Lacunae existing in licensing and pricing models of electronic resource

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The paper aims to explore and identify the recent contributions to the literature available in the current developments and issues in licensing and pricing models in e-resources. An extensive literature survey was performed in an attempt to identify substantial works published to date concerning pricing and licensing issues coupled with the publishers and librarians. The literature review connotes that hardly any systematic study or scholarly output which can facilitate the precise and accurate facts about pricing and licensing issues coupled with the publishers and librarians is available, although the size of the scholarly publishing industry and its effect on the cost and licensing of e-resource is quite large. It is evident from the scrutiny of literature existing that there are still areas for advanced exploration on the topic of pricing and licensing concerns of the scholarly publishing industry; and study paves the way for the concerned organizations and institutions (such as Libraries and Publishers), at global level, to take substantial measures to overcome monopoly effects from the publishers and come up with the standard models. The study is very helpful for librarians or authorities in selecting the best available e-journal package for their libraries. The paper is the first ordered and thorough attempt to review the literature and provide that there is not any standard pricing model available for e-resource subscription in the market to control the monopoly of publishers and aggregators.

Key words: Pricing, e-resources, pay per article, big deal, print, publishers, vendors.

INTRODUCTION

Electronic resources represent an increasingly important component of the collection building activities of libraries. “Electronic resources” refer to those materials that require computer access, whether through a personal computer, mainframe, or handheld mobile device. The globalization of education and multi-directional research output constantly vanish the borders between different disciplines. In fact, discrete boundaries no longer exist between the disciplines. Therefore, the new paradigm for ‘seamless integration of disciplines’ posed the multidisciplinary research opportunities, results a great demand for scholarly communications. Due to financial constraints, increasing cost of print documents, storage problem and publication of larger number of journals, It is not possible for one library or information centres to hold the full stock of information resources or to procure all information, which may be in demand by its clientele. Even not a single library or information center can meet...
the thrust of knowledge of all the readers from its holdings.

To solve this problem, library cooperation started long ago, such as interlibrary loan, document delivery, library networks, etc. At present, the more accepted system of resource sharing is called library consortia. Consortia are the means to have an effective negotiation enhancing buying power at reduced rates for access to electronic resources and provide expanded access to electronic products. Due to different pricing models, each year the library survives but does not succeed to meets its obligations. In effect, each library meets its mission just a little less effectively than the previous year due to increase in costs and reduced library budgets. In order to succeed in our mission we need to have a new set of pricing models taking advantage of new technologies, ever emerging e-products and collective buying power of the consortium. The price variations depend upon various factors (King and Alvarado-Albertorio, 2008) such as:

1. Strength of sale of e-journals
2. Size of the journal frequency, number of articles
3. Content other than articles
4. Special graphics
5. Rejection rates and other content quality considerations
6. Additional revenue sources to publishers, such as author page charges, advertising, tax relief, subsidy from parent organization, etc.

Since 2000, the scope of electronic resources has broadened beyond current journals to include journal archives, reference and e-books (monographs). The range of business models has grown to provide libraries with both purchase and subscription options for such products. Library consortia have become a normal - and significant - part of the business of licensing electronic resources. PEAK (Pricing Electronic Access to knowledge) is exploring several pricing dimensions, including different product bundle as well as nonlinear pricing opportunities offered by electronic access. While traditional journals have familiar bundling conventions, electronic access allows us to conceive of new types of bundles and pricing options for those bundles.

**Per article** – unlimited access by individual users to specific articles purchased at a fixed price.

**Title-by-Title Subscription Model:** The practice followed in most of the libraries to subscribe print journals. The only concession library may get by this model is the special rates if one subscribes few (Physical Reviews package from American Physical Society/ AIP) or all publications (ASPP from IEEE) from the publisher, regarded as set price schemes.

**Print Plus Model:** The pricing of the electronic journal product is expressed as an "add-on" to the price of the print product, or the price quoted is linked to a "no-print cancellation" clause in the contract.

**Electronic Plus Model:** The electronic journal content supplied for a base price and the price for print copies added to that base price. I-Colc argues for keeping the purchase of the print copies as optional, and the base price for the electronic content is not more than 80% of the price for the electronic-plus-print, and the combined electronic and print price is no more than current print-only prices.

**ALL- You-Can-Eat Model:** Some publishers offer their total content for the price that a library might have paid for a limited number of print journal subscriptions.

**Pay-by-the-Drink Model:** Provision to purchase blocks of journal articles, or may pay only for the delivery of the articles that are actually used.

**Consortia cost sharing models**

Each member institution will have specific needs, and budgets, circumstances and size can vary greatly. All these aspects need to be taken in examination, but as Farrow states:

"In the end, a consortium is as much about collaboration and networking as it is about resources. Through a clear cost sharing model and strong communication among members, a consortium can thrive."

The following library consortia cost sharing models are evaluated and illustrated:

Equal share: The total e-resources subscription cost is equally divided between all the member institutions. Example: Consortium of Academic and Research Libraries in Ghana (CARLIGH)

Type of institution: The nature of the institution determines its share of the e-resources invoice. Example: Kenya Library and Information Services Consortium (KLISC)

Size of institution: The size of the user population determines the share. Example: Consortium of Tanzania University Libraries (COTUL)

Ability to pay: Based on available budget. Example: Bangladesh INASP-PERI Consortium (BIPC)

Actual usage: Payment is based on the amount of e-resources that have been used.

Centralized funding: E-resources are centrally funded at government level. Example: Pakistan's National Digital Library Programme (NDLP).

**Issues relating to license agreements**

Providers of electronic information resources (i.e. licensor)
are employing licenses as a legal means of controlling the use of their products. In the electronic environment where the traditional print practice of ownership through purchase is being replaced by access through license, libraries need to be aware that licensing agreements may restrict their legal rights and those of their users.

a) Authorized users: persons who are authorized to use library’s facilities and/or are affiliated with library as students, faculty or employees, or are physically present in the library.
b) Fair use: use of the product for non-commercial educational, instructional and research purposes by authorized users including viewing, downloading, copying, printing and emailing.
c) Access: permanent use of the resource or access rights only for a defined period of time. Access provided through IP address or other mutually acceptable authentication and authorization methods.
d) Use: searching, displaying, copying, saving data, reformatting data, interlibrary loan, course packs and electronic reserves by authorized users simultaneously as well as remotely.
e) Intellectual property: Any trademarks, issued patents and patent applications, copyrights and copyright registrations and applications, rights in ideas, designs, works of authorship, derivative works, and all other intellectual property rights relating to the licensed resource.
f) Network: a group of computers linked together to share information. Networks can consist of a number of linked computers in a single physical location, a Local Area Network (LAN) or they may consist of computers located at different physical sites linked together by means of phone lines and modems or other forms of long distance communications (Kumar and Hadagali, 2005).

Problem

By the turn of the 21st century, library automation and the Internet had revolutionized information access and library operations around the world. The effect of this revolution has been profound, especially on academic institutions. Electronic resources represent an increasingly important component of the collection building activities of libraries. The present study has been undertaken to know the different pricing models adopted by e-journals. The study also highlights the issues and perceptions relating to different pricing models.

Objectives

The objectives of the study are enumerated as:

1. To find out the different studies done on the pricing and licensing models of e-resources and the issues related to it.
2. To know the perception of the publishers and librarians on the e-resource pricing and licensing.
3. To ascertain the strength and weakness of various pricing models provided by publishers.

LITERATURE REVIEW

All electronic resources available through the consortium, university or individually purchase are governed by license agreements. The terms and conditions for using these resources are spelled out in license agreements that are signed with publisher by the licensee.

Davis (2004)’s opinion is that Fair (equitable) pricing requires transparency in the marketplace. The use of confidentiality clauses may result in higher prices for all library consumers. The open sharing of local cost and usage data would provide immediate and beneficial effects on the scholarly publication market. An open market for sharing price and licensing information puts the library in a much stronger position for negotiation than does a confidential and opaque market. Big deals are inflexible, in the long run expensive, and are squeezing out small not-for-profit publishers, who are going to pay the bill for the inability of libraries to step out of big deals or to manage their budgets via cancellations to journals that form part of big deal arrangements. Moreover, libraries become aware of the lack of transparency and incomparability of the pricing of big deals, internally within the consortia and externally between consortia (Verhagen, 2007).

Publishers will need to innovate with their business models and use technology and data analysis to match the price charged for content to the needs of an individual institution. The future is likely to place increased control in the hands of the library community, through initiatives like patron-driven acquisition (PDA) (Kenneway, 2011). The Big Deal today is the biggest bugbear for librarians and currently the focus of a face-off between U.K. librarians and publishers (Poynder, 2013; Anglada et al., 2003) The Consortium of University Libraries of Catalonia (CBUC) prefers the electronic plus print option; the cost of electronic access is paid consortially, and a price is established with a discount for the paper subscriptions that the libraries wish to continue receiving (optionally and at their own expense). This option, which was first adopted in 2000, has proved a success. Since then the libraries have progressively cancelled their paper subscriptions, each at their own pace, and the number of them is now merely symbolic.

Stoller et al. (1996) concluded that the advent of the electronic journal, with the possibility that it is pricing will be based strictly according to usage, may lead to the most equitable pricing system, as well as the most efficient use of societies’ resources. Subscribers will be
charged for and will receive only the articles they plan to read, saving resources for both producer and consumer. They argued for a flat-rate system on the grounds that price differences between journals in different academic disciplines, particularly the higher prices for those in natural sciences and engineering, appeared to be based on price discrimination rather than differences in production costs.

An economic analysis of the journal industry indicated that high and discriminatory prices resulted from the existence of monopoly power among publishers. University and library administrators could alleviate this problem by providing journal users with an incentive for keeping prices lower, by encouraging library organizations and university consortia to exploit their potential monopsony (i.e., a buying monopoly) power into a bilateral monopoly situation and by attempting to create and demonstrate high elasticity of demand for journals in any way possible (Stoller et al., 1996). Tenopir and King (1997) found that the average direct cost involved in publishing a printed journal article was about $2,000, to cover refereeing, subject editing, copy editing, typesetting, and preparation of illustrations. They added $2,000 of indirect costs such as contracting with authors, marketing, subscription management, and a proportion of all the property, staff, and equipment costs incurred by any organization. They also found that articles cost around $4,000 each simply to produce the first copy. These costs were incurred regardless of the medium of output—print or online. Fishwick et al. (1998) concluded that electronic journals be made available through a combination of payment by usage and subscription (Hunter, 1999). It was in publishers and consortia's interest to work together if they believed that there was value in the roles they played or that the scholarly community would be less well served by their absence. Prior (1999)'s survey of publishers' views on the pricing of electronic journals revealed the differing approaches which were reflected in the variety of pricing models being used. The results of continuing experimentation may produce models which are more acceptable to librarians than the current ones. Wade (1999) determined that for the success of library consortia there needed to be establishing sound governance and funding, that would provide the key to not only delivering high quality services but also to establishing the consortium that was able to be agile and effective in its actions and thus be also able to occupy a pre-eminent position in redefining the delivery of library services.

In the changed scenario it was observed that the librarian was becoming more and more involved in negotiating complex licensing agreements, addressing issues of copyright, organizing methods of access to information through networked resources and aggressively engaged in liaising with the academic community in the purchase of information products (Ashcroft, 2000). Cox (2000) developed model licenses for the use of electronic content in libraries and these model licenses can help reduce the negotiation and administration for both publishers and librarians. They do not predict the outcome of negotiation or specify best practice; but rather are tools in a new and rapidly changing, information environment. Bley (2000) viewed that The National Electronic Site License Initiative (NESLI) has overcome the resolution of technical and licensing problems for site, multi-site, and offsite access; clarification and standardization of license terms and conditions; separation of print and electronic subscriptions; and, the further development of a single seamlessly linked electronic journal delivery system. Hurt (2000) concluded that consortia purchase products at a fair price and publishers ended up with wider publicity and sales within a shorter period of time.

Tenopir and King (2000)'s analysis revealed savings of between twelve and thirteen dollars in processing electronic articles on demand compared with the cost of a paper-based interlibrary loan or document delivery transaction. Xenidou-Dervou (2001) found that the dramatic price increase in journal subscriptions over the past 30 years has undermined the ability of academic libraries to sustain their collection development at the level necessary to support educational and research activities in the institutes they served. He supported the foundation of a consortium in order to go some way towards alleviating the problem.

Anglada and Comellas (2002) viewed that library consortia existed to help their members to obtain better prices and buying greater number of resources at the disposal of their users. Commercial publishers try to combine their interests with the technical possibilities and demands of the libraries but the emergence of the pricing models and the types of licenses have improved considerably and a number of the parameters used in the calculation of prices are clearly unfavorable at present for some consortia. The best way to use the competitive titles identified, is in the pricing charts and some indexes provide impact factors, which can assist you in looking at the top rated journals, but we may also want to do market research to determine where the subscriptions are held (Ginn, 2002). Montgomery and King (2002) study the impact of library's shift to electronic journals on staff and costs and they concluded that electronic journals were much cost effective on a per use basis. Storage space for low use bound journals was a major expense. A readership survey showed that the library's electronic collection was widely accepted and extensively used. Arora and Agrawal (2003) perceived that full-text resources and databases proposed for subscription for various categories of institutions in the INDEST (Indian National Digital Library Engineering, Science and Technology) consortium would have costed Rs. 164 crores as per their list price, while through the consortium, the total cost came to be Rs. 18.60 crores for all institutions being considered under the consortium, a
tioned by publisher. Kumbar (2005) showed the significance of consortia and how Libraries in India have been affected by an uncertain financial constrains. Sreekumar and Sunitha (2005) viewed that there were various issues relating to Library Consortia like uninterrupted online access, perpetual access to back issues, pricing, licensing, copyright and archival solutions etc. Malviya and Kumar (2007) found that highly decentralized models suffer due to non-availability of common agenda, no external funds, central sponsor and central staff. On the other hand, highly centralized models overcame these lacunae and also got maximum discounts. Varaprasad and Madhusudhan (2010) suggested that Bundled packages and big deals from the publishers may be avoided and those journals, which satisfy to the highest degree of user needs, may only be subscribed. Formation of a National Consortium and collective and logical negotiation with the publishers for a win-win situation may be the other alternative which will satisfy the growing information needs of users.

Keeping in view the multiplicity of research programmes pursued by DBT (department of Biotechnology) institutions, every attempt was made to subscribe to e-resources that were multidisciplinary in nature with widen scope and coverage. All resources were evaluated for their qualitative and quantitative contents, coverage, and rate applicable for these resources to individual institutions as well as to other consortia (Lal, 2012). Patra et al. (2012) perceived that several factors like price and number of users influenced the decision regarding the subscription of e-resources while negotiating with a particular publisher or journal aggregator.

Sunithal and Sreekumar (2012) study the present systems used by libraries to address the on-campus and off campus users' access requirements. For a long time libraries have been pondering on solving of this issue and SSOs and remote login applications. There were a number of applications found to be used by libraries such as EZproxy, One Log, Shibboleth, Athens and so on. Looking at the long term and the landscape of the online information resources SSO and remote login solutions promised a strong and long standing stake in the upcoming library services.

Ledayn and Shepherd (n.d) revealed that a consortium was in a stronger position than individual customers to negotiate favorable contracts with software vendors, and had a stronger voice in negotiating fixes and enhancements. Consortium hosting charges had economies of scale that were spread across all consortium members. The consortium, with its collective strength of participating institutions, has attracted highly discounted rates of subscription with most favorable terms of agreement Yernagula et al. (n.d).

METHODOLOGY

An extensive literature survey was performed in an attempt to identify substantial works published to date concerning pricing and licensing issues coupled with the publishers and librarians. A range of online scholarly databases, search engines and websites of recognized international as well as national organizations and publishers was searched, to spot out the substantial works carried out in the area. Varied search terms such as “pricing models of e-resources”, “issues pricing models of e-resources” “e-journals packages provided by publishers”, etc. were used for retrieving the literature.

Conclusion

Pricing is global problem with no proper consideration particularly for developing countries so far in this area. Bundled packages and big deals from the publishers may be avoided and those journals, which satisfy to the highest degree of user needs, may only be subscribed. The price differences between journals in different academic disciplines, particularly the higher prices for those in natural sciences and engineering, appeared to be based on price discrimination rather than differences in production costs. Some of the pricing and payment constraints specific to Indian libraries include - inadequate funds, single point payment, rigid administrative, financial and auditing rules, problems of defining asset against payment and pay-per-view not yet acceptable. The
various issues relating to Library Consortia like pricing, archiving, copyright uninterrupted online access, perpetual access to back issues. IP based access authentication provides seamless access, usage statistics for the institution, greater security as there is no misuse of usernames and passwords. The consortium was in a stronger position than individual customers to negotiate favorable contracts with software vendors, and had a stronger voice in negotiating prices and enhancements. Consortium hosting charges had economies of scale that were spread across all consortium members. Consortia movements are drawing prices down and the formation of a National Consortium and collective and logical negotiation with the publishers for a win-win situation to both the parties.

Publishers will need to innovate with their business models and use technology and data analysis to match the price charged for content to the needs of an individual institution. An open market for sharing price and licensing information puts the library in a much stronger position for negotiation than does a confidential and opaque market. Highly decentralized models suffer due to non–availability of common agenda, no external funds, central sponsor and central staff. On the other hand, highly centralized models overcame these lacunae and also got maximum discounts. The Big Deal today is the biggest bugbear for librarians and currently the focus of a face-off between U.K. librarians and publishers.

Conflict of Interests

The author has not declared any conflict of interests.

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