-3

-4

:

.(2008). -

.2001-179 (1)9

.(2005) . -

26 (5) 7 (Rehabilitation International)

http://www.musawa.org/new2/docrihabi/5.doc : 2010

: .(2007) . -

2010 26 .

http://www.un.org/arabic/disabilities/default.asp?id=1364:

.(2001) .

2010 26:

.http://www.menasy.com : -

.(2000)

:

.(2005) -

.(2007) . -

http://www.almadapaper.com/ : 2010 26 : -

.(2002). -

.(2002 28-30)

.(2002). -

.(2007). -

26:

www.gulfkids.com : 2010

.(2006) . -

- Augusto, C. R. & Schroeder, P. W. (1995). Ensuring Equal Access to Information for People who are Blind or Visually Impaired. *Journal of Visual Impairment and Blindness*, 98(4), 9-13.
- Behrmann, M. & Schaff, J. (2001). Assisting Educators with Assistive Technology: *Enabling Children to Achieve Independence in Living and Learning, Children and Families*, 42(3), 24-28.
- Belcastro, F. P. (2004). Rural Gifted Students Who Are Deaf Or Hard Of Hearing: How Electronic Technology Can Help. *American association of deaf*, 149(4), 389-313.
- Bobbie, W. & Azar, H. (2003). Can Assistive Technology Help Us To Not Leave Any Child Behind. *Preventing School Failure*, 1(4).181-187.

-
- Bradley, N. & Poppen, W. (2003). Assistive Technology, Computers and Internet May Decrease Sense of Isolation For Homebound Elderly and Disabled Persons, *Technology and Disability*, (15) ,19-25.
 - Clinton S. (1995). Assistive Technology Impact and the Technology and Media, *College Student Journal* , (3) 349-353.
 - Copel, H. (1991). *Tech Use Guide:Students with Moderate Cognitive Abilities (Technical Report)*, RESTON,VA: Center for Special Education Technology, USA.
 - Edwards, A. D. N. (Ed.) (1995). *Extra-Ordinary Human-Computer Interaction: Interfaces for Users with Disabilities*, Cambridge Series on Human-Computer Interaction. Cambridge University Press, New York, USA.
 - Hallahan, D. P. & Kauffman, J. M. (2009). *Exceptional Learners: Introduction to Special Education* , Boston , Allyn And Bacon, USA.
 - Hegarty, W. (2001). What The Rabbis Heard: Deafness In The Mishnah, *Disability Studies Quarterly*, 23(2) 192-205.
 - Jacobs, Ph.; Haily, D. & Jones, A. (2003). Economic Evaluation for Assistive Technology Policy Decisions, *Journal Of Disability Policy Students*, 14(2),119-125.
 - Johnson, L. (2004). Utah Deaf Videoconferencing Model: Providing Vocational Services Via Technology, *Journal of rehabilitation*, 70(4), 33-37.
 - Kirk, C. A. , Gallagher, J. J. & Anastasiow, N. J.(2003). *Educating Exceptional Children*, Houghton Mifflin Company, Boston, USA.
 - Ladner, R. (2008). *Technology for Deaf People: Introduction to Deaf Studies*, Article Retrieved December 16, 2015, From: <http://www.cs.washington.edu/homes/ladner/DeafStudies/lectures/technolog>.
 - Nocks, A. (2003). *Assistive Technology Information And Education: Community Research For Assistive Technology Focus Group*. Community Research for assistive Technology, USA.
 - Pape T. , Kim, J. &Weiner, B. (2002). The Shaping Of Individual Meanings Assigned To Assistive Technology: A review of Personal Factors. *Disability and Rehabilitation*, 24 (1,2,3,) 5-20.
 - Polson, J. (2000). Providing Services To Adult With Disabilities Barriers To Accommodation, *Adult Basic Education*, 10(2) 90-100.
 - The Royal National Institute for Deaf People (RNID), (2010). *Products And Equipment For Deaf And Hard Of Hearing People*, Article Retrieved July 26,2010,From: http://www.rnid.org.uk/information_resources/products_and_equipment

-
- Sax, C. Pumpian, T. & Fisher, D. (1997). Assistive Technology And Induction, *Journal of Learning Disabilities* 31, 27-95.
 - Scherer, M. J. (2005). *Living In The State Of Stuck: How Assistive Technology Impacts The Lives Of People With Disabilities*, Fourth Edition. Cambridge, MA: Brookline Books.
 - Scherer, M. J. (2004). *Connecting To Learn: Educational And Assistive Technology For People With Disabilities*, American Psychological Association (APA) Books, Washington, DC, USA.
 - Shery, B. (2003). The Role Of Technology In Preparing Youth With Disabilities For Postsecondary Education And Employment, *Journal of Special Education Technology*, 18 (4) ,7-19.
 - Smith. D. D. (2004). *Introduction to special education, Fifth edition*, Pearson Education INK, Boston, USA.
 - Stead, A. (2002). The Future of Assistive Technology Services In The United Kingdom, *Technology And Disability* ,(14), 149-156.
 - Temple, C. L. (2006). *Successes and Barriers: Teacher's Perspectives on Implementing Assistive Technology In Educational Settings*, Unpublished Doctoral Dissertation, George Mason University, USA.