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It's all about mobile!

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Dear EAHIL friends,

Whilst the preparations for the forthcoming Workshop in Edinburgh are underway, we are going to press with the second issue of 2015. This is a really special issue that focuses on a topic of great actuality: "Use of mobile devices and technologies in medical libraries".

JEAHIL has published many themed issues in the past, but for the first time now there is an experienced Guest Editor taking care of this monograph: Oliver Obst, member of the Editorial Board of the Journal. Oliver drew up a plan of development of the monograph and personally invited experts in the field to submit contributions. In his *Preface*, he describes each of the eight original articles included in this monograph and outlines the common thread that unites them. In an area so *mobile*, this monograph is a sort of cornerstone, to help us understand where we are now and where we are going regarding the use of tablets, smart phones, apps and mobile technologies in medical libraries and education.
Thank you Oliver and thanks to all the authors for participating in this initiative!

Following the centre fold pages with the latest news and programme updates about the forthcoming EAHIL+ICAHIS+ICLC Workshop (Edinburgh, 10-12 June 2015), Marshall Dozier, in her *Letter from the President*, summarizes the initiatives EAHIL has taken in order to strengthen links with other associations and to promote access to information. Initiatives that all members are invited to promote among their colleagues and networks.

I am sure you will read all the other interesting news and columns published in this issue. Among them, don't miss the News by Anna Kagedal, member of the Executive Board and project leader of the new EAHIL website (http://eahil.eu/) !

JEAHIL next issues - 2015
The September issue will be entirely dedicated to the "Memories from the Edinburgh Workshop" (deadline 5th of August). Please note that the best paper published in this specific issue will be awarded with a scholarship!
The December issue will publish another monograph, "Marketing and impact of libraries", edited by Michelle Wake, member of the *JEAHIL* Editorial Board (contact Michelle if you wish to contribute, m.wake@ucl.ac.uk, deadline 5th of November).

I wish you a happy reading (mobile or not)!

Federica

MONOGRAPHIC SECTION

Use of mobile devices and technologies in medical libraries

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Mobile devices change the way medicine is taught, learned and practiced. That's a great challenge for libraries

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We are not alone in Leicester in thinking that by the time you qualify as Doctors, tablet devices will have replaced hand written notes and ward rounds will be conducted using electronic tools similar to those that you are currently interacting with. It very likely that tablet devices or their technology will be as integral to your practice as say, a stethoscope is (Mark Hamilton)

The papers in this special issue on mobile technologies have one thing in common. They all agree that "smartphones and tablet computers have become the new cultural 'norm' within personal and professional lives" (Fuller & Joynes). Especially tablets are used to enhance teaching, learning and practice of medicine. As you learn in this issue, some European medical schools have already recognized the value of tablet computers in learning and loan them or present them as a gift to students. Six from eight contributions regard tablets, which reflects pretty much the use we all recognize in lectures, libraries, on the ward, on the go.

As students use tablets for learning and looking up information, it is clear that this will affect libraries too. What may the future hold for medical librarians in the age of mobile devices as the new cultural norm? Some reacted or pro-acted by lending tablet computers, recommending apps, licensing content, or training students in order to make the best of these devices. Some medical libraries have even developed their own apps (Jergefelt) or written designated iBooks (Toro-Troconis), some – with the help of engaged faculty – are embedding tablets and contents into the curriculum.

The projects in this issue present a wide range of interventions in terms of the use of mobile devices and technologies in medical libraries and schools. I tried to categorize them as follows:

a) devices provided such as iPads for undergraduates (Gehrlein, Obst, Teemu) or iPad minis for students in the clinical term (Toro-Troconis), either as loan (from 1 day to 1.5 year) or gift;
b) content provided such as iBooks or eBooks, which were specially developed (Toro-Troconis) or licensed for the project (Bissels, Bruch, Obst), or which was available anyway (e.g. via campus licenses);
c) apps provided to encourage student engagement before, during and after the lectures. Frequently these were pdf reader such as good reader, response systems such as Mentimeter, anatomy apps such as Visible Body, proprietary e-book apps by publishers such as Thieme Campus, or apps for the point of care such as BMJ Best Practice and UpToDate (Fuller & Joynes). Furthermore, apps were developed by faculty and libraries (Bruch, Jergefelt).

To present a short overview about the collected papers: *Richard Fuller* and *Viktoria Joynes* from the Leeds Institute of Medical Education, UK, tell us how mobile learning resources are shaping the way healthcare students are learning. *Sabine Gehrlein* from the Heidelberg University Library, Germany, presents their

iPad lending program to enhance mobile technologies and medical education. *Maria Toro-Troconis* and her colleagues from the Imperial College London, UK, inform us about their large project on the implementation of a mobile learning strategy for undergraduate medical education. *Oliver Obst*, Branch Library of Medicine, University of Munster, Germany, discusses in his paper "A tablet toolbox for embedding mobile digital learning resources into the curriculum" the future role of the library especially in regard to the future of the important business model of lending printed textbooks. *Gerhard Bissels*, Fachbereichsbibliothek Bühlplatz, University Bern, Switzerland, presents his findings on re-inventing the e-book: how tablets increased e-book take-up. *Teemu Masalin*, Faculty of Medicine, University of Helsinki, Finland, writes about the iPad project at the University of Helsinki Faculty of Medicine. We learn that already in 2011 the Meilahti Campus Library Terkko started a project lending out iPad equipped with medical textbooks, and – beginning 2013 – iPads were provided to every incoming student. *Sarah Bruch* and *Tony Paget*, Prince Philip Hospital Library, Llanelli, and College of Medicine, Swansea University, Wales, United Kingdom, inform us on their iDoc app bundling six medical textbooks including the BNF (British National Formulary) and the Oxford Handbook of Clinical Medicine and is meant as a "just-in-time" resource for junior doctors. *Mikael Jergefelt, Karolinska* Institutet University Library, Stockholm, Sweden, praised responsive design for their app "KIB mobile".

Despite these many convincing studies presented here, there are still other projects in Europe dealing with the use of mobile technology in academic medical settings, which could not be covered:

- with launch of the iPad in the year 2010, the Department of Orthodontics of the University Clinic of Münster, Germany, was the first dental school outside the USA which introduced iPads in the clinical courses. The department is lending out iPad and iPad mini to all students of dentistry for bedside education (3);
- the Mobile Learning Initiative of Jochen Bretschneider, VU University Medical Center, Amsterdam, Netherlands, is lecturing students of medicine by the help of interactive iBooks (4);
- Mark Hamilton from the School of Medicine, University of Leicester, UK, began 2013 to give all first year students an iPad to start a "Digital Curriculum" and replace printed workbooks (5);
- Guus van den Brekel, Central Medical Library, Faculty of Medical Sciences, Groningen, Netherlands, is lending out iPads to scientists and regularly annotates apps and teach how to use them (6);
- the Medizinbibliothek Careum, Hauptbibliothek, University Zurich, Switzerland, is lending out preconfigured iPads with selected apps and content (7);
- Laurent Phialy and Arnaud Antonelli, Faculté de Médecine, Université de Lorraine, Nancy, use iPads for teaching and assessment (8);
- Students of the Medical School, University of Basel, write all their exams on the iPad (9).

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Enhancement or replacement? Understanding how legitimised use of mobile learning resources is shaping how healthcare students are learning

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Abstract
The number of smartphones and mobile applications has increased exponentially over the past five years and are now accepted as a cultural norm. This poses challenges and opportunities for higher education institutions exploring the best use of such technologies to facilitate new ways of supporting learning experiences. Examples of good practice in this arena are emerging, in particular in the training of healthcare students who are often away from the university setting and for whom mobile technologies offer new opportunities to access resources and deliver safe patient care. Keys to the success of such programmes are "legitimately" produced resources, and librarians, who are best placed to be able to develop the key skills students need in order to make best use of the technology available to them.

Key words: learning; higher education; healthcare.

Introduction

The rapid growth in the technological development of mobile telephones has led to an explosion in the extent and array of devices in current use, meaning that in many countries smartphones (internet enabled phones which download and run applications) and tablet computers have become the new cultural "norm" within personal and professional lives. Recent work from the International Telecommunications Union has suggested that by the end of 2014, the number of mobile telephone subscriptions would almost equal the global population (1), with near-worldwide access to mobile signals and coverage (2). Policy makers and educators have begun to recognise the importance of this rise and the opportunity to incorporate these technologies into educational settings, with international calls and consensus to improve and integrate mobile technologies within school age education (3, 4).

What has been the impact of this growth in smartphone and tablet usage in healthcare education and workplace settings? Evidence highlights that healthcare professionals are now aided by huge numbers of available applications covering a vast range of clinical related activities, ranging from drug dosage calculators, aids for supporting clinical decision making to specific functions such as "teleradiology" as part of routine patient care (5, 6). The combination of these factors suggests a perceivable "cultural shift" towards both the acceptability and expectation that mobile resources will be used within higher education, to the extent that "mobilisation" appears almost inevitable across the sector, presenting both challenge and opportunity to institutions for library provision, learning resources and curriculum development (7).

As educators begin to move their questions beyond matters of "device" to those of "learning", a number of innovative programmes have explored the application of mobile technology in healthcare education (8). A number of UK medical schools now loan or gift mobile devices to students or ask them to provide their own devices, in order to aid their learning (9, 10) or through workplace based assessment formats (11) and research findings point to a shift in how students are learning as a result of device usage. This paper will use a programme of mobile technology at the University of Leeds to

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illustrate the impact on learning and learning support processes, exploring potential future directions for the role of specialist healthcare libraries in an age of mobilisation.

MBChB Mobile at Leeds

For the past five years, Leeds School of Medicine has loaned smartphones to students in years 4 and 5 of their undergraduate medical degree, where the majority of their learning is situated in clinical placement settings. The primary purpose of this programme (MBChB Mobile) is to support students in placement settings with access to learning and assessment resources (in the form of eBooks and apps) (12). The resources provide students with instant access to key clinical information (e.g. drug formularies), clinical note keeping, access to support from both university tutors and peers, and facilitate the collection of immediate feedback from clinical faculty in the form of Workplace Based Assessments (WBAs) used as a part of a programme of assessment for learning (13). Our previous experiences in working with mobile resources revealed that students engaged best with mobile programmes when elements of the programme were compulsory, and when students felt that they had "ownership" of the devices (i.e. they were not given or lent devices for only short periods of time) (8). This model has underpinned the delivery of MBChB Mobile, alongside a commitment to developing mobile content specifically linked to the Leeds curriculum. Accompanied by a concurrent programme of scholarship that has helped to establish which resources work "well" for the students and how their learning is being shaped, MBChB Mobile is now expanding to integrate more locally produced resources for students from the outset of the degree programme. Simultaneously, with between 85-90% of students in each year already owning a compatible smartphone, MBChB Mobile is moving into a new phase where the majority of students will provide their own devices for learning, enabling the school to invest more in curriculum driven content.

"Legitimatising" resource provision

A key question for any programme of mobile technology is not only to evaluate which resources are enabling student learning (14) but understand how these are selected and prioritised by students. Annual surveys of students from across all year groups, focus group and interview based research that supports the development of MBChB Mobile consistently reveals that the resources produced in-house, which are specific to the Leeds curriculum are most often used and valued. In our programme, these include resources to complement our RRAPID curriculum strand (developed to assist medical students' recognising, response and treatment to rapidly deteriorating patients and delivery of safe care) and apps developed to assist with exam revision, often co-created with students. The way that these resources have helped to both develop and change their learning habits is recognised by both those still studying and those who have completed their degree, as illustrated by this quote from a Leeds graduate:

"[MBChB Mobile] definitely changed the way that I use my mobile now and use technology now to learn, to have ongoing learning whilst working…I think the resources are endless which is what I quite like, and there are still things that are out there which I know would help me in my career that I haven't found yet or downloaded yet, so it's quite good to know that I have this sort of endless resource out there to use."

Subsequent focus group discussions revealed that one of the reasons that the resources are so widely liked and accepted was that they are seen as "legitimate"; the resources were developed by the faculty which meant that the school "wanted" students to know and use the content, and equally importantly, the school promoted and encouraged the use of the mobile resources in placement settings (15).

Learning differently

Complimenting recent research in the area (16), our programme of evaluation revealed that MBChB Mobile resources allows students to "personalise" their learning experience, with the importance of being able to perform different tasks on different devices clearly highlighted. Being able to access resources on their mobile devices was also identified by the students as changing the way that they make use of their time (e.g. taking five minutes to look up the details of a condition they were less familiar with directly before caring for a patient with such a

condition, or using "down time" to revise whilst travelling to and from their placement settings). The mobile resources can thus be seen to be more than just "hype", (17) as they enable the students to "learn differently" on their placements; providing meaningful learning opportunities with more in the moment, in-context learning, and replacing list-making and long sessions spent with text books at the end of the day.

These newer learning behaviours are accompanied by an observable shift in "learning maturity" that is both reflected in and enhanced by the use of the mobile devices. Students in junior years appear reluctant to use resources in front of patients or teachers where they perceive this may look as if they "do not know everything", where students in more senior years are more comfortable in using their devices to look things up, including in consultations with patients, if they perceive that there would be benefits for the patient and the consultation would subsequently "run more smoothly". Consequently, and in contrast to the assumption that mobile resources can only be useful for quick "fact-checking" (18), it is our proposal that the mobile resources can actually be transformative both in terms of learning behaviours and delivery of good clinical care.

What are the implications of MBChB Mobile for libraries and providers of learning resources?

At first glance, the tide of "mobilisation" seemingly poses only challenges to healthcare libraries, suggesting a need to focus efforts on switching from paper texts to provision of mobile and e-learning resources. However, the research findings from MBChB mobile show that legitimacy, maturity and "learning differently" are key facets of how students use mobile devices to both "fact check" and construct new learning. As more students arrive at university with mobile devices in their pockets, the debate, practice and research is moving beyond "what devices to use" and towards how m-learning needs to take already skilled m-learners entering HE into mobile enabled programmes.

What are the implications of this for libraries and library professionals? From our experiences with MBChB Mobile, we suggest that the role and function of the library is more important than ever for supporting students, and needs to take a role at the heart of mobile learning. The ethos of any mobile learning programme needs to be about "enhancement" of learning opportunities and not "replacement" of existing good practice in learning. Subsequently, the skills which libraries are already expert at providing; enabling students to understand and use efficient search strategies, triangulation of data sources and data management become all the more important in an era where the mobile internet offers access to global information and requires students to create their own knowledge. Libraries and health informatics suites are typically integrated within curricula, and are centrally placed to identify and help create locally produced resources, contextual to their programmes of study which are likely to be better valued by learners than just re-provision of texts in online rather than paper format. Simultaneously, mobile learning offers students and those who support them in their learning journey the opportunity to increasingly personalise their learning materials, and information management will play a key role in ensuring that these resources are used both successfully and appropriately. Given the emerging landscape of both the cultural acceptability and the expectations of mobile resource usage within education, the question is now whether both the wider Higher Education Institutions community, and their libraries, can afford not to get involved in developing mobile resources both for – and with – their students.

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Mobile technologies and medical education at Heidelberg University Library

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Abstract
Heidelberg University Library uses mobile devices and has begun lending iPads to its users. The medical faculty in the branch library plays a significant role in this new service model. The tablets on loan are pre-configured with mobile applications specified for medical studies. The new service is part of the library's broader strategy to improve medical education at the university by providing both faculty members and students services in accordance with constantly changing study conditions.

Key words: libraries; education, medical; computing methodologies; mobile applications.

Introduction

Mobile technologies and devices are increasingly shaping our professional and private lives. Equipment such as laptops, smartphones or tablet computers play an essential role in academic research and teaching. This is confirmed by the appearance of any reading room at a scientific library where users usually work on their own laptops or tablets. The library's need for permanently installed computers has become a constant concern. However, fundamental to this library service is a nationwide power grid and a stable WiFi access in the reading areas.

In reaction to this trend Heidelberg University Library began lending netbooks to its users in 2012. Now, since the beginning of the summer term 2015, the branch library in Neuenheim has, in addition, started providing iPads on loan. Thereby the medical faculty plays a key role, as a large number of mobile applications have been developed in the field of medical studies to support students in their studies and help prepare them for their exams. A selection of these mobile apps is preinstalled on the tablets which the library lends to its users.

The provision of mobile devices is part of a comprehensive approach by Heidelberg University Library to enhance and support medical education. The actual handling of the devices as well as the underlying concept are presented below.

Heidelberg: university, library and medical sciences

Heidelberg University is a comprehensive university, offering the full spectrum of disciplines in the humanities, law and the social sciences alongside the natural and life sciences, including medicine. The University comprises about 30,000 students, 5,500 academic staff and more than 500 professors. The University Library is the key information and infrastructure facility with a total of 6 million items in its library system.

The branch library is the lending and reference institution as well as the central learning centre in the so-called "Neuenheimer Feld". The campus combines the University's faculties of natural and life sciences with approximately 15,000 students and scholars. Both the Medical Faculty – with around 100 professors, 2,500 scholars and 3,800 students – and the University Hospital – with 44 specialized clinical departments and 1,600 physicians or scientists – are the library's major and largest group of users with regards to literature and information supply (1).

An important objective is the constant optimization of the library's medical support through the immediate connection to the departments and clinics. It is essential to maintain the communication and exchange with scholars and students in order to keep in touch with current developments in research and teaching.

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iPads on loan for medical education

The Neuenheim branch of Heidelberg University Library has been providing iPads on loan since summer term 2015. The tablets can currently be borrowed for one day to use in- and outside the library compound. There is a special configuration of pre-installed mobile applications which is customized to the preparation of medical examinations and education in general, for example the courseware iPhysikum by MediLearn, the New England Journal of Medicine Image Challenge, Sobotta anatomical atlas or Gray's Anatomy.

Via the library's home button the users also have access to a full range of licensed e-media at the University. Regarding medical studies this comprises the licensed medical e-journals and e-books as well as medical databases, such as Thieme examen online, PubMed or Cochrane Library.

The selection of the pre-installed mobile applications was carried out in collaboration with the Department of Anatomy and Cell Biology at Heidelberg University, and based on the comprehensive and detailed description of medical apps by the Medical Branch Library ULB Münster (2). The organizational handling was also important, i.e. the question of the licenses of apps and the possibility to integrate them into a predefined configuration of a larger number of library tablet computers on loan. Once returned, the iPads are regularly stored in a docking station, where they are charged and restored to their pre-installed basic configuration.

During the preparatory process it was initially also planned to include, in addition to the applications that are customized for medical education, apps with access to daily newspapers or scientific magazines, such as the Frankfurter Allgemeine Zeitung or Geo.de. Due to the licensing models offered by the publishers this could not yet be realized. Likewise, it was originally considered to offer a compilation of scientific sound apps relevant for other disciplines, such as mathematics or physics, as the Neuenheim branch is responsible for the Medical Faculty as well as for the full range of the faculties of natural and life sciences at Heidelberg University. The preliminary research showed, however, that in many disciplines scientific sound apps for students are not yet available at university level. At present they are still primarily aimed at pupils and their preparation for high school examinations. This illustrates that the medical studies with their broad range of teaching material are well advance in the implementation of digital and mobile technologies.

The new service for providing iPads on loan has been set into practice and is at present still in a test phase. The first feedback from students, however, has been positive, without exception.

Parallel to the launch of the iPad service, the conversion of the library's seminar room took place: installed computers were cleared to make space for the use of mobile laptops. During lessons the students now use their own mobile equipment or work on laptops provided by the library. This enables them to continue working in their accustomed virtual environment during seminars. In between seminars the laptops are kept in a docking station, where they are charged and restored to their basic configuration. This also permits a much more flexible use of the seminar room for example for meetings or brief conversations.

The acquisition of the mobile devices was financially supported by the comprehensive program of the country Baden-Wuerttemberg to improve the teaching at the university libraries in 2014 (PVL-HB-BW). One of the essential areas to be conveyed was the creation of innovative electronic reading places for students.

Concept of library support for medical education

Offering iPads on loan is part of a comprehensive approach to enhance and support medical education. Thus, Heidelberg University Library in the course of recent years has forged new paths to strengthen the medical teaching (3). This was done in close cooperation with the Institute for Anatomy and Cell Biology and the innovative study concept of "virtual anatomy" (4). In this concept new digital media play a significant role as well as traditional teaching aids.

The virtual dissection table Anatomage enables students to prepare and reassess their preparation courses. Comparable to the situation in the dissecting room, they are faced with life-sized, virtual anatomical models in 3D. These are generated from CT data and offer an educational and systematic access to anatomical surface structures. Students are

able to rotate, move and prepare the models comparable to real ones. Through various stages and in any section it is possible to visualize and rename bones, tissues, muscles, organs etc.

Complementary to the new digital and mobile technologies, traditional means and models are employed. The extensive collection of nearly 300 anatomical teaching media in around 600 physical copies at the Neuenheim branch library is a permanent loan from the Institute for Anatomy and Cell Biology. The students can borrow the anatomical teaching media, such as SOMSO models or plastinations to prepare themselves for the audit certificates in the anatomy courses and, of course, for the oral part of the important preliminary examination ("Phsyikum"). The collection is, in addition, completely photographed, catalogued and described in detail in the Heidelberg image database HeidICON. Thereby it can also be researched online.

The new medical services of the university library have already had a positive effect. Within the first year, when the services were introduced in 2014, the user appreciation from among the medical students was enormous. The number of visitors in the Neuenheim branch's reading room increased by almost 40%, from 205,000 in the previous year to 285,000 visitors.

Conclusion

The use of mobile technologies is one major component in the concept of improving the conditions for studying medicine at Heidelberg University. Lending iPads with medical applications and using laptops for teaching reflects and is a response to students and scholars daily engagement with mobile devices as well as to new forms and methods of research.

The constant monitoring of and adjustment to these changing in research environments and methods are fundamental to any transforming academic library. By doing so the library remains a strong infrastructural partner for science and teaching. By doing so the library stays alive.

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Design, development and implementation of a mobile learning strategy for undergraduate medical education

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Abstract

This paper describes the process of introducing a mobile learning strategy into a medical school by issuing iPads to clinical students. Data was collected from focus groups, surveys and by engaging a number of student "iPad champions". Students had a positive attitude and experience with the iPads for learning and highlighted some areas for improvement particularly for electronic sign-off. Introduction of mobile technology into medical education is proving to be popular with medical students. Early adoption of mobile technology brings medical students closer to the digital healthcare environment which is rapidly adopting the use of electronic health records, electronic x-ray and laboratory order and online evidence-based practice tools to support patient care.

Key words: mobile learning; medical education; iPad; undergraduate medicine; e-books; m-learning; e-health; m-health.

Background

Increasingly information technology is a part of everyday life. According to the International Telecommunication Union, 2.7 billion people are using the Internet, which corresponds to 39% of the world's population (31% in developing countries compared to 77% in developed countries) (1). Mobile technology is also expanding in clinical practice (2, 3). Different medical schools have introduced mobile medical education targeting pre-clinical and clinical years and the use of different mobile devices, such as personal digital assistants (PDAs) (4); and tablet devices (5, 6). This paper describes how the process of integrating mobile learning into the undergraduate medical school was carried out and supported by the medical library team at Imperial College London. It highlights all the areas of development and implementation introduced as part of the pilot project (2013-2015) targeting 800 undergraduate medical students in the final clinical years of the undergraduate medical curriculum (Imperial College iPad project, 2013) (7).

Introduction

In January 2013 a working group was set up to explore the idea of mobile learning in greater detail. The main stakeholders in this working group were academics, clinicians, administrators and students from the School of Medicine, Information and Communication Technologies (ICT) team from the wider university and the Library.

The idea of pursuing the development of a mobile learning strategy was based on a study carried out in 2011 when a respiratory course for 1st year undergraduate medical students was redesigned as a blended learning course using iPads in class. An analysis of this project showed a positive attitude of students when learning supported by the use of iPads and interestingly a more positive attitude was

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shown by students who owned a tablet device. A high mark in the test at the end of the blended learning course was correlated with higher mark in their end of year exams (8).

The working group of about 30 contributors worked together for 6 months to assess the available options. The main outcome of this assessment highlighted the importance of concentrating on clinical years when a large number of clinical students are spread across multiple hospital and general practice sites across North West London. A business case was presented to the Faculty of Medicine for iPads Mini to be issued in Years 5 and 6 at the beginning of the academic term (2013/14) concentrating on the following areas of development.

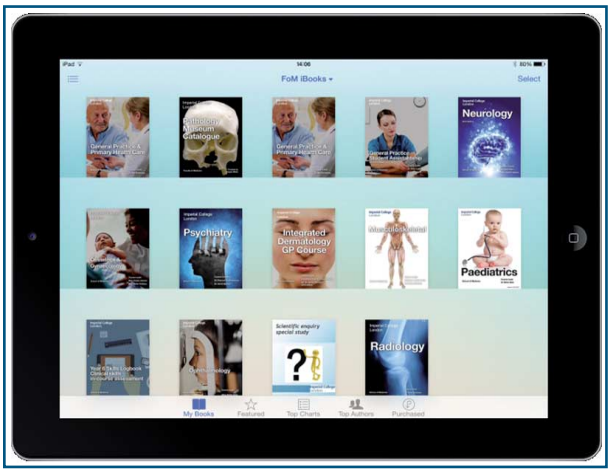

Figure 1. *Year 5 iBooks*

iBooks

One of the key areas of development was the standardisation of course guides provided during different clinical attachments in iBook format for different attachments incorporating, videos, assessments, PowerPoint slides, quizzes, etc. allowing the introduction of interactive learning materials accessible offline.

Within their first month of receiving their iPad, 5th year students used the Pathology Museum iBook in a unique manner for interactive teaching within the classroom. Students had vignettes of patient cases, pictures of some pathology specimens and a location key for finding the correct physical specimen in the pathology museum, which is located at one of the main teaching hospitals.

Other iBooks have also been created for the various clinical placements that students rotate through in 5th and 6th year. *Figure 1* shows some of the iBooks that were produced for some of the attachments.

Interactive teaching

The Pathology course was delivered using a combination of tutorials and lectures. The students were given the paid App iAnnotate and they were encouraged to download hand-outs and annotate them electronically using iAnnotate App on their iPads. Interactivity was also introduced to the didactic lectures using the Apps Virtual G-Pad and Mentimeter. This encouraged student engagement during the lectures.

eBooks

Despite the name, eBooks differ from iBooks and refer to an electronic copy of a published book. Many eBooks have been made available to medical students via the library service. Students have to log in to the library via the browser on their iPad and search for a book in the library. If there is an eBook version available for this title, the student is able to read this book either online or download it to their iPad. The availability of certain books and the ability to download to their iPad or to only read them online is dependent on the licenses agreed by various publishers. Instructions on how these eBooks can be viewed are available on the College Virtual Learning Environment: Blackboard which can be accessed via the browser or the Blackboard App on the iPad.

Medical Apps

Imperial College Library Services has provided a license for the BMJ Best Practice App to allow students to access the learning materials available via the App. This is supported by the Library team and it allows students to access up-to-date medical guidelines and other learning resources quickly offline and in whatever location they are, which is especially important for clinical students on placement.

Imperial College Library Services has also recently provided a license for the UpToDate Anywhere App following requests for access from students.

Electronic submissions and signoffs

Electronic submissions and signoffs have been implemented in two different ways due to various reasons explained in the *Table 1* below.

SharePoint system	eForms App
SharePoint is used for electronic submissions to accommodate open-ended questions requiring formatting as well as submitting attachments (PDF, Word documents, etc.)	eForms iPad App (5) is used for electronic submissions in Years 5 and 6. It allows submissions of assessments (end of attachment, DOPS, etc.) via student iPads. The system allows clinicians to electronically sign the form online/offline and to receive an electronic copy of the submissions via email. Students also receive a confirmation via email and administrators can track submissions online.

Table 1. *Electronic submissions in Years 5 & 6 via SharePoint and eForms App*

iCalendars

The timetables given to the students during the different clinical attachments were designed using different layouts and different formats. iCalendars were introduced as a way to standardise the process of accessing timetables during clinical attachments and making the process of making updates to the timetables more efficient. Students are able to subscribe to an iCalendar and see all their personal appointments merged with the clinical attachment sessions in one Calendar on their iPad.

Methods

At the beginning of Year 5 and 6 in 2013 approximately 800 students received a Wi-Fi only iPad Mini with 16 GB of storage. The iPads were managed by the Mobile Device Management (MDM) system: AirWatch supported by ICT which enforces passcodes and track lost devices. All students were required to sign an iPad Agreement emphasising appropriate use of the device in relation to patient confidentiality and general code of conduct. The iPads were provided as a loan in the first year and were given for free in the second year. The MDM managed the initial setup of the iPad pre-loading the iBooks and the medical and learning related Apps: BMJ Best Practice App, iAnnotate, Mentimeter, eForms, etc. All students received one hour training on basic use of the iPad and the use of the different Apps and iBooks. Drop-in sessions were available at different sites for a period of 2 months.

Data was triangulated using qualitative and quantitative data from surveys, focus groups and feedback from student iPad Champions at different stages throughout the 2 years project (see *Figure 2*).

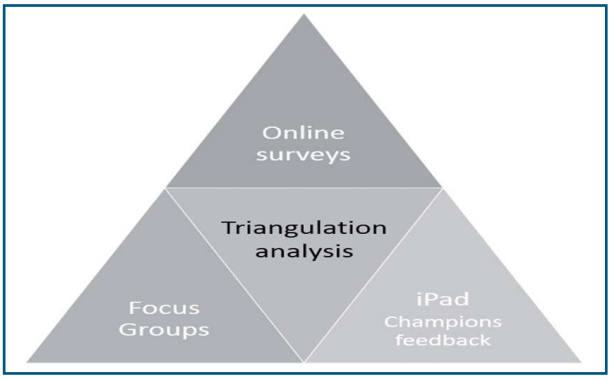

Figure 2. *Triangulation analysis – iPad Project*

The idea of this project is part of a wider initiative of "Students as partners", which is an initiative to involve students at a higher level within the School. iPad Champions were involved at different levels, channelling feedback from the student groups and producing videos on how to use the iPad effectively encouraging peer-to-peer support.

The studies carried out between 2013-2015 involved two Focus Groups conducted at the end of attachments in Years 5 and 6, quarterly meetings with iPad champions and seven surveys.

An initial survey was administered at the end of the Pathology course (Year 5) in June 2013 with 128 student responses (34% of the year group) and included demographics questions and additional questions that related to their experience with the iPad during the pre-clinical phase. A second survey was administered on the 5th month of the clinical phase to Year 5 students. 67 responses were received. This survey was focused on the assessment of the student experience in the use of electronic sign-off forms embedded in the iBooks using the Bookry system. A third survey was carried out in November 2013 with 12 responses from clinicians assessing their experience in providing feedback to students using the electronic sign-off forms available within the iBooks using the Bookry system.

A fourth survey was also administered to Year 6 students after two months of using their iPad to assess their experience with the iPad with 55 student responses. Based on feedback another system for electronic sign-off forms (eForms App) was introduced at the end of 2013. A fifth survey was administered in February 2014 to gather feedback on the use of the new eForms App with 24 responses from students and 29 responses from General Practice tutors. A sixth survey was administered in May 2014 with 25 student responses assessing the student experience accessing iCalendars on their iPad.

Results

Two Focus Groups were conducted at the end of the attachments in Years 5 & 6 in November 2013. The overall feedback received from Years 5 and 6 students on the iPad experience was quite positive. However, there was mixed feedback on the use of electronic sign-off forms delivered using the Bookry system from Year 5 students. In the focus group Year 5 students identified the limitations when using Bookry for electronic sign-off forms and the inconvenience of having some forms on paper and some electronic.

At the same time, the feedback received from clinicians involved in the electronic sign-off using Bookry was more on the positive side with suggestions to include signature functionality and to receive a copy of the submitted form via email which was later provided using the eForms App.

Pre-clinical survey results – Year 5

Figure 3 shows the evaluation carried out after the Pathology course in Year 5 (n = 128) shows positive results. More than 80% of the students found the use of the iPad helpful.

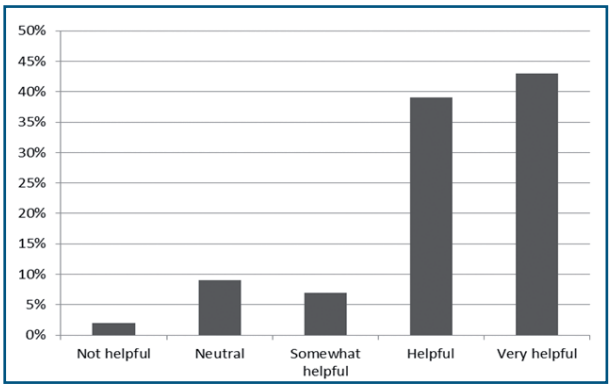

Figure 3. *To what degree the use of iPads helped you learning during the Pathology course?*

Figure 4 also shows high levels of engagement annotating hand-outs electronically using the iAnnotate App. However, as seen on *Figure 5* only 30% of the students used eBooks available from the Library.

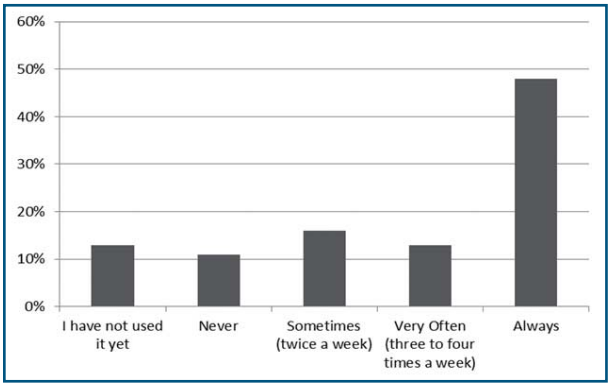

Figure 4. *Student engagement in the use of iAnnotate App during pre-clinical phase – Year 5*

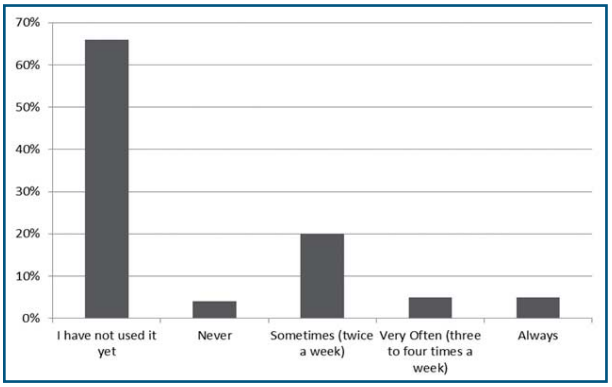

Figure 5. *Student engagement in the use of eBooks during pre-clinical phase – Year 5*

Figure 6 and 7 show how the students (n = 67) continued to find the use of iAnnotate App helpful during clinical attachments as well as the BMJ Best Practice App provided by the Library. *Figure 8* also shows over 50% of the students finding the use of eBooks from the Library helpful.

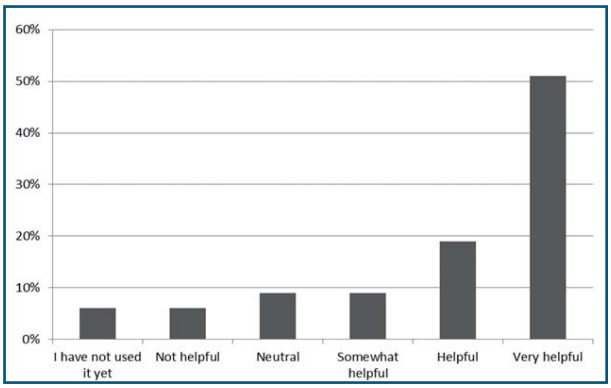

Figure 6. *Student engagement in the use of iAnnotate App during clinical phase – Year 5*

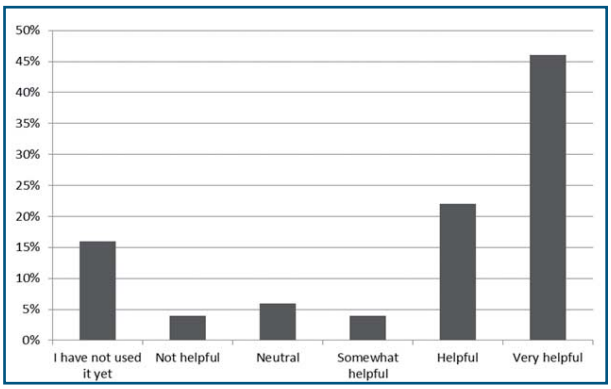

Figure 7. *Student engagement in the use of BMJ Best Practice App during clinical phase – Year 5*

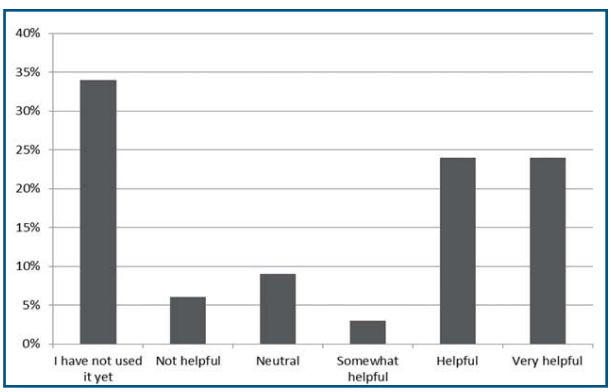

Figure 8. *Student engagement in the use of eBooks during clinical phase – Year 5*

Figure 9 shows the students not finding the electronic sign-off process provided via iBooks using Bookry very helpful. However, *Figure 10* shows students perception in the use of the eForms more positively.

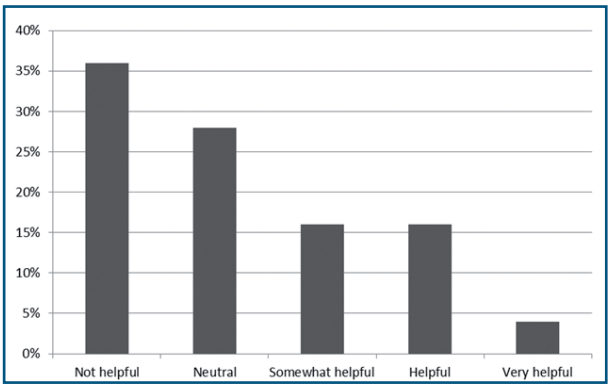

Figure 9. *Student engagement in the use of electronic sign-off using Bookry system – Year 5*

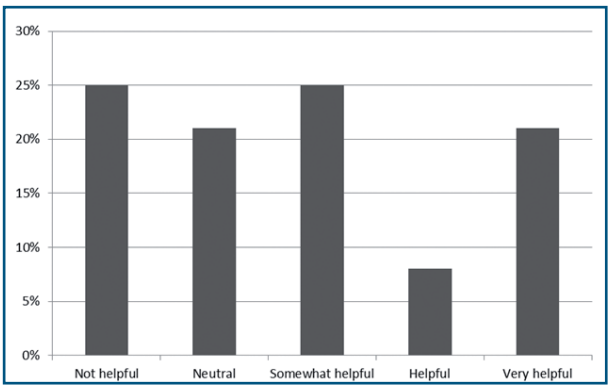

Figure 10. *Student engagement in the use of electronic sign-off using eForms App – Year 5*

Clinical survey results – Year 6

Figure 11 shows Year 6 students also finding the use of iAnnotate App helpful as well as the BMJ Best Practice App showed in *Figure 12* and the eBooks in *Figure 13*.

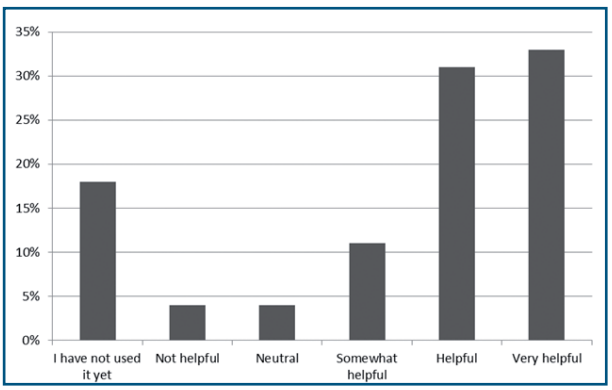

Figure 11. *Student engagement in the use of iAnnotate App – Year 6*

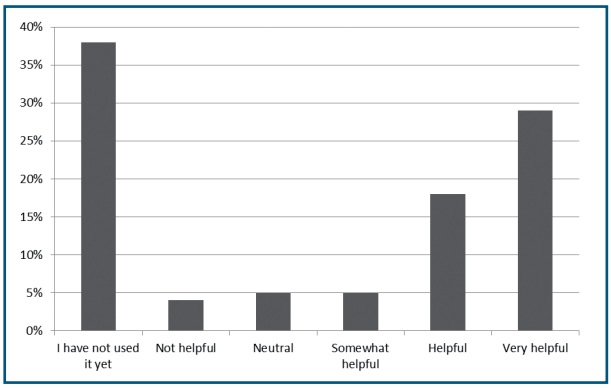

Figure 12. *Student engagement in the use of BMJ Best Practice App – Year 6*

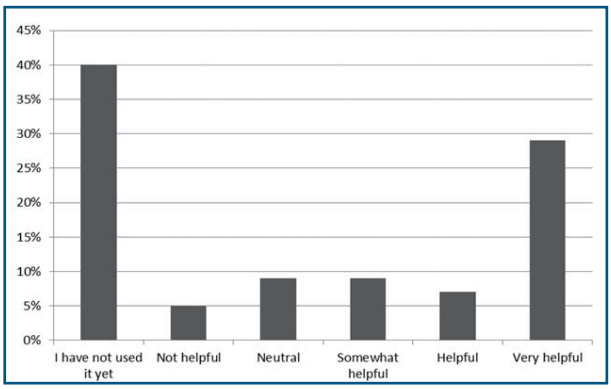

Figure 13. *Student engagement in the use of eBooks – Year 6*

Survey results–electronic sign-offs – Clinicians

Figure 14 and 15 show a positive attitude from clinicians towards the use of both Bookry system and eForms App in Year 5. In both instances they highlighted the importance of having signature

Bookry

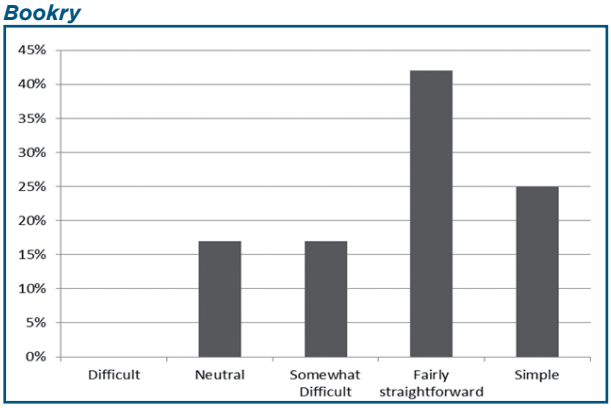

Figure 14. *Clinician engagement in the use of Bookry system – Year 5*

eForms App

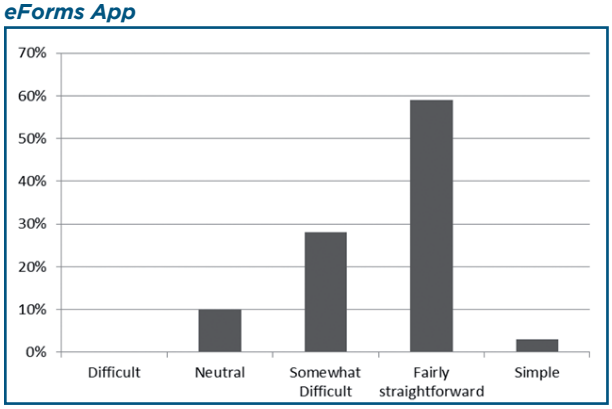

Figure 15. *Clinician engagement in the use of eForms App – Year 5*

functionality on the electronic forms which only eForms App provided.

Discussion

This study shows evidence that students used iPads to support clinical decision and learning during pre-clinical and clinical phases having more opportunities for evidence-based decision support any time at the point of care.

This study also provides evidence of the benefits in the provision of electronic sign-off forms, evidence-based practice tools and the distribution of course and learning related materials on the students' devices (iPads). The digitisation of clinical related assessments (e-forms) provides a more efficient and robust mechanism to audit assessment submissions during clinical attachments.

Careful engagement with key stakeholders and feedback from students and clinical staff is key in the development of the mobile learning strategy which should have transparency in the implementation of explicit educational tasks delivered using mobile devices (9).

Early adoption of mobile technology in medical education brings medical students closer to the digital healthcare environment which is rapidly evolving in the adoption and use of electronic health records, electronic x-ray and laboratory order and online evidence-based practice tools to support patient care.

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The Branch Library of Medicine Münster created a tablet toolbox for embedding mobile digital learning resources into the curriculum

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Abstract
The Branch Library of Medicine of the University of Münster recently finished the ipad lending project easyphysikum, where 250 undergraduates got an iPad Air for loan equipped with every learning ressource to pass the preclinical exams. The project showed, that a digital mobile learning infrastructure represent an added value compared to traditional ways of learning. In May 2015 the library escalated the project to make it available to all students of medicine.

Key words: tablet computer; iPad; curriculum; medical education; medical library.

Introduction

We live in a digital age. Within ten years, printed journals have been replaced totally by electronic ones at our library. A similar development can be seen with academic books as scholarly monographs are accessed and supplied more and more as e-books. Even the textbooks for medical education are no longer sacrosanct. Our belief is that multiple choice tools and textbooks will merge to a new e-learning platform. The future replacement of the printed textbook – one of the most important library services – is becoming more real every day. With the projects *easyphysikum* and *easystudium*, the Branch Library of Medicine of the University of Munster, Germany, is actively monitoring and pushing the transition process.

Projects

With *easyphysikum*, the Branch Library provided 250 2nd-year undergraduates with a mobile digital learning infrastructure. The aim was that each student could access all learning media needed to pass the preclinical exams with tablet computers everywhere and at any time (1). Tablet owners could download these resources on their own tablet; all other students were given an iPad Air for 5 months, which was equipped with these resources ("Tablet Toolbox").

The project was examined by online surveys, focus groups (champion user) and standardized interviews. It could be shown that digital textbooks on tablets represent an added value compared to printed books. The combination of a mobile device, educational content, course organization and document sharing build a novel digital learning environment that was highly attractive and useful for students (2).

After an excellent scoring of *easyphysikum* by the students (88% satisfaction rate) (3), the project was escalated in May 2015 to 1,000+ students of medicine in Münster (www.easystudium.de). The number of iPads tripled to almost 200 and the value of the offered content to 3 Million Euro. Preferably financially weak students got an iPad. The maximum loaning period was 1.5 years. For all other students, the learning resources were provided for free on their own tablets or laptops. The use of all learning media on a mobile device, which are needed for the study of medicine, allowed the independence of students from specific venues and times such as the library and its opening hours. In addition, the learning materials could be annotated and shared with other students. These features make the students more secure and were experienced as a kind of relief. The two projects helped students, the

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university, and the library to better cope with the challenges of the mobile, digital environment.

Conclusion

The project helps us to get to know our users better. This is important because only about one in three students still visits the library regularly. The information needs of the remaining two thirds are hardly known. With *easystudium* they can be addressed personally and attracted to the other services of the library. The library is now much more open to the communication and working methods of the digital natives, which helps us to stay relevant for this group and be more grounded in their awareness. To reach this goal, the library staff was equipped with iPads to acquire expert knowledge for digital, mobile devices and media.

Due to the importance of printed textbooks in the service portfolio of academic libraries, it is extremely important for libraries to know if and how a transition to digital media is happening. The project found some frames of this process and therefore could be of help to libraries who wish to be prepared for that transition. Several universities, libraries and faculties at home and abroad have been keen to build similar projects, as shown by numerous inquiries.

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Re-inventing the e-book: how tablets increased e-book take-up at Bern University

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Abstract
This paper reports how at Bern University the medical library services successfully used the tablet platform to significantly improve students' acceptance of e-books and other e-resources.
Although Bern University had closed its main medical library with the loss of its print monograph collection, students until recently rejected e-books as too inconvenient for intense revision. Only when over the last two years tablets became part of students' basic toolkit, and the library selected e-books, apps, interface and ancillary software to work with tablets, e-books became more palatable to readers.

Key words: books; computers, handheld; consumer behavior; education, medical/mt [Methods]; libraries, medical.

Medical library services at Bern University 2012/13

The situation of medical library services at Bern University was not as comfortable as I had expected when in late 2012 I left London to take up the post of medical librarian at Bern University.

The preclinical library[1] had never had a sufficient budget to maintain an up-to-date collection, let alone acquire the multiple copies other libraries nowadays feel obliged to offer since so many textbooks exceed students' budgets. The clinical library which once existed at the university hospital[2] had closed for good in 2010, with the loss not only of facilities, services and staff, but also of the monograph collection – only the journal and database subscriptions transferred to the preclinical library.

A collection survey using the "Conspectus" methodology (1) carried out between August and December 2013 confirmed that, while journal and database access for research and clinical practice matched the usual expectations, the monograph holdings in both print and e-book format did not exceed Conspectus "level 1 = minimal information level" while for the purposes of a medical school, at least "level 3 = study or instructional support level", if not "4 = research level" would be required.

How did the students cope with the lack of books? Medical students are pragmatic and very focused on getting the job done, regardless of circumstances. The "Fachbereichsbibliothek", now the only library for medical students, attracted students mainly for its learning space, rather than for its collection: students were cramming for their exams using some library books (which were mostly superseded editions), but largely relying on their personal copies, or on copies they had borrowed from libraries elsewhere.

Right after completion of the "Conspectus" analysis, the library started re-building the collection in the preclinical subjects. Approval for also building up a monograph collection in the clinical subjects, thus taking on the role of the former hospital library, was received only in early 2015, with the required additional funding and staffing not expected before 2016.

[1] "Fachbereichsbibliothek Bühlplatz", constituted in 1981 through the merger of the libraries of the preclinical departments, as well as Biology and Geology.
[2] "Universitäts-Spital-Bibliothek"

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Format and platform issues

But should the collection now be print, electronic or a combination? Until 2013 students surveyed in ILT classes had largely rejected on-line formats[3], and usage statistics were appallingly low, with a significant proportion of licensed titles not showing any usage at all. Students' reserved attitude towards the e-book was probably the result of several factors:

- excessive DRM restrictions: part of the e-books available via the library at the time (Ebrary, EBL) allowed no meaningful off-line reading;
- Flash: a number of textbooks had been licensed from Thieme. Although a good deal of these were reading list titles, usage was poor, probably because the publisher at the time had standardised on a Flash-based format – so these books were not accessible on iOS devices;[4]
- inconvenience of screen reading: students do not like using desktop or laptop computers for textbook reading. Tablets or even smartphones, on the other hand, seem to blend in much better with print resources, and enjoy a much greater acceptance. This means e-books and other e-resources need to be accessible on tablets and, ideally, also on smartphones.

After discussion with the student council the decision was taken to focus initially on the print format and demonstrate visibly our commitment to providing a relevant textbook collection. In 2014, 80% of print holdings were withdrawn as superseded, reading-list items purchased in multiple copies, and an overhaul of the general collection started, with the emphasis on handbooks, reference works, and introductory works to complement the textbooks. Students very much appreciated this improvement and began to flock back to the library. Towards the end of 2014 the student council told us the pre-clinical collection was now "better than they had ever seen it" (most pre-clinical classes would now get a "2" on the Conspectus scale), and the next exam-preparation season (winter 2014/15) saw reader numbers in the library double compared to the same period the year before.

Building on our success with a traditional print collection, we decided the time was rife for experimenting with the on-line format. The Medical Faculty had started to encourage the use of tablets for in-house course materials which are distributed via a basic, faculty-specific VLE. Tablets had proven a much more successful platform for e-books in various studies (2, 3), and in the German-speaking countries we medical librarians had our eyes fixed on the big "Easyphysikum" pilot project that Oliver Obst ran at Münster University's "Zweigbibliothek Medizin" (4, 5). This project was as ambitious as it was successful – all core resources for an exam (1. Staatsexamen) were made available as downloads for the iPad; students who did not own one, were offered a loan one by the library, with all content readily pre-installed. As a pilot Münster had secured access to e-resources that publishers had not (yet) made generally available to libraries.

Learning from these tablet projects at other medical libraries, as well as from our library's rather unsuccessful experience with e-books so far, we decided to explore if tablets would prove a more popular reading device for our students, too. Circumstances were much in our favour, especially as the vast majority of students use the same platform, Apple's iPad: Apple products have long been the norm throughout the Bern Medical Faculty, and even across the Swiss population 2/3 of tablets are iPads (6). So, with nothing to worry about compatibility issues and availability of resources on Android or even Windows, we took a fresh look at suitable content:

- some textbooks – primarily purchased through Springer bundles – we had already in our collection in DRM-free pdf format. These allow one-click download, annotating with programmes such as Papership (7) or Goodreader (8), and sharing annotations with a revision group (our students tend to get together in small groups for their revision);
- Elsevier uses for its German-language textbooks the cross-platform iPublish Central (9) e-book

[3] I used both my Information Skills classes and meetings with the student council to get a picture of how students went about their daily work.

[4] Thieme was criticised for its reliance on Flash at the annual conference of the Arbeitsgemeinschaft Medizinischer Bibliotheken AGMB, 16-18 Sep 2013, Berlin <http://www.agmb.de/papoopro/index.php?menuid=116&reporeid=171>, so that Bernd Heß of Thieme publishers made a commitment there to have Flash removed from all Thieme e-books. Thieme has since honoured this promise.

reader which is a lot more restrictive than the plain pdf format (DRM, limited facilities for highlighting, annotating and sharing notes), but does allow the reader to store a copy locally and use it off-line;

- Thieme make their "Studium und Lehre" textbooks available in an on-line format, though individual chapters can be downloaded as pdfs, annotated and shared in the usual way. The "Thieme Campus" app used by the Münster trial is not yet generally available to libraries. It will allow off-line reading of Thieme e-books, but may be prohibitively expensive to license.

Following the Münster example, we created an easy-to-use start page for all learning resources for each year of the programme, using the Medical Faculty's VLE[5] – though we present print and e-books alongside (*Figure 1*).

Figure 1. *University of Bern, Medical Faculty VLE page presenting print and e-books alongside.*

At least during the pre-clinical years research – and be it just a basic OPAC search – is not something students are trained to do, nor do they want to bother; they are far too busy cramming. Therefore, a plain list of learning resources for each year, with clickable links to any on-line content, was likely to increase usage of these resources.

The breakthrough: Bern's first apps

E-books may be the bread-and-butter of electronic learning resources, but the breakthrough only came with formats that offered additional value – with apps. We also hoped that students who had just installed an app provided by the library, would take a fresh look at what else the library has to offer – in other words, apps would promote the library. Our hopes have clearly been fulfilled.

Anatomy Atlas: "Sobotta"

The first app purchased (and the first app at Bern University altogether) was Sobotta's anatomy atlas from Elsevier, targeted at students in the first two years. Although Elsevier's "ordinary" e-books, as mentioned above, already come with a reader app that allows local storage of a complete textbook, the app offers a number of revision functions which the students love. Elsevier demands a substantial surcharge for the app format, and instead of the usual site license charges per individual user – so libraries need to think carefully which users should be the privileged ones. The entailing process of distributing download codes through a serial mailing tool, is not something you'd want to undertake on a regular basis. However, the Sobotta was the first really popular e-resource the library ever offered, going by the numerous emails I received.

Multiple Choice Tool: "Amboss"

Our second "big hitter" amongst e-resources, and aimed at the final two years, was Amboss (10), a multiple-choice tool that integrates the questions from Germany's medical exam database, IMPP(11), with approx. 5,000 pages of handbook content. Amboss can be used both via the browser and as an iOS or Android app. Feedback during the trial was extremely positive – I received over 100 mails, not even counting students approaching me in the library or coming to see me in the office to ask for a permanent subscription to Amboss. Never before had I seen students rally with such enthusiasm for a library resource!

[5] Unfortunately, the university library currently has no mechanism for generating and presenting reading lists, so the faculty's offer to present our resources clearly targeted at students in each year via their VLE, was very welcome. The books are exported from the library's Discovery interface into a Zotero group, imported from there into the VLE, and automatically enriched with cover images. We hope to present these VLE pages on large touch screens within the library soon, with QR codes added so students only need to read the QR code from the touch screen into their iPad to open the textbook they wish to use.

E-Journal App: "Browzine"

The third app, Browzine (12, 13), supports those in research and clinical practice, but, judging by the feedback I received, is popular with students in their clinical years, too. The app aims to present the library's e-journals on a virtual bookshelf, and allows users to select titles into a kind of personal journals rack, indicating for each title how many new papers have appeared in it since it was last accessed. The software company, Thirdiron, provides a good range of promotional materials, including pop-up banners for the library website (or, in our case, the VLE) which are only activated when the page is accessed from a device on which the app can be installed – i.e. an iOS or Android tablet or phone. As tablets are rapidly becoming the preferred e-readers across academic departments, we hope to extend Browzine coverage accordingly, thus encouraging the use of our e-journals. The license started only this year, so we have no meaningful usage statistics yet.

Where next?

In experimenting with e-resources for the preclinical years we have learnt a lot that will inform our decisions when building up a collection of clinical resources. Most important has been to us the close involvement of our students – through official channels such as the student council, but also in countless informal conversations, in mails and chats on the corridor. After all, it is their library – we just run it for them!

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From pilot to practice: iPads at the University of Helsinki Faculty of Medicine

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Abstract
The University of Helsinki Faculty of Medicine started a mobile learning pilot by providing iPads to all incoming medical students in 2013 and 2014. A model describing how technology facilitates learning is used to portray how diversely iPads have been used by the students. After the successful pilot in collaboration with the Medical Library Terkko, iPads have been integrated into medical studies and will be provided to incoming students also in autumn 2015.

Key words: tablet computer; e-books; m-learning; medical education; problem-based learning.

Background

Tablet computers have been available since the 1990s but with very limited success from the start. Tablet type e-book reader devices and especially Amazon Kindle were popular in 2000s, but with the introduction of iPad in 2010, modern tablet computers started to gain success rapidly. The strong growth has slowed down, but according to Gartner, global tablet sales will reach 233 million units in 2015 (1).

With a large selection of e-books, massive information resources on internet and rapidly expanding and evolving mobile applications, tablet computers have quickly gained popularity education. Tablet is more mobile than traditional laptop computer and bigger screen makes it more suitable for reading e-books than in most smartphones. Many medical schools have explored the use of tablet computers around the world with different pilots (2-4).

From small to large pilot

The University of Helsinki Faculty of Medicine started to consider the use of tablet computers in medical education quickly after the iPad arrived to Finland in late 2010. First concrete step was taken by the Meilahti Campus Library Terkko, which is responsible for the information services of the University of Helsinki Faculty of Medicine and the Helsinki University Central Hospital. The medical library started an iPad pilot named TerkkoPad in 2011. The idea was to loan iPad to medical students and teachers preloaded with several course e-books (5). Some of the e-books were interactive and provided by Inkling. Besides the large selection of interactive and traditional e-books, the iPads contained also applications to other resources e.g. PubMed.

With the positive feedback from the TerkkoPad pilot, the medical library proposed that tablet computers could be used more widely among the students and teachers. With TerkkoPad the iPad's function was mainly a reading device. The next step was to provide tablet computers to students to facilitate their learning. With a two-year-long grant from Jane and Aatos Erkko Foundation, the Faculty decided to provide tablet computers to every incoming students in autumn 2013 and 2014.

The pilot started in the beginning of 2013 when the experts from the faculty, library and IT department decided that iPad would be optimal device, after comparing iPad and iPad mini, available Android and Windows tablets and their selection of applications, security issues, need of support and compatibility and integration into University's

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infrastructure. Full size 32 GB iPad with wi-fi only was chosen because bigger screen was found better for reading, capacity was enough for storing e-books and applications and University's wi-fi network was deemed sufficient for internet access.

Funding included also iPads to teachers but the main goal was to provide mobile learning tool for students. Just like in the TerkkoPad, the second pilot included also interactive e-books from Inkling. All the students and teachers received three course books via Inkling application. After testing a large selection of applications, iPads were handed out to teachers with a selected general purpose and medical applications.

Medical library arranged the course books from Inkling and also ensured that the regular e-books available from library's web-site would work on iPads. Some of the e-books at that time required Adobe Flash which was not available for iPads, but compatible versions were obtained gradually.

Teachers were trained to use the iPad with several training sessions and workshops before the semester started. Later a more informal pop-up training sessions were introduced to make training more accessible and continued training and workshops were offered through the school year.

Students received the iPads on the third day of the semester in 2013 and they had access to help materials and pop-up training. The medical library delivered also training on the use of e-books and other information resources.

On the second year of the pilot students received the iPads couple days before the start of the semester so they could be used from the start of the first course. More training were also provided and iPad training was incorporated more deeply into compulsory IT course. Also a group of second year students formed an iPad tutor group that supported the incoming students. Their objective was to provide information on how the iPads were used successfully in studies and to offer peer-to-peer support as an addition to faculty's formal support.

Changes in the learning environment

Continuing training has been important part for the success of the pilot. The focus shifted quickly from technical training to support the use of technology in studying and teaching. Besides the available information resources, teachers have created materials optimized for mobile learning, e.g. iBook e-books and instructional videos.

Previously study materials were printed, but with iPads students download course materials from medical library's digital course library portal. Also the use of Moodle online learning environment has increased with many teachers providing materials and links to useful medical videos. Also the selection of e-books has risen dramatically. Helsinki University Library increased the availability of e-books by 250 000 titles and the use of e-books tripled in 2014. Also almost 90% of the journals are available in electronic versions (6).

Most apparent changes have been seen in problem-based learning tutorials (PBL), which are integral part of studies as curriculum is based on problem based learning. Students and the teacher have instant access to massive online resources. Most medical students at the University of Helsinki owned already previously some kind of mobile device, especially a smartphone, but their use on classrooms and especially on PBL-tutorials were rare (7). With the iPads, all the students have a personal study tool that they carry with them every school day.

Interactive whiteboard application has also been adopted in PBL-tutorials to replace the traditional post-it notes in brainstorming. And with the monitors or projectors and Apple TVs installed on the PBL-classrooms teacher and students can instantly contribute pictures, diagrams and videos related to the topics discussed.

Studying the role of technology

The iPad pilot has been studied closely with several surveys, interviews and observations. One of the research topic relates to how the iPads can enhance and facilitate learning. A model originally designed for developing communal web-based learning environments describes also how the use of iPad can facilitate learning (8-11). The model includes four overlapping categories (*Figure 1*).

Pedagogical use of technology describes how the content is taught by an application itself. Interaction and action occurs between the student and the application. In iPad pilot students have been studying by for example reading e-books, articles and summaries (*Figure 2*).

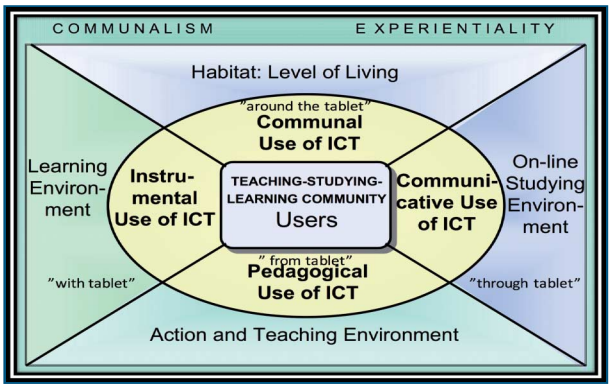

Figure 1. *Model describing the relationship of technology and learning (11).*

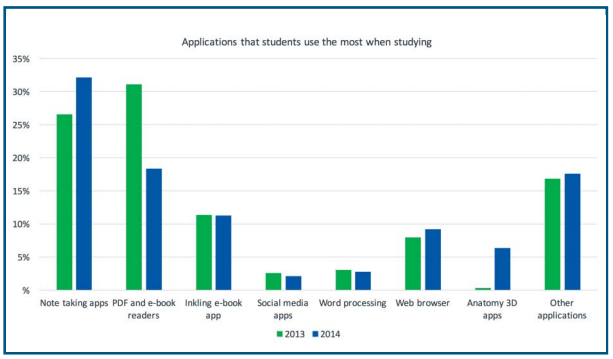

Figure 2. *The most used applications in studying. From student surveys late 2013 (N = 155) and late 2014 (N = 136).*

In instrumental use category technology is considered as a tool to for example to create content. In a sense student is working with the technology and the technology supplements intellectual tools (12, 13). In the iPad pilot (14) many have replaced traditional leaflets with a note taking app. In surveys conducted in late 2013 and 2014 note taking application was considered the most used application (26.6% and 32.2%) when studying (*Figure 2*).

The communicative use category is similar to instrumental category, but main idea is to enable social interaction. Instead of being a tool to create content, in communicative use learning is facilitated through technology. For instance students have been using instant messaging, video calls and social media applications to interact and communicate with each others.

In communal use of technology skills and content are learned through the structuring of the situation, students learn around the technology. Students can share physical and virtual working space at the same time. In the iPad pilot this has been apparent with students using communal interactive whiteboard and studying together with shared flashcards. BaiBoard have been a primary application in PBL-teaching but some of the students have been using the application also when studying.

The role of social media and communality has been very important among the students. Students have been sharing notes and other learning materials via peer-to-peer AirDrop file sharing within the study groups and via cloud services with bigger groups or even with the whole class and other students. Facebook groups have been used actively with PBL groups with students creating a group among themselves. Instant messages have been used to keep in touch with fellow students.

Trends in applications

Large selection of applications is one the advantages when using tablets. Along the pilot several applications have been tested and gradually students have found the best applications for studying. In reading e-books and pdf documents the free Adobe Reader and Readdle's Documents applications and interactive e-book reader Inkling are the most popular reader applications.

In note taking Notability is the most used application with almost all the students preferring the application even though it is not free. Interestingly most of the students have switched from the free Evernote to Notability. Students follow each others recommendations and adopts new applications rapidly. This is shown by the use of medical applications which has risen significantly in a year. Essential Anatomy is quite expensive application compared to other application, but students have adopted it quickly based on other students recommendations (*Figure 2*).

In social media the students prefer Facebook which is very popular in Finland in general. Students use Facebook approximately once a day or more often with their iPads whereas Twitter is hardly used at all. LinkedIn, Instagram, Pinterest, Tinder, Snapschat and Redding are other social media services used by the students, with Instagram being more popular than Twitter.

In general students have been downloading many

applications. 42.5% of the students had installed 10-20 applications and 43.3% had installed over 21 applications. Students prefer free application and paid applications have not been required or needed. But students have been willing to buy an application that is found to be useful.

Conclusion: from pilot to practice

The two-year-long pilot is reaching its end with the class of 2014 moving to second year and the class of 2013 completing their second semester and moving to clinical phase in autumn. The pilot continues in part because the students continue with their iPads to clinical phase and will use the iPads until they graduate.

With the successful pilot the faculty have decided to continue the mobile learning project by providing tablet computers to the incoming students in autumn 2015 funded by the faculty. The pilot has shown that students print only rarely and the need for dedicated PC classroom with desktop computers is unnecessary. Students have also been very careful with the iPads with only few have broken or stolen during the two-year-period among the approximately 350 students.

Based on the experiences of the pilot, the incoming students will be getting the iPads and training on the week before the teaching starts. And all the students will receive also training on how to use the iPads in PBL sessions so they are to start studying effectively from the start of the semester. Additional help materials including faculty's iPad user guide and iPad instructional videos are also available from the start. It is also essential to continue teacher training and research.

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What are the attitudes of F1 doctors in Prince Philip Hospital towards their use of the iDoc app?

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Abstract
Access to information by all medical staff has undergone drastic change over the past 10 years. Paper-based information sources are no longer seen as the most useful and important. These days people want access to information when and where they need it, rather than going to a library to look information up later in their day. This is where smartphones and more specifically smartphone apps are now coming into their own.

Key words: cell phones; mobile applications.

Background

Access to information by medical staff has undergone drastic change over the past 10 years. Paper-based information sources are no longer seen as the most useful and important. These days people want access to information when and where they need it, rather than going to a library later in their day. This is where apps for smartphones are now coming into their own.

What is the iDoc?

The iDoc is an app which is downloaded onto an F1s' mobile phone. It contains five or six medical textbooks including the BNF (British National Formulary) and the Oxford Handbook of Clinical Medicine. It aims to give trainee doctors access to medical information via their smartphone to make the transition from medical students to trainee doctors easier and less dangerous (1). The iDoc app is meant as a "just-in-time" resource for junior doctors when they cannot use more traditional methods of accessing information (2).

The iDoc project started in 2009 and the app is the third project phase. The pilot phase consisted of F1s being given a HTC phone loaded with a memory card containing 17 medical textbooks. This was not well accepted as it meant carrying two phones – leading to difficulties including the cost of insurance and problems with set-up (1, 2).

From September to December 2011 the iDoc project moved on to supplying the app only for iPhones, as at the time this was the only compatible platform. During this phase the trainees could access approximately 11 books chosen for their popularity, and it was noted that the iPhone version of the app worked much faster and was easier to use than the previous HTC phones (2).

In the current phase of the project both Android and iPhones can use the app, with only BlackBerry phones unable to do so (2). During 2012 F1 doctors were offered a 12 month licence key to access the iDoc app which now contains roughly six books that were considered most useful during the previous phases (1).

Project structure

This study looked at the qualitative reasons why F1 doctors use the iDoc app, where they use it, and whether they consider it a useful tool within their medical life. This information was gathered through the use of one-to-one interviews with F1 doctors who had downloaded and also used the iDoc app at least once. In total five interviews were conducted as this was the largest amount possible due to time constraints. The interviews were conducted with a selection of male and female participants from different specialties throughout the hospital. The interviews were transcribed verbatim and the

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resulting information gathered was then analysed using thematic content analysis.

Convenience/efficiency/speed

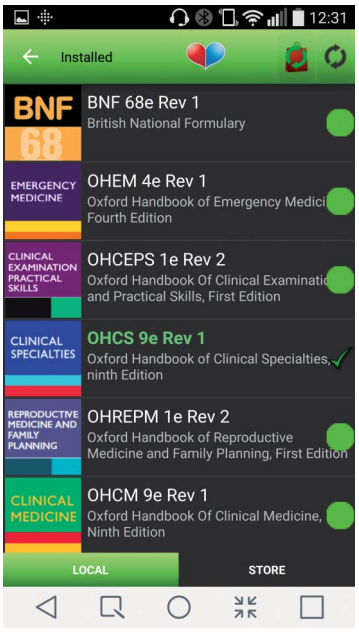
Many of the respondents felt that the primary way that having no access to the iDoc would affect them was inconvenience - having to use a paper copy of the books or find a colleague to ask a question that they could easily have looked up on their smartphones. Lack of access would make them work more slowly and make their job a little harder.

The iDoc app was considered most useful when prescribing medicines. Because the iDoc was in their mobile phone it was much easier to access than trying to find a paper version of the BNF. Use of the iDoc app for access to drug information falls neatly into the convenience/speed aspect as this is mostly information that is needed quickly with little depth. Use of the index to quickly find information within the text books also falls within this category. Convenience is a big issue with regard to preference for the iDoc (3).

It has been shown in previous studies into the iDoc that doctors tended mostly to use the BNF and the Oxford Handbook of Clinical Medicine (4). This bias holds true for the doctors interviewed in this study, reasons given being that they need help remembering drug calculations, or to be reminded of any interactions. Use of the Oxford Handbook of Clinical Medicine would appear to be because it is a very generic book. These are the two main books that new doctors carry with them in paper format, so it is unsurprising that they were the ones they rely on within the iDoc app.

Most interviewees said that they used the iDoc app when they were on call more than on the ward as this was when they would most often be left alone or with little support. This was when time was most critical and when they would be presented with new patients who had conditions they may not be familiar with.

One of the most discussed aspects of using a smartphone within any context, and especially in a medical context, is the benefit of having quick and convenient access to information. Many of the respondents gave the impression that when they are without the iDoc they work at a slower speed because they have to use other methods to gain access to information. Use of the iDoc app was felt to increase efficiency. Convenience covers both the time and place in which the doctors can access information (3). Accessing information where and when it is most useful to them and their patient is especially important in the medical profession as it is a 24/7 service.



Other people and smartphones

Most of the doctors did not think that other colleagues were a barrier to them using the iDoc, as they felt that everyone has a mobile phone these days so it is not unusual to see people using them. Also people were aware of the iDoc or other medical apps so they knew that the doctors were using their smartphones in a clinical rather than a recreational way. Generally they felt that other doctors reacted favourably to their use of the iDoc or smartphone in the clinical setting.

Almost all the doctors interviewed for this study had never used the iDoc in front of a patient. Reasons given included not feeling that it instils confidence (much like bringing out a book to look up things in front of a patient) and also that it may look as if they are playing games etc. on their phone rather than accessing medical information (5). Within the literature most research is concerned with how patients react, or are perceived to react, when doctors use smartphones during treatment (4). Clinicians worry that patients might assume that they were reading texts, and would think them rude.

This was not evidenced as none of the doctors reported a negative reaction from a patient when using a smartphone, it just seemed to be an assumption that the doctors made. If doctors and patients both felt happy with the use of smartphones it might improve patient treatment as doctors would gain access to up-to-date information.

It was also mentioned that the doctors preferred not to bother their seniors with questions that may then embarrass the F1 doctor with a perceived lack of knowledge. This is interesting as it may mean they practice better medicine and learn more because they are not embarrassed to look things up on their phone. This was not really backed up within the literature review as other research suggests that junior doctors still feel that colleagues are the best and quickest source of knowledge when they are on the ward (3). If a junior asks a senior for help with information they are able to give that information along with some context, whereas an app just gives the information (3).

Comparison to other resources

Some of the doctors discussed how using the iDoc compared to using other resources, such as books. It was mentioned that it is much easier to carry around just the smartphone rather than a number of bulky books, as previous doctors had to. If for some reason the doctors are unable to access the iDoc they then have to rely on paper versions of books and asking colleagues for information that previously was at their fingertips. Some of the respondents no longer carry paper copies of the books in the iDoc, which puts them at a disadvantage when the iDoc does not work.

The iDoc app was often used outside work, to reinforce knowledge of things the doctors had seen during the day that they wished to learn more about. One participant mentioned using paper textbooks rather than the app when they were studying, only using the app to study when they were travelling or were not expecting to find time to study. This was reflected within the literature review (6). Paper versions enable easier note-making. Phone screen size also made it more difficult to study, rather than using a book. This was also mentioned in the literature search as a disadvantage to using a smartphone rather than a standard PC (7).

Confidence/reinforcing own knowledge

Interviewees mentioned that not having the iDoc app might make them less comfortable with their decisions, and possibly less efficient. This is something that has been discovered in other studies - although doctors feel it does not affect their confidence not to have access to an app, it does give them more confidence in their work when they do, especially when looking at something like drug calculations (8). Information overload is becoming an increasing pressure for medical staff. Is it better for new medics to have access to knowledge on their smartphones to ensure they are using the most up-to-date information without them having to constantly read medical research?

It was clear from the interviews that most of the doctors used the iDoc to reinforce their own knowledge and to learn about new drugs and diseases that they encountered. This also came out of the literature review, doctors with learning apps on their smartphones had their learning triggered through experiences they had during their clinical practice (9). As these new doctors are some of the first to be using smartphones within clinical practice it was seen that they are not yet completely reliant on the smartphone, they seemed to be equally at home using the other resources available to them. This is likely to change in the near future as people generally become more reliant on using their smartphones.

The doctors had a tendency to double check any knowledge they felt they already had, probably because they are in their first year of actual work within a clinical environment and aware of their own limitations. The iDoc is meant to help them in the

transition from medical student to fully-fledged doctor and it would appear that this is the way the doctors are using it. Having the iDoc allowed them to access rarely-used information for use alongside their own knowledge to ensure patients were treated safely and to the best of their ability (10).

Overall

Because this was a piece of qualitative research and only took in information about a very small section of F1 doctors in one hospital, there are only a few areas where all the respondents gave the same or similar answers. There were also a lot of very different answers from each of the doctors. This is beneficial because there are some areas that can be generally concluded but there are others that would need more research to see whether the background reasons for the different answers were actually similar, and whether if questioned again the respondents would all agree on some of the more different points.

This study did not seek out F1s who were not using the iDoc app, either because they have an unsupported device or no smartphone at all. Further research is needed into whether some doctors are being disadvantaged due to the assumption that they should be able to use a smartphone (1).

Overall each of the participants seemed enthusiastic about their use of the iDoc, there were some issues with its use but on the whole it was something they appreciated having free access to.

Acknowledgements

This paper is partly based on the following dissertation from the author: Bruch, S. What are the attitudes of F1 doctors in Prince Philip Hospital towards their use of the iDoc app? [dissertation]. [Swansea]: Swansea University; 2013. 89 p.

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Accepted on 4 May 2015.

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Abandoning native apps to become future friendly

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Abstract
Native apps have become the norm of mobile interaction with digital services, but it's an expensive way to reach users. With responsive web design, a more inclusive and accessible experience can be crafted for all mobile users instead of just a majority. This article describes the move from a native library app to a responsive website, and why it is right for the future.

Key words: mobile applications; internet; web browser; forecasting.

Background

Smartphones are so associated with apps these days, that some of you might not even believe me when I tell you that the original iPhone launched in 2007 didn't have an app store. Steve Jobs' original vision for the smartphone was for developers to use modern web technology standards to write apps that run in the browser; so called "web apps". Instead, developers started hacking their phones to be able to write "native" apps that looked just like the preloaded ones, and Apple was forced to release an official software development kit and the app store the following year. The rest is history, but the discussion about what's better, native versus web apps, has been going on ever since.

Native apps are built specifically for the intended platforms, which means they are usually prettier, faster and what users most likely expect when tapping an icon on their home screen, but the web way of doing things got stronger around 2011 when "responsive web design" was introduced. This technique allowed websites and apps to share the same code for all different screen sizes instead of having separate websites for mobile and desktop. A typical example originating from this time was to have a native app for mobile, and a website made for desktop use. This was the case for us at the Karolinska Institutet University Library until earlier this year when we retired our native app in favour of a responsive website. This article describes how that decision came to be, and why I believe it's right for the future.

The app decline

Our "KIB Mobile" app for iOS and Android was introduced to users in April 2011 as a way to offer mobile access to our services and information. It was downloaded about 13,000 times during its lifetime (70% for iOS and 30% for Android), and updated to support and match the general look and feel of three new iOS versions and just as many new Android OS iterations.

In late 2012, we started the UX and pre-study work needed to build a new and improved website. When it was time to decide the technical details in 2013, "responsive web design" had become a strong trend that would've been too foolish to ignore, so the decision came down to building a website that would work just as well for small screens as for big ones. The experience of viewing and navigating would be optimal no matter if it was viewed on a desktop computer, tablet or a phone.

We also wanted to try and find a better workflow for the app, which organisationally was tied to our website, from where it was pulling data and information. Content was made specifically for the app because of differences in visual and technical design. This situation with very little content parity

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made the app difficult to work with for staff, and users still had to rely on the website designed for desktop computers to get some things done from their small screen phones.

Maintaining an app takes time and effort to keep up to date with the latest hardware and software. To support new operating system versions there's also a big risk you need to drop support for older ones to keep development practical. Using a development framework that supported shared code between the different phone platforms made a huge difference for us and saved a lot of hours and manpower. The original plan was to leverage this even further for content with a responsive website, but when it was time to deal with the app specific parts in the website development phase, it became painstakingly clear the app was superfluous.

All of a sudden, the app's only advantage was that it was a native app. It loaded faster, and was streamlined for certain tasks, but there was nothing you could not do just as well on the responsive website, which now also contained the full library experience on a mobile device, compared to the selective features of the native app. This motivated the decision to discontinue the app instead of putting time and resources into updating it to work alongside the new website. There was no way to justify having two different solutions for one problem. In our case, mobile access to the library's content and services was now clearly best solved with a responsive website, which as a bonus also made us more future friendly.

Being future friendly

"Future friendly" in this context is a phrase coined by a group of web and UX designers who released a manifesto in 2011 about web standards, content strategy and responsive design among other things to tackle the accelerating pace of technological change. They meant that our current processes and standards have reached their breaking points and wanted to start a discussion about how to adapt and deal with the increasing device diversity like desktops, laptops, tablets, smartphones, feature phones and smartwatches etc. Their solution is "future friendly thinking" and involves acknowledging and embracing unpredictability when creating content and contexts in which users interact with digital products and services (1).

Well-structured content is an essential part of future friendliness since you can never know how it will be consumed in the future. Brad Frost, one of the creators of the manifesto, writes: "Instead of chasing down the platforms du jour, we should recognize the fact that our content now needs to reach a lot more places and turn inward to invest in our content infrastructure" (2). He also emphasises, "get your content ready to go anywhere because it's going to go everywhere" (3).

With "KIB Mobile", iOS and Android were the only supported platforms because that's what most of our users had on their phones. Reaching users of another platform such as Windows Phone with a native app would have required us to develop and maintain yet another version built on top of additional proprietary software and technology out of our control. Compare this to our responsive website that has a single code base, is built on open web standards, and supports pretty much any smartphone out there, even if it's running ageing systems such as webOS. We also put ourselves in good position to support possible future consumer products with Tizen, Jolla or even holograms. If it's got a web browser, it will be viewable. It might not be as fast and pretty as a native app, but it's inclusive and accessible for all mobile users instead of just a majority. The great thing about building things with standard web technologies is that you don't need to know exactly what the future will look like. It's pretty future proof to assume web technologies will still be present in anything that's connected to the Internet.

Conclusions

Being future friendly was never something that affected the decision to move away from apps, but it's what makes me believe we made the right choice for the future. Instead of focusing on an exclusive majority of our users with a couple of native apps, we can now offer a relatively full and true mobile experience for everyone without breaking a sweat using responsive web design. We're currently in the process of deconstructing our second app, Swedish MeSH, previously featured in JEAHIL (4), which will have even more to gain from taking future friendly routes when it comes to focused design and agnostic content to be able to stay relevant on as many future devices as possible, for as long as possible.

The more I think about it, the more I believe in Steve Jobs' original vision for the smartphone. Web apps and websites may not have been what people expected or wanted to use on their phones in 2007, but a very sympathetic initial direction for the future, that perhaps just was introduced before its time.

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supporting, understanding, conducting research

The International Programme Committee and the Local Organising Committee for the 2015 Workshop, are delighted to present a wonderful and diverse programme of inspiring keynote speakers and workshop session topics.

The Workshop is a collaboration with the International Conference of Animal Health Information Specialists (ICAHIS) and the International Clinical Librarian Conference (ICLC). The theme of the Workshop is *Research-Minded: understanding, supporting, conducting research*.

On these two pages, we present the keynotes and workshop sessions schedule so that you can get a flavour of the breadth and depth of topics. Many session titles here are shortened; for the full programme, including ICAHIS and ICLC satellite conferences, EAHIL Board, EAHIL Council, First-timer and Special Interest Group meeting times, social programme, and descriptive details for each workshop session, please see the Workshop website at https://eahil2015.wordpress.com/

The primary aim of the Workshop is to equip participants with greater understanding of, and practical skills in, research approaches and methods. The rationale for this aim is that understanding and experience of research makes us better able to support clinicians, researchers, teachers and students. It also equips us as reflexive practitioners to engage critically and analytically with the daily activities of our work, and develops our skills fundamental to taking an evidence-based approach to our professional practice. These skills are also necessary for measuring and demonstrating impact of our services.

Get the latest news, programme updates and ideas for your visit to Edinburgh

- look at our event page in FaceBook : http://tinyurl.com/2015-Workshop-FB
- join the EAHIL group in FaceBook: http://tinyurl.com/EAHIL-Group-FB
- follow EAHIL on twitter at @eahil or @eahil2015
- follow ICLC on twitter @ClinLib_Conf
- event hashtag #researchminded

Wednesday 10 June

1330	**Plenary 1 Opening Keynote**: Prof Hazel Hall								
	Block A parallel workshop sessions								
	Overview	**Qualitative methods**	**Quantitative methods**	**Systematic Reviews**	**Miscellaneous**		**Communi-cation**	**Research Data**	**Masterclass**
1410 - 1520	Planning your research project	Measuring impact in health library services	Introduction to statistical thinking	Introduction to Systematic Reviews and the role of the librarian	*Take another half-block or take a break*	Keeping up to date the new way: Apps, Content Curation & Aggregation Tools	Presentation techniques	Why is Research Data Management important?	Masterclass by CABI: Recall vs precision: optimal searches
1550 - 1700		*Take another half-block or take a break*			Running a journal club				Masterclass by Springer: Papers bibliographic manager

Thursday 11 June

0900	**Plenary 2 Keynotes**: Dr Alison Brettle, Dr Johanna Rivano Eckerdal					
	Block B parallel workshop sessions					
	Communi-cation	**Miscellaneous**	**Systematic Reviews**	**Quantitative methods**	**Qualitative methods**	
1010 - 1120	Writing for Publication: Getting Started, Getting Help and Getting Published	Making sense of the evidence: a workshop in critical appraisal skills for health librarians	Reducing systematic review workload using text mining	Bibliometrics for Information Specialists	A brief introduction to interviewing as a research method	
		Using action research in practice	Searching trials registers and regulatory sources	*Take another half-block or take a break*	Thematic analysis in qualitative research	
1150 – 1300		*Take another half-block or take a break*		Social Network Analysis	Observation techniques	
	Block C parallel workshop sessions					
	Masterclass	**Research Data**	**Communi-cation**	**Miscella-neous**	**Systematic Reviews**	**Quantitative methods**	**Qualitative methods**
1440 - 1550	Masterclass by EBSCO: Using Advanced Search Techniques	Data Management Plans for grant applications	Science Social Network: researcher networks	Works in Progress - presentations & group discussions	*Take another half-block or take a break*	Introduction to Meta-Analysis	Using Systematic Text Condensation for analysis
					Project and data management in systematic reviews	*Take another half-block or take a break*	Delphi technique
1620 - 1730	Masterclass by Sage: SAGE Research Methods & MD Conference Express		*Take another half-block or take a break*		Improving efficiency and confidence in systematic literature searching	Altmetrics: how librarians can support researchers	*Take another half-block or take a break*
					Sharing literature search blocks		

Friday 12 June

	Block D parallel workshop sessions						
	Master-class	**Communication**	**Miscellaneous**	**Systematic Reviews**	**Mixed methods**	**Qualitative methods**	**Overview**
0900 - 1010	Masterclass by Elsevier: Mendeley	Communicating With Impact To Hard To Reach Audiences	Archives, historical resources and digital preservation	Improving efficiency and confidence in systematic literature searching	Questionnaire Design & Survey Management	An Introduction to phenomenographic research	*Take another half-block or take a break*
		Create a great poster	*Take another half-block or take a break*		Case study methods	Focus Group Interviews	
1040 - 1150	*Take another half-block or take a break*		Health library benchmarking		*Take another half-block or take a break*		Fitting research into your day job
1330	**Plenary 3 Closing Keynote:** Dr Liz Grant -- **Closing Ceremony**						

Letter from the President

Marshall Dozier

Information Services
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Dear Colleagues,

Over the past couple of years, EAHIL has become a signatory to, or member of, various initiatives to promote access to information. I'd like to use this letter to summarise the initiatives so that EAHIL members see some of the "behind the scenes" activities of the Association, and also I hope that by outlining the initiatives you could also help promote them among your own colleagues and local networks, to raise awareness and support.

IFLA (www.ifla.org)
EAHIL has long been a member of the International Federation of Library Associations. EAHIL members have also been active within subgroups of IFLA, such as the Health and Biosciences Libraries Section. IFLA's "core values" are fundamental to the ethos of our profession: that access to information and expression of ideas are human rights; that this access is of social, cultural and individual benefit; that libraries are fundamental to the provision of access to information; and that access should be equal for all people (see more about IFLA www.ifla.org/about/more). By being a member of IFLA we also add our voices to particular campaigns, such as work to improve copyright regulations (see http://blogs.ifla.org/sccr/2014/04/15/why-wipo/), and we benefit by good access to professional information and a global network of colleagues.

Lyon Declaration on Access to Information and Development (www.lyondeclaration.org)
In 2014, EAHIL became a signatory to the Lyon Declaration. This is one of IFLA's initiatives, and illustrates some of the work to establish principles as well as campaigning to influence international policy and development. This is a campaign to have the United Nations (UN) add to the next set of development targets a "development agenda to ensure that everyone has access to, and is able to understand, use and share the information that is necessary to promote sustainable development and democratic societies" (see www.lyondeclaration.org). IFLA attended the UN in February 2015 to negotiate the inclusion of a strong commitment to access to information, we should see some progress updates this summer. In addition, a toolkit is available in many languages for libraries and institutions to use for local advocacy: www.ifla.org/publications/toolkit--libraries-and-the-un-post-2015-development-agenda.

Open access
For many years, EAHIL has supported the principle of open access to information, and in line with that principle, *JEAHIL* has been published open access online. In 2014 the EAHIL General Assembly endorsed of a policy of a default CC-BY licence for papers in JEAHIL. In addition, the policy formally articulated support for the Budapest and Berlin declarations, so EAHIL formally became a signatory of both declarations. The Budapest Declaration was first published in 2002, and in 2012 a revised set of

recommendations were published (www.budapestopenaccessinitiative.org/boai-10-recommendations) providing a set of actions to support the goal of open access publication becoming the default by 2022. The Berlin Declaration was first published in 2003 and most recently followed by a 2013 mission statement (http://openaccess.mpg.de/mission-statement_en) reflecting ongoing challenges and urging research-oriented institutions to take responsibility to enact open access.

The Civil Society Platform on Multilingualism

EAHIL has joined the Multilingual group of the Civil Society Platform, which is an advisory Board of the European Commission. The Platform supports multicultural and multi language projects, which is highly relevant to the work of our colleagues who are translating MeSH to improve discovery of health literature by both health professionals and laypeople in their native languages. To learn more, see http://ec.europa.eu/languages/information/language-related-tools/civil-society-platform-multilingualism_en.htm

EBLIDA (www.eblida.org)

In 2015, EAHIL joined the European Bureau of Library, Information and Documentation Associations. EBLIDA is an advocacy group, working on the interests of libraries, librarians, and public access to information. The motivation for deciding to join was the positive experience of three EAHIL Board members at an EBLIDA seminar on copyright issues. EBLIDA has also been doing advocacy work to improve availability of ebooks via libraries.

So, what can you do to further support these initiatives? You can get your institution and national library association to join, you can disseminate information about their work, you can attend their events, and support their principles and aims by embedding them in your institutional practices.

Are there other significant initiatives or associations that EAHIL should join? I'd love to hear your suggestions.

Kindest wishes,

Marshall

We are delighted to announce the winners of the jointly funded EAHIL and EBSCO scholarships for 2015:

Vesna Cafuta, Slovenia
Alberto Perlini, Italy
Valeria Scotti, Italy
Josip Šimić, Bosnia and Herzegovina
Dina Vrkic, Croatia

The scholarships are being used to attend the EAHIL+ICAHIS+ICLC Workshop on 10-12 June 2015, in Edinburgh. We are very grateful to EBSCO for their collaboration and generous support of EAHIL and its members!

The new EAHIL website is launched!

Anna Kågedal

Team Leader Customer Service
SLU Library
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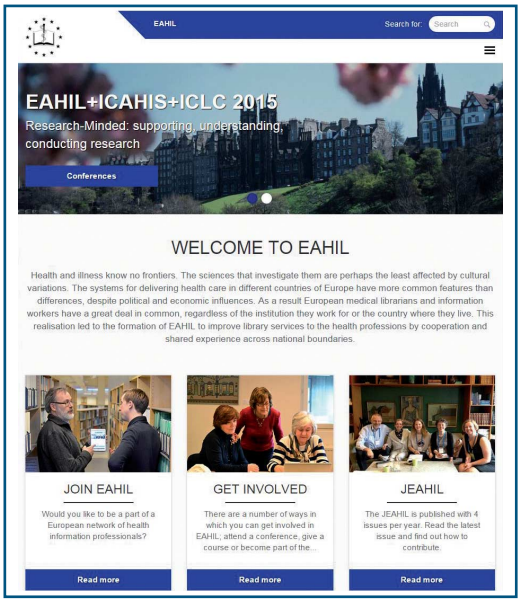
The groundwork for creating a new website has been an ongoing process for several years, involving many creative people along the way. It's the result of collective work of those who created and maintained our former website, who contributed to the Web task force, and all those who have given input, practical work, support and cheering as we built the new site. It's been great fun to work on design with the web bureau, to sharpen our focus to prioritized needs of EAHIL, and to gather photographs and interview members.

The new site is built in WordPress which is a full Content Management System (CMS) that matches our software requirements specification, including features like open source, easy-to-use for a distributed group of people, easy-to-buy professional developers' time from web bureaus in EAHIL countries, and with the potential to add on a broad variety of features in future development phases of the website. We wanted to build a responsive website that could easily adapt to various screen sizes but also the needs of EAHIL as they change over time.

That last bit is important; "a website that could easily adapt to the needs of EAHIL as they change over time". This is not the perfect website. Websites seldom are perfect, especially when you work with them. That is why the most important part of the work with our new website starts now. You, as a member of EAHIL and a user of the website, can provide feedback on how you use the site, how you are not using the site, what needs the web fulfils and what needs it doesn't fulfil. In this way, together we can make this site as useful as possible for the various needs of EAHIL as an organisation and of our members.



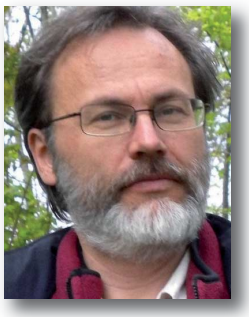
I would like especially to point out the parts of the website that highlight the different ways to get involved in EAHIL, including interviews with various engaged members who share, for example, their experiences and the benefits of being a member of the Council or of arranging an event.

Another way to get involved is to help with the development of the website; please get in touch if that is something you would like to do!

http://eahil.eu

May 2015

Report from the European Veterinary Libraries Group (EVLG)



Michael Eklund, chair EVLG

SLU University Library,
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The programme for the 8th International Conference of Animal Health Information Specialists (ICAHIS) day is now ready and we all look forward with anticipation to Tuesday the 9th of June.
This special day before the main EAHIL Workshop is going to be at the Royal (DicK) School of Veterinary Studies and a bus will transport the participants from the University area (Appleton Tower) and Pollocks hall.
We got a programme with three main sessions, each followed by a group discussion and the opportunity for sharing ideas. The three parts of the day are going to be about Evidence based veterinary medicine & practice, Information search & behaviour and the last part will be about Research support.
We will also have a guided tour of the Veterinary School before lunch and in the evening we will have an ICAHIS dinner at Howie's at Waterloo Place.

More information about the Conference day at
https://eahil2015.wordpress.com/icahis/

During the main EAHIL Workshp, the EVLG will have a Special Interest Group meeting at Thursday 11 June 13.30-14.30 and we will discuss, among other things, our new bylaws, and look through the proposal from our amendment group led by Anne-Catherine Munthe, Norway.
Besides the Edinburgh event we have started to work with the new EAHIL site and will move our old homepage information to our SIG pages, and already have some plans for how we are going to use them.

Meeting near Piazza Navona in Rome, 2014. As we all know, vetlibbers have more fun!

US Medical Library Association report for EAHIL

Carol Lefebvre

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MLA 2015: Austin, Texas, 15-20 May 2015. Conference report.

As you all know from my previous columns, MLA 2015 was held this year in Austin, Texas and closed earlier today. This is the third time it has been held in Texas over recent years (with MLA 2002 being held in Dallas and MLA 2005 being held in Phoenix) but it had a different feel from either of those meetings.

When I arrived in Brisbane for ICML in 2009, I was told I that I had brought rain, as Brisbane had been suffering from drought until my arrival. (Wherever you are in the world, as a "Brit" you can never escape remarks about our British weather). Well, if it was true in Brisbane, it was certainly true in Austin! The heavens opened with thunder and lightning and we had major storms that went some way to alleviating the drought which has persisted here in Texas since 2008 and has been described as the worst on record. We did not mind, however, as we were, of course, indoors all the time!

The conference went under the title and theme "Librarians Without Limits", which is wordplay based on a long-running TV music programme entitled "Austin City Limits", known across the US (and, possibly, beyond?). We were told to expect lots of live music entertainment – and bats – but neither in the Convention Centre, I should add! (Apparently, Austin is the home to the largest urban bat colony in North America. The Congress Avenue Bridge, just a few minutes' walk from the Convention Centre, is home to c. 1 million bats at this time of year and they generally fly out from under the bridge at dusk, creating a magnificent sight across the river).

The conference started, as ever, with a wide range of Continuing Education courses on the Friday and Saturday and ended with additional courses on the Wednesday afternoon. This year there were 25 CE courses with over 300 participants. A colleague and I presented two courses, which regrettably meant that I was not able to attend anyone else's courses! Topics ranged from setting up a clinical librarian programme, mobile technology, data analysis, bioinformatics, advanced search techniques, evidence-based-medicine and systematic reviews. Many of the courses were very popular and some were sold out.

For the conference itself, there were c. 2,000 registrants from 18 countries. Thirty registrants were from Europe. In total there were 85 people from outside the US. More than 100 papers were presented and c. 200 posters. As ever, the conference was supported by an exhibition with about 100 exhibitors.

The key opening plenary speaker this year was Mae Jemison. During her career she has not only been a physician and a NASA astronaut, as I mentioned in my last column, but has also featured in Star Trek! She was the first African American woman to travel in space when she went into orbit on the Space Shuttle Endeavour in 1992.

The two closing plenaries were also inspiring. Ann McKee, a neurologist / pathologist spoke about the dangers of sports-related brain injuries arising from football, rugby and soccer and the implications of young people engaging in these sports. She ended with the words of encouragement to us all that exercise is helpful in preventing many brain diseases, that is, if one chooses one's form of exercise with caution, I imagine? Finally, Eszter Hargittai gave a very interesting closing address based on her research on the Web Use Project and advised us that the myths that young people are all computer savvy and the elderly are not are just that – myths! Her research had indicated a stronger correlation between web skills and socioeconomic status than age. All the above plenaries are available as part of the e-Conference package, see below.

During the main part of the meeting, Betsy Humphreys (Acting Director, US National Library of Medicine (NLM)) opened the annual NLM Update with a tribute to Donald Lindberg, who had retired recently as the Director of NLM, a post he had held for over 30 years. Many of his predictions for the future of medical information became reality including predicting a time when "the book or journal on the shelf will become increasingly too remote for immediate patient-care decisions," and computers will become increasingly useful; and that "medical informatics will emerge as a formal research field and academic discipline".
http://infocus.nlm.nih.gov/2015/04/14/the-end-of-an-era-director-lindberg-retires-after-31-years-leading-nlm/

NLM also had a booth, as usual, with a vast range of presentations on NLM and related products and services. Many of these presentations easily compete by way of quality and relevance with the oral sessions in the main programme. This year topics included PubMed, PubMed Health, MedlinePlus and Public Access / PubMed Central. Recordings of these presentations and / or recordings made prior to the meeting are now available:
http://www.nlm.nih.gov/pubs/techbull/mj15/mj15_mla_theater_presentations.html

Please note that the "e-conference" registration is still available post-conference. The cost for "Individual e-Conference Registration' is 139 USD (the reduced rate for EAHIL members). Please note that this is an individual rate, not be shared with your colleagues. If you wish to obtain an institutional subscription, please contact MLA. Once you have registered for the "e-Conference", you can listen to recordings and follow the slides of the plenary and parallel sessions as well as the oral sessions and other content.

As ever, this was a very successful and well-organized meeting at all levels and thank you to all MLA staff, the National Programme Committee, the Local Assistance Committee and others who contributed to its success.

Future MLA annual meetings - dates for your diary:
MLA 2016, Toronto, Canada 13-18 May 2016
MLA 2017, Seattle, Washington, 26-31 May
MLA 2018, Atlanta, Georgia 18-23 May 2018
MLA 2019, Chicago, Illinois 3-8 May 2019

Membership of MLA
MLA offers International Membership to individuals at a reduced rate for those health information professionals who live outside the United States or Canada. The current annual subscription rate for International Membership is 130 US dollars. For details of what this includes, see the link below.
https://www.mlanet.org/about/membership

News and publications from MLA

The latest issue of the Journal of the Medical Library Association (JMLA) (Volume 103(2) April 2015) is now available on open access together with open access to back issues of the JMLA (and its predecessors back to 1898) from:
http://www.ncbi.nlm.nih.gov/pmc/journals/93/

Preprints of forthcoming issues of the Journal of the Medical Library Association (JMLA) are available (for members only) by selecting JMLA Preprints under the Publications option when you login with your username and password. MLA News and the current edition of MLA-FOCUS (the fortnightly electronic newsletter (both for members only) are also available when you login with your username and password.

Photo credit: "365 things to do in Austin, Texas"

http://365thingsaustin.com/2010/06/08/158-kayak-bat-watching-tour/

National Library of Medicine report for EAHIL

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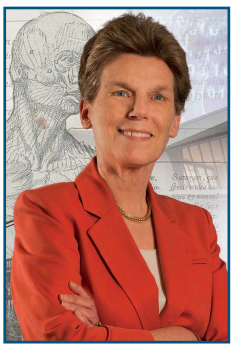
Changes at the Library

The Director of the National Library of Medicine, Donald A.B. Lindberg, MD, retired on March 31, 2015 after 31 years of leading the world's largest medical library. He was the Library's longest serving director and one of the longest-serving leaders at the National Institutes of Health (NIH), the Library's parent organization. Hundreds of people from the library, the NIH, and from across the country gathered to pay tribute to him. His parting words to staff, "It's a wonderful place because of you. I've loved every day here. I think you'll continue to serve the country and the world well." We will honor his wishes!

Dr. Lindberg at his farewell tribute



B.L. Humphreys

Betsy L. Humphreys was appointed the NLM Acting Director effective April 1, 2015. She has served as NLM's deputy director since 2005, sharing responsibility with the Director for overall program development, program evaluation, policy formulation, direction and coordination of all Library activities. As Deputy Director, she coordinated NLM's extensive activities related to health data standards, serving as US Member and founding Chair of the General Assembly of the International Health Terminology Standards Organisation (IHTSDO). Ms. Humphreys has contributed to the development of policy on a range of matters, including health information technology, public access to research results, clinical trials registration and results reporting.

A tribute to Marshall Nirenberg

Fifty years ago, Dr. Marshall W. Nirenberg (1927-2010) completed his first summary of the genetic code – one of the most significant documents in the history of twentieth-century science – a painstaking, handwritten chart of the discovery of how sequences of DNA, known as "triplets," direct the assembly of amino acids into the structural and functional proteins essential to life. In honor of the 50th anniversary of Nirenberg's Nobel Prize-winning work the NLM held "A Tribute to Marshall Nirenberg" on March 17, 2015. The event included a presentation of Nirenberg's Nobel medal and certificate to NLM, for permanent

display in the NLM Visitor Center. People who knew him well shared memories, including his widow, Dr. Myrna Weissman; former colleague Dr. Frank Portugal, who wrote a book about Nirenberg; and experts who have had a hand in assuring that the accomplishments of the NIH intramural program's and the federal government's first Nobel laureate will not be forgotten. The *Circulating Now* blog has a series of articles commemorating the anniversary of this scientific milestone: http://circulatingnow.nlm.nih.gov/category/series/deciphering-the-genetic-code/.

NLM and disasters

NLM has a long history of providing health information for health professionals and first responders to prepare for and respond to all types of disasters, and has developed a number of tools and advanced information services designed for disaster and emergency response.

The Disaster Information Management Research Center (DIMRC), a part of the Specialized Information Services Division helps prepare for, respond to, recover from, and mitigate the adverse health effects of disasters. The DIMRC site hosts a variety of tools and information resources including, Emergency Response and Toxicology Tools and Apps, Subject Guides, and Disaster Medicine and Public Health Literature.

Disaster Image Collage

NLM has developed partnerships with participating publishers to provide free access to full-text from more than 650 biomedical journals and over 4,000 reference books and online databases to healthcare professionals and libraries affected by disasters through its Emergency Access Initiative (EAI). EAI serves as a temporary collection replacement and/or supplement for libraries affected by disasters that need to continue to serve medical staff and affiliated users. As of this writing EAI has been enacted seven times, with the most recent events being the Ebola outbreak in West Africa and the April 2015 earthquake in Nepal.

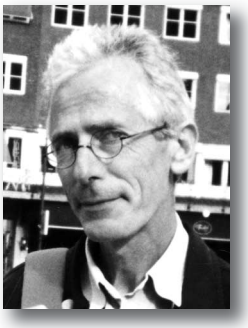
While EAI offers information for professionals, MedlinePlus, provides a consumer friendly resource with a specific Health Topic, Disaster Preparation and Recovery that covers links to resources such as preparing disaster plans and kits to returning home after a disaster. MedlinePlus offers reliable, up-to-date health information, anytime, anywhere, for free…and now it's completely mobile friendly.

Stay up-to-date with NLM

It's hard to keep on top of everything going on at NLM, let alone the whole information world! Here are a few of my NLM news sources and links that I use regularly. I hope you'll find them useful as well.

NLM-Announces: weekly email with links to new and updated files on the NLM site
NLM Technical Bulletin: information on products and system changes that impact search and retrieval
NLM News: links to major events and happenings at the Library
Distance Education Resource Page: list of long or short training material about products and services
Social Media Options: a variety of choices to satisfy your social media needs

[Collected during March to April 2015]



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The goal of this section is to have a look at references from non-medical librarian journals, but interesting for medical librarians (for lists and TOC's alerts from medical librarian journals, see: http://www.chu-rouen.fr/documed/eahil67.html). Acknowledgement to Informed Librarian Online

FREE FULL TEXT

1. Quesenberry AC. **Linking Health Literacy and Libraries in Tennessee.**
Tennessee Libraries Volume 65 Issue 1 2015
Information literacy is an issue at the front of most librarians' minds, and health literacy is equally as important. Health literacy is defined as "the degree to which individuals have the capacity to obtain, process, and understand basic health information services needed to make appropriate health decisions" (Glassman, 2013). Numerous studies show the magnitude of problems with low health literacy. One study in particular found that 88% of the population in the United States falls below the 'proficient' ranking in health literacy (Glassman, 2013). Low or limited health literacy has an impact on one's health levels in a variety of ways, including not being capable of taking the correct dosage of medication or having communication issues with healthcare professionals.
Available from: http://www.tnla.org/?page=TL65_1_health

2. Pontika N. **Why principal investigators funded by the US National Institutes of Health publish in the Public Library of Science journals**
Information Research: An International Electronic Journal v.20 #1, March 2015
Introduction. The National Institutes of Health public access policy requires the principal investigators of any Institutes-funded research to submit their manuscript to PubMed Central, and the open access publisher Public Library of Science submits all articles to PubMed Central, irrespective of funder. Whether the investigators, who made the decision to publish in one of the seven Public Library of Science journals were motivated by the National Institutes' public access policy or by the journals' quality standards is unknown. Method. Forty-two Institutes-funded investigators who had published in one of the seven journals between 2005 and 2009 were interviewed, using a semi-structured, open-ended interview schedule. Analysis. Qualitative analysis was conducted, dividing the participants into those who published in the journals before the mandatory policy (pre-mandate) and those who published after the policy (post-mandate). Results. The Institutes-funded investigators submitted to the Public Library of Science journals because they favour the high impact factor, fast publication speed, fair peer-review system and the articles/ immediate open access availability. Conclusions. The requirements of the National Institutes' public access policy do not influence the investigators' decision to submit to one of the Public Library of Science journals and do not increase their familiarity with open access publishing options.
Available from: http://www.informationr.net/ir/20-1/paper654.html

3. Quinn B. **The McDonaldization of Academic Libraries?**
Coll. Res. Libr. 75th Anniversary Issue 76:339-352
George Ritzer, a sociologist at the University of Maryland, has proposed an influential thesis that suggests that many aspects of the fast food industry are making their way into other areas of society. This article explores whether his thesis, known as the McDonaldization thesis, is applicable to academic libraries. Specifically, it seeks to determine to what extent academic libraries may be considered McDonaldized, and if so, what effect McDonaldization may be having on them. It also investigates some possible alternatives to McDonaldization, and their implications for academic libraries.
Available from: http://crl.acrl.org/content/76/3/339.abstract

4. Lynn VA *et al.* **Body apps iPads for undergrad Anatomy and Physiology students**
Coll. Res. Libr. news March 2015 76:149-152
Would iPads with anatomy and physiology apps increase student learning in a small campus classroom? A campus librarian and a biology instructor at Penn State University certainly hoped they would. The Penn State Hazleton Campus Library and Department of Biology purchased iPads that were preloaded with anatomy and physiology apps for the undergraduate anatomy and physiology curricula. During the first week of class, students received instruction about the use of library electronic resources related to anatomy and physiology. Students used the iPads in the classroom/lab and borrowed them from the library to complete course assignments and study for exams.
Available from: http://crln.acrl.org/content/76/3/149.full

5. Barr D. **Science and technology resources on the Internet. Brain matters: Resources for researchers in the neurosciences**
Issues in Science and Technology Librarianship Number 79 Winter 2015
The study of neurobiology, or neuroscience, is vitally important to our understanding of ourselves and the world around us. New ways of studying the brain are constantly uncovering surprising insights. For instance, Functional Magnetic Resonance Imaging (fMRI) and Positron Emission Tomography (PET) scans allow scientists to see what is happening in the brain, and techniques such as Brainbow can map individual neurons. This webliography is aimed at librarians working in the biomedical and life sciences, who can facilitate access to online resources and data for their patrons while at the same time keep up with new developments in neurobiology.
Available from: http://www.istl.org/15-winter/internet.html

6. Dankowski T. **Stimulating minds: Libraries develop programs to serve patrons with Alzheimer's disease and dementia**
American Libraries February 9, 2015
Tracey Degnan arrives 10 minutes early carrying a suitcase filled with large-print books, illustrations, photographs, name tags, fake passports, a big blow-up globe, reading packets, and souvenirs. Sometimes she brings music, miniature flags, dolls, coloring sheets, or scented objects to pass around—whatever it takes for Degnan, life enrichment liaison at Gail Borden Public Library (GBPL) in Elgin, Illinois, to help stimulate her travel companions' memories and engage their senses as they visit a new, faraway land.
Available from: http://americanlibrariesmagazine.org/2015/02/09/stimulating-minds/

7. Henshaw, C *et al.* **Automating harvest and ingest of the Medical Heritage Library**
Ariadne #73, February 2015
The aim of the UK Medical Heritage Library (UK-MHL) Project is to provide free access to a wealth of medical history and related books from UK research libraries. There are already over 50,000 books and journal issues in the Medical Heritage Library drawn from North American research libraries. The UK-MHL Project will expand this collection considerably by digitising a further 15 million pages for inclusion in the collection.

The Wellcome Library is incorporating these books into its own digital library, making further strides towards becoming a global online resource for the history of medicine and health.
Available from: http://www.ariadne.ac.uk/issue73/henshaw-et-al

8. Levay P *et al.* **The contributions of MEDLINE, other bibliographic databases and various search techniques to NICE Public Health Guidance**
Evidence Based Library and Information Practice Vol 10, No 1 (2015) 50-68
Objective – To make recommendations for the National Institute for Health and Care Excellence (NICE) on the factors to consider when choosing databases and search techniques when producing systematic reviews to support public health guidance development. Methods – Retrospective analysis of how the publications included in systematic reviews commissioned by NICE on obesity, spatial planning, and tuberculosis were retrieved. The included publications were checked to see if they were found from searching MEDLINE, another database or through other search techniques. Results – MEDLINE contributed 24.2% of the publications included in the obesity review, none of the publications in the spatial planning review and 72% of those in the tuberculosis review. Other databases accounted for 9.1% of included publications in obesity, 20% in spatial planning and 4% in tuberculosis. Non-database methods provided 42.4% of the included publications in the obesity review, compared to 5% in the spatial planning review and 24% in the tuberculosis review. It was not possible to establish retrospectively how 24.2% of the publications in the obesity review and 75% in the spatial planning review were found. Conclusions – Topic-specific databases and non-database search techniques were useful for tailoring the resources to the review questions. The value of MEDLINE in these reviews was affected by the degree of overlap with clinical topics, the domain of public health, and the need to find grey literature. The factors that NICE considers when planning a systematic search are the multidisciplinary nature of public health and the different types of evidence required.
Available from: http://ejournals.library.ualberta.ca/index.php/EBLIP/article/view/23248

ABSTRACTS ONLY

1. Walters K *et al.* **Developing online tutorials to improve information literacy skills for second-year nursing students of University College Dublin**
New Review of Academic Librarianship Volume 21, Issue 1, 2015 pages 7-29
This article explores the process of developing online tutorials for a specified student group, in this case Second-Year Nursing students in University College Dublin. The product was commissioned by the Health Sciences Library and the UCD School of Nursing, Midwifery, and Health Systems. It was developed as a "Capstone Project" for part fulfillment of the MLIS in UCD. We focused our research on three areas of scholarship to assist in the development of our product, namely Information Behavior, Learning Technologies, and Learning Science and Design. Flemings VARK model was used to inform the team of the four different learning styles (visual, auditory, reading, and kinesthetic) and to match the presentation style to these. An initial difficulty in the assessment phase was one of access to a large group of students, as the students were on clinical placements. We created personas and a profile of nursing students to try and compensate for this. The tutorial was developed to cater for this specific group of students and later to act as a valuable support to the Library, which is under severe pressure in terms of staff availability to support student learning. The product is relatively straightforward to produce (and maintain) and is something the Library will be able to develop and add to in future years.
Available from: http://www.tandfonline.com/doi/abs/10.1080/13614533.2014.891241

2. Sbaffi L. **NICE evidence search: student peers' views on their involvement as trainers in peer-based information literacy training**
The Journal of Academic Librarianship Volume 41, Issue 2, March 2015, Pages 201–206 his research seeks to contribute to the understanding of peer-based models of information literacy training, through gathering insights from peer trainers (champions) in a scheme designed to promote the use of a national health and

social care information portal, Evidence Search (ES), amongst university students mainly in the health professions. Specifically, this article focuses on the benefits and learning that the peer trainers derive from their involvement in the scheme. This article reports on focus groups conducted with student champions. Findings suggest that champions believe that they have learnt a lot about information searching and evaluation from their engagement as champions, and have developed their teaching, planning and organisational skills. They now reported using Evidence Search as a first port-of-call for information for an assignment, although they still used Google. Students' choice of queries for their training session was influenced by their recent experience with study units or placements. In addition, many acted as advocates, making recommendations to friends (for study) or colleagues (in practice settings). Questionnaire data showed that champions regarded Evidence Search as credible, trustworthy and reliable, and that their approach to searching for and evaluating information is comparable to that of an expert.
Available from: http://www.sciencedirect.com/science/article/pii/S0099133314001748

3. Kim YM. **Is seeking health information online different from seeking general information online?**
Journal of Information Science April 2015 vol. 41 no. 2 228-241
Increasing use of the Internet for health information delivery has created considerable discussion among digital divide scholars (i.e. how online information delivery benefits those individuals in higher socioeconomic brackets more than their counterparts). Because it is health information, we need to integrate how patients seek out online information. This study included patients' information-seeking behaviour along with digital divide scholars' constructs (i.e. literacy and computer skills). Using 1617 observations from the 2010 Pew Internet and American Life Project, this study found that individuals with a significant number of health problems, who are likely to be in a lower income bracket, are proactive online health information seekers; however, they are less likely to search general information. This finding adds value to existing research revealing that usefulness, which has been overlooked in online health information seeking, is important and should be a part of the research model.
Available from: http://jis.sagepub.com/content/41/2/228.abstract

4. Inthiran A *et al.* **A preliminary study on the usage of search assisting features when searching for a personal health task**
Aslib Journal of Information Management v.67 #2, 2015
Purpose – Current research topics in relation to health information searching focus on challenges faced by health consumers and domains used to perform the health search. Health consumers may not be capable of successfully searching for a health task due to limited medical knowledge. As such search assisting features provided on health domains are important in assisting health consumers during a search session. The purpose of this paper is to perform a preliminary exploratory research study to understand if search assisting features are visible to searchers and the usage of search assisting features when searching on a personal health task. Design/methodology/approach – A convenience sampling method in a university setting and an observational type study was used. MedlinePlus is used as the search domain for this research study. While participants of this research study were first time users of MedlinePlus, they were not first time medical searchers. Findings – Results of this research study indicate health consumers do not utilize search assisting features when searching for a personal health task. This is because health consumers are comfortable with their search skills. In other cases health consumers found the search assisting features irrelevant or had no confidence in the search assisting features presented. Key contributions of this research study indicate health consumers do not utilize search assisting features when searching for a personal health task. This is because health consumers are comfortable with their search skills. In other cases health consumers found the search assisting features irrelevant or had no confidence in the search assisting features presented. Research limitations/implications – Results of this research study has implications for health domain and human computer designers in relation to the development of specialized search assisting features and the placement of these features. Theoretical contributions indicate

health searchers use search assisting features minimally when searching on a personal health task.Originality/value – Results of this research study indicate health consumers do not utilize search assisting features when searching for a personal health task. This is because health consumers are comfortable with their search skills. In other cases health consumers found the search assisting features irrelevant or had no confidence in the search assisting features presented.
Available from: http://www.emeraldinsight.com/doi/abs/10.1108/AJIM-09-2014-0110

5. St. Jean B et *et al.* **The influence of positive hypothesis testing on youths' online health-related information seeking**
New Library World v.116 #3/4,2015
Purpose – The aim of this paper is to investigate whether/how youths' pre-existing beliefs regarding health-related topics influence their online searching behaviors, such as their selection of keywords and search results, their credibility assessments and the conclusions they draw and the uses they make (or do not make) of the information they find. More specifically, we sought to determine whether positive hypothesis testing occurs when youth search for health information online and to ascertain the potential impacts this phenomenon can have on their search behaviors, their ability to accurately answer health-related questions and their confidence in their answers. Design/methodology/approach – An exploratory field experiment was conducted with participants in an after-school program ("HackHealth"), which aims to improve the health literacy skills and health-related self-efficacy of middle-school students from socio-economically disadvantaged backgrounds. Findings– Evidence of positive hypothesis testing among the participants was found and important impacts on their search outcomes were observed. Practical implications – The paper was concluded with suggestions for improving digital literacy instruction for youth so as to counteract the potentially negative influences of positive hypothesis testing.Originality/value – This study extends existing research about positive hypothesis testing to investigate the existence and impact of this phenomenon within the context of tweens (ages 11-14) searching for health information online.
Available from: http://www.emeraldinsight.com/doi/abs/10.1108/NLW-07-2014-0084

6. Tahamtan I *et al.* **Drug information seeking behaviours of health care professionals in Iran**
New Library World v.116 #3/4, 2015
Purpose – The purpose of this paper is to list the resources that Iranian health-care professionals used to access drug-related information, to know the features and types of drug information resources which were much more important for health-care professionals, the problems they encountered in seeking drug information and the way they organized and re-found the information that they had retrieved. Drug-related queries are one of the most common types of questions in medical settings. Design/methodology/approach – This was a descriptive-analytical study conducted in Iran during 2014. The data collection tool was a self-designed questionnaire. Data analysis was conducted using Statistical Package for Social Sciences. Descriptive statistics and chi-square test were used to analyse the data and examine the research hypothesis. Findings – Participants used books, drug manuals, search engines and medical databases more frequently, and less than half of them consulted colleagues to acquire drug-related information for clinical, educational and research purposes. Handheld computers were used by most participants to access and store drug information. Lack of access to drug information and lack of enough time were the main obstacles in seeking drug information. A significant association (p value = 0.024) was detected between organizing and re-finding information for future uses. Originality/value – This study investigated drug information-seeking behaviours of health-care professionals and the way they managed this information in a developing country that lacks necessary information technology infrastructures. Training programmes are required to help health-care professionals to find and access reliable and up-to-date drug information resources and to more easily re-find the found drug information for future uses.
Available from: http://www.emeraldinsight.com/doi/abs/10.1108/NLW-06-2014-0070

7. Rochon PA *et al.* **Prospective evaluation of the accessibility of Internet references in leading general medical journals**
Scientometrics February 2015, Volume 102, Issue 2, pp 1375-1384
This study prospectively evaluates the accessibility of Internet references in leading general medical journals and explores the impact of their lost accessibility. We identified all original contributions published in five leading peer-reviewed traditional general medical journals and one leading on-line journal that were published at two time points (January 2005 and January 2008). We followed the sample prospectively for 5 years and determined the number of Internet references that remained accessible. Our sample of 165 original contributions contained 154 Internet references. Accessibility to Internet references declined from 51% after 4 years to 37% after 8 years in the articles published in January 2005, and decreased from 78% after 1 year to 44% after 5 years in the articles published in January 2008. Among those Internet references published in the most highly-cited articles, only 19% (95% CI 10-35%) remained accessible in March 2013. Among the Internet references cited in the Methods section of the articles, only 30% (95% CI 20-43%) remained accessible. Of the 91 Internet references which were no longer accessible at the end of the follow-up period, 39 (43 %) were assigned a rating of either 'important' or 'very important'. Accessibility of Internet references declines substantially over time most often because the information is updated or the sites become unavailable. Accessibility remains poor even among those Internet references that are most important.
Available from: http://link.springer.com/article/10.1007/s11192-014-1489-y

8. de Winter JCF *et al.* **The relationship between tweets, citations, and article views for PLOS ONE articles**
Scientometrics February 2015, Volume 102, Issue 2, pp 1773-1779
An analysis of article-level metrics of 27,856 PLOS ONE articles reveals that the number of tweets was weakly associated with the number of citations (ß = 0.10), and weakly negatively associated with citations when the number of article views was held constant (ß = −0.06). The number of tweets was predictive of other social media activity (ß = 0.34 for Mendeley and ß = 0.41 for Facebook), but not of the number of article views on PubMed Central (ß = 0.01). It is concluded that the scientific citation process acts relatively independently of the social dynamics on Twitter.
Available from: http://link.springer.com/article/10.1007/s11192-014-1445-x

Publications and new products

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It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair
(Charles Dickens, A tale of two cities, 1859).

There is no doubt, tough times such the ones libraries are living, need some efforts and positive thoughts. So, why not start with some good news and inspire new projects? Enjoy the read!

Randomized controlled trials are praised as one of the highest forms of evidence in healthcare. However, to be valuable, all research must have valid methods, and be reproducible and useable. The usability of research is affected by a multitude of factors, stemming from the research not being reported in sufficient detail. Clinical trials particularly have come under heavy fire recently, with a few very high-profiles cases highlighting some of these issues. A new research published in Trials brought some new interesting thoughts. It explored the first-hand experiences that trialists face when conducting and reporting clinical trials. What did they say and what can we do to tackle the challenges they face?
(Smyth RM et al. Trials. 2015;16:16).

Not new, but worthy is the article whose aim is to investigate the consequences of the bibliometrics-based system of evaluation of scientific production, on the contents and methods of sciences. Until a few years ago, most scientists had hardly heard about terms like "impact factor" or "h-index". Now, the implications of bibliometrics on the choice of the research topic, on the experimental practices, and on the publications habits are discussed, also taking into account possible evolving scenarios and the recent development of digital archives. (Castellani T et al. Soc Epistemol Rev Reply Collect. 2014;3;11).

JOURNAL ISSUES

Health Information and Libraries Journal: Contents of April issue 2015

Editorial
The role of the health information professional
Audrey Marshall
Increasing impact in a time of decreasing budgets
Anthea Sutton
Meeting the challenges of clinical information provision
Hannah Spring

BOOKS REVIEW

Handbook of research on disaster management and contingency planning in modern libraries. Emy Nelson, and Jennifer A. Townes. Web. 5 May 2015; ISBN 978-1-4666-8624-3, $276.00 (hard cover + Free E-Access). IGI Global. 678 pp.

Special interest in topics relating to library management over the last decade has led to the close examination of crisis management practice among library professionals. Due to the importance of the archives, documents, and books housed within libraries around the world, preemptive planning for potential disaster is necessary to all librarians and their staff.

The Handbook of Research on Disaster Management and Contingency Planning in Modern Libraries brings together the latest scholarly research, theories, and case studies to investigate the scale and types of disasters that can impact a library.

This handbook features timely research-based chapters and case studies on crisis management, emergency response, exhibition loans, natural disasters, preserving archives, public and staff safety, and risk assessment.

Innovative solutions for building community in academic libraries. Bonnand, Sheila, and Mary Anne Hanson. Web. 5 May. 2015; ISBN 978-1-4666-8392-1, $160.00 (hard cover + Free E-Access). IGI Global. 343 pp.

The library has always been an essential part of the collegiate experience, providing students with access to knowledge and literature. However, as virtual services and online learning become more prominent within collegiate environments, the ways students conduct research and access resources has been altered.

This book examines new methods librarians use to engage both on-campus and online users in library services, taking into account the significant impacts of online learning on students' interaction with library resources. Focusing on various outreach practices, techniques of literacy instruction, and the utilization of library spaces, this research-supported book is a pivotal reference source for distance educators, program planners, academics, and library professionals interested in new ways to attract users to library services.

E-LEARNING

Integrating video game research and practice in library and information science. Ratliff, Jacob A., 2015. Web. 5 May. 2015. ISBN 978-1-4666-8175-0, $148.00 (hard cover + Free E-Access). IGI Global. 300 pp.

Video games are now a ubiquitous form of media used by the majority of the American population. However, the academic research field surrounding this genre does not accurately reflect the pervasive influence of video games. The field of library and information sciences helps provide the necessary foundational support for this media.

This book brings together video gaming culture and its unique forms of communication with information behaviour research. By detailing the nuances of video games and their influence, this reference book reveals communication patterns within society and provides comprehensive background and analysis for libraries, librarians, and information professionals.

NEWS

- One of the hot topics in science and academic publishing at the moment is peer review, and much work is going into research integrity and promoting good practice from all involved with research. In response, the launch of the new journal Research Integrity and Peer Review was announced. It will act as an academic forum where these discussions can take place.

  The journal will be headed up by Elizabeth Wager (publishing consultant and University of Split School of Medicine) and Iveta Simera (UK EQUATOR Centre and University of Oxford), alongside BioMed Central's Medical and Biology Editors: Stephanie Harriman and Maria Kowalczuk.

  Research Integrity and Peer Review will cover topics that include peer review, study reporting, and research and publication ethics. It will be launched at the world conference of "Fourth World Conference on Research Integrity", which will be held in Rio de Janeiro from May 31 to June 3, 2015.

- Apple just announced plans to launch a new open-source medical research data-sharing platform called ResearchKit (http://www.nature.com/news/smartphones-set-to-boost-large-scale-health-studies-1.17083). It will be available to researchers conducting large-scale medical studies, and iPhone apps will allow users to share their health data with those scientists. In theory, this makes it much easier to recruit and track study participants. Apple will not have access to user data, as it might raise ethical quandaries for researchers using the platform, and anonymization will be guaranteed.

- Wiley Online Library Bookstore is proud to announce the launch of the Wiley Online Library Bookstore, exclusively for the use of Institutional Account Administrators. The Bookstore (https://wolbookstore.wiley.com/CGI-BIN/lansaweb?procfun+bookseller+bksfn07+funcparms+WOLBKS(A0010):Y) caters to orders for online books, online reference works and journal backfiles via perpetual access purchase only. Designed to handle orders that your institution needs quickly - the new online bookstore can handle your institution's needs simply and efficiently. If you will be placing an order greater than a $10,000 value, please contact your account manager to discuss special pricing.

FORTHCOMING EVENTS

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WORKSHOPS (in association with the 12th annual conference of HTAi, Oslo, Norway: Saturday, June 13, 2015 (one-day)
Introduction to information retrieval for health technology assessment
Organized by the HTAi Interest Sub-Group on Information Resources (IRG)
For further information: http://www.htai.org/interest-sub-groups/information-resources.html

Sunday, June 14, 2015 (one-day)
Advanced information retrieval for HTA: qualitative research, medical devices & text analysis tools
Organized by the HTAi Interest Sub-Group on Information Resources (IRG)
For further information: http://www.htai.org/interest-sub-groups/information-resources.html

CONFERENCES

May 31-June 3, 2015, Windsor Barra Hotel, Rio de Janeiro, Brazil.
Fourth World Conference on Research Integrity
For further information: http://www.wcri2015.org

June 10-12, 2015, EAHIL 2015 Workshop, in collaboration with ICAHIS and ICLC, Edinburgh, UK.
For further information: https://eahil2015.wordpress.com/

June 21-25, 2015, University of Tennessee Conference Center. Knoxville, Tennessee, USA.
Joint Conference on Digital Libraries 2015. Large, Dynamic and Ubiquitous – The Era of the Digital Library.
For further information: http://www.jcdl2015.org/

August 15-21, 2015, Cape Town, South Africa
81st World Library and Information Congress: IFLA General Conference and Assembly
For further information: http://conference.ifla.org/ifla81

October 19-21, 2015, Olympia Conference Centre, London, UK
Dynamic disruption: transforming the library. Internet Librarian International 2015.
For further information: http://www.internet-librarian.com/2015/

November 23-25, 2015, Wilhelmsburg, Hamburg, Germany
Semantic Web in Libraries 2015
For further information: http://swib.org/swib14/