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Using Mobile Apps for Research: An Emerging Trend in LIS Profession

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Abstract:

With advancements in technology and the rise in Smartphone use, people are taking advantage of being connected to data wherever they are. Mobile phones aren't just phones anymore: they can access e-mail, search the Web, video chat, and play games. Even mobile devices can bring social media, productivity tools, and entertainment literally into the palm of your hand. In this scenario, libraries need to position its research resources to today's generation's changing information needs. The libraries need to explore mobile devices as a way to connect with patrons. The resources mentioned in the paper will help libraries begin to plan and implement their own unique mobile presence. The paper talks about the various mobile apps which can be used for Research. The paper focuses on consideration for Librarians and Vendors. The paper also discusses the future of Mobile use.

Key words: *Mobile Technologies, Mobile Applications, Mobile Web browsers, Academic Library, E-Databases, online research tools*

1. Introduction

The globalization of markets accompanied by rapid change in information technology has increased the competitiveness in most industries. The libraries are not exception to this. Media transformation and ICTs have brought in unprecedented changes in the way the information is gathered, stored, organized, accessed, retrieved and consumed. The journey of libraries from analog to hybrid to digital has posed both challenges and opportunities as well for library professionals. The constant change in generation and delivery of information leave library professionals with no alternative but to adapt their services in response to technological developments. A library is experiencing a paradigm shift in their services due to advancement in IT. Use of latest technologies in providing services has enhanced the structure of library services to be provided to the users.

A growing number of library users are engaging mobile devices as search tools. Smart Phones cell phones, iphones, and tablets are now commonly among the first places people turn when seeking information. When one confronted with the need to do serious research, does he reach first for mobile devices, a laptop or desktop computer? In today's scenario, most of the users will prefer searching information using mobile apps. The recent explosion in popularity of mobile applications (apps), the phrase "There's an app for that" has entered the popular vocabulary with a vengeance and it has fueled a new direction in mobile search. Many information resources and portals have created mobile applications as powerful gateways to their online resources. Major search engines, as diverse as Google, Bing, and Wolfram Alpha now offer powerful search experiences via Smartphone applications. Newspapers, from The Wall Street Journal to The Times of India to local city dailies, have created mobile versions, which are optimized for reading on a cell phone screen. These tools have set the stage and offered lessons for libraries and information vendors pursuing mobile search projects.

2. Why Should We Care About Mobile Devices?

In the Hands of Millions			
Top 10 countries with mobile Populations			
Rank	Country	Mobile Phones (MN)	% of Population
1	China	1170	85.21
2	India	864	68.72
3	United states	327	103.29
4	Indonesia	281	118.6
5	Brazil	263	136.7
6	Russia	261	183.0
7	Japan	138	108.0
8	Vietnam	134	146.5
9	Pakistan	122	68.83
10	Nigeria	114	69.0

Table 1: Mobile Subscription Population in Top 10 Countries

Source: ITU, National Telecommunication Ministries and Regulatory Authorities, June 2013

According to International Communications Union (ITU) in early 2013, the world had 6.8 billion mobile subscriptions, with more than half- 3.5 billion- in the Asia-Pacific region. Of the Asia-Pacific region, India and China alone constitute more than 2 billion mobile subscriptions, as the two countries that sit at the head of the list of the top 10 countries with mobile subscriptions. Mobile Internet users in India are expected to hit 165 million by March 2015. By 2015, 80 per cent of the world's mobile handsets will be smart phones — with much of the growth coming from emerging markets. CCS further predicts that by 2017, the combined number of mobile phones and tablets in use will exceed the world population. Gartner, another leading information technology research and advisory firm, predicts combined shipment of PCs, tablets and mobile phones to reach 2.4 billion units this year. The research shows a decline in the PC markets to 7.6 per cent as consumers' transition to tablets and ultra-mobiles. [6]

As per survey of TCS on Indian students conducted during 2012-2013, nearly 70 percent of Indian students own a Smartphone, with more user base in smaller cities than metros. The findings of survey of Indian teenagers across 14 Indian cities that smart devices and unprecedented levels of online access are making this generation the most connected yet. This is changing the way they communicate with each other and transforming both their academic and social lives. "Research for school" is as the main reason to access the Internet followed by social reasons like chatting/connecting with friends. [3]

Thus, in today's scenario, mobile phones play a vital role in the information communication. The information industry is adapting to reflect this shift in user behavior. Today's generation rely more heavily on mobile devices. They are becoming more willing to embrace the use of mobile technologies for searching and advance research. With the mainstreaming devices, libraries can no longer ignore this importance trend. Hence, in order to tune to today's users' mobile technology habits, libraries need to mobilize the library resources and services and make ourselves accessible to patrons whenever they are, from a device that fits in their pocket.

3. Integrating Library Resources with Mobile Technologies

Searching information using Internet from the Desktop Computers to laptops to using Mobile Apps for research, the library resources and services have experienced paradigm shift. The users' information needs are changed over the period of time. Today's Libraries need to take a new channel to provide their resources, services and Research tools to today's generations and staytuned with users. Therefore, it is crucial for librarians to understand mobile devices and provide services through them.



4. What is Mobile APPs?

Mobile apps are pieces of software produced by third parties such as businesses or services that people can download onto their smart phones.[4]A mobile application (or mobile app) is a software application designed to run on Smartphone, tablet computers and other mobile devices. They are usually available through application distribution platforms, which are typically operated by the owner of the mobile operating system, such as the Apple App Store, Google Play, Windows Phone Store, and BlackBerry App World. Some apps are free, while others must be bought.

5. Mobile Apps for Library Research

The recent explosion in popularity of mobile applications has given a new direction in Mobile search. Many Information resources and portals have created mobile applications as powerful gateways to their online resources. There are apps for those information companies have begun to make their tools accessible to mobile searchers by introducing mobile search gateways in the form of smart phone applications or mobile web platforms. There are variety of mobile Apps for research, reading, writing and other essential tools for studying on the go. The Apps are available for Apple iPad, iPhone, and Android devices, which can be downloaded from Apple App store or Google Play. Some apps are free, while others are paid. In case of proprietary databases, only institutional library subscribers can access databases using Mobile Apps or mobile browsers.

Category- Reference:



Dictionary.com (Free): Search over one million definitions, synonyms, antonyms without an internet connection. Includes voice search, audio pronunciation, and word origin and history.



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Google Translate (Free): Translate words and phrases in over 50 languages. For most languages, you can speak your phrases and hear the corresponding translations.



Merriam-Webster Dictionary (Free): Use voice search to look up definitions in Merriam-Webster's Collegiate Dictionary.



Wikipedia (Free): Mobile app for searching the popular online encyclopaedia, Wikipedia. Includes advanced features such as table of contents browsing, history, bookmarking, and in-page searching.



arXiv (Free): Open access to 864,151 e-prints in Physics, Mathematics, Computer Science, Quantitative Biology, Quantitative Finance and Statistics Subject search and browse



iSSRN (Free for Apple iOS): Search over 260,000 research papers in the social sciences and humanities available from the open access repository of the Social Science Research Network (SSRN).



WolframAlpha(Paid):Computational knowledge engine covering a variety of subject areas and offering everything from definitions, biographies, and statistics to mathematical formulas, chemical properties, and stock quotes.



World Atlas by National Geographic (Paid): Detailed interactive world maps.



World Factbook 2011 (Paid) :Information on over 250 countries around the world including natural resources, industries, GDP, religion, ethnic groups, legal system and much more.

Category : Proprietary Databases



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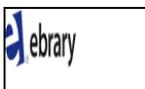
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Category: Reading



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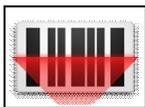
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Category: Writing



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Mindjet (Free): Enter ideas, topics, and concepts into intuitive visual maps that help you quickly organize your thoughts and outline projects.



My MLA (Paid): Mobile app for the MLA Handbook for Writers of Research Papers (7th ed.), offering examples for the general format of MLA research papers, in-text citations, endnotes/footnotes, and works cited.



Scanner for Zotero (Paid): Fetches item's bibliographic information from the web and allow you to add it to your Zotero Library.

Category: Presenting



Slide by Slide (Free) : Allows you to view Slideshare presentations on your iPad



Slideshare (free) : Allows you to view Slideshare presentation on Android devices.

6. Mobile Browsers On Your Phone

Putting an app on your mobile device isn't the only way to access research information. Browsers are now appearing on mobile devices.[4] A mobile browser, also called a micro browser or wireless internet browser (WIB), is a web browser designated for use on a mobile device such as a mobile phone or PDA. Mobile browsers are optimized so as to display web content most efficiently for small screen on portable devices. Gearing resources to mobile web browsers and developing mobile web pages as opposed to mobile applications widens the potential audience to all mobile searchers. Nowadays, many database companies have created rich websites for mobile browsers. [4]

EBSCO, ProQuest, Emerald Insight, Nature Journal and many other e- databases also provide mobile access to its online resources via a mobile web browser- optimized site. Tailor-made for the smaller screens of mobile devices, these applications offer the most important features and functionality right in the palm of your hand—providing the same user-friendly and easy-to-use search experience that is available online

7. Consideration For Librarians And Publishers

Before committing resources to mobile products, librarians should consider how to respond to the mobile revolution, how to react to vendor endeavors, and how to adapt skills and operations to welcome a mobile culture, how to respond to user's changing information seeking behavior. Thus includes keeping current on mobile technology and gaining personal familiarity with the mobile search experience. Librarians need to manage the shift to mobile search by exploring mobile literacy skills. Librarians should be able to orient the users with Mobile technology. Librarians need to establish new processes for managing access to mobile information resources. Librarians should consider the mobile search experience at every stage of a library's operations, from purchasing to providing access to end users.

Although Publishers of e-resources have shown a strong start towards mobile search, but, providing full access without compromising content is an important consideration. Publishers should develop an enterprise culture of adaptability that is responsive to the ever-shifting behaviors and expectations of mobile searchers. They should consider the user's information needs to strengthen and further enhance their mobile search projects and continue their success in this arena.[4]

8. Future Of Mobile Search

Mobile devices are becoming a significant gateway to searching. We are seeing increased user demand for the convenience of searching on-the-go. The expanding mobile focus of information services is influencing users' expectations for engaging information tools.

Changes in information technology are now occurring the scale of months, not years. Other technologies that will impact mobile search in the near future are emerging gadgets such as the ipads and tablets that will change the perceived roles of mobile technology in research.

The users of mobile and small-screen devices will continue to be a factor in the continued development of library services.

Mobile phone has surpassed PCs and landline phones combined, so information needs of potential users constitutes a challenge for today's libraries. The mobile web is connecting people to information while they are on the go, so this is a great space for libraries!

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