
Alerta de artículos de revista de Información y Documentación

Abrizah, A., M. Hilmi, et al. "Resource-sharing through an inter-institutional repository: Motivations and resistance of library and information science scholars." *The Electronic Library* vol. 33, n. 4 (2015). pp. 730-748. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-02-2014-0040>

Purpose – The purpose of this paper is to be concerned with the motivations and resistance among an institutional repository (IR) stakeholder – the Library and Information Science (LIS) academicians – with respect to Green Road open access publishing in an inter-institutional repository. **Design/methodology/approach** – The answers were identified from 47 LIS faculty from three library schools in Malaysia who reported awareness of what an IR is and having had experience in contributing resources to digital repositories. Data were collected using survey and interviews. **Findings** – The results highlighted the LIS faculty on their motivation to share their intellectual profile, research and teaching resources in an inter-institutional repositories and why the reluctance in contributing. The study reveals that the major motivation to share resources for those practicing self-archiving is related to performance expectancy, social influence, visible and authoritative advantage, career benefit and quality work. The major resistance to share scholarly research output through self-archiving in institutional repositories for those practicing self-archiving is concern on plagiarism, time and effort, technical infrastructure, lack of self-efficacy and insularity. **Practical implications** – Knowing what conditions predict motivation and resistance to contribute to IRs would allow IR administrators to ensure greater and more effective participation in resource-sharing among LIS academic community. If this resistance is addressed aptly, IRs can be of real benefit to their teaching, scholarship, collaborations, and publishing and to the community that they serve. **Originality/value** – The first study that has explored the ways LIS academics respond to a situation where knowledge

sharing in academe has now been made mandatory through an IR and what makes them resist to do so.

Adigwe, I. and J. Oriola **"Towards an understanding of job satisfaction as it correlates with organizational change among personnel in computer-based special libraries in Southwest Nigeria."** *The Electronic Library* vol. 33, n. 4 (2015). pp. 773-794. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-01-2014-0018>

Purpose – This paper aims to understand job satisfaction as correlate with organizational change among personnel in computerized-based special libraries in Southwest, Nigeria. Design/methodology/approach – The study used a survey approach in collecting data. The population of the study comprised all intermediate and senior personnel of the special libraries in Southwest, Nigeria involved in the study on grade levels 06 to 17. Based on the 180 response sample drawn, 148 responses were received from the survey. Findings – The degree and level of satisfaction derived from one's job is sine qua non to the level of productivity obtained in due cause. Job satisfaction varies from individual to individual and from place to place. Although, organizational change is the basis for spontaneous increase of job dissatisfaction. Findings of the study revealed that organizational change is seen as a precursor to influencing job satisfaction of employees but the level of job satisfaction of employees depend on the impact of organizational change. Research limitations/implications – It should be noted that a number of limitations exist relative to this research, the review of which should both place the research findings discussed, in an appropriate context and thereby suggest direction for future research. This study focused on employees attitudes in special libraries in six states of the federation at one time. Considering the fact that a very wide and varying cultural environmental differences which without doubt affected personnel dispositions in many different ways. Originality/value – This paper differs from the previous literature in presenting statistical evidence to confirm the relationships between job satisfaction and organizational change and a range of potential outcomes.

Agyemang, F. G., H. Boateng, et al. **"Dialogic communication on universities in Ghana libraries' websites."** *The Electronic Library* vol. 33, n. 4 (2015). pp. 684-697. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-02-2014-0041>

Purpose – This study aims to ascertain the contents of universities in Ghana libraries' websites and find the dialogic potential of the websites. Design/methodology/approach – A qualitative content analysis technique was used. The sample includes the libraries' websites of universities in Ghana that have received presidential charter. A checklist was developed to assess the content of the websites. In assessing the dialogic potential of the websites, Kent and Taylors' framework was used. Findings – Findings from the study show that Ghanaian universities libraries' websites are providing only static information about libraries and their services. The libraries' websites are deficient in providing vital information on newspapers, print journals, frequently asked questions and date of post. Again, findings of the study indicate that universities in Ghana libraries' websites have poor dialogic features. Originality/value – There is no study investigating the dialogic potential of universities in Ghana libraries' websites.

Aharony, N. **"An exploratory study on factors affecting the adoption of cloud computing by information professionals."** *The Electronic Library* vol. 33, n. 2 (2015). pp. 308-323. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-09-2013-0163>

Purpose – The purpose of this study explores what factors may influence information professionals to adopt new technologies, such as cloud computing in their organizations. The objectives of this study are as follows: to what extent does the technology acceptance model (TAM) explain information professionals intentions

towards cloud computing, and to what extent do personal characteristics, such as cognitive appraisal and openness to experience, explain information professionals intentions to use cloud computing. Design/methodology/approach – The research was conducted in Israel during the second semester of the 2013 academic year and encompassed two groups of information professionals: librarians and information specialists. Researchers used seven questionnaires to gather the following data: personal details, computer competence, attitudes to cloud computing, behavioural intention, openness to experience, cognitive appraisal and self-efficacy. Findings – The current study found that the behavioural intention to use cloud computing was impacted by several of the TAM variables, personal characteristics and computer competence. Originality/value – The study expands the scope of research about the TAM by applying it to information professionals and cloud computing and highlights the importance of individual traits, such as cognitive appraisal, personal innovativeness, openness to experience and computer competence when considering technology acceptance. Further, the current study proposes that if directors of information organizations assume that novel technologies may improve their organizations' functioning, they should be familiar with both the TAM and the issue of individual differences. These factors may help them choose the most appropriate workers.

Aibar, E., J. Lladós-Masllorens, et al. **"Wikipedia at university: what faculty think and do about it."** *The Electronic Library* vol. 33, n. 4 (2015). pp. 668-683. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-12-2013-0217>

Purpose – The purpose of this paper is to investigate university faculty perceptions and practices of using Wikipedia as a teaching resource. Design/methodology/approach – This study is based on a large survey to all faculty members in two large public universities. A total of 913 valid responses were collected through an online questionnaire with 9 control variables and 41 Likert-scaled questions. Findings – The results do not support an overwhelming sceptical attitude among faculty towards Wikipedia. The overall quality of Wikipedia articles is highly valued and most faculty are regular users, just as students are. Though most faculty show a positive view on the teaching usefulness of Wikipedia, few of them actually use it for teaching purposes. A certain conflict has been detected between standard academic procedures of knowledge building and the open collaborative model on which Wikipedia rests. In the end, two important factors play a role in shaping faculty views: their colleagues' perceived opinions and practices, and academic disciplines. Research limitations/implications – The survey has only been conducted in two universities. More institutions are needed to broaden the scope. Originality/value – The authors have gathered a greater number of answers than those collected in previous studies. The questionnaire is also very extensive. The survey has been addressed to all faculty members at one online university and at one standard brick-and-mortar university.

Ajuwon, G. A. and S. O. Popoola **"Influence of motivational factors on utilisation of Internet health information resources by resident doctors in Nigeria."** *The Electronic Library* vol. 33, n. 1 (2015). pp. 103-119. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-12-2012-0159>

Purpose – This study aims to determine the influence of motivational factors: perceived ease of use (PEU), perceived enjoyment (PEJ) and perceived usefulness (PU) on utilisation of Internet health information resources among resident doctors in tertiary health-care institutions in Nigeria. The Internet has become a major source of health information for practitioners and the general public. Despite the availability of health information resources on the Internet, some resources are underutilised. There are numerous studies on Internet use among health-care workers; however, there is a dearth of information on motivational factors influencing utilisation of Internet health information resources among resident doctors in Nigeria.

Design/methodology/approach – A descriptive survey design was used. Total enumeration technique was adopted to cover 1,280 resident doctors in 13 tertiary

health-care institutions in southwestern Nigeria. A validated, self-administered questionnaire was used for data collection. The questionnaire has four sections covering the demographic profile of the respondents, PEU, PEJ and PU. Four hypotheses were tested at the $p < 0.01$ level of significance. Data were analyzed using descriptive statistics, Pearson product-moment correlation and multiple regression analysis. Findings – There were more males (69.0 per cent) than females (31 per cent); respondents mean age was 34 years. The result revealed that PEU($r = 0.181$, $p < 0.01$), PEJ($r = 0.166$, $p < 0.01$) and PU($r = 0.121$, $p < 0.01$) have significant relationship with utilisation of Internet health information resources by the respondents. Also, PEU, PEJ and PU collectively ($F = 15.366$, $df = 3$; 897 , $p < 0.01$) have significant influence on utilisation of Internet health information resources of the respondents. Individually, PEU ($B = 0.864$, $df = 897$, $t = 3.90$, $p < 0.01$) and PEJ ($B = 0.349$, $df = 897$, $t = 3.060$, $p [t] < 0.01$) were found to have significant influence on utilisation while PU ($B = 0.232$, $df = 897$, $t = 1.328$, $p > 0.01$) does not significantly influence the utilisation of Internet health information resource of the respondents. Research limitations/implications – One major implication of this study is that system designers and web content developers should design programs and websites that are compatible with the user's abilities. Medical librarians have a role to play in providing quality health content that is easy to navigate and pleasurable to use. Both the institutions and the government have a role to play in providing information and communication technology facilities to enable doctors access relevant health information resources easily. Practical implications – Introduction of information literacy training in the residency programme or inclusion as a component of the continuing professional development will enable resident doctors to know relevant online searching tools and search techniques for accessing health information resources which will be useful to their work. This will in turn increase their PU of Internet resources. Health sciences librarians (medical librarians) in the various institutions/centres have a role to play in training resident doctors on how to access, retrieve and evaluate online health information. Librarians should also train resident doctors on how to search evidence-based Medicine resources such as the Cochrane Library and PubMed Clinical Queries and Critical Appraisal of the medical literature to make informed decision in the management of their patients and for research purposes. They should be trained on how to organise bibliographic references using reference manager tools such as Endnote, Zotero or Mendeley. Social implications – The social implication of this findings is that systems that are easy to use should be designed, so that doctors will be able to access relevant information for research and patient care for better health outcomes. The easier and enjoyable the system is to use, the more resident doctors will access and use health information resources to improve their service and save more lives. Originality/value – This study examined three motivational factors (PEU, PEJ and PU) that influence the utilisation of Internet health information resources by resident doctors in tertiary health-care institutions in Nigeria. The result revealed that collectively PEU, PEJ and PU have significant relationship with the utilisation of Internet health information resources, but PEU and PEJ are the main drivers of use of Internet health information resources among the resident doctors studied. This study adds to the literature of motivational factors influencing utilisation of Internet health information resources by resident doctors in southwestern Nigeria. This paper is original because, to the best of our knowledge, there is no other study on motivational factors influencing Internet use among resident doctors in Nigeria.

Al-Aufi, A. and C. Fulton "Impact of social networking tools on scholarly communication: a cross-institutional study." *The Electronic Library* vol. 33, n. 2 (2015). pp. 224-241. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-05-2013-0093>

Purpose – This paper aims to investigate the extent to which social networking tools had an impact on academics' patterns of informal scholarly communication in humanities and social science disciplines. Social networking tools, reinforced by proliferation and advances in portable computing and wireless technologies, have reshaped how information is produced, communicated and consumed. Design/methodology/approach – A cross-institutional quantitative study utilized an online questionnaire survey sent to 382 academics affiliated with humanities and social

science disciplines in two different academic institutions: one that belongs to a Western tradition of scholarly communication in Ireland, and the other to a developing country in Oman. Descriptive interpretation of data compared findings from both universities. Frequencies, percentages and means were displayed in tables to enhance the meaning of collected data. Inferential analysis was also conducted to determine statistical significance. Findings – Overall findings indicate progressive use of social networking tools for informal scholarly communication. There is perceived usefulness on the impact of social networking tools on patterns of informal scholarly communication. However, nearly one-third of the respondents have never used social networking tools for informal scholarly communication. Institution-based data comparison revealed no significant differences on data except for few activities of informal scholarly communication. Research limitations/implications – Given that the number of study subjects was eventually small (total = 382) and that academics by their very nature are disinclined to respond to online surveys, results of the study may suggest non-response errors, and these may impact negatively on the acceptability of inferences and statistical conclusions. The results of the study are, therefore, unlikely to be useful for generalization, but they remain suggestive of a growing tendency among humanities and social sciences' academics to use social networking tools for informal scholarly communication. Originality/value – Empirical findings provide a broad understanding about the potential of social networking tools on informal scholarly communication in areas of humanities and social sciences disciplines. Multi-disciplinary investigation and qualitative studies may further deepen our understanding of the impact of social networking tools on patterns of scholarly communication.

Al-Baridi, S. A. **"Survey of selected US academic library consortia: a descriptive study."** *The Electronic Library* vol. 34, n. 1 (2016). pp. 24-41. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-09-2014-0153>

Purpose – The purpose of this paper is to develop and present a working model for consortia of academic libraries in Saudi Arabia. It is based on the American model of consortia operating at all levels, including local, state and region. The American consortia are highly developed, functional and have a large membership of small-, medium- and large-size libraries and are good models to be followed by other countries. Design/methodology/approach – An email survey questionnaire (with seven closed-ended and four open-ended questions) was distributed to ten selected US academic library consortia to obtain relevant information on various operational facets and policies they have adopted. Findings – The survey results will provide useful information to help develop a workable consortia model for Saudi Arabia. If implemented successfully, the Saudi model is expected to motivate other library groups at provincial and national levels in Saudi Arabia and regional level in the Arabian Gulf Region. Research limitations/implications – The survey is aimed at gathering relevant information about the experiences of ten selected US academic libraries as members of various consortia. Originality/value – While the project will start with academic libraries only, it may open membership for other libraries not only in Saudi Arabia but also for libraries of the Gulf Cooperation Council countries. The other scenario could be that instead of joining Saudi consortia, the libraries may decide to develop their own consortia.

Albertson, D. and M. P. Johnston **"Individual differences of science teachers and interactive video retrieval."** *The Electronic Library* vol. 34, n. 1 (2016). pp. 42-57. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-11-2014-0198>

Purpose – This article aims to examine how the interactions and perceptions of users from a defined domain, i.e. science education, vary across different groups of teachers while retrieving video. Given the prevalence of digital resources in use in education today, it is critical to assess users' perspectives and experiences for retrieving information across different contexts and individual user groups. Design/methodology/approach – Interactive search experiments with 28 users were performed. A pre-experiment questionnaire collected the demographic information used

to form groups for comparison in the present study. Users attempted six experimenter-developed topics using a prototype video retrieval system; experimental measures were recorded, including all actions, completion rates, errors and durations. Users rated their experiences and levels of satisfaction with different aspect of the system after each search topic. Data analyses included mean comparisons across the different groups. Findings – A variety of influences emerged from the results, including significant variations among teachers' interactions, levels of satisfaction and expectations across different groups of users. Research limitations/implications – Understanding the interactions and perceptions when retrieving digital video provides insights for information professionals on how to better support the needs of different users. If systems are not taking into account users and context, there can be a mismatch between the needs of users and interactive systems, which can lead to low perceptions and further underuse of digital resources. Originality/value – Although similar influences on digital libraries have been analysed in other contexts, they have not been directly assessed, as they specifically pertain to experiences with and perceptions of video.

Al-Daihani, S. M. and S. A. AlAwadhi **"Exploring academic libraries' use of Twitter: a content analysis."** *The Electronic Library* vol. 33, n. 6 (2015). pp. 1002-1015. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-05-2014-0084>

Purpose – This research aims to analyze academic libraries' Twitter content and present a categorization framework for the study of their tweets.

Design/methodology/approach – The research adopted a statistical descriptive analysis in addition to a content analysis of the tweets. Consequently, many categories and subcategories were created to classify the tweets according to different aspects. A total of 17 academic library accounts were examined. Findings – The findings show that academic libraries used Twitter as a multifaceted tool. "News and announcements" received the highest score as the type of information most often posted on Twitter by libraries, followed by "library collections" and "library services". The subcategories that received the highest scores were "library marketing and news", "answers and referrals" and "books". Academic libraries showed a penchant for posting links more often than other content. Other results show different patterns of communication and interaction between libraries and their Twitter followers. Practical implications – The categorization of tweets provides a framework for understanding how academic libraries use Twitter. Originality/value – As little research can be found in the library and information science literature on Twitter content analysis, this research is expected to contribute significantly. It will also support academic libraries and librarians in using Twitter more efficiently and effectively.

Alipour-Hafezi, M. and H. A. Nick **"Evaluation of digital libraries of Iranian research institutions based on the DigiQUAL protocol."** *The Electronic Library* vol. 33, n. 4 (2015). pp. 824-841. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-07-2013-0131>

Purpose – The purpose of this study is to identify the situation of evaluating Iranian digital libraries using DigiQUAL protocol. Design/methodology/approach – Evaluative survey research method is used in this study to assess digital libraries. In this way, digital libraries of Iranian research institutes constitute the study population. DigiQUAL protocol actually was used to evaluate eight Iranian digital libraries. Systematic observation and interview based on researcher-made checklist was used for data collection. In fact, checklist was constructed based on DigiQual protocol. Findings – The results showed that Digital Library of Isfahan Science and Technology Town has the best performance and Noor digital library has the lowest operation in studied digital libraries. The overall score of all studied digital libraries was under 60 (out of 100) which shows the average performance of the digital libraries. Originality/value – This study emphasizes on evaluating active digital libraries in Iran by DigiQUAL protocol. Because digital libraries are new in Iran and their progress need to evaluate their activity, this research was done to demonstrate their situation.

Al-Kharousi, R., N. H. Jabur, et al. **"Factors affecting the implementation of Web 2.0 applications in Omani academic libraries."** *The Electronic Library* vol. 34, n. 2 (2016). pp. 332-351. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-06-2014-0101>

Purpose – The purpose of this paper is to investigate the different factors that affect using Web 2.0 applications in Omani academic libraries (OALs). Design/methodology/approach – In all, 29 interviews with directors and library staff of five OALs were conducted for the purpose of collecting data for the current research. Findings – The results indicated that there are nine internal factors and four external factors that affect using Web 2.0 applications in OALs. Internal factors include the low motivation of directors and library staff regarding using of Web 2.0 applications, lack of training and constant changes in the management structure. Meanwhile, the external factors are related to lack of policy and regulations and weakness and low speed of the internet. Practical implications – Most academic libraries in Oman have not yet adopted Web 2.0 applications to enhance their services. Therefore, this study intends to open insight into the state of Web 2.0 adoption in academic libraries and will help library managers to understand factors facing the use of Web 2.0 applications in their libraries, and this could signal a basis for policy shift in the internet infrastructure especially in the institutions of the higher education. Originality/value – This research is the first study in the field of Web 2.0 applications in OALs that investigates the factors affecting the use of Web 2.0 applications in academic libraries in general and in OALs specifically.

Alqudsi, T. M. and R. M. Alkhaledi **"Website usability: the case of Kuwaiti middle school students."** *The Electronic Library* vol. 33, n. 3 (2015). pp. 557-572. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-12-2013-0216>

Purpose – The purpose of this paper is to add to the knowledge about how to design websites that are stress-free, easy to navigate and relevant to children's learning needs. Design/methodology/approach – This paper involves an observational study that reports the results of website usability among sixth-grade students in a private foreign school in Kuwait. The observation pertained to search performance, usability and navigation to find the needed information using the WebPath Express database. Findings – Most of the children navigated and searched the system without much prompting; they found the search box easily, as it was positioned at the top-centre of the page, and without keywords. Of the eight students, none used the narrow-down search option; they commonly performed searches using phrases, and consistency and simplicity aided the search process. Some gender differences were found. The boys got side-tracked easily and took a longer time to find the information they sought than the girls. User behaviour, generally, was influenced by the interface design. Research limitations/implications – Research about usability with different grade levels, with different languages and between genders needs to be conducted to provide more definitive conclusions. Sample size in observations can bring to light details that large samples cannot. The goal in observation is not statistical significance but small things that observations can bring to light. Practical implications – Web designers need to take into consideration the research results in the areas of user interaction with computers and software. In designing educational tools for the young, several elements that research in general, including this one, emphasizes have to do with the location of search boxes, navigation interface and design elements, all of which can aid the learning process while providing a rewarding and fruitful educational experience. Originality/value – These findings shed light on implications for cooperation between librarians and teachers and on design elements for sites tailored to school children.

An, X., W. Bai, et al. **"A comprehensive concept map for adequate protection and effective management of personal information in networked Chinese services."** *The Electronic Library* vol. 33, n. 6 (2015). pp. 1047-1064. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-04-2014-0059>

Purpose – This paper aims to develop a comprehensive concept map to guide adequate protection and effective management of personal information in the provision of networked services in China through comprehensively considering the multi-disciplinary perspective of personal information protection and management with respect to their multi-dimensional applications, multi-directional controls and multi-contextual analysis in today's networked environments. There are different perspectives on what personal information protection and management is about, why and how personal information should be protected and managed in the literature. Little, however, is known about the relationships between these multiple perspectives and their implications to personal information protection and management in the real-world practice. Design/methodology/approach – A multi-methods approach is adopted in the study, including a comprehensive review of the related literature, a content analysis of the relevant laws, polices, standards, a multi-cases study of the relevant network services providers and an online survey of the Chinese citizens who are the end-users of the networked services to adequately achieve the objective of this study. The concept map building technique is used as a tool for conducting the meta-synthesis of the findings from multiple data resources in the development of a comprehensive concept map for personal information protection and management. Findings – This study rationalizes the importance of the identification of personal information for adequate protection and effective management. It identifies five perspectives on personal information protection and management, namely, law, economics, sociology, information technology and information resources management for their applications at the organizational level. Five types of personal information are identified in the study for protection and management, namely, identifiable personal information, personal identity information, personal moral right information, personal civil right and interest information and personal business and transaction information. An integrated approach consisting of risk control, security control and users control is proposed for personal information protection and management in the provision of networked services in China. The study shows that not enough attention has been paid to the personal information protection and management from multi-disciplinary perspectives with respect to their multi-dimensional applications, multi-directional controls and multi-contextual analysis in the literature. There is a lack of understanding of what, why and how personal information is protected and managed in real-world practices in China. Practical implications – The investigation of the issues of personal information protection and management with respect to the relevant laws, polices, standards, networked services and organizations can lead to a better understanding of what, why and how personal information is protected and managed in real-world practices in China. The development of a comprehensive concept map for personal information protection and management can be used as an effective guideline for the formulation and implementation of appropriate strategies and policies in individual organizations for providing their stakeholders with quality-networked services in today's highly connected network environment in China. Originality/value – The paper is the first step of a comprehensive study on the protection and management of personal information for the provision of networked services in China. It provides a solid foundation for further research with respect to the personal information protection and management. It is the first of this kind of studies to answer the questions of what types of personal information needed to be protected, why and how they should be protected in conformity with laws, regulations, polices, standards and the needs of networked services and business activities of organizations.

Arshad, A. and K. Ameen "**Usage patterns of Punjab University Library website: a transactional log analysis study.**" *The Electronic Library* vol. 33, n. 1 (2015). pp. 65-74. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-12-2012-0161>

Purpose – This paper aims to assess the usage patterns of a university library website to find out user's behaviour of monthly use, its top most used resources and services and search phrases used to reach the library website.

Design/methodology/approach – Transactional log analysis (TLA) – an unobtrusive research method – was used to identify and analyse data of website-using patterns. The log data of website use from January 2011 to March 2011 were analysed for this

study. Findings – The findings of this study revealed that the university library website was heavily used on campus by users; however, it was used by a significant number of clients residing off-campus. Free scholarly journals, resources downloaded, e-journals, e-books and donated personal collections were among the top most used resources and services. However, free scholarly journals were used more than subscribed e-journals accessible on-campus only. Originality/value – This study first used the TLA method to trace user behaviour of website use in a local scenario. Assessing the usage of e-resources is imperative to determine the effectiveness of the library website in providing these services to its on-campus and distant users. The findings of this study are valuable for librarians and webmasters of the library website to redesign and reorient their services.

Asogwa, B. E., C. I. Ugwu, et al. **"Evaluation of electronic service infrastructures and quality of e-services in Nigerian academic libraries."** *The Electronic Library* vol. 33, n. 6 (2015). pp. 1133-1149. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-04-2014-0071>

Purpose – The purpose of this paper is to evaluate the quality of online services in academic libraries in Nigeria. It seeks to assess the functionality of electronic infrastructures, to expose areas where the service needs of users are not adequately provided and to recommend solutions. Design/methodology/approach – The sample population was 210 staff and students who used electronic resources in Nigerian university libraries during the 2012-2013 academic session. A questionnaire was the main instrument for data collection. Modified WebQual four performance indicators were designed and used to measure: library equipment, library website, online public access catalogue (OPAC) and e-user education in the university libraries. The five-point service performance scale that ranged from very poor performance to excellent was used in measuring the views of the respondents. Findings – None of the indicators was rated excellent; six were rated good; nine were average; two and five indicators scored poor and very poor, respectively. Poor funding, intermittent power supply and weak telecommunication infrastructures were among the major impediments to online services in Nigerian universities. Through adequate funding and prudent management of library funds, online services in Nigerian university libraries could meet global standards. Practical implications – Results from this paper could guide library management on several concrete remedial actions to sustain e-service performance that could meet the missions and visions of contemporary academic libraries. Originality/value – This paper was the first to apply WebQual model in the evaluation of electronic performance quality of academic libraries in Nigeria.

Awwad, M. S. and S. M. Al-Majali **"Electronic library services acceptance and use: An empirical validation of unified theory of acceptance and use of technology."** *The Electronic Library* vol. 33, n. 6 (2015). pp. 1100-1120. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-03-2014-0057>

Purpose – The purpose of this study is to apply the unified theory of acceptance and use of technology (UTAUT) model in the context of electronic library services in public Jordanian universities. This study investigated the determinants of use behaviour (UB) regarding electronic library services, and the moderating effects of age, gender, experience, education level and academic discipline on the relationships between the determinants and behavioural intention (BI). Design/methodology/approach – Quantitative data were collected, through a questionnaire instrument from a sample of 575 students. Statistical analysis of the study's model was conducted using the structural equation modelling technique. Findings – Empirical examination of the model's hypotheses indicated that students' "intention to use" electronic library services is dependent on performance expectancy (PE), effort expectancy (EE) and social influence (SI), while students' "use behaviour" is dependent on facilitating conditions (FCs) and intention to use. The effect of PE on BI was significant for younger, undergraduate and social sciences discipline students, while EE was significant for

older and applied discipline students. Practical implications – Library directors should design promotional campaigns directed to younger, undergraduate and social academic discipline students to promote the efficiency of electronic libraries. Faculty members can be targeted with these promotional campaigns to exert influence on the desired effect on students' intentions toward using the electronic library. Easier-to-use technology and training courses for older and applied academic discipline students are necessary. It is important to ensure that the physical facilities and technical support provide students with needed assistance. Online help should be available. Originality/value – This study empirically validated the UTAUT model in the context of electronic library services within an Arab culture. The study also investigated the moderating effects of students' characteristics, including age, gender and experience, in addition to education level and academic discipline, as new affects.

Ayoku, O. A. and V. N. Okafor **"ICT skills acquisition and competencies of librarians: Implications for digital and electronic environment in Nigerian universities libraries."** *The Electronic Library* vol. 33, n. 3 (2015). pp. 502-523. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-08-2013-0155>

Purpose – The purpose of this paper is an audit of information technology (IT) skills set of librarians in some Nigerian university libraries with the aim of examining their relevance and adequacy to the digital environment. Nigerian universities as knowledge creators and their libraries as gatekeepers of knowledge are rapidly witnessing the introduction of various IT. One of the challenges facing IT/digital library projects in Nigeria has been the readiness of the university libraries in terms of knowledge and skills to implement the digital and electronic library services. Design/methodology/approach – This paper used the survey approach. The sampling technique for the selection of the universities was stratified and for the librarians (respondents), census. The sampling frame was the approved list of universities released by the National Universities Commission as of the time of this study. The data were analysed using the Statistical Package for the Social Sciences. Findings – The findings of this paper revealed that many of the respondents do have knowledge and skills of email use and word processing tasks but lack knowledge of search engines and directories other than Google and Yahoo, respectively. Many of them do not know how to evaluate and catalogue e-resources; have no knowledge of subject gateways, specialised databases and some open-access library databases; have no knowledge of database management; are not skilled in Web design; and are equally not familiar with Web design applications. Originality/value – The study recommends management support for IT skills training and/or continuous professional development to improve the librarians. Librarians are also challenged and encouraged to explore the range of training resources available over the Internet for self-development.

Boberić-Krstićev, D. and D. Tešendić **"Mixed approach in creating a university union catalogue."** *The Electronic Library* vol. 33, n. 6 (2015). pp. 970-989. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-02-2014-0026>

Purpose – The purpose of this paper is to present the software architecture of the university's union catalogue in Novi Sad, Serbia. The university's union catalogue would comprise the collections of 14 academic libraries. Design/methodology/approach – The basis of this paper is a case study of developing a software solution for the union catalogue of the University of Novi Sad in Serbia. The solution principles of object-oriented modelling are applied to describe the software architecture. Specifically, the unified modeling language (UML) component and sequence diagrams are used. The database model is described by using a physical data model. Findings – Through the research of related papers and, taking into consideration the problem of creating a university union catalogue, it is concluded that the best approach is to combine the idea of a virtual and a physical union catalogue. Records are stored in one physical union catalogue, while the holdings data are stored in the local library management systems (LMSs) organized in the form of virtual union catalogues. Because academic libraries

often use LMSs from different vendors, interoperable communication between those LMSs and the union catalogue is provided through the usage of standard library protocols for information retrieval (Search and Retrieve URL [SRU], SRU Record Update and NISO Circulation Interchange Protocol [NCIP]). Research limitations/implications – The development of a union catalogue for the University of Novi Sad is in its test phase, and, at this moment, only a software solution supporting the functionalities of a union catalogue has been created. Practical implications – By introducing a university union catalogue, students would be able to search the collections of all the university libraries by using a single portal. Their results would indicate whether a book is available and from which library it is available to borrow. Originality/value – Originality of this software architecture lies in the usage of standard library protocols. The described architecture enables the addition of new members to the university union catalogue, regardless of which LMS the library uses.

Chang, S.-S., S.-J. Lou, et al. **"Exploration of usage behavioral model construction for university library electronic resources."** *The Electronic Library* vol. 33, n. 2 (2015). pp. 292-307. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-10-2013-0195>

Purpose – The primary purpose of this paper is to integrate unified theory of acceptance and use of technology (UTAUT) and website service quality, compiling it into a usage behavioural model for university library electronic resources. Design/methodology/approach – Using structural equation model technology to verify model fit. Questionnaire surveys are the main research methodology in this study, in which fourth-year university students and second-year Master's students in six Taiwan public and private universities are the research population. This study uses a cluster sampling, releasing 1,206 questionnaires, and retrieves 1,089 valid questionnaires, for a valid retrieval rate of 90.3 per cent. Findings – The conclusions are: this study has good fit in the model, and is applicable for the UTAUT; the pairs of variables are correlated; public or private and school type have partial significant mediating effect; website service quality has a significant positive influence on behavioural intention; performance expectancy and social influence both positively affect behavioural intention; facilitating conditions positively affect use behaviour. Originality/value – Empirical research results and suggestions are provided for the relevant departments for practice and future academic research.

Chao, P.-Y. and C.-C. Lin **"Young children's storybook searching with a visualized search interface."** *The Electronic Library* vol. 33, n. 4 (2015). pp. 610-624. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-12-2013-0219>

Purpose – The purpose of this paper is to explore how young children interact with a visualized search interface to search for storybooks by assembling the provided visual searching items and to explore the difference in visual search behaviours and strategies exhibited by pre-schoolers and second-graders. Design/methodology/approach – The visualized search interface was used to help young children search for storybooks by dragging-and-dropping story characters, scene objects and colour icons to perform search queries. Twenty pre-schoolers and 20 second-graders were asked to finish a search task through the visualized search interface. Their activities and successes in performing visual searches were logged for later analysis. Furthermore, in-depth interviews were also conducted to research their cognitive strategies exhibited while formulating visual search queries. Findings – Young children with different grades adopted different cognitive strategies to perform visual searching. In contrast to the pre-schoolers who performed visual searching by personal preference, the second-graders could exercise visual searching accompanied with relatively high-order thinking. Young children may also place different foci on the storybook structure to deal with conditional storybook queries. The pre-schoolers tended to address the characters in the story, whereas the second-graders paid much attention to the aspects of scene and colour. Originality/value – This paper describes a new visual search approach allowing young children to search for storybooks by

describing an intended storybook in terms of its characters, scenes or the background colours, which provides valuable indicators to inform researchers of how pre-schoolers and second-graders formulate concepts to search for storybooks.

Chaudhry, A. S. and S. Al-Mahmud **"Information literacy at work: A study on information management behaviour of Kuwaiti engineers."** *The Electronic Library* vol. 33, n. 4 (2015). pp. 760-772. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-04-2014-0063>

Purpose – The purpose of this paper was to investigate the information behaviour of Kuwaiti engineers with a focus on information sources and finding information from these sources, management of information found and re-finding of information from personal collections. Design/methodology/approach – Survey method of research was used to conduct the study. Data were collected using online questionnaire and interviews with a selected number of participants. Findings – Results indicated that engineers collected and received information from a variety of sources. They saved selected information for future use in folders and structured them by using work-related categories. Use of information management tools was not common. A majority of participants expressed the need for training courses in information literacy. They felt that lack of institutional support to facilitate access to information was considered a major difficulty in information seeking. Originality/value – No similar study could be found in the literature, as earlier studies either investigated personal information management practices or information seeking behaviour. This study looked at information literacy in a wider context.

Chen, J.-F., J.-F. Chang, et al. **"Integrating ISSM into TAM to enhance digital library services: A case study of the Taiwan Digital Meta-Library."** *The Electronic Library* vol. 34, n. 1 (2016). pp. 58-73. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-01-2014-0016>

Purpose – This study aims to propose a new model by incorporating information system success model (ISSM) into technology acceptance model (TAM) with an “attitude toward using” as the connection variable. The new model is then adopted to analyse and investigate empirical data and develop relevant factors, which affect the personal usage behaviour and net benefits for National Central Library in Taiwan to enhance digital library services. The research results can benefit future establishment and design of library information system or improvement of website service procedures. Design/methodology/approach – This study selected National Central Library Taiwan Digital Meta-Library as the research theme, and used stratified convenience sampling to perform interviews in various colleges and universities in the southern Taiwan. A total of 264 valid questionnaires were returned, and this study used structural equation modelling (SEM) to perform analyses. Findings – The results reveal that attitude toward using is significantly and positively affected by perceived usefulness, perceived ease of use and user satisfaction. However, service quality of information system and personal net benefits do not have a significant and positive effect on attitude toward using, while they have an indirect and significant effect on attitude toward using through user satisfaction. Based on the results above, “user satisfaction” is the critical factor affecting the attitude toward using. Therefore, to strengthen users’ positive attitude toward using, the factor of user satisfaction is a key for enhancing digital library service. Originality/value – This study constructed the “New Technology Information Assessment Model” as the reference for improving practical assessment. Moreover, this study also proposed the suggestions concerning digital library information services.

Chen, L.-C., T.-J. Yu, et al. **"TMTpedia: a case of extended Wikipedia for the military-based application in Taiwan."** *The Electronic Library* vol. 33, n. 3 (2015). pp. 450-467. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-08-2013-0151>

Purpose – This paper aims to collect the terminologies from the Ministry of National Defense military dictionary and to design a military-based wiki system, TMTpedia, to serve as a collaborative and sharing platform for military personnel. Design/methodology/approach – The development of the system is based on a prototype design and case illustration. The framework of the Taiwan Military Terminology Wikipedia system (TMTpedia) consists of three major subsystems, namely, Military Terminology Dictionary Processing, Military Article Contents Extension and Military Article and Resource Recommendation. This paper applies the engines of MediaWiki to design the proposed TMTpedia, and embedded different functions into a variety of system modules are developed by using such tools as C#, Java and SQL Server. Findings – In this demonstration, the focus is on the topics of “Communications, Electronics and Information Operations” that are illustrative of cases that reveal the results of the TMTpedia system. Originality/value – The main contributions of this paper are to transform military terminologies from a traditional dictionary into Wiki-based platform that can provide a reference framework for knowledge collaboration, to extend the content on the TMTpedia system from an external knowledge encyclopedia to an extensible mechanism that can renew military concepts for the accuracy of knowledge sharing and transformation and to implement a recommendation model into the TMTpedia system that dynamically provides relevant military information from external resources to enhance the effectiveness of knowledge acquisition.

Chen, Y.-T. "**Applying the DEMATEL approach to identify the focus of library service quality: A case study of a Taiwanese academic library.**" *The Electronic Library* vol. 34, n. 2 (2016). pp. 315-331. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-08-2014-0134>

Purpose – This paper aims to apply the decision-making trial and evaluation laboratory (DEMATEL) to validate the service factors of an academic library. Design/methodology/approach – First, the service criteria were extracted from the SERVQUAL model and then their values were examined in the user's mind. Second, the DEMATEL was applied to estimate the importance of the criteria and identify the causal factors. Next, an empirical study was conducted to demonstrate and validate the proposed approach. Finally, this paper offers some practical suggestions for academic libraries based on the analysis. Findings – According to the analysis' results, “Empathy” is the causal factor in the cause–effect diagram; i.e. the library should pay more attentions to “Empathy” rather than “Reliability”, “Responsiveness” and “Assurance” factors. Originality/value – DEMATEL is a useful tool to identify the prominence and relationship of service factors; the evaluation is easy to apply and has not been used before in the discussion of library service. This paper provides an alternative for libraries to sort out the priorities of service improvement. The correspondence improvement can be addressed based on the causal analysis to make notable enhancement in service quality.

Chen, Z. S. C., S. J. H. Yang, et al. "**Constructing an e-portfolio-based integrated learning environment supported by library resource.**" *The Electronic Library* vol. 33, n. 2 (2015). pp. 273-291. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-07-2013-0118>

Purpose – The purpose of this study was to present a pilot electronic portfolio (e-portfolio)-integrated learning environment by integrating library resources into an e-portfolio system for its application, and to explore reader's satisfaction of the integrated system. Design/methodology/approach – This study develops a research model by modifying the information success model to explore reader satisfaction to the understanding of the adoption of integrated system. The sample consisted of 289 graduate and undergraduate students. In total, 189 were considered useful and used for analysis. A regression analysis was then conducted to identify key causal relationships. Findings – The findings show that reader-perceived benefits, information quality and system quality are critical factors for the reader's satisfaction. Overall, the model

explained 84 per cent of the variance in reader satisfaction. Thus, the results show that the proposed model does satisfactorily explain the reader's satisfaction of the integrated system. Originality/value – There is scant research available in the literature on user satisfaction of pilot e-portfolio-integrated learning environment from a reader perspective. The findings of this research provide some useful insights into a reader's satisfaction toward adoption of the integrated system. In addition, it will be valuable for better understanding of factors affecting the determinants of reader's satisfaction, which improve the reader's satisfaction of the integrated system and thereby boost realization of collaborative learning environment.

Clements, L. and C. L. Liew **"Talking about tags: An exploratory study of librarians' perception and use of social tagging in a public library."** *The Electronic Library* vol. 34, n. 2 (2016). pp. 289-301. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-12-2014-0216>

Purpose – While examining subject headings and tags is a popular research topic, most studies focus on comparing user-assigned tags and professional subject heading. Studies that compare Library of Congress Subject Headings to user-assigned tags, for instance, dominate the literature. However, little research has involved an examination on how and to what extent these features are actually used by library staff. This study adds to the body of knowledge. This study aims to focus on how librarians perceive and use tags. By focusing on people's perceptions rather than simply comparing social tags and formal subject headings, new insights can be collected. Design/methodology/approach – This research collects data through semi-structured interviews conducted with 12 library staff from various roles and locations throughout Auckland Libraries. Findings – The research findings show that while social tags have been adopted and used in their work by the majority of library staff interviewed, there remains resistance to using them. Some library staff preferred the traditional hierarchical subject headings found in the traditional catalogue. A general lack of awareness about tag functions and features is also evident among the staff interviewed. Originality/value – The research focus is unique because it examines this phenomenon in a public library setting rather than in academic libraries, an area that is rarely examined in the literature.

Cross, R. **"Implementing a resource list management system in an academic library."** *The Electronic Library* vol. 33, n. 2 (2015). pp. 210-223. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-05-2013-0088>

Purpose – The purpose of this paper is to review the key components of the introduction of a new resource list management system (RLMS) at Nottingham Trent University (NTU) using the Aspire application from Talis Education. It explains the key service goals; the implementation milestones; the main technical challenges which needed to be addressed; and the dynamic relationship between the rollout of the RLMS and existing selection, acquisition and resource delivery processes. Design/methodology/approach – This evidence in this paper is drawn from the experiences of the NTU RLMS project group, which involved colleagues from Libraries and Learning Resources, Information Systems and the Virtual Learning Environment (VLE) teams at the university. It draws on both qualitative evaluations and quantitative assessments of adoption and use by academics, students and library staff; and the internal mechanisms of project review. Findings – This paper concludes that the successful technical implementation of a cloud-based mission-critical service for academics and students depends on a successful collaboration between library, VLE and technical teams; and reaffirms that a hosted RLMS service still requires the deployment of local technical expertise. It is essential (although not always straightforward) to try to anticipate the impact that the introduction of a new RLMS will have on existing processes (inside the library and without). Ultimately, however, the successful implementation of an RLMS is dependent on securing its adoption by both academics and students; not least by ensuring that the application meets their needs.

Although it is not a technical prerequisite, the prospect of a successful implementation of an RLMS is greatly improved when working with the grain of a supportive institutional policy environment. Originality/value – Interest in “next-generation” resource list systems which can address the needs of students, academics and library services is likely to increase sharply in the next few years, as library services seek to align both resource spend and resource discovery more closely than ever with the student experience around “directed reading”. The experiences of an “early adopter” implementer of an RLMS highlight some of the key prerequisites and significant operational decisions, and provide a number of insights for those about to embark on a similar implementation process.

Deng, S. and Y. Zhang **"User perceptions of social questions and answer websites for library reference services: A content analysis."** *The Electronic Library* vol. 33, n. 3 (2015). pp. 386-399. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-12-2013-0213>

Purpose – This paper aims to understand Social Questions & Answers (SQA) users' perceptions of library reference services. Design/methodology/approach – The authors examined the postings on the largest SQA site, Yahoo! Answers, regarding library reference services and identified the major themes. Findings – Three themes emerged in library reference-related discussions: reference librarians and their services are well and positively recognized, reference services are less recognized and understood and Yahoo! Answers is recognized as a helpful service. Those who have used both library reference services and Yahoo! Answers are fully aware of the differences between the two services. Originality/value – This study provides new insights on how library reference services are perceived by SQA users. The results are helpful for libraries to position reference services to better serve users in today's information environment.

Duncan, A. S. P. and F. Durrant **"An assessment of the usability of the University of the West Indies (Mona, Jamaica) Main Library's website."** *The Electronic Library* vol. 33, n. 3 (2015). pp. 590-599. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-11-2013-0207>

Purpose – The purpose of this study is to provide an assessment of the usability of the University of the West Indies, Mona, Main Library's Web site by Master of Arts students of the Department of Library and Information Studies (D.L.I.S.) for the identification of major strengths and weaknesses of the site and to incorporate the results and participant feedback into a redesign that reflects users' intuitions rather than those of the site developers and library staff. Design/methodology/approach – One method was used to collect data; Observation. Its instruments included a list of activities executed by students followed by a checklist, which reflected day-to-day usage of the Main Library's Web site by Master of Arts students in the D.L.I.S. In addition, both usability heuristics and International Standards Organisation (ISO) guidelines were used to assess effectiveness, learnability, usefulness, functionality, navigability and user satisfaction. Respondent strategies used a sample size of five participants in the focus group sessions. Experimental strategies combined observation of five individual participants who performed the usability tests. Findings – The findings identified challenges in the site's navigation, user satisfaction and learnability. Research limitations/implications – There can be further assessment, as this study did not speak specifically to students with disabilities or took into consideration the views of the librarians. Additionally, more ethnographic approaches are required to elicit distinctive Caribbean user behaviors. Practical implications – The study concludes that usability training should be incorporated into the culture of the library organization as well as more usability testing needs to be done on a more regular basis and on a more student interactive basis. Originality/value – The paper presents issues of usability and the impact of technology on information access, memorability, learnability and functionality of an academic library's Web site.

Erb, R. A. and B. Erb **"An investigation into the use of LibGuides for electronic resources troubleshooting in academic libraries."** *The Electronic Library* vol. 33, n. 3 (2015). pp. 573-589. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-02-2013-0021>

Purpose – The purpose of this paper is to seek to ascertain how many electronic resource troubleshooting LibGuides are in use and what level of support they tend to provide. LibGuides have become quite popular in academic libraries as a tool for subject and college liaison librarians to deliver library-mediated content to colleges and individual classes. Another promising area for their use is to provide electronic resource troubleshooting support to students and faculty, as well as to other library staff. **Design/methodology/approach** – A sample of electronic resource troubleshooting LibGuides was obtained through a Google advanced search augmented by additional searches in the limited LibGuides community search utility. These LibGuides were selected according to a standard definition of troubleshooting and were analyzed for content on 36 support variables. **Findings** – A relatively small number of LibGuides were located, and a thorough treatment of electronic resource access issues was present in only a limited number of the LibGuides found. **Research limitations/implications** – While some LibGuides may have gone undiscovered owing to an incomplete search strategy for discovery, subsequent efforts to find overlooked pages were mostly fruitless. The relatively small number of electronic resource troubleshooting LibGuides discovered coupled with their simplicity may indicate that the use of LibGuides platform in this capacity has not gained traction. **Originality/value** – While there have been many case studies discussing the use of LibGuides as a subject and course guide platform, relatively few have explored the use of LibGuides outside of their traditional subject-focused implementation, and none have looked at LibGuides as a potential platform to aid in electronic resource access troubleshooting.

Ezeani, C. N., H. N. Eke, et al. **"Professionalism in library and information science: An examination of current trends, needs, and opportunities in academic libraries in Southeast Nigeria."** *The Electronic Library* vol. 33, n. 1 (2015). pp. 2-18. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-10-2012-0134>

Purpose – This paper aims to examine the current trends, needs and opportunities of professionalism in librarianship in Nigeria. The broad purpose of the paper was to investigate the level of professionalism in librarianship and to ascertain the current status, trends and opportunities within the profession among academic librarians in Nigeria. Five specific research questions were formulated which are: to examine how librarians value librarianship as a profession, to elicit the efforts made by librarians with regards to professional development, to ascertain methods of acquiring current competencies within the profession, to investigate the role of professional bodies in promoting professionalism and excellence within the library and information science (LIS) profession and to proffer strategies to enhance professionalism and excellence among librarians in Nigeria. **Design/methodology/approach** – Descriptive survey design was adopted in the study across both quantitative and qualitative research methods. The area of the study was the University of Nigeria, Nsukka, Enugu State and the Nnamdi Azikiwe University Awka Anambra State. Population of the study comprised a total of 63 librarians in the two universities. All librarians were sampled because of the small sample size. The instrument for data collection was oral interview and questionnaire which contained 53 items derived from the research questions and built on a four-point scale of Strongly Agree (SA), Agree, (A) Disagree (D) and Strongly Disagree (SD). The criterion mean was 2.50. Therefore, any calculated mean below 2.50 was adjudged a negative score, while any mean from 2.50 and above was regarded as a positive score. **Findings** – The study revealed the challenges facing professionalism and excellence within the LIS field as lack of funding for professional development, lack of sponsorship to workshops and conferences, lack of uninterrupted internet facility and a dearth of professional mentors in the South East zone. Other

problems gathered from a scheduled interview with some senior professionals in the institutions revealed that most librarians are still facing the challenge of imbibing and utilizing emerging skills in the LIS professions such as digital archiving and data mining skills for their day-to-day activities. Originality/value – Recommendations arising from the study were proffered such as the creation of staff development programmes by management; collaboration and partnership by libraries within the zone; acquisition of training through workshops and conferences irrespective of sponsorship by the institutions; and teaming of academic librarians to enhance their visibility and publication output. International staff exchanges and opportunities for sabbatical leave, which hitherto was not common in the South East Zone, were recommended. Among other recommendations also were building of consortia with libraries in the country; LIS professional bodies helping to create visibility and prestige of the LIS profession; and, finally, to scale up the image of the profession the marketing of library products through profiling of patrons and furnishing them with required information has not only become necessary but critical.

Faba-Pérez, C. and A.-M. Cordero-González **"The validity of Bradford's Law in academic electronic mailing lists."** *The Electronic Library* vol. 33, n. 6 (2015). pp. 1031-1046. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-06-2014-0087>

Purpose – The purpose of this paper was to check the validity of Bradford's Law in the contemporary world of academic electronic mailing lists.

Design/methodology/approach – The present research study applied Bradford's Law to academic electronic mailing lists to determine: whether, on the Internet, mailing lists and the posts sent to them follow the same distribution as scientific journals and the articles published in them with respect to the original form of Bradford's Law; and whether the behaviour of the Bradford distributions differs depending on the type of academic discipline (social studies or sciences) and subject category (documentation and education, medicine and life sciences) to which the list belongs. As a prior step, the utility of mailing lists was analysed during the 10-year period of 2002-2011, together with their expected future in terms of ratifying the applicability of the Law. Findings – The results showed that, in general, electronic mailing lists are continuing to be used, and that Bradford's Law is indeed satisfied, especially in the science subject categories, coherent with the fact that Bradford's Law in cybermetrics holds only for fairly narrow (closed) and well-defined (homogeneous) environments. Originality/value – The originality of the present research study was to check the validity of the historic Bradford's Law in the contemporary world of Internet.

Fasae, J. K. and I. Adegbilero-Iwari **"Mobile devices for academic practices by students of college of sciences in selected Nigerian private universities."** *The Electronic Library* vol. 33, n. 4 (2015). pp. 749-759. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-03-2014-0045>

Purpose – This study aims to look at the use of mobile devices by science students with emphasis only on privately owned universities in Nigeria.

Design/methodology/approach – A descriptive research design was used, as the study was a survey research. Eighty copies of structured questionnaire were distributed to collect data from science students in advanced levels of their undergraduate programmes in Afe Babalola University, Ado-Ekiti (ABUAD) and Joseph Ayo Babalola University (JABU) Ikeji-Arakeji, in their lecture halls and laboratories with the permission and assistance of their lecturers. The data were collected within a period of five weeks. All the administered questionnaire were correctly filled and returned, yielding a 100 per cent return rate. The data were analysed using descriptive statistics which includes frequency and percentage presented in tables and charts. Findings – The study found that science students in the selected private universities mostly (83.7 per cent) use smartphones than other mobile devices. Also, the students own mobile devices for the purpose of using educational applications (77.50 per cent) and to chat with people (72.50 per cent). The students use the Internet on their devices very often. The Internet

facilities mostly used by the students are e-mails (71.25 per cent), social media (68.75 per cent) and search engines (60.50 per cent). The challenges mostly faced by the students using mobile devices for academic practices are poor Internet connectivity (81.25 per cent) and high cost of data subscription (53.75 per cent). Practical implications – Given the knowledge gained from this study, it is desired that universities across Nigeria would encourage the integration of the use of mobile devices into core educational programmes. Also, mobile data service providers need to reduce the cost of data subscription, especially on campuses for students. Moreover, owners of private universities should ensure the provision of good Internet connectivity for mobile devices campus-wide. Free and accessible Wi-Fi hot spots should be created for students. Social implications – Policy makers in the country should encourage mobile data service providers to reduce cost of data subscription on university campuses so as to enable students enjoy to the fullest the numerous features of mobile devices for academic practices. Originality/value – Research on the use of mobile devices for academic practices by students is somewhat new in Nigeria more so that privately owned universities are in focus. The study has therefore opened the floor for more in-depth studies on the subject now that mobile devices should be seen as tools rather than fanciful gadgets.

Fasae, J. K. and I. Adegbilero-Iwari **"Use of social media by science students in public universities in Southwest Nigeria."** *The Electronic Library* vol. 34, n. 2 (2016). pp. 213-222. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-11-2014-0205>

Purpose – The purpose of this paper is to investigate the use of social media for academic practices by science students of public universities in Southwest Nigeria. Design/methodology/approach – Descriptive design was used for the study. Research instrument used was questionnaire where 140 copies were administered to science students, using purposive sampling technique. Three institutions in southwest of Nigeria were selected for the study. Copies of the questionnaire were distributed to students in their lecture rooms and laboratories during practical classes with the permission and assistance of their lecturers. The data collected were analysed using frequency and simple percentage. Findings – The results reveal that among the various social media networks available, Facebook (93.48 per cent) is the most recognized and most famous, followed by Google+ (63.77 per cent) and Twitter (47.83 per cent). Two-third of the students make use of social media daily to remain up-to-date with trending events/news and to occupy free time when they are bored, among other reasons. The findings show that Google+ (52.17 per cent) is the most beneficial social media network followed by Facebook (29.7 per cent) and Wikia (23.91 per cent). Most of the science students are knowledgeable in the usage and application of social media, while majority of them considered poor Internet connectivity, receiving of unwanted messages/pictures and electricity failure as the leading problems encountered while using social media. Originality/value – The study was necessary to identify the use and application of social media by science students in public universities in Southwest Nigeria.

Fasola, O. S. **"Perceptions and acceptance of librarians towards using Facebook and Twitter to promote library services in Oyo State, Nigeria."** *The Electronic Library* vol. 33, n. 5 (2015). pp. 870-882. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-04-2014-0066>

Purpose – The purpose of this paper is to report on research that examined librarians' perception and acceptance of use of Facebook and Twitter in promoting library services in Oyo state, Nigeria. Design/methodology/approach – The survey design and interview were used to collect data from librarians in Oyo state. The questionnaire contained questions that are pertinent to the issues being investigated. The 81 responses (81 per cent) received were processed, analysed and results presented. Findings – The paper reveals that majority of the libraries in Oyo state, Nigeria, have Facebook profiles, though minority have Twitter accounts. Librarians in Oyo state, Nigeria, have high perception and acceptance of using Facebook and Twitter

to promote library services. Findings also reveal that librarians in academic and special libraries in Oyo state, Nigeria, are more highly receptive to use of Facebook and Twitter to promote library services. Findings revealed further that younger librarians showed more positive perception and higher acceptance. Research limitations/implications – While the research was limited to librarians in Oyo state, Nigeria, it has applications to librarians and libraries all over Nigeria. Practical implications – This research provides information on the perceptions and acceptance of social media tools (Facebook and Twitter) in promoting library services. The findings may help provide information to library heads on adopting new and popular technologies to bring the library closer to the user and attract more users and on why it is not being used where they are provided. Originality/value – At the time of completing this study, research had mainly been on librarians' use of social media for personal issues not on librarians' perception and acceptance of using it to promote library services. This research also focuses on libraries in Oyo state having a presence on Facebook and Twitter to promote library service and direct and prompt communication with their users.

Fattahi, R., M. Parirokh, et al. **"Effectiveness of Google keyword suggestion on users' relevance judgment: A mixed method approach to query expansion."** *The Electronic Library* vol. 34, n. 2 (2016). pp. 302-314. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-03-2015-0035>

Purpose – One of the most effective ways information retrieval (IR) systems including Web search engines can improve relevance performance is to provide their users with tools for facilitating query expansion. Search engines such as Google provide users with keyword suggest tools. This paper aims to investigate users' criteria in relevance judgment regarding Google's keywords suggest tool and to see how such keywords would lead to more relevant results from the viewpoint of users. Design/methodology/approach – Through a mixed method approach, quantitative and qualitative data were collected from 60 postgraduate students at Ferdowsi University of Mashhad, Iran, using four different instruments (questionnaire, thinking aloud technique, query logs and interviews). Findings – Among other criteria, the "relation between suggested keywords and the information need" (with the mean rate of 3.53 of four) was considered the most important by searchers in selecting suggested keywords for query expansion. Also, the "relation between suggested Keywords and the retrieved items" (with the mean rate of 3.62) was considered the second most important criterion in judging the relevance of the retrieved results. The participants agreed that the suggested keywords by Google improved the retrieval relevance. The content analysis of the participants' aloud-thinking sessions and the interviews approved such findings. Originality/value – This research makes a contribution to the need of designers of IR systems regarding the use of add words for query expansion. It also helps librarians how to instruct searchers with expanding their queries to retrieve more relevant results. Another contribution of the study is the identification of a number of new relevance judgment criteria for Web-based environments.

Fu, H.-Z. and Y.-S. Ho **"A bibliometric analysis of the Journal of Membrane Science (1976-2010)."** *The Electronic Library* vol. 33, n. 4 (2015). pp. 698-713. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-12-2013-0221>

Purpose – This study aims to examine publication characteristics and development of a science journal Journal of Membrane Science (JMS) with 35 years' history by bibliometric indicators. Design/methodology/approach – A bibliometric approach was used to identify its document types, impact factor, publication outputs, most cited articles and large contributing countries/territories and institutions. The main indicators included impact factor, CPP (citations per publication), TC2010 (number of citations from one paper's publication to the end of 2010), C2010 (number of citations in the year of 2010), number of total articles, "single country articles" and "single institution articles", "internationally collaborative articles" and "inter-institutionally collaborative articles", "first author articles" and "corresponding author articles". The annual citations

of most cited articles were displayed in a table list. Findings – The two-year citation window used by impact factor is not fair for a journal which had its peak annual citations in the third or more years. JMS would get a better citation performance if impact factor can be calculated for three or four years. Impact factor is affected by the size of its subject categories. JMS showed higher impact factor rankings in both chemical engineering and polymer science category in the early twenty-first century. Furthermore, the G8 (Canada, France, Germany, Italy, Japan, Russia, the UK and the USA) contributed more than a half of the total, with higher CPP. National University of Singapore, University of Twente and Chinese Academy of Sciences were the main contributing institutions. The citation life cycles revealed the impact history of most cited articles. Originality/value – A bibliometric analysis has been carried out to analyze the characteristics of a journal with 35 years' history. Some improved indicators including TC2010, C2010, TP, SP, CP, FP and RP have been used for the evaluation. This study provides an evidence from JMS to discuss the feasibility and limitations of impact factor.

Geraei, E. and G. Heidari **"Measurement of generic core competencies among students of library and information science in Iran."** *The Electronic Library* vol. 33, n. 6 (2015). pp. 1016-1030. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-08-2013-0153>

Purpose – The purpose of the present survey is to identify and measure generic core competencies essential for Iranian library and information science (LIS) students. Design/methodology/approach – The study population included all undergraduate LIS students in Iran, and the sample included all undergraduate LIS students in the three universities of Tehran, Shahid Chamran and Ferdowsi of Mashhad. The study was performed during the second semester (February to May) of the 2010-2011 academic year. After a thorough review of the literature, a pattern for generic core competencies was formulated and, accordingly, a researcher-designed questionnaire was developed and distributed. The final data analysis was carried out using 207 completed questionnaires, and the data were analysed using the SPSS19 software. Findings – Except for English and management, the major participants' scores mean for the 12 identified generic core competencies were higher than the total mean. Originality/value – Besides presenting a new theoretical pattern for measuring core generic competencies, especially for students in the LIS field, the study is expected to help higher education planners to channel their efforts into strengthening the examined competencies.

Górny, M., J. Catlow, et al. **"Evaluating Polish digital libraries from the perspective of non-academic users."** *The Electronic Library* vol. 33, n. 4 (2015). pp. 714-729. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-01-2014-0011>

Purpose – The purpose of this paper is to describe and evaluate the role played by digital libraries in Polish society, particularly in relation to users who are not in education or professionally engaged in academic work. Design/methodology/approach – Results are presented from a survey of non-academic users, identified as one of the key groups of digital library users in an exploratory survey in 2008-2009. The targeted survey was carried out by sending e-mails to persons who had supplied their addresses in the first survey or had set up accounts with the Digital Library of Wielkopolska. Analysis was also made of e-mail correspondence between digital library users and librarians, and data from digital library server logs, during 2008-2013. Findings – The research provided three interesting results. The first is that the creation of digital libraries in Poland has caused a significant number of people to pursue an interest in genealogical or local historical research. The second result is that the evaluations of digital libraries made by non-academics do not differ significantly from those made by students and academics. The third is the fact that at present, approximately 50 per cent of digital library users in the non-academic category are over 50 years of age. Originality/value – This is the first comprehensive study on the use of digital libraries in

Poland by non-academic users. It shows what role digital libraries play, and to what extent, in the stimulation of cultural activity in Polish society.

Hu, Q. **"A user-centred collaborative framework for integrated information services in China."** *The Electronic Library* vol. 33, n. 6 (2015). pp. 990-1001. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-04-2014-0060>

Purpose – The paper aims to propose a user-centred collaborative framework for providing integrated information services (IIS) to corporate users in China. The framework is conceptualized based on a literature review of IIS models and a case study. The authors provide suggestions with regard to the implementation of effective and efficient information services for corporate users based on the proposed framework. **Design/methodology/approach** – This paper reviews the efforts of investigating appropriate models for integrated information services (IIS) and proposes a user-centred collaborative framework for providing IIS for corporate users. It is organized as follows: first is an overview through a review of the related literature of the current status of information resource services in China. Then, a case study of IIS in Hubei Province is analysed. Next, a user-centred collaborative IIS framework is presented that aims to address the needs of corporate users. The paper concludes with a summary and suggestions for future study to build effective and efficient IIS systems. **Findings** – Through an exploratory survey conducted in 2009, it was discovered that, in general, corporate users need all kinds of information, not only scientific publications but also business and market information. Their channel to obtain needed information was mainly the Internet. Books and domain-specific databases were also used by most of the participants. The major challenges for corporate users to obtain needed information included the high cost of purchasing or leasing desired information resources, the low quality of information on the Internet, limited information workers or their skills and the quality of high-level information services. **Research limitations/implications** – The survey served as a tool to gather primitive information on user needs. It was an incomplete, unsystematic exploration. However, the authors could still gain some insights on the users' information needs and directions for future IIS. The results showed that Hubei Science and Technology Information Sharing Service, which was an implementation of the agency collaboration-based IIS model, satisfied the needs of less than 30 per cent of the participants. It has much room for improvement. **Practical implications** – This paper proposes a user-centred collaborative integrated information services (UCIIS) framework. The UCIIS framework takes the idea of the user-centred integrated information service (IIS) model that the construction of IIS should start from understanding the users of the services, but it also takes important characteristics from the agency collaboration-based IIS model. **Originality/value** – The discussion in this paper is basically on the macro level, leaving a lot of interesting future work to design, develop and evaluate IIS systems based on the proposed framework. Specifically, interest is in developing user models through systematic and comprehensive investigation of corporate information users' needs, and examining current library and information science curricula to produce qualified information professionals who can carry out user experience studies, and high-level knowledge discovery tasks using various advanced computational technologies.

Huang, T.-C. **"What Library 2.0 has taught libraries in Taiwan about e-learning."** *The Electronic Library* vol. 33, n. 6 (2015). pp. 1121-1132. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-04-2014-0070>

Purpose – This paper aims to review the four elements of Library 2.0, which represents a major innovation, and adopts several pedagogical concepts to investigate other innovations libraries in Taiwan could implement to become ideal libraries. **Design/methodology/approach** – This paper presents an overview of the essential principles of Library 2.0 and examines the current state of libraries in Taiwan. The authors then present a reciprocal feedback model of Library 2.0+. **Findings** – A Library 2.0+ model and a concept map of the mutualism between e-learning education and

Library 2.0+ were proposed to diminish the gap between the status quo and Library 2.0. Two recommendations are provided: to develop a library learning platform to maximize the education value of the library, and to regard library development as part of the overall community's development. Users can access library resources anytime/anywhere by visiting the library learning platform without visiting the library. Allowing an individual approach is necessary to realize the social educational value of the library. Moreover, a Library 2.0 library engages more in community development and invites participation with participation in community first. Universities in the community would be good technology partners when developing a Library 2.0 library. Originality/value – Although there has been extensive research of library development in view of Library 2.0, such a topic has never been explored with an educational perspective, especially an e-learning perspective. Given that the definition of Library 2.0 is abstract and fairly broad, the authors take the view of an e-learning platform to make Library 2.0 more figurative. Moreover, through interdisciplinary exploration, concrete suggestions regarding library development are provided to librarians, especially those with similar conditions as those in Taiwan.

Huang, T.-C., Y. Shu, et al. **"Get lost in the library?: An innovative application of augmented reality and indoor positioning technologies."** *The Electronic Library* vol. 34, n. 1 (2016). pp. 99-115. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-08-2014-0148>

Purpose – This paper aims to identify ways to establish an information system to aid users to enhance the effectiveness of self-regulated learning and solve the problem of learning domain unawareness. Many libraries are spacious and with a rich collection of books, the problem a newcomer may encounter in the wide library is spatial unawareness. In addition, people new to a particular field of study often encounter the problem of learning domain unawareness. Design/methodology/approach – This paper presents an overview of self-regulated learning theory first. We realize the essential principles of self-regulated learning model in the library and developed a learning system that utilizes the concept of combining mobile augmented reality (AR), indoor navigation and data mining algorithms. Findings – The proposed NO Donkey E-learning (NODE) system utilizes AR and innovative indoor positioning technology to fulfil the goal of navigation inside a library and solve the problems of spatial and learning domain unawareness. On the one hand, the system allows peers to communicate asynchronously to create a cloud-based information sharing community; the dual-track terminal (the website and the app interfaces) in the system could provide both educational functionalities and mobility for readers. On the other hand, AR navigation function integrates the information of reading paths, the real-space locations, real-time dynamic information, book introductions and readers' comments to help readers have access to the topic-related books efficiently. Practical implications – We found that although the library provides the floor plan and signs, such passive and fixed indication may cause spatial unawareness. People need system to show the bookshelf location and dynamic direction indicators when they walk in the wide library. However, most existing library information systems only provide readers with the function of book search, including which floor the book is on, call number and check-out status. In this sense, we propose that self-regulated learning theory integrated the new innovation technology is the solution for the above issues. Originality/value – The system developed in this study, while viewing the real scenes inside the library through camera lens, provides related virtual educational information services and learning paths on screen and guides the public to do systematic self-regulated learning. With the functions of the "learning topic" and "knowledge sharing", the learning system promotes the general public to self-monitor their learning progress and to use the sharing mechanism as the system structure to solve the two main problems of spatial unawareness and domain unawareness in learning in libraries, creating a truly innovative people-centred library information system.

Huang, Y.-M., Y.-H. Pu, et al. **"Development and evaluation of the mobile library service system success model: A case study of Taiwan."** *The Electronic Library* vol. 33, n. 6 (2015). pp. 1174-1192. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-06-2014-0094>

Purpose – The purpose of this study is to develop and analyse the usage status, level of satisfaction and success model of a mobile library service system in Taiwan. The research results could serve as a reference for the development, evaluation and improvement of libraries' mobile services. Design/methodology/approach – This study designed a mobile library service system and used the informational system success model to evaluate its use status and level of satisfaction and, thus, to develop a success model for a mobile library service system. Findings – Results showed that students' level of satisfaction with the mobile library service system had a positive correlation with the usage status indicated that the system could help them to improve their work efficiency, such as by reducing time spent searching for books and cost of obtaining electronic resources. The students also expressed a willingness to continue using the mobile library service system. Practical implications – In general, the students thought that the mobile library service system could reduce the time needed to search for book-related information, but that the service quality should be improved. Therefore, this study suggests that the education and training of system service personnel should be enhanced and that easy-to-use functions be provided to promote the users' level of satisfaction and willingness to use the system. Originality/value – This study developed a mobile library service system and invited students studying in the National University of Tainan, in southern Taiwan, to be the subjects in an experiment, with a goal to evaluate the success of a model mobile library. The findings showed that the overall explanatory power (R²) of this model was 55 per cent and, thus, that the findings of this work have practical significance.

Isfandyari-Moghaddam, A., F. Danesh, et al. **"Webometrics as a method for identifying the most accredited free electronic journals: The case of medical sciences."** *The Electronic Library* vol. 33, n. 1 (2015). pp. 75-87. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-10-2012-0141>

Purpose – The present study aims at determining the most accredited free English electronic journals (EJs) in Medical Sciences, as finding free scholarly EJs including medical ones is difficult in the web environment. Design/methodology/approach – The research population consisted of 700 free EJs of Medical Sciences, which were collected from two reputable websites, namely, Directory of Open Access Journals and Free Medical Journals. After first screening, 269 free EJs including 76 journals in health, 4 journals in nursing, 175 journals in medicine and 14 free EJs in dentistry remained for final investigation [...]. Findings – The most accredited journals in four medical disciplines studied here are health: New South Wales Public Health Bulletin, PLoS Biology and Environmental Health Perspectives – National Institute of Environmental Health Sciences; nursing: Online Journal of Rural Nursing and Health Care and Online Journal of Nursing Informatics [...]. Originality/value – This research can be treated as an addition to the webometrics literature.

Karlovčec, M., D. Mladenčić, et al. **"Conceptualization of science using collaboration and competences."** *The Electronic Library* vol. 34, n. 1 (2016). pp. 2-23. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-01-2014-0015>

Purpose – The purpose of this paper is to propose an approach for conceptualizing science based on collaboration and competences of researchers. Design/methodology/approach – The research is conducted by exploratory analysis of collaboration and competences using case studies from humanistic, engineering, natural sciences and a general topic. Findings – The findings show that by applying the proposed approach on bibliographic data that readily exist for many national sciences

as well as for international scientific communities, one can obtain useful new insights into the research. The approach is demonstrated with the following exploratory findings: identification of important connections and individual researchers that connect the community of anthropologists; collaboration of technical scientists in the community of anthropologists caused by an interdisciplinary research project; connectivity, interdisciplinary and structure of artificial intelligence, nanotechnology and a community based on a general topic; and identifying research interest shift described with concretization and topic-shift. Practical implications – As demonstrated with the practical implementation (<http://scienceatlas.ijs.si/>), users can obtain information of the most relevant competences of a researcher and his most important collaborators. It is possible to obtaining researchers, community structure and competences of an arbitrary research topic. Social implications – The map for collaboration and competences of a complete science can be a crucial tool for policy-making. Social scientists can use the results of the proposed approach to better understand and direct the development of science. Originality/value – Originality and value of the paper is in combining text (competences) and network (research collaboration and co-authoring) approaches for exploring science. Additional values give the results of analysis that demonstrate the approach.

Keshvari, M., F. Z. Farashbandi, et al. **"Modelling influential factors on customer loyalty in public libraries: a study of West Iran."** *The Electronic Library* vol. 33, n. 4 (2015). pp. 810-823. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-10-2013-0185>

Purpose – The purpose of this study is to present a model for influential factors on customer loyalty in public libraries and its evaluation in public libraries of western Iran. Design/methodology/approach – This research is a correlation study and uses a questionnaire as a data gathering tool. The statistical population consists of all members of public libraries in western Iran. The final data analysis was carried out using 467 completed questionnaires and data were analysed using SPSS19 and AMOS19 software. Findings – The findings of this study showed that perceived value has the largest influence on customer loyalty with a factor of 0.451. The second most influential factor is customer satisfaction with a factor of 0.214. Three predictor variables are the effect of the services, controlling the provided information and library as a location, which had the highest influence on perceived value of libraries' customers. The findings also showed that perceived value with meaningfulness level of $p < 0.001$ and a value of 0.316 has the most influence on libraries' customer satisfaction. Originality/value – Identifying and improving the influential factors on customer loyalty in public libraries can increase the customer return rate of these libraries. Public library managers of Iran, especially in western Iran, can use the findings of this study to improve the influential factors on customer loyalty in libraries under their care.

Khan, A. and H. Idrees **"Calculating Web impact factor for university websites of Pakistan."** *The Electronic Library* vol. 33, n. 5 (2015). pp. 883-895. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-01-2014-0022>

Purpose – This study aims to explore the Web impact factors (WIFs) for websites of Pakistani universities. The paper discusses why revised Web impact factor (RWIF) is more meaningful than simple WIF. The study also attempts to rank the top-five websites of Pakistani universities by considering four different website ranking systems and compares the WIFs of university websites of other developing countries as well. Design/methodology/approach – This study calculates the RWIF for subject websites using two webometric tools. Open Site Explorer service (i.e. Developer Shed) and two commercial search engines, i.e. Google and Bing, were used to collect the data for examining the RWIF for subject websites. Findings – Collectively 41,960 web pages and 49,740 inlinks were found in top-ten Pakistani universities' websites. The collective RWIF for subject websites comes to 1.185, which is at the top in comparison with other developing countries, i.e. India, Bangladesh, Sri Lanka and Indonesia. Originality/value – Calculating WIF for university websites in Pakistan and presenting the comparison

with other types of website ranking system is a kind of first study conducted for Pakistani library websites. The study also presents alternate search strategy for data collection to calculate RWIF for websites.

Kumar, S. "**Effect of gender on collaborative associations of researchers in Malaysia.**" *The Electronic Library* vol. 34, n. 1 (2016). pp. 74-82. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-09-2014-0162>

Purpose – This study aims to find the level of gender-based assortativity in the association of researchers and investigate if gender has influence over social capital of researchers and their research performance in the context of a multi-ethnic nation, such as Malaysia. Design/methodology/approach – Social network analysis is used as a primary research method to analyse the associations between the authors. Mann-Whitney test is used for testing the significant differences in research performance and social capital based on gender. Findings – The assortative mixing patterns of 187 researchers revealed positive assortativity, meaning that more authors preferred to co-author with authors of their gender. No influence of gender was seen on the social capital of authors. However, gender did significantly influence the research productivity of authors. Originality/value – This is one of the first studies that attempts to find the influence of gender on collaborative associations of researchers in Malaysia.

Kumar, S. and J. M. Jan "**The assortativity of scholars at a research-intensive university in Malaysia.**" *The Electronic Library* vol. 33, n. 2 (2015). pp. 162-180. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-02-2013-0018>

Purpose – The purpose of this study was to provide quantitative indicators of intra-university assortative mixing patterns of scholars based on five parameters: degree of connections, faculty, professional position, gender and race. Design/methodology/approach – We conducted a case study of business and management scholars of University of Malaya, a research-intensive University in Malaysia, using co-authorship in papers indexed in the Digital Library Indexing System, Social Sciences Citation Index (SSCI) database of Web of Science, from 2006 to 2010. Background information of scholars was extracted from bibliometric records, online curriculum vitae and other online sources. Assortativity coefficients were calculated for all parameters. Findings – The study found a degree assortativity coefficient of 0.195, which corresponds with other studies in the literature. Assortativity due to university faculty was strongly assortative at 0.649, whereas gender (0.28) and race (0.16) were weakly assortative. However, in contrast to the common belief that "similarity breeds connection", the scholars were highly disassortative by professional position (-0.75). Practical implications – This study holds significance to policymakers in understanding the socio-academic factors that bring scholars together. It also adds to the body of knowledge in social network studies that are examining the various factors responsible in bringing the actors together. Originality/value – This is one of the first studies that empirically investigated mixing patterns of researchers at a prominent research-intensive university in Malaysia.

Kumar, S. and G. Sanaman "**Web challenges faced by blind and vision impaired users in libraries of Delhi: An Indian scenario.**" *The Electronic Library* vol. 33, n. 2 (2015). pp. 242-257. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-03-2013-0043>

Purpose – The purpose of this paper is to analyse the challenges faced by blind/vision-impaired users during the web access in the leading academic and special libraries of Delhi, India. Design/methodology/approach – Survey methodology has been used as the basic research tool for data collection with the help of questionnaire. A total of 125 users surveyed in all the five libraries are selected randomly on the basis of willingness of the users to participate in the survey with the experience of working in digital environment. The survey results were tabulated and analysed with descriptive

statistics methods using Excel software and “Stata version 11”. Findings – There are various barriers faced by blind/vision-impaired users in the libraries of Delhi (India) during the “web access” with the help of assistive technologies as assistive technology like “Screen Readers” available today are “somewhat compatible” with the web. The facility of “web-based catalogue” is generally lacking in Delhi libraries. Research limitations/implications – The paper does not offer a comprehensive set of web accessibility issues, concentrating instead on the most common problems as epitome of this study. Practical implications – The paper raises awareness of web accessibility issues in libraries of Delhi, India. Originality/value – The paper highlights the web accessibility issues faced by blind/vision-impaired users of leading academic and special libraries of India including the users’ recommendations for the accessible web page/website design for the first time.

Lagzian, F., A. Abrizah, et al. **"Critical success factors for institutional repositories implementation."** *The Electronic Library* vol. 33, n. 2 (2015). pp. 196-209. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-04-2013-0058>

Purpose – This paper aims to explore the critical factors that contribute to the success of institutional repositories worldwide. Previous research indicates that there is little agreement surrounding what constitutes a successful institutional repository. Design/methodology/approach – Possible key factors were extracted from literature review and responses from expert panels. A web-based survey questionnaire forming a total of 69-item statements was developed. The questionnaire, when pilot-tested, was found highly reliable. The questionnaire was then distributed to 322 institutional repository managers, who are representative of the population, via the OpenDOAR email distribution service. Data collection ended in four months, once the sample volume of usable questionnaires reached 295, which is 91.6 per cent response rate. Findings – The results of the factor analysis indicate the possibility of 46 variables under six factors being important for the success of institutional repository implementation. These six factors are “Management”, “Services”, “Technology”, “Self-archive Practices”, “People” and “Resources”. Practical implications – This study has empirically tested and consolidated the factors which are important in institutional repository implementation worldwide and documented them as critical success factors. Originality/value – It also frames questions about the possible value of developing some guidelines or standards related to success factors to be able to monitor the deployment of institutional repositories.

Leduc, C. and J. Schöpfel **"Usage of e-journals in French business schools."** *The Electronic Library* vol. 33, n. 2 (2015). pp. 258-272. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-03-2013-0046>

Purpose – The paper of this paper is to explore the usage patterns of e-journals in French business schools. Design/methodology/approach – The paper exploits COUNTER-compliant usage statistics from a nationwide usage study with data from journal collections of an international academic publisher. Findings – With regard to online collections, the usage appears to be relatively intensive, especially when compared to usage statistics from universities in the same fields. This result may reflect an emerging research activity in business schools and a projected and required international orientation. However, the study also reveals important differences between schools, a fact that should not be overestimated because of the small sample size, even if the sample is a representative of French business schools. Research limitations/implications – The paper uses empirical data from a national usage study to identify specific patterns in business schools. It does not integrate qualitative survey data or deep log file analysis. Originality/value – Very few studies provide empirical evidence of e-journal usage in business schools. The paper enhances the knowledge on usage in specific environments in higher education. This is the first usage study with French business schools.

Li, C., W.-D. Zhang, et al. **"Early warning of risks of copyright infringement in digital library based on extension theory."** *The Electronic Library* vol. 34, n. 2 (2016). pp. 250-264. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-04-2014-0064>

Purpose – The purpose of this study is to evaluate the potential risks of copyright infringement in digital library based on the extension theory. **Design/methodology/approach** – At first, the analytic hierarchy process (AHP) is used to determine the weights of the existing indicator system for early warning. Second, a model is built to evaluate the potential risks of copyright infringement based on the extension theory in digital library. Finally, a real-world application is presented to show the effectiveness and usefulness of this approach. **Findings** – The main findings of this paper are as follows: the early warning extension theory model is effective in distinguishing the degree of the potential risks of copyright infringement in digital library; the ranges of the value and the values of the indicators can directly affect the results while using this approach, so the accuracy of these two aspects is a crucial question. **Social implications** – The social impact is that copyright infringement risks of digital library is reduced; the lawsuit rate and economic loss due to copyright infringement are thereby decreased as well. **Originality/value** – This paper introduces the evaluation of the potential risks of copyright infringement based on the extension theory in digital library. The results provide support for the decision-makers in handling the potential risks of copyright infringement in digital library.

Lin, W.-C., S.-W. Ke, et al. **"SAFQuery: a simple and flexible advanced Web search interface."** *The Electronic Library* vol. 34, n. 1 (2016). pp. 155-168. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-12-2014-0207>

Purpose – This paper aims to introduce a prototype system called SAFQuery (Simple And Flexible Query interface). In many existing Web search interfaces, simple and advanced query processes are treated separately that cannot be issued interchangeably. In addition, after several rounds of queries for specific information need(s), it is possible that users might wish to re-examine the retrieval results corresponding to some previous queries or to slightly modify some of the specific queries issued before. However, it is often hard to remember what queries have been issued. These factors make the current Web search process not very simple or flexible. **Design/methodology/approach** – In SAFQuery, the simple and advanced query strategies are integrated into a single interface, which can easily formulate query specifications when needed in the same interface. Moreover, query history information is provided that displays the past query specifications, which can help with the memory load. **Findings** – The authors' experiments by user evaluation show that most users had a positive experience when using SAFQuery. Specifically, it is easy to use and can simplify the Web search task. **Originality/value** – The proposed prototype system provides simple and flexible Web search strategies. Particularly, it allows users to easily issue simple and advanced queries based on one single query interface, interchangeably. In addition, users can easily input previously issued queries without spending time to recall what the queries are and/or to re-type previous queries.

Liu, Y.-F., W.-Y. Hwang, et al. **"The effects of gender differences on the use of annotatable multimedia e-readers."** *The Electronic Library* vol. 33, n. 4 (2015). pp. 842-860. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-09-2013-0174>

Purpose – This paper aims to examine how gender differences influence students' reactions to the use of the annotatable multimedia e-reader (AME). To reach this aim, we develop an AME where various annotation tools are provided to help students learn English in-class and after-class. **Design/methodology/approach** – An empirical study was conducted with 63 fifth-grade students from an elementary school. A pre-test and post-test were used to identify their prior knowledge and learning achievement, respectively. A questionnaire was applied to identify participants'

perceptions towards the AME. Findings – The results show that students' post-test scores are significantly related to after-class behaviour, instead of in-class behaviour. Females prefer to use the text annotation and teachers' voice, but it is voice annotation that is beneficial to improve their learning achievement. Conversely, males prefer to use the text-to-speech only, but it is text annotation that is helpful to improve their learning achievement. Additionally, the ease of use affects males' intention to use the AME to learn English after-class while it has no effects on females. Originality/value – This study not only shows the importance of gender differences but also demonstrates the essence of after-class learning behaviour. More importantly, a framework is proposed to support designers to develop e-readers that can accommodate the preferences of females and males.

Madhusudhan, M. and V. Singh **"Integrated library management systems: Comparative analysis of Koha, Libsys, NewGenLib, and Virtua."** *The Electronic Library* vol. 34, n. 2 (2016). pp. 223-249. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-08-2014-0127>

Purpose – The purpose of this paper is to analyze the various features and functions of Koha, Libsys, NewGenLib and Virtua with the help of specially designed evaluation checklist and rank them based on features/functions of integrated library management system (ILMS). Design/methodology/approach – The evaluation approach taken in this paper is similar to that of Singh and Sanaman (2012) and Madhusudhan and Shalini (2014) with minor modifications, comprising 306 features/functions and categorized as ten broad categories. Findings – The paper explores different features of open source (OS) and commercial ILMS, which reveals that Virtua got the highest total score of 218 (77.86 per cent), followed by Koha ILMS with 204 score (72.86 per cent). Interestingly, NewGenLib got the lowest total score, that is, 163 (58.21 per cent). ILMS under study are lagging behind in exploiting the full potential of the Web 2.0 features, including cloud computing features, and needs to be addressed in their future development. Practical implications – It is hoped that both the OS and commercial software will attend to the lacunae and soon develop fully functional Web 2.0/3.0 and cloud-based technologies. Originality/value – The findings of this paper will not only guide the librarians in the selection of a good ILMS, which can cater to the needs of their libraries, but also abreast the knowledge of evaluation of ILMS for the students of Library and Information Science. And the findings will help the ILMS vendors to know the limitations of their ILMS, so that they can overcome the limitations faced by users and improve their products.

Mansour, E. A. H. **"Information needs of local domestic workers in the Arab Republic of Egypt."** *The Electronic Library* vol. 33, n. 4 (2015). pp. 643-667. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-01-2014-0012>

Purpose – The purpose of this study is to provide first-hand information regarding domestic labour/labourers in Egypt. The researcher tries to investigate the information rights and needs of these vulnerable and marginalized groups in Egypt in terms of its thoughts, perceptions, attitudes, motivations, techniques, preferences, ways, tools and problems encountered towards using of and accessing information. The study, therefore, attempts to look at, as possible, the many different characteristics of local domestic workers in Egypt and affecting their use of and access to information. Design/methodology/approach – Methodology used here was an adaptive form of snowball sampling of a heterogeneous demographic group of participants in the local domestic work in Egypt, used to select focus groups to explore a range of relevant issues. Findings – Demographically, this study showed that local domestic labour in Egypt, to a great extent, is occupied and performed by women and children, and the average age of the total interviewed participants was around 31 years. Over half of participants were uneducated, followed by nearly a quarter of them were with no formal education and just a small number had some primary education. This study concluded that a large number of participants were described as illiterate and nonskilled labourers.

Participants' income proved that it was one of barriers to use of and access to information where a large number of participants were labelled as low-income workers. The information-seeking behaviour (ISB) profile of participants indicated a preference for verbal over written, informal over formal and undocumented over documented information channels and sources to solve problems relating to everyday existence using some helping tools and devices especially cell phones. The most popular information sources mentioned and followed by participants were verbal information with friends, peers and colleagues in neighbouring households either via telephones, especially cell phones, or face-to-face meeting. TV and Radio, newspapers and magazines were, respectively, the most famous formal sources participants use. Information related to work, family affairs, security and health issues was most commonly desired and wanted by participants. Participants mentioned that their priorities of accessing information were to help in work-related activities such as cooking cleaning and decorating, to know new kitchen recipes, to assist in the education of the employer's children. Others added that they were also seeking for information for getting promoted and having some fun especially through audiovisual sources like TV and Radio. They were not commonly using libraries due to the fact that most of them were uneducated, and the education of the some others was limited. However, this study showed that there was a little and accidental use for some libraries like public and children libraries and a small number of them was using the employer's home library. In terms of using technologies related to the use of information like the Internet, the study found such access was an issue, as a very small number of participants were using it mainly for personal information. Regarding challenges, concerns and problems faced by local domestic workers in Egypt during using of and accessing information, the study found that the most important challenges participants faced in this study were the illiteracy and lack of awareness about the basic rights and perception of information rights and needs. Other challenges like the time, psychological burdens, the social image being domestic worker, lack of accessible information channels, lack of training and skills and also lack of money needed to access information were also an issue. Research limitations/implications – This study comes to respond strongly to the great global concern on the neglected and marginalized sector of work/workers in Egypt. It provides information on invisible forms of domestic labour/labourers, and indicates how their rights, especially towards accessing information, are violated. Any findings of this study may generate interest and create awareness on the needs and conditions of domestic labour/labourers among marginalized labour advocates, policymakers and the civil society. Originality/value – The literature on this topic is scarce and, therefore, this paper gives important and significant insight into how to assist local domestic workers in Egypt with information needs.

Mansour, E. A. H. **"The use of Social Networking Sites (SNSs) by the faculty members of the School of Library & Information Science, PAAET, Kuwait."** *The Electronic Library* vol. 33, n. 3 (2015). pp. 524-546. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-06-2013-0110>

Purpose – The purpose of this study is to describe the usage of Social Networking Sites (SNSs) by the faculty members of the School of Library and Information Science (SLIS), at the College of Basic Education, the Public Authority for Applied Education and Training (PAAET), Kuwait. Design/methodology/approach – A survey conducted to collect data from 33 faculty members of whom only 21 members were using SNSs, representing 63.6 per cent of the total sample, and 12 members were not using SNSs, representing 36.4 per cent of the total sample. This study revealed that SNSs are used moderately by the faculty members. Findings – This study showed that faculty members who were using SNSs tend to be males, aged between 41 and 50 years, PhD holders, ranked as assistant professors, full-time members, specialized in information technologies with a relatively new experience of teaching ranged from one to five years, and most of the faculty members who were not using SNSs tended to be also males, aged between 41 and 60 years, PhD holders, ranked as lecturers, full-time members specialized in organization of information with a teaching experience ranged

from 16 to 20 years. More than half of the faculty members were using SNSs for three years to less than six years, and a large number of them were using SNSs several times a week and were accessing these sites more from their school office, home and school laboratory. There are no any statistical significant differences between the demographic data of participants (gender, age and education level) and either their use or non-use of SNSs. There are no significant differences between the academic rank, teaching status and teaching experience of faculty and their use of SNSs. However, there is a significant relation between the faculty's area of teaching and their use of SNSs. Faculty members were interested in the use of SNSs. YouTube, Twitter, Facebook and blogs respectively were used mostly by faculty members, but Twitter, Facebook and YouTube were the most famous SNSs they have profiles on. Faculty members have adopted SNSs mainly for the purpose of communicating with others, finding and sharing information with peers and students as well. Tasks on SNSs made by faculty members were mostly to make communication, send/receive messages and find general and specific information. Faculty members' profiles on SNSs were mostly on Twitter, Facebook, YouTube, blogs, wikis and podcasting respectively. Faculty members confirmed that the use of YouTube, Facebook, blogs, Twitter, wikis and podcasting respectively was at least effective and the use of YouTube, Facebook, Twitter, Blogs and Wikis respectively was at least fairly useful fairly easy to them. Faculty members are in general agreement about the effectiveness of SNSs especially for disseminating and sharing information, communication and informal collaboration. The study showed also that there is no gender-related difference among the faculty in terms of their usage of SNSs. The study revealed also that the time was the most important barrier both SNSs users and non-users faced at PAAET's SLIS. Other barriers like trust about SNSs, training and skills were significant to SNSs users in this study, and barriers like interests in SNSs, awareness of them and trust about them were respectively the most important barriers to SNSs non-users. The study recommended that a further research is needed to examine more additional aspects of using SNSs among faculty members that may affect their use like the technical, legal, ethical and intellectual aspects. More information is needed to investigate why some faculty members do not use SNSs especially for educational purposes. A qualitative study of the perception and opinions of faculty members would provide much important data about that. A further research is also needed to specify the relation between the use of these sites and each area of study separately. Due to the lack of awareness and knowledge about the use of SNSs, shortage of language skills and training, this study recommended that SNSs non-users should be provided with necessary assistance to foster their skills towards such usage. A future study is needed to compare experiences of faculty members and students regarding the use of SNSs in educational practices and may look at how communicational uses of these sites have influenced educational uses. Research limitations/implications – This study involved a single and certain academic institution, namely PAAET. Therefore, findings, conclusions and recommendations may not be applicable and reasonable to be generalized on all Kuwaiti academic institutions. Social implications – This paper provides valuable insight into the usage of SNSs by a very important client group. Originality/value – This study is the first one of its kind conducted about the usage of SNSs by faculty members at a library school of one of the two public academic institutions in the state of Kuwait to examine and investigate more specific information about SNSs and related innovative topics.

Matusiak, K. K., L. Meng, et al. "**Multilingual metadata for cultural heritage materials: The case of the Tse-Tsung Chow Collection of Chinese Scrolls and Fan Paintings.**" *The Electronic Library* vol. 33, n. 1 (2015). pp. 136-151. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-08-2013-0141>

Purpose – The purpose of this paper is to explore multilingual access in digital libraries and to present a case study of creating bilingual metadata records for the Tse-Tsung Chow Collection of Chinese Scrolls and Fan Paintings. The project, undertaken at the University of Wisconsin-Milwaukee Libraries, provides access to digital copies of calligraphic and painted Chinese scrolls and fans from the collection donated by Prof

Tse-Tsung Chow (Cezong Zhou). Design/methodology/approach – This paper examines the current approaches to multilingual indexing and retrieval in digital collections and presents a model of creating bilingual parallel records that combines translation with controlled vocabulary mapping. Findings – Creating multilingual metadata records for cultural heritage materials is in an early phase of development. Bilingual metadata created through human translation and controlled vocabulary mapping represents one of the approaches to multilingual access in digital libraries. Multilingual indexing of collections of international origin addresses the linguistic needs of the target audience, connects the digitized objects to their respective cultures and contributes to richer descriptive records. The approach that relies on human translation and research can be undertaken in small-scale digitization projects of rare cultural heritage materials. Language and subject expertise are required to create bilingual metadata records. Research limitations/implications – This paper presents the results of a case study. The approach to multilingual access that involves research, and it relies on human translation that can only be undertaken in small-scale projects. Practical implications – This case study of creating parallel records with a combination of translation and vocabulary mapping can be useful for designing similar bilingual digital collections. Social implications – This paper also discusses the obligations of holding institutions in undertaking digital conversion of the cultural heritage materials that originated in other countries, especially in regard to providing metadata records that reflect the language of the originating community. Originality/value – The research and practice in multilingual indexing of cultural heritage materials are very limited. There are no standardized models of how to approach building multilingual digital collections. This case study presents a model of providing bilingual access and enhancing the intellectual control of cultural heritage collections.

Mohamed, K. A. and A. Hassan **"Evaluating federated search tools: usability and retrievability framework."** *The Electronic Library* vol. 33, n. 6 (2015). pp. 1079-1099. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-12-2013-0211>

Purpose – This study aims to explore a framework for evaluating and comparing two federated search tools (FSTs) using two different retrieval protocols: XML gateways and Z39.50. FSTs are meta-information retrieval systems developed to facilitate the searching of multiple resources through a single search box. FSTs allow searching of heterogeneous platforms, such as bibliographic and full-text databases, online public access catalogues, web search engines and open-access resources.

Design/methodology/approach – The proposed framework consists of three phases: the usability testing, retrievability performance assessment and overall comparison. The think-aloud protocol was implemented for usability testing and FSTs retrieval consistency, and precision tests were carried out to assess the retrievability performance for 20 real user queries. Findings – Participants were directed to assign weights for the interface usability and system retrievability importance as indicators for FST evaluation. Results indicated that FSTs retrievability performance was of more importance than the interface usability. Participants assigned an average weight of 62 per cent for the system retrievability and 38 per cent for interface usability. In terms of the usability test, there was no significant difference between the two FSTs, while minor differences were found regarding retrieval consistency and precision at 11-point cut-off recall. The overall evaluation showed that the FST based on the XML gateway rated slightly higher than the FST based on the Z39.50 protocol. Research limitations/implications – This empirical study faced several limitations. First, the lack of participants' familiarity with usability testing created the need for a deep awareness and rigorous supervision. Second, the difficulties of empirically assessing participants' perspectives and future attitudes called for mixing between a formal task and the think-aloud protocol for participants in a real environment. This has been a challenge that faced the collection of the usability data including user behaviour, expectations and other empirical data. Third, the differences between the two FSTs in terms of number of connectors and advanced search techniques required setting rigorous procedures for testing FSTs retrieval consistency and precision. Practical implications – This paper has practical implications in two dimensions. First, its results could be utilized by FST

developers to enhance their product's performance. Second, the framework could be used by librarians to evaluate FSTs performance and capabilities. The framework enables them to compare between library systems in general and FSTs in particular. In addition to these practical implications, the authors encourage researchers to use and enhance the proposed framework. Social implications – Librarians can use the proposed framework to empirically select an FST, involving users in the selection procedures of these information retrieval systems, so that it accords with users' perspectives and attitudes and serves the community better. Originality/value – The proposed framework could be considered a benchmark for FST evaluation.

Najafqolinejad, A. and M. Hassanzadeh **"National libraries and regional cooperations: a framework for ECO national libraries."** *The Electronic Library* vol. 34, n. 2 (2016). pp. 196-212. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-07-2014-0118>

Purpose – The purpose of this paper is to study the cultural integration, the role of national libraries in regional and international cooperation, Economic Cooperation Organization (ECO) national libraries' barriers of cooperation and drivers of their cooperation and to propose a framework (conceptual and operational) for their cooperation. Design/methodology/approach – Data collection tool of this survey was a researcher-made questionnaire, sent to 30 individuals and experts involved in cooperation of ECO National Libraries from eight institutions. The reliability of the questionnaire was calculated using Cronbach's alpha. It was 0.91. In this study, for awareness of activities between ECO national libraries and extraction of drivers, some documents were studied, and preliminary data were collected by informal interviews with meeting stakeholders and participants. Findings – The lack of stability in management positions was one of the major barriers in cooperation of the ECO national libraries. Other major obstacles in this context were lack of continuous communication, lack of common protocols and standards, lack of planning, lack of a central coordinating organization, bureaucracy, etc. Geographical proximity, common history and heritage, common resources, Islamic and cultural factors, importance of information and knowledge, requirements of the international system and political and security requirements were considered as drivers. An information centre was proposed for their active cooperation. Iran is better to host the information centre. Originality/value – National libraries as the scientific and cultural memory of nations and heirs of written heritage should cooperate and share their valuable scientific and cultural heritage to the future generations.

Nwagwu, W. E. and B. Famiyesin **"Acceptance of mobile advertising by consumers in public service institutions in Lagos, Nigeria."** *The Electronic Library* vol. 34, n. 2 (2016). pp. 265-288. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-09-2014-0169>

Purpose – The purpose of this paper is to investigate the acceptance of mobile advertising by consumers in public service institutions in Lagos Nigeria from the perspective of non-permission-based nature of advertising practice in Nigeria. Design/methodology/approach – Guided by the theory of reasoned action, data were collected from 389 respondents in a sample survey using a structured questionnaire, and the variables were measured on ordinal scale. Findings – The respondents reported that the mobile advertising is informative; they also strongly agreed that the media is ubiquitous but irritating. Attitude of consumers towards mobile advertising, behavioural control and subjective norm have correlations with acceptance. Irritation and informativeness significantly and positively predicted acceptance of mobile advertising, while credibility and ubiquity predicted acceptance of the technology negatively. Age has a negative relationship with acceptance; both gender (male = 1) and tertiary education have a significant relationship with acceptance of mobile advertising just as marital status. Research limitations/implications – The study focused only on public service mobile consumers in Lagos, Nigeria. Practical implications – Mobile adverts are ubiquitous in Nigeria, but consumers do not trust or use the adverts,

although they consider them informative. The telecom regulatory body needs to control deployment of mobile technologies for produce and service ads, so that ads will be subject to individual choices and discretion, and thereby reducing the ubiquity and increase the trust consumers have on the strategy. Social implications – There is hype that mobile advert has penetrated Nigerian market, but the strategy is not credulous to the people. Originality/value – There is no study focusing on the acceptance of this ad strategy in the public service sector in Nigeria.

Pant, A. "**Usability evaluation of an academic library website: Experience with the Central Science Library, University of Delhi.**" *The Electronic Library* vol. 33, n. 5 (2015). pp. 896-915. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-04-2014-0067>

Purpose – The paper aims to evaluate the usability of the website of Central Science Library (CSL), University of Delhi. Multi-method approach of evaluation is used with the use of standard checklist and questionnaire survey of representative users. Besides, the information architecture of the website under study is analysed in this paper. Design/methodology/approach – Based on the literature review and the author's experience, a usability assessment tool for library websites was developed by Pant (2013). It comprises standard checklist and questionnaire for users' survey. In the present study, this framework was used to assess the usability of CSL website. The questionnaire survey of 35 representative users was conducted through random sampling. The results of both methods (standard checklist and questionnaire survey) were analysed for evaluating the website usability. Findings – Need for improvement of the website was realised in terms of efficiency, effectiveness and learnability for better usability. Notice board, site search facility, list of services, FAQs and user guides were the most sought after features among others as per the analysis of the questionnaire survey. Besides, the need to enhance the visual appeal of the website was felt. However, information resources provided through the CSL website were found useful for users. Originality/value – The paper presents an innovative multi-method approach of website usability assessment while considering six usability attributes: Usefulness, Efficiency, Effectiveness, Learnability, Satisfaction and Accessibility. The approach adopted in this paper is cost effective in comparison to formal usability tests and heuristic evaluation. Therefore, this framework is suitable for libraries having limited budget to ensure the user-centred library website with maximum usability. This paper encourages other libraries to conduct similar website usability evaluation to identify the usability problem areas and users' perception for their respective website.

Park, E., J. Sung, et al. "**Reading experiences influencing the acceptance of e-book devices.**" *The Electronic Library* vol. 33, n. 1 (2015). pp. 120-135. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-05-2012-0045>

Purpose – This paper aims to explore users' perception of, and then intention toward using, e-book devices as new reading devices, based upon an integrated technology acceptance model (TAM), reading engagement based upon flow theory and readability. The recent introduction of e-book devices has drastically changed the way people access and use reading content. However, few studies have explored the impact of reading experience on acceptance of e-book devices. Design/methodology/approach – A total of 219 participants participated in a survey after using e-book devices to analyze the research model. Findings – This study confirmed the crucial roles played by viewing experience, perceived mobility, perceived behavioral control, skill and readability. Also perceived usefulness and text satisfaction were found to have a positive and significant association with acceptance of e-book devices. Research limitations/implications – Implications and suggestions for researchers and manufacturers are also addressed in the present study. Originality/value – The current study focused on how actual reading experiences using e-book devices influences acceptance of e-book devices, through the triangular integrated model of TAM, reading engagement and readability features, and investigating users' reading experience on the basis of responses to the characteristics of e-book devices.

Park, M. and T.-S. Lee "A longitudinal study of information needs and search behaviors in science and technology: A query analysis." *The Electronic Library* vol. 34, n. 1 (2016). pp. 83-98. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-04-2014-0058>

Purpose – This study aims at a longitudinal understanding of the user–system interactions from the context of science and technology at a query level.
Design/methodology/approach – The authors quantitatively analyzed log data sets culled from more than 24,820,416 queries submitted by users of a national scientific and technical information system, collected in 2008-2011. Findings – In the fields of science and technology, the user search behaviors and patterns have remained stable. User queries are short and simple. In all, 80 per cent of the queries are made up of one-three terms. The length of query on a scholarly information system in the fields of science and technology is different from that of Web search. The former is longer than the latter. Search topics have shifted fast. "FUEL BATTERY", "NANO", "OLED", "CAR", "ROBOT" and "SMARTPHONE" were high-ranked queries from 2008 to 2011. It was found that the time to determine whether the users will stay on the site took about 10 seconds on average from the time of visit. If the users viewed the results of a list generated by the search query and took any action, such as detailed view, export or full-text download, most of them stayed more than 10 minutes on average.
Originality/value – Longitudinal user research using a query analysis helps to understand the information needs and behavioral patterns of users on information systems related to a specific field and those based on the Web. It also brings insights into the past, present and future events of a field. In other words, it plays a role as a mirror that reflects the flow of time. In the long run, it will be an historic asset. In the future, user studies using a query analysis need to be carried out from various (e.g. social, cultural or other academic disciplines) long-term perspectives on a continuous basis.

Pournaghi, R. and F. Babalhavaeji "The factors and criteria for prioritization of GIS utilization by libraries." *The Electronic Library* vol. 33, n. 2 (2015). pp. 181-195. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-05-2013-0092>

Purpose – This paper aims to identify the impressive factors on choosing the type of the libraries and information centers and determining their significance and prioritizing them and finally determining the priority of each type according to the identified factors to implement geographic information system (GIS) in the library researches. Design/methodology/approach – A combination of documentary, Delphi and analytic methods was used in the current study. Due to the interdisciplinary nature of the topic in mind, different dimensions of the issue were firstly identified through reviewing the research literature. Then, the Delphi panel was formed and the factors and indices for choosing and prioritizing the libraries were extracted and finally the analytic-hierarchy and Topsis method was used for analyzing and ranking the data which were collected through a questionnaire. In this way, the instrument was devised by the researcher and the population under the study consisted of the professors in two fields of LIS and the GIS. The criteria include the "access to the library", "being active", "the number of sources", "the size and space of the place", "the library equipment", "compatibility" each one include eight, seven, five, five, two and five factors, respectively. Findings – In the Delphi study, six factors including 32 indices were determined for prioritizing the libraries to implement the GIS in the library researches. The analytic-hierarchy method was applied to compare the factors correspondingly in terms of the degree of their significance. In this way, "access to the library sources", "being active", "the number of sources", "the size and space of the place", "the library equipment" and "compatibility" were identified as the factors on choosing the library type with the values of 0.39, 0.24, 0.16, 0.08, 0.07 and 0.06, respectively. Then, several types of the libraries were ranked and the findings show that academic libraries are prioritized as the first one for conducting the GIS projects. Originality/value – Employing

the factors resulted from the conducted researches is recommended for choosing the libraries to implement the GIS, so that the researches in this interdisciplinary field become more organized. To extend the current study, the extracted factors and indices can be sent to the professors of the LIS from the other countries to elicit their insights and thereby, designing a standard international checklist for choosing the libraries and information centers in the GIS projects.

Qasim, J. and A. M. Khan **"Use of e-journals by the scientists of CSIR-Institute of Genomics and Integrative Biology (IGIB), Delhi, India: A study."** *The Electronic Library* vol. 33, n. 5 (2015). pp. 928-942. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-07-2014-0107>

Purpose – The purpose of this paper is to analyze the use of electronic journals (e-journals) by the scientists of Council of Scientific and Industrial Research-Institute of Genomics and Integrative Biology (CSIR-IGIB) – a center of excellence in the field of genomics and integrative biology situated in Delhi, India. **Design/methodology/approach** – The paper is based on the results of a well-structured questionnaire administered to all the scientists of the institute for the purpose of data collection. **Findings** – The main findings are that the scientists are more attracted toward e-journals specially on those provided by CSIR-NISCAIR Consortia, NKRC than those available via direct subscription. From this survey, the investigator has been able to find out that almost all the scientists are consulting e-journals from their campus cabin, not only for research purposes but also to update their own knowledge. The infrastructure to use e-journals are superb and there is no technological problem specially hardware and software support with high bandwidth of Internet speed exists here, as CSIR-IGIB uses largest computing facility (four Tflop/s) in Asia outside Japan (ranked 158th among the World's Top 500 Super Computers). Respondents also identified that there is dire need for training in using e-resources and retrieving pinpointed information from the databases. **Research limitations/implications** – The present paper consists only of scientists and the geographical area is restricted to CSIR-IGIB, Delhi. The scope of the paper can be extended to additional CSIR libraries. A comparative study can also be made among some biological research libraries of CSIR Institutes. **Originality/value** – There are a number of studies on the use of e-journals by CSIR scientists, but this is the first of its kind which covers scientists of IGIB that has the largest computing facility (four Tflop/s) in Asia outside Japan. As such, it should pave the way for research and lead a model role for other CSIR Institutes as well as elsewhere.

Rajgoli, I. U. and A. Laxminarsaiah **"Authorship pattern and collaborative research in the field of spacecraft technology."** *The Electronic Library* vol. 33, n. 4 (2015). pp. 625-642. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-12-2013-0210>

Purpose – The purpose of this paper is to study and analyse the authorship pattern, degree of collaboration, prepare list of prolific authors and test Lotka's law of scientific productivity in spacecraft technology research. **Design/methodology/approach** – Data are collected from the print versions of three journals in the field of spacecraft technology for the period 2001-2011. In all 154 volumes containing 1,907 papers have been analysed, and data are presented in different table headings. **Findings** – Study reveals that 4,355 authors have contributed 1,907 papers. Journal of Spacecraft and Rockets has published maximum (1,487) number of papers during the study period. Multi-authored papers with 87.15 per cent of contributions have dominated this field of research. Journal of Spacecraft Technology has recorded highest degree of collaboration of 0.90. James M. Longuski has published 20 papers in Journal of Spacecraft and Rockets during the period 2001-2011. Lotka's law of scientific productivity is tested and conforms only partially. **Research limitations/implications** – Study is restricted only for the period 2001-2011, and the data are collected from the print versions of three journals in the field of spacecraft technology research. **Originality/value** – As far as space science and technology is concerned, there are not many bibliometric studies reported in the published literature. The present study will add

value to the bibliometrics literature and provide publishing trends in spacecraft technology research.

Renaud, J., S. Britton, et al. **"Mining library and university data to understand library use patterns."** *The Electronic Library* vol. 33, n. 3 (2015). pp. 355-372. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-07-2013-0136>

Purpose – Library data are often hard to analyze because these data come from unconnected sources, and the data sets can be very large. Furthermore, the desire to protect user privacy has prevented the retention of data that could be used to correlate library data to non-library data. The research team used data mining to determine library use patterns and to determine whether library use correlated to students' grade point average. Design/methodology/approach – A research team collected and analyzed data from the libraries, registrar and human resources. All data sets were uploaded into a single, secure data warehouse, allowing them to be analyzed and correlated. Findings – The analysis revealed patterns of library use by academic department, patterns of book use over 20 years and correlations between library use and grade point average. Research limitations/implications – Analysis of more narrowly defined user populations and collections will help develop targeted outreach efforts and manage the print collections. The data used are from one university; therefore, similar research is needed at other institutions to determine whether these findings are generalizable. Practical implications – The unexpected use of the central library by those affiliated with law resulted in cross-education of law and central library staff. Management of the print collections and user outreach efforts will reflect more nuanced selection of subject areas and departments. Originality/value – A model is suggested for campus partnerships that enables data mining of sensitive library and campus information.

Rodríguez, R. A. M. and M. O. M. Rivero **"Information skills training through mobile devices: Practical applications of QR codes in academic libraries."** *The Electronic Library* vol. 34, n. 1 (2016). pp. 116-131. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-04-2014-0061>

Purpose – This paper aims to examine the use of different mobile devices by libraries to develop programs for information skills training, focusing on the application of quick response (QR) codes for such a purpose. Design/methodology/approach – The study was developed in two stages; primarily an analysis of the literature was conducted to determine the theoretical framework underlying the use of this tool for information literacy. The second part examined the practical application of this tool, with examples of several university libraries. In all, 13 academic libraries were included as the sample, which were chosen randomly from a global search on the Internet under the thematic basis for the theme of the study and thus evaluate the different employment opportunities of mobile telephony in developing skills information on users. The study is complemented with an assessment from the practice of the applicability of the principles described, arriving at conclusions and recommendations. Findings – The purpose of the study is to recognize the use given to mobile technologies from libraries, particularly the use of QR codes, to help meet the demands of users in relation to skills training information, just as you may have the need. Originality/value – The benefits of the use of mobile devices for the development of information literacy actions are identified and the set of actions that can be implemented for training information skills through the use of QR codes are set based on all outlined by the Association of College and Research Libraries goals.

Rudman, R. and R. Bruwer **"Defining Web 3.0: opportunities and challenges."** *The Electronic Library* vol. 34, n. 1 (2016). pp. 132-154. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-08-2014-0140>

Purpose – The purpose of this study is to define Web 3.0 and discuss the underlying technologies, identify new opportunities and highlight potential challenges that are associated with the evolution to Web 3.0 technologies.

Design/methodology/approach – A non-empirical study reviewing papers published in accredited research journals, articles and whitepapers and websites was conducted. To add scientific rigour to a literature review, a four-stage approach, as suggested by Sylvester et al. (2011), was used.

Findings – The World Wide Web (henceforth referred to as the Web) is recognised as the fastest growing publication medium of all time. To stay competitive, it is crucial to stay up to date with technological trends. The Web matures in its own unique way. From the static informative characteristics of Web 1.0, it progressed into the interactive experience Web 2.0 provides. The next phase of Web evolution, Web 3.0, is already in progress. Web 3.0 entails an integrated Web experience where the machine will be able to understand and catalogue data in a manner similar to humans. This will facilitate a world wide data warehouse where any format of data can be shared and understood by any device over any network. The evolution of the Web will bring forth new opportunities and challenges. Opportunities identified can mainly be characterised as the autonomous integration of data and services which increase the pre-existing capabilities of Web services, as well as the creation of new functionalities. The challenges mainly concern unauthorised access and manipulation of data, autonomous initiation of actions and the development of harmful scripts and languages.

Practical implications – The findings will assist data managers to identify future opportunities while considering negative impacts and understanding the underlying technologies associated with the structure and storage of electronic information. The research will assist anyone in the data and information management industry to identify opportunities and mitigate risk.

Originality/value – Many organisations were caught off guard by the evolution of the Web to Web 2.0. Organisations, and in particular anyone in the data and information management industry, need to be ready and acquire knowledge about the opportunities and challenges arising from Web 3.0 technologies.

Sarkar, T. D. **"The prevalence of web browser extensions use in library services: an exploratory study."** *The Electronic Library* vol. 33, n. 3 (2015). pp. 334-354. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-04-2013-0063>

Purpose – The paper aims to present an outline how libraries are harnessing browser extensions to provide an easy and convenient access to library resources and services. Investigating the features, purposes of use and types of browser extensions prevalent among libraries in different regions, the paper seeks to measure the degree of implementation of browser extensions.

Design/methodology/approach – Stratified sampling method was followed to select academic libraries, and convenient sampling method was applied to select public libraries from four continents – Asia, Oceania, Europe and North America. Two-step web content analysis was applied to gather data along the select dimensions.

Findings – The study contributes to the recent advances in application of browser extension with numerous examples focussing on the relevance of different approaches adopted by the libraries. Providing a framework of proportionate implementation along checkpoints, the study also highlights degree of acceptance of browser extension among libraries in different regions.

Research limitations/implications – The investigation was restricted to libraries having English websites and confined to four continents only. This study aims at improving understanding among the librarians about the intended use and application of browser extension and helping them benchmark their effort in support of education, research and training. The current investigation expands the scope of future research on remaining regions and website whose contents are in non-English language to attain a broader perspective of its implementation.

Originality/value – The article may guide library professionals to use, develop and promote the implementation of browser extension in libraries. The checkpoints used here may serve as bedrock for framing questionnaire and interview schedule for conducting future research examining users' perception of browser extension in the context of library resources and usage pattern, to fully comprehend its practicability and usefulness.

Sharma, G. and W. Lijuan **"The effects of online service quality of e-commerce Websites on user satisfaction."** *The Electronic Library* vol. 33, n. 3 (2015). pp. 468-485. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-10-2013-0193>

Purpose – The purpose of this paper is to investigate service quality of e-commerce Websites in online platform and their contribution on e-business promotion. Design/methodology/approach – The online survey was performed on a survey portal provided by Nepal Telecom in Nepal. Findings – The findings of this study suggest that information quality and online service quality were the key determinants for user satisfaction and sustainability of e-commerce technology. Research limitations/implications – Research opportunities of web services and e-commerce area are fruitful and important for both academics and practitioners. Practical implications – The findings on online service quality of e-commerce technology will be useful for current management practice such as making business policies and strategies and sharing information to managers and organization leaders. This study can be used for e-commerce Website operators wishing to enhance the competitiveness of their Websites in the highly competitive online market. Originality/value – E-commerce is considered an excellent alternative for individuals and companies to reach new customers. Service quality delivery through Internet is an essential strategy to success, more important than price and web presence. The e-commerce Website has been identified as having a significant impact on business activities in solving the geographical problem. A number of performance problems have been observed for e-commerce Websites, and much work has gone into characterizing the performance of web-servers and Internet applications.

Shehata, A., D. Ellis, et al. **"Scholarly communication trends in the digital age: Informal scholarly publishing and dissemination, a grounded theory approach."** *The Electronic Library* vol. 33, n. 6 (2015). pp. 1150-1162. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-09-2014-0160>

Purpose – The purpose of this paper is to investigate scholars' attitudes toward informal publishing and dissemination to provide a view of the challenges and advantages of using such channels. Although considerable research has been carried out in relation to peer-reviewed scholarly publishing, relatively few studies have investigated the adoption of informal scholarly communication platforms in the scholarly publishing process. Design/methodology/approach – The paper deployed a grounded theory approach using semi-structured interviews as a qualitative research tool. A theoretical sample of 40 researchers in 4 universities were interviewed to gather data regarding informal publishing, platforms, factors that affect the researchers' decision and the use of informal channels in dissemination. Findings – Results of the interviews suggest that there is an increasing trend among researchers toward informal publishing and dissemination throughout the scholarly communication cycle. The paper shows that there are three types of scholars who are involved in the scholarly communication process: conventional, modern and liberal scholars. Each of these scholars carries different beliefs regarding the scholarly communication process. Research limitations/implications – This paper was conducted on a relatively small sample of academic researchers, and therefore, the results cannot be easily generalized into a wider community of scholars. Originality/value – The paper provides insight into informal scholarly publishing practices using a grounded theory approach. This approach helped to capture the changes in both scholarly publishing practices and the adoption of informal techniques among the scholarly community.

Si, L., W. Xing, et al. **"Investigation and analysis of research data services in university libraries."** *The Electronic Library* vol. 33, n. 3 (2015). pp. 417-449. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-07-2013-0130>

Purpose – This paper aims to find the current situation of research data services by academic libraries and summarize some strategies for university libraries to reference. Recent years have seen an increasing number of university libraries extended their traditional roles and provided research data services.

Design/methodology/approach – This paper selected 87 libraries of the top 100 universities listed in the World's Best Universities released by the USA News in October 2012 as samples and conducted a Web site investigation to check if there were any research data services provided. In addition, it made an interview with the Wuhan University Library's Research Data Service Workgroup to understand the procedure, difficulties and experiences of their research data service. Based on the survey and interview, it analyzed the current status and difficulties of research data services in university libraries and proposed some strategies for others to reference. **Findings** – Of the 87 university libraries investigated, 50 libraries have offered research data services. Most of the services can be divided into six aspects: research data introduction, data management guideline, data curation and storage service, data management training, data management reference and resource recommendation. Among these services, research data introduction is the most frequently provided (47.13 per cent), followed by data curation and storage services (43.68 per cent), data management guideline (42.53 per cent), data management reference (41.38 per cent), resource recommendation (41.38 per cent) and data management training (24.14 per cent). The difficulties met by research data service of Chinese academic libraries are also concluded.

Originality/value – Through Web site investigation and interview with the Wuhan University Library's Research Data Service, this paper presented an overall picture of research data services in university libraries and identified the difficulties and experiences of research data services of the Wuhan University Library. Based on some successful examples, it put forward some strategies for university libraries to reference. This study is very useful for academic libraries to promote their research data services.

Singh, K. P. and M. S. Gill **"Role and users' approach to social networking sites (SNSs): a study of universities of North India."** *The Electronic Library* vol. 33, n. 1 (2015). pp. 19-34. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-12-2012-0165>

Purpose – The purpose of this paper is to evaluate and assess the awareness and extent of the use of social networking sites (SNSs) by the students and research scholars of universities of North India. **Design/methodology/approach** – The study is a questionnaire-based survey on the usage of SNSs among the students and research scholars of the universities of North India. The data of the study were collected through questionnaires, which were personally distributed to the identified population, i.e. undergraduate students, postgraduate students and research scholars, by the authors. The survey was based on a sample of 610 questionnaires; of which, 486 questionnaires were received, having a response rate of 79.67 per cent. **Findings** – The study showed that all the respondents were found to be aware of and making use of such applications in their academic affairs. It was revealed from the study that Facebook is the most popular SNS by all categories of respondents. To determine the purpose of SNSs, it emerged that SNSs are mostly used for entertainment and communication. The study also found that the majority of respondents were aware about the security aspects of SNSs. It signifies that excessive time consumption and fear of misusing personal information were the major hurdles in the way of accessing SNSs. **Research limitations/implications** – The study covers the students and research scholars of select universities of North India. It also signifies the use of SNSs in their research and academic environment. **Originality/value** – The paper provides reliable and authentic data. The study is worth, justifiable and enlightens the salient findings on the topic, which will be very useful for researchers in this area.

Taram, K. and A. Douhani **"A webometric analysis of major keywords and expressions in biochemistry using LexiURL Searcher."** *The Electronic Library* vol. 33, n. 6 (2015). pp. 1163-1173. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-03-2014-0054>

Purpose – The purpose of this paper is to explore webometric analysis of keywords and expressions of the biochemistry field of study via LexiURL Searcher. Design/methodology/approach – Interfaces for assisting users with information access have received considerable attention. Along with the extraction of data on Web sites for webometric purposes (e.g. link analysis, ranking of Web sites, etc.), LexiURL Searcher presents some information on the arrangement of links among different Web sites. Such capability enables users to identify one or more Web sites around their intended subject and, accordingly, explore all Web sites linked with their identified Web site(s). LexiURL Searcher has preceded webometric analysis by considering the main expressions and keywords derived from the MeSH database. Findings – The worldwide survey indicated that links from countries such as England, Japan, Germany, Australia and Canada were among the Web sites that are most used in biochemistry. Alternatively, other countries such as Singapore, Thailand and Poland had the most advantageous links to the outside world, whereas South Africa, New Zealand and The Netherlands had the least link effect. Biochemistry, being a specialized domain, would benefit greatly from site linking and would provide users the most assistance in information processing. Originality/value – Most webometric studies remain on the level of link analysis and Web site statuses; however, this paper gives information on the common thread Web sites based on a standard thesaurus.

Trachtengerts, M., A. Erkimbaev, et al. **"Using a digital library instead of a traditional database: ABCD-based infrastructure for nanotechnology."** *The Electronic Library* vol. 33, n. 5 (2015). pp. 916-927. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-08-2014-0136>

Purpose – The purpose of this paper is to reveal main advantages of digital libraries in comparison with technology of common database for data-oriented fields of modern science. As an example, the subject domain "nanomaterials and nanotechnologies" with new features due to evolution of concepts and objects is presented. Design/methodology/approach – An analysis of the information system ABCD as a basis for science-oriented digital library was fulfilled. Also, a survey of peculiarities of data in fast developing fields of science was prepared. Findings – The results of this paper showed that functional capacities of ABCD satisfy requirements for complex collections and archives of scientific documents. Based on the ABCD tools and this concept, the digital library for storage and systematization of data and documents on nanomaterials and nanotechnologies for the power engineering was constructed. The library combines opportunities of bibliographic, full text and factual information systems. Originality/value – This paper gives the foundation for creation of a library that combines services of bibliographic, full text and factual (numerical) information systems. Some analyses of ABCD tools were made before elsewhere, but they did not point on data peculiarities of complexly organized domains: semi-structured data, multitude formats (text, image and tables), interconnection of content with external sources located on other servers or in the Web.

Tsai, C.-F., S.-W. Ke, et al. **"LocalContent: a personal scientific document retrieval system."** *The Electronic Library* vol. 33, n. 3 (2015). pp. 373-385. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-08-2013-0148>

Purpose – The purpose of this paper is to introduce a novel personal scientific document retrieval system. The most common approach taken for the storage of personal documents is to construct a hierarchical folder structure. Most users prefer searching for documents by manually traversing their organizational hierarchy until reaching the location where the target item is stored, then locating the specific documents within its directory or folder. However, this is very time-consuming, especially when the number of personal scientific documents is very large. Unfortunately, related personal information management (PIM) systems, which provide solutions for managing various types of personal information, have thus far made little

progress at managing personal scientific documents. Design/methodology/approach – In this paper, we introduce the design of a personal scientific document retrieval system, namely, LocalContent. It is composed of database indexing and retrieval stages. During indexing, term feature extraction from scientific documents is performed by the natural language processing technique. The extracted terms are stored in the inverted index for later retrieval. For retrieval, a graphical user interface is provided by LocalContent, which allows users to search their personal scientific documents. Findings – The evaluation results based on 20 different personal archives taken from 20 graduate students show that LocalContent is simple to use and can facilitate the search for relevant scientific documents. Moreover, these users were willing to have a system which provides specialized search functions like LocalContent to explore their personal scientific documents in the future. Originality/value – LocalContent is a novel scientific document retrieval system and provides several particular functions of LocalContent including displaying the content summary of the query term frequency in each specific section of the retrieved documents, querying by local section specification and providing a number of recommended keywords related to the query terms.

Ukachi, N. B. **"Information literacy of students as a correlate of their use of electronic resources in university libraries in Nigeria."** *The Electronic Library* vol. 33, n. 3 (2015). pp. 486-501. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-05-2013-0085>

Purpose – The purpose of this paper is to determine the relationship existing between undergraduate students' information literacy skills and their use of electronic resources (ERs) located in university libraries in Nigeria. Design/methodology/approach – The descriptive design was adopted for the research questions, while the correlational design was adopted for the hypothesis. The purposive sampling technique was also adopted in selecting 12 university libraries which the preliminary study had revealed that they have Internet access and also subscribe to ERs in the south-west geopolitical zone in Nigeria. Questionnaire and oral interview were used for data collection. The population size consists of all the 36,116 library-registered undergraduate students in the 12 universities, while the sample size is 1,806 (5 per cent of the population) and the 12 librarians heading the ERs sections of the libraries. Findings – The findings revealed that ERs are not adequately utilized, undergraduate students do not possess adequate information literacy skills necessary for optimal utilization of the libraries' ERs and strong positive correlation between level of undergraduate students' information literacy skill and their use of ERs provided in the library. Practical implications – This paper provides practical insights into the impact of possessing inadequate information literacy skills on the use of ERs. Originality/value – This paper is the first to relate undergraduate students' information literacy skills and their use of libraries' ERs in south-western zone of Nigeria.

Vassilakaki, E. and E. Garoufallou **"The impact of Twitter on libraries: a critical review of the literature."** *The Electronic Library* vol. 33, n. 4 (2015). pp. 795-809. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-03-2014-0051>

Purpose – The paper aims to present a critical review on the adoption and use of Twitter in libraries. Twitter, a microblogging service, is becoming more and more popular among libraries as a means of reaching users and as a marketing tool for their services. Design/methodology/approach – The method of systematic review is used to identify, collect and critically present all relevant literature. Papers' aims were analyzed to identify the emergent themes and sub-themes in an effort to gain a better understanding of libraries' use of Twitter. Findings – A systematic and critical analysis of the literature revealed the specific reasons why a library should adopt Twitter; the specific examples and thoughts on how Twitter could be used to promote libraries' interests; the different ways Twitter had affected diverse aspects and functionalities of libraries; and the attempts to provide guidelines for librarians. Research limitations/implications – This literature review has implications for research in that

libraries could explore the way public view their presence on social networking sites such as Twitter to better gain from it. In addition, it indicates what libraries should expect when they adopt Twitter. This study reviews only papers published between 2007 and 2013 in the English language. Originality/value – This paper contributes in identifying, collecting, analyzing and critically presenting published research referring to the adoption of Twitter in the field of Library Science. In addition, it identifies and discusses the main issues librarians and libraries need to consider, when faced with the challenge of adopting Twitter.

Wijayaratne, A. L. and D. Singh **"Developing an academic library website model, a designer's checklist, and an evaluative instrument: A Delphi method approach."** *The Electronic Library* vol. 33, n. 1 (2015). pp. 35-51. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-11-2012-0115>

Purpose – The purpose of this paper is to introduce a library website model. Further, the paper discusses a designer's checklist and an evaluative instrument that were constructed based on the proposed model. Design/methodology/approach – The model was developed through a Delphi study that was participated by two panels of experts. The researcher communicated with the panel members via e-mail using two Delphi instruments designed out of two item pools that were developed based on the knowledge gained from surveying the literature, visiting the selected libraries and exploring the library websites. Then, a designer's checklist and an evaluative instrument were derived from the proposed model through a series of brainstorming sessions. Findings – The proposed model consisted of altogether 140 items (60 web content elements and 80 web design features). The designer's checklist comprises all 140 items, and the evaluative instrument comprises 60 content elements and 57 design features. Research limitations/implications – This study has developed an academic library website model and derived two instruments based on the proposed model. Further studies are needed to customize, particularly, the web content pillar of this conceptual model, to meet the specific needs of different types of libraries including public libraries, special libraries, school libraries, etc. Practical implications – The designer's checklist and the evaluative instrument derived from the proposed model are useful tools for library professionals in designing, re-designing, maintaining and evaluating their library websites. The librarians may use these tools for both institutional and research purposes. Originality/value – The model and the two instruments proposed by this study are unique in focus, origin, content and presentation.

Wilson, D. E. **"Web content and design trends of Alabama academic libraries."** *The Electronic Library* vol. 33, n. 1 (2015). pp. 88-102. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-05-2013-0100>

Purpose – This paper aims to evaluate the website content of Alabama academic libraries to examine their services, content and compliance with design and accessibility standards. Design/methodology/approach – A content analysis was conducted on 24 academic library websites discovered through Jeanne Burke's Higher Education Directory and the Alabama Colleges directory website. All data were collected within a month. Findings – Study data revealed that while academic libraries are offering more online services, many continue to lack certain services or fail to implement basic web design and accessibility standards. Research limitations/implications – Inclusion into the study was limited to the independent library websites of Alabama institutions offering four-year degree courses and content data discoverable within three clicks of the home page. Future studies might identify why certain libraries lack reference chat services, social media accounts and/or certain accessibility accommodations. Additional research might evaluate multilingual websites and their methods for providing language options. Practical implications – The results of this study should assist in the evaluation of library websites and increase awareness of design and accessibility standards, enabling designers and policy makers to improve upon future website designs. Originality/value – This study presents a depth of

evaluation and currency unseen in most web content analyses. The extent of this study should provide librarians, web designers, and library policy makers with a suitable comparison for website projects and evaluations.

Wu, B. and C. Zhang **"Trust evaluation for inter-organization knowledge sharing via the e-learning community."** *The Electronic Library* vol. 33, n. 3 (2015). pp. 400-416. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-08-2013-0140>

Purpose – The purpose of this study is to design a trust-based knowledge-sharing framework based on the characteristics of the e-learning community. Design/methodology/approach – The interaction network is constructed to illustrate the relationships between knowledge-sharing agents and objects. Then, a trust evaluation method for knowledge sharing is proposed based on identified agent types and object types. Three sub-methods are included in the model to provide the trust-level references between agents. Findings – This study develops strategies based on proposed diagnosis framework to improve the willingness of knowledge sharing in the e-learning community. Finally, the authors apply the proposed diagnosis framework to a case study in China to propose strategies for the development of inter-organization knowledge sharing via e-learning community. Originality/value – Previous research on e-learning community strategies has generally suggested broad guidelines without diagnosing the current trust status. The purpose of this study is to design a trust-based knowledge-sharing framework based on the characteristics of the e-learning community.

Wu, D., X. Xu, et al. **"Comparing collaborative annotations on books between libraries and social community sites: A case study."** *The Electronic Library* vol. 34, n. 2 (2016). pp. 178-195. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-09-2014-0171>

Purpose – Based on the study of overall situation of the tagging function in the provincial public libraries and library of major colleges and universities, this paper aims to examine the difference of tagging behaviour of its users in library and social community sites. The authors also want to understand the causes of a variety of annotation behavior in social community sites and libraries. Design/methodology/approach – The authors collected all system log data of tags, comments and ratings users added in Wuhan University library, and then found the tags, comments and rating of corresponding books in Douban. Then, the authors did questionnaire survey to the Wuhan University students. Findings – The authors found that the annotation service in the library is not perfect as that in social community site. Enthusiasm of users annotating books in the library is far less high than that on the social community sites. Lack of understanding of the annotation service is the main reason why users are not concerned or do not use the tagging service. But users have the needs of the organization of personal information in the library using tags. Originality/value – This paper investigated the library users' behavior in the using library OPAC course and compared the difference of annotation behavior between library and social community site.

Xinli, H. **"Effectiveness of information technology in reducing corruption in China: A validation of the DeLone and McLean information systems success model."** *The Electronic Library* vol. 33, n. 1 (2015). pp. 52-64. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-11-2012-0148>

Purpose – The purpose of this paper is to examine the effectiveness of information technology in reducing corruption in China. Meanwhile this paper explores whether electronic monitoring systems (EMS) can be evaluated in terms of the DeLone and McLean information systems (IS) success model. Design/methodology/approach – The status of the EMS in five cities is first proposed, and then a model of e-government

system success is designed to evaluate the EMS. Data are obtained from 387 civil servants in the supervision agencies. Then the effectiveness of EMS in reducing corruption is deeply assessed, and the DeLone and McLean IS success model is validated. Findings – The findings show that the application of EMS has a positive effect on reducing corruption. IT thus has the potential to reduce corruption, but the institution and the people are more important. Originality/value – Although many theories about reducing corruption have been proposed, the EMS application in reducing corruption has seldom been addressed. This study is the first, to the author's knowledge, to examine EMS and corruption reduction from the point of view of the IS success model.

Xu, H. **"Factors affecting faculty use of learning object repositories."** *The Electronic Library* vol. 33, n. 6 (2015). pp. 1065-1078. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-07-2014-0108>

Purpose – The purpose of this study was to identify factors that motivate or impede faculty use of learning object repositories (LORs). The unified theory of acceptance and use of technology (UTAUT) served as the theoretical framework for this study. Design/methodology/approach – The study used both quantitative and qualitative approaches to explore two research questions relating to factors affecting faculty use of LORs. Research subjects were faculty users in two- or four-year colleges or universities from two LORs: Orange Grove and Wisconsin Online Resource Center (Wisc-Online). Two phases of the study were conducted. Phase I of the study collected data by semi-structured interviews, and data were analyzed by a content analysis method. Based on the results of Phase I, Phase II collected data by a survey instrument, and data were analyzed by descriptive statistics and analysis of variance. Findings – The study identified 22 factors as motivators for faculty use of LORs and 13 factors as barriers for faculty use of LORs. Research limitations/implications – The research policies of Orange Grove and Wisc-Online limited the selection of study participants. Lack of a random sample and a small sample size limited the generalizability of the results and findings of the study. However, as an exploratory research, the results and findings of the study are still valuable for LOR builders and managers to get a better understanding of factors affecting faculty use of LORs, and to develop strategies to recruit more faculty members to use LORs. Practical implications – The findings and results of the study can inform designers and managers of LORs about what positively or negatively influences faculty use of LORs, and serve as a basis to develop strategies to recruit faculty members to use LORs. Originality/value – First, this study identified the factors that motivate or impede faculty use of LORs from actual faculty users' perspectives, so these factors more accurately reflect LORs' values to faculty in teaching and course design and the barriers for faculty use of LORs in a practical environment. Second, this study is among the first known to explore these factors using UTAUT as the theoretical framework, and the results of the study also validate UTAUT in the context of faculty use of LORs.

Yaminfirooz, M. and H. Gholinia **"Multiple h-index: a new scientometric indicator."** *The Electronic Library* vol. 33, n. 3 (2015). pp. 547-556. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-07-2013-0137>

Purpose – This paper aims to evaluate some of the known scientific indexes by using virtual data and proposes a new index, named multiple h-index (mh-index), for removing the limits of these variants. Design/methodology/approach – Citation report for 40 researchers in Babol, Iran, was extracted from the Web of Science and entered in a checklist together with their scientific lifetimes and published ages of their papers. Some statistical analyses, especially exploratory factor analysis (EFA) and structural correlations, were done in SPSS 19. Findings – EFA revealed three factors with eigenvalues greater than 1 and explained variance of over 96 per cent in the studied indexes, including the mh-index. Factors 1, 2 and 3 explained 44.38, 28.19 and 23.48 of the variance in the correlation coefficient matrix, respectively. The m-index (with coefficient of 90 per cent) in Factor 1, a-index (with coefficient of 91 per cent) in Factor

2 and h- and h2-indexes (with coefficients of 93 per cent) in Factor 3 had the highest factor loadings. Correlation coefficients and related comparative diagrams showed that the mh-index is more accurate than the other nine variants in differentiating the scientific impact of researchers with the same h-index. Originality/value – As the studied variants could not satisfy all limits of the h-index, scientific society needs an index which accurately evaluates individual researcher's scientific output. As the mh-index has some advantages over the other studied variants, it can be an appropriate alternative for them.

Yaminfirooz, M., F. Nooshinfard, et al. **"Structural equation model of organizational climate in Iranian academic libraries."** *The Electronic Library* vol. 33, n. 5 (2015). pp. 943-958. <http://www.emeraldinsight.com/doi/abs/10.1108/EL-05-2014-0076>

Purpose – The purpose of this paper is to evaluate the status of organizational climate of Iranian academic libraries and map its structural equation model. **Organizational climate** is one of the main indicators of organizational health and dynamic. **Design/methodology/approach** – This research was an applied survey. The statistical population of the research included all staff working in 96 central libraries of Iranian governmental universities (N = 520). A self-administered questionnaire was used for data collection. Some descriptive and inferential statistical methods applied for data analysis in SPSS and factor analysis in LISREL software were used for modelling organizational climates in the libraries. **Findings** – The t values of factor analysis pass showed that the effect of all indicators of ClimateQUAL on organizational climate was significant. The factor loading of the pass model showed that among the nine indicators, climate for psychological safety with 5.24, climate for innovation with 5.06 and climate for leadership with 4.93 had a higher effect on organizational climate of the libraries. Considering the values of goodness-of-fit indicators, the path model has an optimal status in all indicators, but that of RMSEA in which the status is relatively acceptable. The observed data relatively matched the theoretical model. **Originality/value** – The t values of factor analysis pass showed that the effect of all indicators of ClimateQUAL on organizational climate was significant. The factor loading of the pass model showed that among the nine indicators, climate for psychological security with 5.24, climate for innovation with 5.06 and climate for leadership with 4.93 had a higher effect on organizational climate of the libraries. Considering the values of goodness-of-fit indicators, the path model has an optimal status in all indicators, except the RMSEA in which the status is relatively acceptable. The observed data relatively matched the theoretical model.

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