CD 485 Computer Applications in Communication Disorders and Sciences

MODULE 3

SECTION VII IDENTIFYING THE APPROPRIATE DATABASES – JOURNAL ARTICLES THROUGH PUBMED, MEDLINE AND COMMUNICATION DISORDERS MULTISEARCH

The profession of Communication Disorders was founded in earnest after the Second World War on a medical model of training, research and practice. Hence, it is not unexpected that databases focused on medical issues would be considerably useful. Two such databases are PubMed and Medline.

A. IDENTIFYING THE APPROPRIATE DATABASES – PUBMED THROUGH NCBI (THE NATIONAL CENTER FOR BIOTECHNOLOGY INFORMATION)

The National Center for Biotechnology Information (NCBI) provides an integrated approach to the use of gene and protein sequence information. It was established in 1988 as a national resource for molecular biology information. NCBI creates public databases, conducts research in computational biology, develops software tools for analyzing genome data, and disseminates biomedical information - all for the better understanding of molecular processes affecting human health and disease.

On the surface, this does not appear to be a likely source for information in Communication Disorders in general or AAC in particular. But included in this service is a public database called PubMed. This has many relevant sources for the study of AAC. Unlike many of the other databases that have to be accessed through a Provider Service paid for by the CSUN Library for the exclusive use of registered students, PubMed is a public service free to anyone who has access to the internet. It's interface looks like this:



It also has a nice tutor at:

http://www.nlm.nih.gov/bsd/viewlet/search/journal/journal.html

It is well worth looking and hearing this tutor.

Hence, PubMed above was be accessed through a Google Search, but it can also be accessed through the CSUN Library structure via the A to Z Index list, or the Communicative Disorders Library Home Page. Although it looks the same, this is a slightly different Pub Med however, only accessible to CSUN Students. The advantage of using the CSUN Library Structure is that once you have found a reference you want, there is a direct link that allows you to check whether or not it is in the CSUN Oviatt Library or the CSU Union of Libraries. One new feature under More Resources (the column to the right) is the link to the MeSH Database. This is a database for finding the structure of terms used by the U. S. Library of Medicine.

NCBI Search Page in MeSH Database



Please note there are links to an overview of PubMed and some interesting Tutorials. These are very useful. And if one plans to do a lot of research both in school and after, it would be advantageous to open a NCBI account so references and search strategies could be saved. This account is outside the CSU Library structure so it would remain in use after a student has graduated. For our purposes here, however, we will go directly to the search. PubMed like Medline has a very structured set of search terms. We can ferret these out by making a search in the **MeSH** database first. MeSH stands for Medical Sub Headings. If we use the search words Augmentative Alternative Communication into the MeSH database we come up with a rich array of search terms as follows:

NCBI MeSH Results Page

1: Communication Aids for Disabled					
Equipment that provides mentally or physically disabled persons with a means of communication. typewriters, cathode ray tubes, computers, and speech synthesizers. The output of such aids include language signs, Morse code, and pictures. Year introduced: 1993					
Subheadings: This list includes those paired at least once with this heading in MEDLINE and may allowable combinations.					
adverse effects classification economics ethics history psychology standards stati and distribution trends utilization					
 Restrict Search to Major Topic headings only. Do Not Explode this term (i.e., do not include MeSH terms found below this term in the MeSH 					
Entry Terms:					
 Communication Aids for Handicapped Communication Boards Communication Board Text Telecommunication Devices Telecommunication Device, Text Telecommunication Devices, Text Text Telecommunication Device TTY Telephone Tty Telephones Text Telephones Text Telephones Telecommunications Devices for the Deaf TDD Text Telecommunication Telecommunication, Text Telecommunications, Text Tect Telecommunications Augmentative and Alternative Communications Systems Speech Synthesizers Speech Synthesizers, Speech 					
Previous Indexing:					
 Communication (1966-1979) Nonverbal Communication (1970-1979) 					
See Also:					
<u>Speech Recognition Software</u>					
All MeSH Categories Analytical, Diagnostic and Therapeutic Techniques and Equipment Category Equipment and Supplies Self-Help Devices					
Communication Aids for Disabled					

Selecting, from the list of search words that we obtained above, the search terms "*Communication Aids for Handicapped*," we can return to our Search Page in Pub Med. Hence, we are now using MeSH terms for our search strategy in PubMed. We must also first change the Database from MeSH to PubMed.



NCBI Search Page in PubMed Database

In making this search, with these terms we come up with 1649 records. We could run the search again using some limits to reduce the number, but the second reference seems very interesting in terms of AAC so we'll go with that..

NCBI Results Page in PubMed Database



Clicking on the second record, we get a *full citation* having an abstract of the article, and related links. There are also some MeSH terms available for further research strategies.

NCBI Full Citation in PubMed Database

U.S. National Library of Medicine National Institutes of Health	
Display Settings: () Abstract Send to: ()	healthcare ACCESS FULL TEXT
Augment Altern Commun, 2009;25(3):202-14. Picture-book reading as an intervention to teach the use of line drawings for communication with students with severe intellectual disabilities. Stephenson J.	Related articles PPlease listen, it's my turn": instructional approaches, curri[J Intellect Dev Disabil Teaching sound letter correspondence
Macquarie University Special Education Centre, Macquarie University, New South Wales, Australia, jennifer.stephenson@speced.sed.mq.edu.au Picture-book reading provides an effective intervention context for young children learning spoken language and may also be appropriate for teaching the use of augmentative and alternative communication to children with severe intellectual disabilities. This study reports on a group intervention using a semiscripted book reading routine implemented by a teacher in a classroom for students with severe intellectual disabilities. Student use of line drawings was observed over the course of the intervention. Students' abilities to match words, line drawings, book illustrations, and real objects were assessed weekly. There were differences between baseline and intervention performances for all students, and these differences were particularly noticeable for one student.	consonant-vo (Augment Altern Commun • The effect of color on the recognition an of line drawin; [Augment Altern Commun • Review Learning disabilities. [Future Child • Review Iconicity in the development of p skillis: typical ([Augment Altern Commun » See reviews] » S
PMID: 19925312 [PubMed - indexed for MEDLINE]	Recent activity <u>Turn Off</u> Picture-book reading as an interventeach the use of line drawings for Communication aids for ha (1649)

Of most importance, however is the *Informa* Link in the upper right hand corner, which provides an access to the **Full Text** of the article. Clicking on the link gives us the Informa page which looks like this:

i i he	nforma althcare	Username:	Pas	sword: Resources	Login Reg Services	gister Shibboleth About Us	Athens Jobs	Help	Search:
Sum Aug 2009, V Picture Stude	Summary Augmentative and Alternative Communication 2009, Vol. 25, No. 3, Pages 202-214, DOI 10.1080/07434610903031216 Picture-Book Reading as an Intervention to Teach the Use of Line Drawings for Communication with Students with Severe Intellectual Disabilities				Home >Journal home >TOC >Summary Prev. Article Next Article View/Print PDF (391 KB) View PDF Plus (391 KB) Add to favourite Email to a friend TOC Alert Citation Alert What is				
Jennife	er Stephenson								
Macqu	/acquarie University, New South Wales, Australia				California State		State		
Macqua jennife	arie University Special Edu r.stephenson@speced.sec	ucation Centre, N d.mq.edu.au	facquarie Univer	rsity, NSW, 2109, A	ustralia +61 2 98	850 8694	No	rthridge	

In the right hand column (and again below not shown here) are links to Full Text PDF files which will display the article in it's entirety as shown below. Augmentative and Alternative Communication, September 2009 VOL. 25 (3), pp. 202-214

Intorma healthcare

Picture-Book Reading as an Intervention to Teach the Use of Line Drawings for Communication with Students with Severe Intellectual Disabilities

JENNIFER STEPHENSON*

Macquarie University, New South Wales, Australia

Picture-book reading provides an effective intervention context for young children learning spoken language and may also be appropriate for teaching the use of augmentative and alternative communication to children with severe intellectual disabilities. This study reports on a group intervention using a semiscripted book reading routine implemented by a teacher in a classroom for students with severe intellectual disabilities. Student use of line drawings was observed over the course of the intervention. Students' abilities to match words, line drawings, book illustrations, and real objects were assessed weekly. There were differences between baseline and intervention performances for all students, and these differences were particularly noticeable for one student.

Keywords: Augmentative and Alternative Communication (AAC); Severe Disability; Children; Book Reading; Line Drawings

INTRODUCTION

Children with severe intellectual disabilities and little or no spoken language may benefit from the use of augmentative and alternative communication (AAC) strategies such as the use of graphic symbols. Colored line drawings generated by computer programs, such as Picture Communication Symbols (PCS) or COMPIC have become 2002). In many cultures, book reading is a common activity in homes and schools and has been shown to influence vocabulary learning in young children with no disabilities (Arnold, Lonigan, Whitehurst, & Epstein, 1994; Fletcher & Reese, 2005). Around their first birthday, these children are learning words and their mothers respond to them by actively teaching correct labeling using "what" questions and providing

Research doesn't get any better than this.

B. IDENTIFYING THE APPROPRIATE DATABASES – MEDLINE THROUGH NCBI (THE NATIONAL CENTER FOR BIOTECHNOLOGY INFORMATION)

As described online, "MEDLINE® is the premier database of the U.S. National Library of Medicine (NLM). It contains over 12 million records of journal articles in all areas of the life sciences, with particular emphasis on biomedicine. MEDLINE records are created by NLM and collaborating partners. Full records include complete

bibliographic details and author abstracts. In addition, subject specialists at the National Library of Medicine assign controlled terms from the MeSH Thesaurus that add value to the database and aid in retrieval."

To those of us who can remember a time when computers didn't exist (referred to sometimes as the Crustacean Period by archeologists) the big reference source in the Library for Communication Disorders & Sciences was Medicus Index. It existed in volumes of bound books in the Reference Room. These have all been replaced now by computers and a software database called, Medline.

The Provider for Medline in the CSUN Library is the *ISI Web of Knowledge (Thomas Corporation).* This database can be accessed through the Library A – Z Index listing or the Communication Disorders Library Home page. In regards to the former you would look under "**M**" for **MEDLINE (ISI)**, rather than "**I**" for **ISI (MEDLINE)**.

MEDLINE (ISI)

Indexes, abstracts more than 4,600 medical journals, 1950-

The ISI Search Page for Medline looks like the following:

The Search Page of Medline in ISI Web of Knowledge

ISI Web of Knowledge [™]					
All Databases Select a Database MEDLINE Additional Resources					
Search Advanced Search History Marked List (0)					
MEDLINE®					
Search for:					
communicat* in Topic - Add MeSH					
Example: "skin graft" reject*					
AND 🗘 aid* in Topic - Add MeSH					
Example: "skin graft" reject*					
AND 🛟 disable* in Topic - Add MeSH					
Example: "skin graft" reject*					
Add Another Field >>					
Show me only records with abstracts.					
Search Clear					
Current Limits: [Hide Limits and Settings] (To save these permanently, sign in or register.)					
Timespan: All Years (updated 2010-02-16) From 1950 + to 2010 + (default is all years) 					
Databases: ✓ In-Process ✓ MEDLINE –1950-present					

Using the truncated search terms "communicat* and aid** disable*, we obtain a results with 1686 records

The Results Page of Medline in ISI Web of Knowledge--References

ISI Web of Knowledge™							
	All Databases Select a Databas	e MEDLINE Additional Resources					
Γ	Search Advanced Search Search	h History Marked List (0)					
	MEDLINE®						
	<< Back to previous						
	Results (Topic=(communicat*) AND Topic=(aid*)) AND Topic=(disable*) Refined by: MeSH Headings=(COMMUNICATION AIDS FOR DISABLED) AND MeSH Qualifiers=(REHABILITATION OR METHODS OR PSYCHOLOGY OR INSTRUMENTATION) Timespan=All Years. Databases=In-Process, MEDLINE.						
	Results: 1,016	Page 1 of 102 Go >>> Sort by: Latest Date					
Mestine Results Search within results for Search ▼ MeSH Headings COMMUNICATION AIDS FOR DISABLED (1,016) HUMANS (994) MALE (432) FEMALE (374) ADULT (338) more ontions (values		 Print E-mail Add to Marked List Save to EndNote Web Save to EndNote, RefMan, PmCite Analyze I more options 1. Title: Sign language recognition using intrinsic-mode sample entropy on sEMG and accelerometer data. Author(s): Kosmidou, Vasiliki E, Hadjileontiadis, Leontios J Source: IEEE Trans Biomed Eng Volume: 56 Issue: 12 Pages: 2879-90 Published: 2009 (EPubDate 2009 23) Find Text 2. Title: Issues in the use of visual supports to promote communication in individuals with autism spectrum disorder. Author(s): Arthur-Kelly, Michael, Sigafoos, Jeff, Green, Vanessa, et al. Source: Disabil Rehabil Volume: 31 Issue: 18 Pages: 1474-86 Published: 2009 (Find Text 3. Title: The loneliness experiences of young adults with cerebral palsy who use alternative and augmentative 					
	MeSH Qualifier Refine REHABILITATION (666) METHODS (294) PSYCHOLOGY (254) INSTRUMENTATION (187) PHYSIOLOGY (171) more options / values Subject Areas	 Author(s): Cooper, Lauren, Balandin, Susan, Trembath, David Source: Augment Altern Commun Volume: 25 Issue: 3 Pages: 154-64 Published: 2009 Find Text 4. Title: Metrics for comparing three word-based software programs used for augmentative and alternative communication. Author(s): Ratcliff, Ann, Sutton, Beth Anne, Lehman, Mark Source: Augment Altern Commun Volume: 25 Issue: 3 Pages: 176-86 Published: 2009 Find Text 					

We could and should, of course, have used the **Advanced Search** Options or the **Refine Results** options to limit and focus the search and eliminate irrelevant references from the results.

We can among other things obtain a full text record by clicking on the Title Link, for example, "Enhancing AAC Connections etc." This gives us a wealth of information.

Full Text Citation in Medline via ISI Web of Knowledge

Enhancing AAC connections with the world.

GFind Text

Print

Author(s): DeRuyter, Frank; McNaughton, David; Caves, Kevin; Bryen, Dia

Source: Augment Altern Commun Volume: 23 Issue: 3 Pages: 258

[PubMed Related Articles]

Abstract: The availability of new technologies has changed how we contr Significant barriers, however, have prevented many individuals who use a technology and computer-based activities available in today's "Information increased interoperability between AAC and mainstream technologies. W individuals who use AAC, (b) individuals who assist in selecting and supp manufacturers, (e) mainstream application developers and technology m suggestions for future research, public policy, and technical development

PubMed ID: 17701744

Document Type: Journal Article; Review

Language: English

Address: Duke University Medical Center, Durham, NC 27710, USA. deru

MeSH Terms:

Heading	Qualifier
Commerce	
Communication Aids for Disabled	*economics

Included here is the typical information found in a full citation, plus some more useful MeSH terms, and options to save, email or print the citation. Also included is a "Find Text" option. This is important because it not only give us an opportunity to format the citation in an APA style (under More Options) but it also gives us information about Full Text options and/or the availability of the reference in the CSU Library System.



We can see that there are two Full Text sources for this reference, and that it is also available in the Oviatt (CSUN) Library. Our work is done!

Without a doubt, PubMed and Medline are very useful databases for research in Communication Disorders and Sciences, but there is an even more powerful tool, which shortens considerably the effort and time we must spend in locating references and their full text. That tool is *Communication Disorders & Sciences Multisearch.*

D. IDENTIFYING THE APPROPRIATE DATABASES – COMMUNICATION DISORDERS MULTISEARCH.

Confucius said, "If you want to catch more butterflies, use a bigger net!" Or, maybe it was my entomology professor at the U. of Hawaii who suggested that, or maybe my kindergarten teacher at Leilahua elementary. Anyway, for Communicative Disorders Students, *Multisearch* is the *BIGGER NET*.

This database can only be accessed from the Communication Disorders Library Home Page as the first item in the list under the heading Databases (actually for some strange reason there are two Database headings so use the second one here)...

Communicative Disorders Library Home Page

http://library.csun.edu/mhenry/bibcd.html



You can see the list of databases included in MultIsearch although we will only be able to search 10 at a time. Clicking on any one in this list will give us the individual Provider interface with all its specific options. Clicking on the Communicative Disorders Multisearch link will give us the Search Page for including up to 10 databases. In this case, however there will be a generic interface format for all, which may lack some of the nuances of the individual Provider interface. But the efficiency gained in most cases far outweighs this disadvantage.

Although it is not necessary to log in to do a search, it is advantageous to do so in case we wish to save any of the references we have located. The Log in link is in the upper right corner of the screen. We log in using our CSUN ID and Password just as if we were logging into the Portal.

Remote access to this database is restricted to current CSUN students, faculty, and staff. Please enter your CSUN User ID and password in the fields provided below:					
CSUN User ID:					
Password:					
Submit Clear					

Communicative Disorders Multisearch Search Page

Communi	ication	Disorders	+
Sciences	Multis	earch	

Search across multiple databases relating to Communication Disorders + Sciences. You may search up to 10 databases simultaneously.

Search	all fields 💠 for	
	Aac and communication	
	CO	
More Op	otions	

My Account

- Log-in
- My Saved Records
- My Saved Databases

Most Useful

- 🗹 PubMed 🔁
- CINAHL Plus with Full Text (EBSCO) 1
- 🗹 ERIC (CSA) 🖯
- ✓ Oviatt Library Catalog ¹

Also Useful

- PsycINFO (EBSCO)
- Academic Search Elite (EBSCO)
- Wilson OmniFile Full Text Mega
- ✓ INSPEC (Engineering Village) €
- Cochrane Library (Wiley)
- Health Reference Center (Gale) 1
- ScienceDirect (Elsevier) 1
- 📃 Ovid Journals 🖯
- 📃 MEDLINE (ISI) 🕄
- MEDLINE (Ovid)
- 📃 ERIC (CSA) 🕄
- Linguistics and Language Behavior
- Abstracts (LLBA) 🕄
- Communication & Mass Media (EBSCO)
- 🗏 Wiley Interscience 🕄
- Education Full Text (Wilson) 1
- 📃 NetLibrary 🖯
- 📃 WorldCat 🕄
- Google Book Search 1
- 📃 Gale Virtual Reference Library 🖯

Once you have logged in you will be at the Search Page, which is where we were before we logged in.

The "big net" here is the capability of Multisearch to cover TEN databases in one search. These databases, more over, are among the most relevant for the field of Communicative Disorders, and hence AAC.

Of course, you can select less than 10 databases to search. Regardless of how many you select, the format of the results page and beyond will be the same for all databases, regardless of the Provider they typically use. For example using the first Ten databases and the search strategy "AAC and communication," we get a results page with 149 citations. On the right side of the monitor is the "hit" rate for each of the ten databases. You can see whom the "heavy hitters are.

Search Results for Communication Disorders Multisearch (Right side of the monitor)

Search results

Top Results (149)

Results by database

- PubMed (211)
- CINAHL Plus with Full Text (498)
- ERIC (163)
- Oviatt Library Catalog (1)
- PsycINFO (754)
- Academic Search Elite (184)
- Wilson OmniFile Full Text Mega (98)
- INSPEC (838)
- Cochrane Library (6)
- Health Reference Center (713)

On the left side of the monitor are the records. The entire list of 149 citations is presented in the order of their relevance (please see below).

Search Results for Communication Disorders Multisearch (Left side of the monitor)



But we can also get these databases ordered, if we wish, within each individual database by clicking on the link (name) of the Database in the list to the right; or the by the Dates).

Limit top results by:

topic

- AAC devices (14)
- Spectrum Disorders (14)
- Picture (12)
- Review (10)
- Generating (8)
- Intellectual disabilities (7)
- Aged children (7)
- Speech-Language Pathologists (6)
- Primary (5)
- Practices Related (4)
- In augmentative and alternative communication (4)
- Data (3)
- Natural speech (3)
- There a mentoring role for adul
 (3)
- Conditions (3)
- Explore The Experiences (3)
- Cerebral palsy (3)
- Teachers Of Students (3)
- Pragmatic (3)

date

- 2010 (10)
- 2009 (105)
- 2008 (27)
- 2007 (6)

We can, of course, get the full text record, use the "Find Text" link and check the availability in the CSUN Library as we have done in the past for other databases.

If there are any references we wish to save for an extended period of time we can click on the "save this record "link. This will only work, of course, if we have logged in.



Then later, if we wish to review the records we have saved we can click on the "My Saved Records" which is adjacent to the Log-in (now Log out) link.



There we will have access to all our saved records. There are a log of additional options here like Exporting records or downloading them.

My Saved Records		My Account
Results 1-4 of 4	sort by: title author date most recently added	 Log-out vcoao0el
		🗎 My Saved Records
A Study of Literacy in Three Impairments Who Use Aug	e Adults with Moderate-to-severe Intellectual gmentative and Alternative Communication Systems	My Saved Databases
Dissertation		Export Records
This study was undertaker moderate-to-severe intelle alternative communication which their communication	n to explore (a) the everyday literacies of three adults with ectual impairment (M/SII) who use augmentative and n systems (AAC); and (b) the nature of the conditions under n goals were successfully addr	 Email records to yourself Download to text file Download to Endnote, Zot
By: Feeney, James J Year: 2009		Limit by Format
Published in: Dissertation Sciences	Abstracts International Section A: Humanities and Social	 Article (1) Book Chapter (1)
GFind Text Check for avail	lability	Conference Paper (1)
× Delete this record		 Dissertation (1)
Tags:	Update	
(separate tags with commas)		Tags
		• aac(3)

But for now we will just Log-out.

There is much more to be learned about the library strategies both in general and in particular for selected databases. And it is all available in the form of Tutorials both in the databases themselves and in the Communication Disorders Library Home Page. The more one uses these databases the more simple the procedures will appear to become. For any obstacles, which seem insurmountable, the final resource is to email our Librarian, Marcia Henry, who will answer all your questions.