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Research on the Construction and Management of Electronic Resources in PDA Mode

¹Zhong Wenjuan, ¹Wu Xuezhi and ²Zhao Tieqin

¹Capital Normal University Library, China

²Capital University of Economics and Business Library, China

Abstract: PDA Patron Driven Acquisitions (PDA) is literature resources construction mode dominating by user, it is approved by the user because of getting real-time and purchasing user needs. In this mode, the construction of electronic resources tends to get the required resources at this moment. The librarians face more challenge that how to coordinate the permanent preservation and used in real-time on the construction and management of library electronic resources. The article try to put forward some tactics of electronic resources reasonable construction and standardized management from allocation of funds, adjustment of the resource type, performance evaluation of electronic resources, improving electronic resources management system, building institutional repository, analyzing and mining user data and other aspects.

Key words: PDA, electronic resources, construction of electronic resources, management of electronic resources

INTRODUCTION

PDA (Patron Driven Acquisitions, PDA) also is known as POD (Purchase-on-Demand). It derived from the inter-library loan service originally, which purpose is to alleviate the inter-library loan presses and promotes paper literature resource construction (Schroeder, 2012). In network and mobile services universal digital age, PDA is a kind of literature resources construction mode that the certain standards or parameters purchasing some literature is based on the user's actual browser and reading. It is some kind of immediate procurement strategy by patron driven and literature selected according to the individual needs of users (Bian *et al.*, 2012).

PDA is carried out more than ten years in American libraries. According to a survey from Publishers Communication Group of 250 libraries in the United States in March 2010, 32 libraries have implemented a PDA project and more than 160 libraries will carry out PDA within one or three years. The PDA project have put into practice in some well-known universities such as Wellesley College (Lenares, 2010), Purdue University (Anderson *et al.*, 2010), University of Illinois at Urbana-Champaign (Wiley, 2011).

Liu (2012) pointed out, PDA is favored by many university libraries and become the main mode of many university libraries purchasing document information resources in particular e-book. The generation and promotion of PDA have deep background and reasons, such as experienced funding crunch, low collections utilization, the high cost of inter-library loan and cater to the needs of the user requirements and changes in

reading habits etc. The Chinese university libraries are confronted with the same problem. PDA is the better way for Chinese users. PDA is practiced only two years in Chinese university libraries. How to apply PDA to the Chinese university libraries, how to construct and manage the electronic resources in PDA mode, it must be researched and pay close attention for Chinese university libraries. This article explores the ways and means on the construction and management in PDA mode. It is very effective for the development of library collection building.

PDA' EFFECT FOR CONSTRUCTION AND MANAGEMENT OF ELECTRONIC RESOURCES

Compared with the traditional resource construction mode, PDA has the following salient features:

- **Meet the individual needs:** Users do not need to seek or browse electronic resources in the library following popularization of network, mobile services and mobile reading, users can make use of the literature resources at anytime and anywhere through the network in PDA mode, as users of the library, can take advantage of any resources as long as it is in the library home page whether purchased or not
- **Supply and demand interact procurement:** The important characteristic of PDA is real-time interaction of supply and demand that is different from the traditional procurement process. Literature resources will be purchased if the trigger parameters or the standard is sufficed which come from the

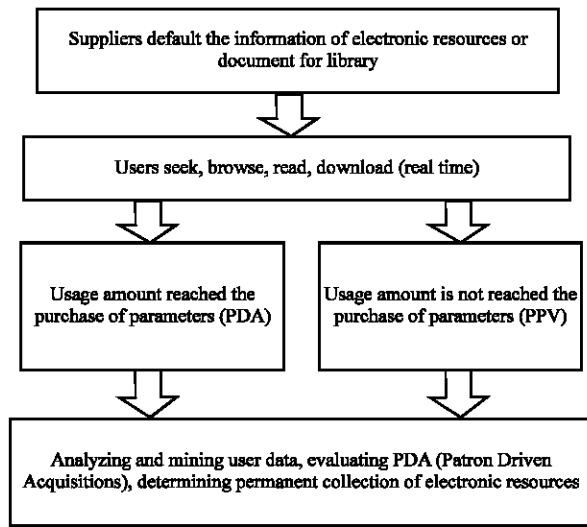


Fig. 1: Construction and management of electronic resources in PDA (Patron Driven Acquisitions) mode

number of read or skim by users. The generation and completion of instant procurement is depending on the interaction of demand and supply

- **Use and pay in real time:** Facing a flood of literature resources, the user is more concerned with the literature resources conveniently accessed for individual needs. It is precisely adept to the needs of users "just in time" in PDA mode. For users, they will unconsciously participate in and complete the procurement process of literature resources and can access to the resources needed directly. For libraries, the circulation service is instant-on, the literature resource flows shortest cycle when it is not purchased

PDA has a wide range of applications in the field of electronic resources procurement based on these characteristics. It will affect the construction and management of electronic resources currently:

- The work-flow of the construction and management of electronic resources will befall conversion. Foretime, the overall purchase of the database has been in use which based on management personnel as the main. In PDA mode the procurement of electronic resources points to a single electronic document not the overall of the database, therefore, users have more decision-making power while the librarian more focus on the allocation of funds and arrangements to meet the individual needs of users (Fig. 1)

- The content and focus of construction and management of electronic resources will befall conversion. In PDA mode, user's needs become the dominant trigger demands, funding more concentrate electronic resources used by the current users instead of library permanent preservation

REASONABLE CONSTRUCTION AND STANDARDIZED MANAGEMENT OF ELECTRONIC RESOURCES IN PDA MODE

PDA will bring important changes and impacts for the work-flow and content of construction and management of electronic resources in the university library. PDA meets the individual needs of the user greatly, it is easy to implement for those academic libraries. Judging from the long-term development of the university library, users themselves do not consciously participate the overall planning and construction of the library's electronic resources in PDA mode. Therefore, it proposed greater challenges for the acquisition librarians, they must consider overall construction of literature resources planning and management including the immediate needs, construction planning and development trend of the overall discipline. It is extremely important to reasonable construction and standardized management of electronic resources in PDA mode.

Reasonable construction of electronic resources in PDA mode: In PDA mode, the contradiction can be resolved between the current demand and long-term construction of electronic resources from the following aspects.

For different users, PDA can meet their immediate needs: The library must find the equilibrium point of literature resource construction between immediate needs and permanent preservation as limited funding. One of the important factors is the type of user. Such as scientific users and some developing cutting-edge disciplines users, they more incline to get the latest contemporary literature resources, for example instant electronic journals, the needs of them will be gotten the fastest response and satisfied in PDA mode. For some users of the humanities and social sciences, the librarian will jointly determine the procurement plan and completion of the procurement of literature resources.

To maintain the balance of literature resource construction between the present use and permanent preservation, it is very important to control the ratio of the electronic document type. The library can implement PDA for procurement of e-books and e-journals in the first place. A large number of database supplier provide to sale

literature resources in PDA mode, such as Wiley, Taylor, Emerald, Sage Publications, Oxford University Press and Princeton University Press. Promotion Selection Ordering Platform in china should be the better way to attempt PDA (Zhang, 2012a). Per-Pay-View (PPV) is the best way to purchase e-journals. In this digital age, individual articles rather than journals have become the fundamental units that researchers want. The utilization of the PPV mode for e-articles as an alternative to journal subscription has the contradiction between instant access and the permanent save of articles (Zhang, 2012b). Therefore, whether to adopt the PPV and to what extent using PPV, it must be considered for the library document resources procurement agencies.

Library's construction of electronic resources according to the needs of different disciplines, it must ensure the balance between the present demand and permanent preservation.

The library requires real-time needs of the user, at the same time it is the preservation center and sharing center about literature resources. The librarian need formulate electronic resources procurement planning in accordance with literature resources is not conducive to long-term planning and preservation development in PDA mode, details are as follows:

- For the different disciplines' electronic resources, the funding will use on real-time order and guide the user exploiting as much as possible open access publication such as the application of SCOAP3 (Sponsoring Consortium for Open Access Publishing Particle Physics)
- The library need establish different levels of construction and sharing between different disciplines and library consortium. Disciplinary development have differences in the university, some college funding is more than the library, however, their funding are not well utilized and the purchased resources are not open to all users of the university. In this situation, the library need coordinate overall college resources development in order to share the resources purchased by the colleges. At the same time the library couldn't fully meet the needs of all users of the university by itself. Library consortium can make up the shortfall, different member libraries undertake the construction and saving tasks on the different disciplines, all members should share the use of literature resources
- The library must pay close attention to academic information resources open accessed, build IR

through hierarchical level of sub-disciplines. On behalf of academic journals and academic papers is open access, academic information resource has become an integral part of the academic research resources. Paper which is open access is 8%~10% accounting for the global paper output up to 2009 (Jinha, 2010). More and more publishers realize that it is a reliable business model on open access, many commercial publishers are actively entered the open access journal publishing field. Peter Binfield forecast, "50% of the scientific, technical and medical literatures will be published by 100 super open access journals, the rest of the influential papers will be published by 100 kinds of high-quality business journals" (SCOAP3, 2012). Another form of open access papers are the open access papers which stored in the institutional repository and pre-printed or report published by the institutional repository. According to statistics of (OpenDOAR, 2010), institutional repository is more than 2200 entire world and the annual growth rate is more than 30%. The use of institutional repository increases quickly, for example RePEC, the download is more than 6200000 since 1998. The results of institutional repositories are deficient in China, there are only 54 institutional repositories in the end of 2011. CALIS as Chinese largest institutions of higher learning literature resource construction union commit to the construction and application of institutional repository, employ the mode of demonstration library and construction library, develop institutional repository based on DSpace in accordance with the division of labor. The system platform integrated into the concept of Web2.0, provided personal center, label, comment and RSS etc. The purpose is determined to elevate user experience effectively and attract readers using institutional repository (Nie *et al.*, 2013). The university library should actively participate in the establishment of institutional repository, it is fully consistent in the original intention of saving funds and maximize meeting the user needs in PDA mode

Standardized management of electronic resources in PDA mode: PDA is generated in response to the shortage of funds. It is the goal and inevitable trend for the library how to fulfill the maximum demand of the user on a shoestring budget. The management of electronic resources is faced greater challenges. The Chinese university libraries can devote the attention in the standardized management of electronic resources from the following aspects:

- The library need utilize electronic resources management system and open the function of default service. When users get more dominance in PDA mode, the librarian must pay close attention to management of funds and electronic resources usage. The librarian coordinates the allocation of funds and should guide the user in avoiding the wasting of the funds. The electronic resource management system can default, manage the content of the resource open selected by users and trace the effect. The prompt language will be set in the system in advance, such as "you will purchase this article through tokens", "you have 24 h of use rights". It will improve the utilization and prevent waste effectively (Corral, 2012)
- Evaluating the performance of PDA mode, the librarian must attach importance to data analysis and mining. Today people are in big data area with networking and the prevalence of mobile services. The library possesses a large number of structured and unstructured data, it is imperative to grasp and track user's needs and expectations trough analyzing and mining. It is different for user who access and employ literature resources in PDA mode, the controller of electronic resources is not only procurement staff but also become a data analysis librarian and data management librarian, so the librarian can adjust the direction of development and construction of electronic resources to achieve the value maximization timely. Many libraries have to pay attention to it

CONCLUSION

One of the 2012 top ten trends in academic libraries published by ACRL Research Planning and Review Committee is Patron driven e-book acquisition, it is show that PDA is poised to become the norm. For this to occur, licensing options and models for the library lending of e-books must become more sustainable. A report on the future of academic libraries identifies PDA as an inevitable trend for libraries under pressure to prove that their expenditures are in line with their value. It is necessary for academic library that starting and putting into practice PDA, wherefore the library must attach importance to reasonable construction and standardized management of electronic resources. User-led will become the development trend of the library in the future although PDA is partly about efficiencies, PDA will widely be practiced in Chinese libraries.

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