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Rx: eBooks — A Comparison of Functionality of Four Medical eBook Collections

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While the debate continues about whether people want to read books online in general, one area where eBooks have flourished is in the health sciences. Medical textbooks are not typically read cover-to-cover, but instead are used to look up specific information or to answer a question, which lends them perfectly to the online platform.

In this article, I will describe and compare four major medical eBook collections: **AccessMedicine** from **McGraw-Hill**, **MDConsult** from **Elsevier**, **Books@Ovid** from **Ovid Technologies** (a **Wolters Kluwer** business), and **STAT!Ref** from **Teton Data Systems**. In addition to giving a general content description, I will cover the search, browse, navigation, and output functionality of each platform. See, Table 1: Comparison of Features, for a detailed comparison of specific search, browse, output, and other features of each platform. While these collections are specifically medical in nature, the criteria for comparing the search, browse, and output features can be applied to any eBook collection, medical or not.

One important commonality among the platforms is that the books are not scanned images, and therefore no special reader software is required (like some other eBook platforms, such as **ebRARY**). In addition, data elements, such as tables and footnotes are hyperlinked in the text for ease of navigation.

Another significant search feature of each platform is the use of the **National Library of Medicine's Unified Medical Language System**. All four eBook collections discussed here map the search query to the unified medical language metadata applied to the content. This indexing allows the systems to match the entered term(s) to the content by searching for the concepts rather than the exact search word(s), and as a result, retrieve all relevant entries. For example, if a searcher types "heart attack," the search engine will expand the search to include "myocardial infarction," the clinical term.

AccessMedicine

AccessMedicine is a comprehensive online resource for medicine. It provides access to 58 medical textbooks from **McGraw-Hill**, including the *Lange Educational Library* series. In addition to eBooks, it also contains a drug database, differential diagnosis generator, practice guidelines, patient education materials, **United States Medical Licensing Exam (USMLE)** practice test, an image database (culled from the textbooks), and PDA downloads of book sections (see, Figure 1: AccessMedicine Homepage).

One major benefit of licensing **AccessMedicine** is that the preeminent textbooks in the collection, *Harrison's Principles of Internal*

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Table 1: Comparison of Features

Search Features	Access Medicine	MD Consult	Ovid Books	STAT!Ref
AND OR NOT operators	Advanced search only	yes	yes	yes
Search terms map to index terms	yes	yes	yes	Advanced search only
Correct spelling suggested when word is misspelled	yes	yes	no	yes
Can specify limited truncation/character masking	no	yes	yes	no
Can specify unlimited truncation	no	yes	yes	no
Software assumes AND relation between words	yes	yes	yes	no
Software assumes phrase relation between words	no	no	no	yes, but finding no matches then assumes proximity
Proximity searching allowed	no	no	yes	yes
Results can be further refined by clicking on subtopic cluster	yes	no	no	yes
Search help available	no	yes	yes	yes
Browse Features	Access Medicine	MD Consult	Ovid Books	STAT!Ref
List can be sorted by specialty	yes	yes	yes	no
List can be sorted by title	no	no	yes	yes
Book covers available	yes	yes	yes	no
Output Features	Access Medicine	MD Consult	Ovid Books	STAT!Ref
Number of results clearly displayed	yes	yes	no in Quick Search, yes in Main Search	yes
Results ranked by relevance	ranking unclear	yes	yes	yes
Search terms in records are highlighted	no	yes	yes	yes
Book sections can be saved to disk	no	no	yes	no
Book sections can be emailed	yes	yes	yes	no
Book sections can be printed	yes	yes	yes	yes
Book sections can be downloaded to PDA	yes	no	no	no
Section of book is clearly displayed in the results list	yes	no	yes	yes
Bookmark a page	yes	yes	no	no
Administration Statistics	Access Medicine	MD Consult	Ovid Books	STAT!Ref
	Must log in to admin site	Emailed monthly by customer support rep	Can retrieve at will or set up an automatic email	Can retrieve at will or set up an automatic email

Medicine, Hurst's The Heart, and William's Obstetrics are updated daily, by virtue of the fact that this is the publisher's own platform. These books are available via other eBook vendors (e.g., **Ovid** and **STAT!Ref**), but on those platforms these books are only updated annually.

Searching AccessMedicine

AccessMedicine's default search allows for single concept searching only. Type in one topic, and a list of books appears with thumbnail images of the book covers and the section of the book where the topic resides clearly displayed. The left side bar offers subtopics, such as diagnosis, etiology, genetics, etc., to help refine the search further. After selecting one of the results, the precise section of the book is retrieved, and a breadcrumb trail details what chapter and subsection are being viewed. Drug names mentioned in the text are hyperlinked and open a quick look-up window about the drug. The searcher can then print the section or whole chapter, email, bookmark, or download the section to PDA.

One unique feature of **AccessMedicine's** search engine is the option to re-execute one's search as an image search. This provides one-click access to **AccessMedicine's** image database.

If more than one topic is entered in the default search, then the search engine performs a Boolean "or" search and provides a list of possible topics for all the concepts entered. Once a topic is selected, then a list of book results appears. Combined concept searching is reserved for the Advanced Search mode.

Browsing AccessMedicine

AccessMedicine's browse feature frustrates the user for its inability to provide a

complete list of eBooks available in a single list. The homepage lists the eleven **McGraw-Hill** textbooks, but leaves out the bulk of the eBooks, which are from the *Lange Educational*

Library. The *Lange* books are browsable only by clicking a specialty area (e.g., biochemistry or neurology), which retrieves only the book or books in that specialty, or by clicking on the full *Lange Educational Library* titles link, which lists the *Lange* titles in the medical specialty categories.

MDConsult

Like **AccessMedicine**, **MDConsult** is a comprehensive online resource for medicine that also includes journals, a core collection of medical textbooks, and twelve medical specialty collections of textbooks all from **Elsevier** imprints. In addition, **MDConsult** contains practice guidelines, patient education materials, and drug information. The journal packages and medical specialty eBook collections are not included in the basic **MDConsult** package, but can be purchased a la carte.

Searching MDConsult

The default search on the **MDConsult's** homepage searches across all the kinds of information contained in **MDConsult**. One may uncheck specific boxes next to the

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Figure 1: AccessMedicine Homepage

Figure 2: MDConsult Book Tab

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various types of information to be excluded from the search (i.e., journals, books, images from books, patient handouts, drugs, news, etc.). Tabs line the top of the homepage that take the user directly into those various content areas. Clicking on the “Books” tab retrieves a browsable list of books and a search box that queries the books exclusively. (See, Figure 2: MDConsult Book Tab)

MDConsult’s search engine understands Boolean operators, but if no Boolean operator is entered, then the engine assumes the Boolean “and.” A drop-down menu next to the search box allows one to focus the query on diagnosis, etiology, treatment, or prognosis. After the search executes, the results rank by the number of the occurrences of the search term(s) within each book. The title of the book and the editor is the only information provided in the results list. A sidebar on the left displays the search term(s) and provides an easy method to search another content area of **MDConsult** with the same query.

Once one clicks on a book, a new results list displays the sections of the book where the search term(s) occur. The search term(s) are highlighted and shown in context (partial sentences) to help decide which section to read. Once a section is opened, the search term(s) remain highlighted on the page. One can email, print, or bookmark the section. Printing can be cumbersome, because certain books only allow one page to be printed at a time.

Browsing MDConsult

When one clicks on the “Books” tab at the top of the **MDConsult** homepage, the browsable list of books appears grouped by medical

specialty. The list can be resorted by editor, but the list then reorganizes by the packaged collections, and then by editor within the collections. When you click on a book, there is a photograph of the book cover, but it would be nice if the covers were displayed in the list of books like **AccessMedicine** and **Books@Ovid**.

Books@Ovid

Books@Ovid provides a collection of eBooks from **Lippincott, Williams, & Wilkins** (also a **Wolters Kluwer** business) as well as other publishers with a total selection of 649 books across many disciplines from the sciences to the humanities. Of interest to health sciences libraries are the pre-selected packages of the *Brandon/Hill Medical*, *Brandon/Hill Nursing*, and the *Doody’s Core Titles* in the Health Sciences collections.

While **Books@Ovid** is simply an eBook collection, unlike **AccessMedicine** or **MDConsult**, which have additional medical content, **Ovid’s** platform does allow cross-searching among whatever other **Ovid** products that a customer might have. Therefore, if one has access to journals or databases from **Ovid**, then all of these resources can be searched simultaneously.

Searching Books@Ovid

Books@Ovid provides a Quick Search from the browse page or one can search from the Main Search Page in order to conduct more complex search queries, including proximity searching and limits. The Quick Search allows for Boolean operators, but lacking a Boolean operator the search engine assumes a Boolean “and” relationship between search terms.

When one searches via the Quick Search, results are ranked by relevance. One striking absence is an indication of how many results

were retrieved. The searcher has to keep clicking for the next page of results until he gets to the end not knowing whether there are 20 or 200 results.

The results list clearly indicates the book title, edition, editors, publisher, date of publication, and the chapter of the book where the search topic resides. Several sentences with the search terms highlighted provide context, assisting the searcher to select the most appropriate result. The search terms remain highlighted when clicking to enter the section of the book. A search box remains at the top of the page that enables the searcher to search another topic within the book at hand or across all the books. Sections can be saved, printed, or emailed.

Browsing Books@Ovid

The browse page sorts the books by title or by specialty. Thumbnail images of the book covers offer a nice graphic display along with the publication details (see, Figure 3: Books@Ovid Browse Display). One drawback is the limited number of books listed on one page. Only twenty books display on a page, and paging through can be annoying. An option to see all books on one page would be a nice feature to add to the otherwise nicely detailed and laid out browse page.

STAT!Ref

STAT!Ref is the only platform discussed here that is not related to any publisher. It is purely a medical and nursing eBook aggregator from **Teton Data Systems** where all of the eBooks are sold a la carte.

Searching STAT!Ref

STAT!Ref utilizes a sophisticated search engine. It is the only search engine among the four discussed here that not only accepts Boolean operators, but also conducts proximity and adjacency searching automatically in order to retrieve results. Its search engine assumes a phrase relationship among the entered search terms, but if it finds no matches, then it searches for the terms near one another in a gradual manner (first within 5 terms, then within 10 terms, etc.), so your search results rank by the proximity of the search terms to each other.

After typing in the query, the results list displays the book citation, including the specific section of the book, and it gives the sentence in which the terms fall for context. Above the results list is a link to *Stedman’s Medical Dictionary*, so that one can look up the definition of the search terms easily. To the left of the results, further refining options are presented that enable the searcher to see the specific books that fall under certain categories and then re-order the results list accordingly, such as drug infor-

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Figure 3: Books@Ovid Browse Display

mation, patient information, or by medical specialty. Suggestions for refining the search using related concepts are also offered. Search terms are highlighted in the text. The section can be printed. Unfortunately, emailing, saving, or downloading to PDA are not options on this platform.

Browsing STAT!Ref

STAT!Ref's title list is quite plain (see, Figure 4: STAT!Ref Browse Display) and can only be displayed in title order, with no option to sort by specialty. The tables of contents of the books are easily displayed by clicking on the title, providing easy navigation to a specific section of the book.

Conclusion

The high quality content for each eBook collection discussed here is unquestionable. Each carries premier medical books that certainly health sciences libraries, and possibly other kinds of libraries, want to provide to their patrons. **AccessMedicine** and **MDConsult** contain additional medical content enhancing the value of their products.

In terms of search, browse, and navigational functionality, each of these eBook platforms has its strengths and weaknesses. **AccessMedicine** and **MDConsult** allow image searches in the books. The **Books@Ovid** browse page shows book covers and all the bibliographic data, and the Main Search offers advanced search options. **STAT!Ref** offers a smart search engine, so the searcher does not have to be. None of the platforms is perfect, but each does something extraordinarily well.

Figure 4: STAT!Ref Browse Display

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BORN & LIVED: Born and raised in the Philadelphia, PA area, then lived in Chicago, IL for many years, and currently reside in Honolulu, HI.

EDUCATION: BA, **Northwestern University**; MA, **DePaul University**; MLIS, **University of Hawaii** at Manoa.

IN MY SPARE TIME I LIKE TO: Surf the gentle waves off of Oahu's south shore.

FAVORITE BOOKS: *A Fine Balance* by **Rohinton Mis-try**; *In the Time of the Butterflies* by **Julia Alvarez**; *The Time Traveler's Wife* by **Audrey Niffenegger**.

HOW/WHERE DO I SEE THE INDUSTRY IN FIVE YEARS: Innovations in technology will advance beyond what I can foresee. As librarians, we need to understand, embrace, and integrate them into our services for the benefit of our organizations, our workflow, and our patrons. It's an exciting time to be in libraries! 🐼

Searchers expect an interface that is easy to use, that supports Boolean operators, but doesn't require them, that has a logical relevancy ranking algorithm to float the most relevant results to the top, that suggests spelling alternatives, that allows saving, printing, and emailing

of sections, and a single browsable list of books with relevant bibliographic data displayed. In the eBook platforms discussed here, only one allows sections to be downloaded to PDA. In the future, patrons might expect the ability to download book sections to any number of handheld devices, such as PDAs or iPods, or even may want to download audio files of eBooks to their iPods or MP3 players.

As librarians, we need to communicate the strengths, weaknesses and desired innovations to the vendors at every opportunity, so that the vendors understand the features important to us. This kind of feedback helps vendors improve their products, which benefits librarians and patrons all.

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