

Information Technology & Social Role of Users in Collection Development of Library and Information Centers

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Abstract: *The process of collection development, collection generating and obtaining information is of basic debates in libraries and information centers which a lot of articles have been written about the methods of collection development of information as well as the application of information technology, accordingly, to this day. This article, as opposed to other articles, which are about the prevailing methods of collection development and also the application of information technology in collection of libraries development and information centers, analyses the role of knowledge management, corporate culture, extension of relations as well as the development of human resources and their social role in the expansion of information collection; and finally, some scientific and studious centers and universities in Iran which started their collection of information development and their knowledge concerning the use of knowledge management and more noticing the human resources, are presented.*

Keywords: *Collection Development, Knowledge management, Information Management, Corporate Culture, Iran.*

Introduction

The information technology nowadays has provided the facilities and necessary flexibilities for the libraries and information centers to use its capabilities in collection development of information as well as its dissemination. But collection development needs knowledge management and more importantly requires the attention to human resources and extension of corporate culture among the users society in order to make them feel responsible and have a direct role in collection expansion through sharing their information and knowledge and being active in producing more knowledge and science, before it needs information technology.

Nowadays, the universities and higher education institutions have a remarkable quantity-wise growth. And every day we witness the establishment and initiation of universities and higher education institutions in every corner of the country and even outside of the country borders, as in every city in Iran there is a branch of different universities and everyone can easily study in their own residence. But the thing that keeps a university live and dynamic is the debate of quality growth and presenting proper educational services in the fields which are in the students' interests. In order to gain this importance, one of the most important sections in a university which can have an important role in increasing the quality level of university, are libraries and information centers; the more active and pioneer they are in collection development of information the more qualitative services they can provide. One of the most recent methods that universities, with the use of today information technology, start their collection development with that is the development of human resources, knowledge management and extension of corporate culture among inside individuals and links it to human resources outside of the university; so with the use of this, they can accentuate the role of human resources especially the users' society in collection development and with minimum expenditure and maximum speed expand their information collection to provide their users with their needed information. In other words, through obtaining the facilities and necessary potentials, the leave a great part of collection development to users; so these users, individually and in groups, have direct interference in collection development and undertake its management.

But what is definite is that the covert knowledge of libraries and information centers' users' society as one of the greatest and richest source of information and knowledge in collection development in universities in Iran is

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neglected. Researches, professors and students, individually and in groups, execute comprehensive researches, annually, which a little amount of them leads to scientific productions and overtly could be used by others. However, a great amount of their information and knowledge cannot be displayed due to lack of proper space and perhaps a lot of this information remain in their minds and would not be used by others. Consequently, universities try to collect their information in order to expand the information collection of libraries and information centers to provide better services through the use of information technology, knowledge management and extension of corporate culture and more noticing the human recourses and encouraging each of their users.

Definition of Collection Development

Collection development as those activities revolving around selection of materials (Edgar, 2003). Hannaford, discussing intellectual content existing solely in print rather than digital format, argues that collection development can be broken down into five parts, each to be done in order. First comes evaluation, determining the strengths and weaknesses of the collection. Next comes developing a plan delineating what the collection should be in terms of strengths and weaknesses. Such a plan essentially exists to identify and close the gaps between the collection's current strengths and weaknesses and the desired strengths and weaknesses. Third, funding must be sought to carry out the plan. Finally, in steps four and five, selection and de-selection are carried out so as to close the gaps revealed in step two (Hannaford, 1980).

Osburn defines collection management and collection development as clearly separate but closely related activities. He argues that collection management is “a process of information gathering, communication, coordination, policy formulation, evaluation, and planning”. He says that this process in turn influences “decisions about the acquisition, retention, and provision of access to information sources in support of the intellectual needs of a given library community. Collection development is the part of collection management that primarily deals with the decision about the acquisition of materials” (Osburn, 1990).

In contrast to Osburn, Creth merges the activity of collection development into that of collection management by defining the former to be encompassing of the latter. She says that collection management contains the following activities: selection, weeding, preservation, liaison with faculty and academic departments, reference and user-education (individual specialized reference, teaching subject-oriented seminars, developing bibliographies), fiscal responsibility (developing budgets, analyzing costs), and policy development (Creth, 1991).

In 1990, a book written about the process of collection development for various types of libraries examined administrative and organizational theories of decision making. The primary focus was on the work of Henry Mintzberg, in particular his seven steps or routines of decision making: recognition, diagnosis, search, design, screening, evaluation, and authorization. The author then applies those seven steps to collection development, focusing on the work of individual selectors rather than on group processes. (Kovacs,1990).

Library collection development is the process of meeting the information needs of the people (a service population) in a timely and economical manner using information resources locally held, as well as from other organizations. Collections are developed by librarians and library staff by buying or otherwise acquiring materials over a period of time, based on assessment of the information needs of the library's users. In addition to ongoing materials acquisition, library collection development includes:

- the creation of policies to guide material selection
- replacement of worn or lost materials
- removal (weeding) of materials no longer needed in the collection
- planning for new collections or collection areas
- cooperative decision-making with other libraries or within library(Evans,2000).

The process of planning and building a useful and balanced collection of library materials over a period of years, based on an ongoing assessment of the information needs of the library's clientele, analysis of usage statistics, and demographic projections, normally constrained by budgetary limitations. Collection development includes the formulation of selection criteria, planning for resource sharing, and replacement of lost and damaged items, as well as routine selection and deselection decisions.

- Large libraries and library systems may use an approval plan or blanket order plan to develop their collections. In small- and medium-sized libraries, collection development responsibilities are normally shared by all the librarians, based on their interests and subject specializations, usually under the overall guidance of a written collection development policy.(Reitz,2011).

ALA (American library Association) defines collection levels as follows:

1. Minimal Level: A subject area in which few selections are made beyond very basic books.
2. Basic Information Level: A collection of up-to-date general materials that serves to introduce and define a subject.
3. Instructional Support Level: A collection that is closely tied to the needs of the curriculum:
 - 3A -- Undergraduate Support level: a collection that is adequate to support undergraduate instruction.
 - 3B -- Upper Level/Graduate Support level: A collection that is adequate to support undergraduate instruction and most upper level/ graduate instruction or independent studies.
4. Research Level: A collection that includes major published source materials required for research needs.
5. Comprehensive level: A collection in which the Library includes all significant works of recorded knowledge for a necessarily defined and limited field (Online).

The ALCTS (Association for Library Collections and Technical Services) discussion group began by discussing what they perceived to be the declining importance of collection development librarians. This group of predominately academic librarians discussed the role of collection development librarians in libraries that use approval plans for the majority of their selection. They agreed that their role in selection is changing. Collection development librarians are now spending their time as follows:

- working with vendors on customizing approval plans;
- developing, monitoring and adjusting monograph approval plan profiles;
- monitoring e-book packages and selecting e-books;
- monitoring electronic resource packages;
- selection of all formats of materials not arriving through approval plans;
- developing the most cost effective ways to handle interlibrary loan requests such as buying the books requested;
- more emphasis on assessing of collections;
- more outreach publicizing collections; and
- developing guidelines for selection of materials in all formats such as always buying material in electronic format if available (Kay, 2008).

What is relatively presented above of the definitions of collection development individual and different organizations, all share a common point which is all these definitions know the collection development as withdrawal or obtaining information and produced knowledge outside of organization, however, the produced information in the organization by users or in other words the social role of users inside the organization in collection development, is often neglected or has not been considered worthy.

Knowledge management

Knowledge management (KM) emerged as a business trend in the 1990s and continues to evolve a decade later. Its fundamental premise is that enormous amounts of knowledge about customers, processes, products, and services exist at all levels of an organization, and if this cumulative knowledge can be captured and communicated, it can help organizations become more productive, effective, and successful(Goman,2002).

In recent years, KM has also become visible on the radar screens of libraries. Library and information science publications are increasingly, including KM articles, and professional associations such as the Special Libraries Association and American Society for Information Science are offering publications, seminars, and conferences on KM.

For libraries and information services, as for other types of organizations, one of the most useful solutions that can be adopted in order to survive and to be successful in a society dominated by knowledge, is to implement a knowledge management process.

Simply defined, KM is “organizing to know.”⁷ It is a concerted effort to capture critical knowledge, share information within an organization, and capitalize on the collective organizational memory to improve decision making, enhance productivity, and promote innovation. It “involves capturing the knowledge, the wisdom, the added value experiences of individuals within an organization, making it easy to find again, and in so doing preserving it as an organizational asset.”⁸ KM is an attempt “to turn employee’s knowledge (human capital) into a shared, firm wide asset (structural intellectual capital).”⁹

The goal of KM is to create a learning and sharing organization by linking together and creating a flow between the buckets of information generated by people in different parts of the company—finance, operations, competitive intelligence, etc.¹⁰

KM has two parts: first, the management of data and information; and second, the management of individuals who possess specific expertise, abilities, or knowledge¹² These two parts—content and people—are integrated with the help of specific processes and technology to facilitate KM.¹³ Benchmarking, capturing best practices, creating learning organizations, developing learning communities, data mining, fostering culture change, improving workflow, and systematically gathering competitive and business intelligence are just few of the tools, practices, interventions, and infrastructure-based approaches organizations have embraced to manage knowledge and information.¹⁴

The two constituent terms of KM—“knowledge” and “management”—are integrated with the help of its two enablers—technology and corporate culture to harness the collective memory of organizations.

The real challenge of KM lies in being able to identify and capture tacit knowledge so that it can be retrieved when needed. However, while explicit knowledge is easy to record and transfer, tacit knowledge is difficult to identify, capture, and transmit. Therefore, most organizations concentrate on managing the 20 percent of the explicit knowledge available, leaving it to coincidence that tacit knowledge is used.²⁷

Although converting tacit knowledge to explicit knowledge is difficult, it is not impossible. Tacit knowledge is generally transmitted in the form of stories about best practices, which are often documented and put on a network and are subsequently used by other employees to learn and improve processes.²⁸

Corporate Culture

One of the most important enablers of KM is an “open” corporate culture that encourages people to interact with each other, share ideas, experiences, and viewpoints and be heard without fear of reprisals.³⁷ The absence of a corporate culture that encourages collaboration, trust, knowledge sharing, listening, learning, and creativity can be a major barrier in developing and implementing a successful KM project. Davenport et al. assert, “if the cultural soil is not fertile for a knowledge project, no amount of technology, knowledge content, or good project management practices will make the effort successful.”³⁸

The success of KM projects will depend on the collaboration and knowledge sharing between all participants, and all participants must be actively engaged in collecting and contributing content to the projects. However, if employees are penalized instead of being rewarded for sharing their knowledge, they will not contribute to the KM effort. Goman, O'dell, and Grayson suggest that people are often reluctant to share their knowledge because they may:

- be too busy;
- not wish to take on additional responsibilities that come with sharing;
- be assigned to projects that do not utilize their talents or aptitudes;
- feel that sharing knowledge will hinder their personal success;
- feel outranked and intimidated in team discussions and think they have nothing to contribute;
- not trust others with their knowledge or that they will reciprocate by sharing their knowledge;
- feel threatened and “punished” for contributing if their opinions are ridiculed, criticized, or ignored; or
- work for managers and decision makers who withhold information from them(41).

Extension of Relations

The extension of relations involves identification, creation and spreading relations with users (customers) and if necessary, discarding relations with customers depending on the obtained benefit as both side's intentions are fulfilled. This comes through exchange and the accomplishment of both side's commitments. First important issue in establishing relations with users (customers) in a digital library is to ensure them of providing the most appropriate and the best services. The basis of this issue is that the libraries recognize their users (potential users). Of course, this recognition is fairly possible through gaining the demographic elements of users such as age, religion, sex, personality, interests, professional field, education and so on. (Henderson, 2005: 343). But in order to the development of usable digital libraries and advancement in system design, researches have focused on users' habits and behaviors and their needs in different environments such as universities, schools, state and private institutions and also have carried out different investigations. The following show some of research areas:

- Experimental studies about the interaction of users and digital library;
- Usability, accessibility and userability of digital library;
- User-based support to learn, teach and research via enclosing virtual learning environments and digital libraries;
- Human interaction with computer;
- Evaluation of different user groups' behaviors based on knowledge level, age sections and particular needs (Shiri, 2003: 183)

Therefore, nowadays extension of relations is a new and dynamic mechanism which is place first on the major librarians' activities.

The Exhibition of Practical Pattern in Optimum Collection Development

As mentioned before, the aim of this article is not the inquiry of guideline or policy of libraries and information centers which in most written materials are publicly presented about collection generating or collection development. But the aim is the exhibition of a new pattern using knowledge management and information technology. So through that we can acknowledge and manage the overt and covert knowledge of intra-organizational users, besides obtaining information, and possibly we can propagate their knowledge, experiences and awareness for public use and provide facilities for intra-organizational users to connect to each other as well as outside users and groups, so they can increase their information collections.

1. Knowledge management:

a. Corporate culture

- Knowledge sharing
- Answering the question and needs of the users in professional and unprofessional fields and saving all questions and answers for others to use.
- Describe and presenting research priorities in a professional field: the process of raising a simple or complex question until reaching an answer and analyzing it by a reference group or professional groups and all the process of reference interview or introducing suitable references, can be an important section in collection development; because most of the questions are posed by professionals which usually are experts in those fields.
- Teaching the necessary instructions to each user for their participation in cultural organizational corporation program.

2. Extension of relations:

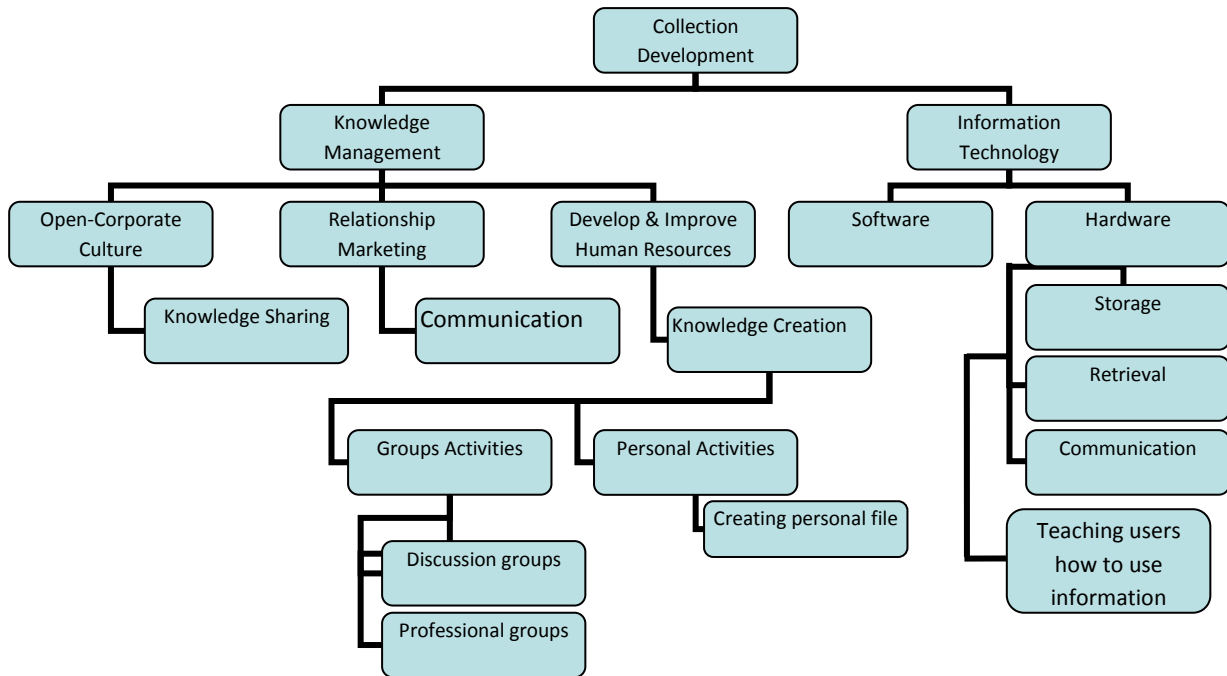
- Communications: introducing new scientific productions to each other. Every user might find and reclaim new information materials through their searches and researches which presenting them to others could help them use new resources. Albeit, these informational materials are categorized in different groups with regard to each user professional field and a variety of informational materials could exist such as an article, a book, license registration of an innovation, a device making method and so on.
- The possibility of raising a question in a professional group and answering it by everyone.
- Executing speech ceremonies by elites.
- Critique and evaluation sessions by creators and finally publishing the results.
- Presenting the necessary instructions in order to expand information and experiences for everyone to use.

3. The Development of human force: paying more attention to these human force and the experiences gaining through years of working, to use them to solve problems.

- Producing knowledge individually and in groups.
- Acknowledging covert knowledge of each and every one of the users and publishing them.
- Supporting the publication and encouraging the users to disseminate their overt knowledge.
- Encouraging people to produce more science and presenting them.
- Forming discussion groups: through this, the users can establish a relation with other experts in their respective fields and getting answers for their scientific problems.
- Constituting theorizing rostrums.
- Publishing their scientific productions such as books, articles, dissertations and so on.
- Forming professional groups in order to evaluate and analyze today's sciences and presenting priorities in professional fields.
- Constituting Think tanks.
- Forming scientific associations.

4. Information technologies:

- Accommodating necessary hardware and software in order to:
 - Suitable save of information
 - Recycling information
 - Establishing fast and easy communications among users without time and space limitations



Samples of Collection Development in Iran

1- Islamic World Science Citation Center (ISC)

To uphold and uplift Iran’s contribution in production and provision of Science within the scope of the Islamic countries; to materialize the sage and succinct remarks made by the Supreme Leader of the Islamic Republic of Iran as regards the necessity for the establishment of the ISC (the Islamic countries’ Science Citation Center), and following the approvals in the 9th General Assembly of the ISESCO regarding promotion of the ISC, the Supreme Council for Cultural Revolution called its 623th(29-04-2008) meeting during which the following policies were discussed and approved thereafter:

Article 1: The ISC seeks the following as its general objectives:

1. Founding a Science Citation Center encompassing information related to the scientists from the Islamic countries, and working in conjunction, coordination and constructive interaction with those presently at work over the globe.
2. Providing incentives that would uplift the Islamic countries researchers’ zeal for initiating innovative research in humanities, while considering local needs and Islamic values, such that would encourage the whole Islamic countries to adopt such incentives.
3. Preparing the ground for promotion of science and scientometrics in the Islamic countries.
4. Exercising needful attention to the Islamic laws and moralities in production and provision of science.
5. Adopting facilitative policies that would uplift constructive interaction amongst Muslim scientists and Islamic centers.
6. Proposing suitable instruments and mechanisms that would fulfill optimally the information needs of the Islamic Ummah.

Article 2: The ISC will bear the following as its most significant responsibilities:

1. Monitoring as well as adopting suitable policies as regards the status of scientific publications of various types.
2. Encouraging and advocating research in humanities that would be Islamic-values-oriented and should tackle and propose solutions for the Islamic world's social problems.
3. Proposing a time-wise plan for the citation analysis of scientific publications.
4. Introducing quantitative and qualitative measures for ranking journals and other publications with an emphasis on the Islamic ethics and indexes, and publicizing the ultimate rankings through the ISC.
5. Indexing the Islamic countries' scientific productions to facilitate accessibility to them amongst the Islamic world.
6. Highlighting the most cited scientific works in a subject-wise manner.
7. Adopting measures that would facilitate registration of patents of the Islamic countries to preserve Muslim scientists' patent rights.
8. Preparing the grounds for publicizing the ISC publications throughout the world besides increasing the volume of such works.
9. Introducing the ISC's most cited scientists and those bearing maximal publication volumes.

2- Iranian information and Documentation Center (IRANDOC)

In September 1968, Iranian information and Documentation Center (IRANDOC) was formed originally as a part of the institution for Research and planning in science and Education of Iran (IRPSE). Since then, this center has been involved in accumulating, organizing and disseminating various scientific information and documents in support of research activities. In 1981, following the dissolution of the IRPSE, IRANDOC became an independent organization affiliated with the Ministry of Science, Research and Technology of Iran. Since 1991, following the ratification of Higher education Development High Council, IRANDOC has continued its activities as a research organization under Ministry of Science, Research and Technology of Iran. IRANDOC renamed to Iranian Research Institute for Scientific Documentation & Information in 2005 and renamed to Iranian Research Institute for Information Science & Technology in 2009.

Iranian Research Institute for Information Science and Technology (IRANDOC) is an institute affiliated with the Ministry of Science, Research, and Technology (MSRT) of Iran which was established to work in the field of science and technology of Information and Librarianship. From the point of view of activity, this institute enjoys total independence and according to the articles of association, the goals of this institute consist of Information Research Activities, collecting and dissemination of scientific information and documentation for the purpose of meeting the information needs in this area and attempting for the development of a scientific information network. To achieve this goal, this institute has so far developed various [scientific databases](#) and meets different information needs of its users.

This institute has gained the experience and knowledge for management of science and technology systems in a macro level during its 40 years activity in the path of collecting, organizing, and dissemination of science and technology information. At present, [the Scientific Information database](#) of the institute with more than 615000 information records, 126847 of which belongs to the graduates' theses, has on the average more than 22000 visitors daily, and according to the report of the High Council of Information, this database ranks first in terms of content and quantity amongst the governmental sites of the country.

[Ghadir](#) and [Amin](#) Initiatives also were initiated in the institute with the purpose of resource sharing and interlibrary cooperation and implementation of interlibrary loan services countrywide and perform a wide range of activities. Measures such as the development of "list of Latin periodicals Journal" databases and other such databases continues as before.

Vision

- To develop the science and services of information Network through research and education.
- To expand the scientific horizons in the realm of information network services • To preserve the Iranian scientific heritage and to facilitate their public access
- To address the Sci-tech information needs of university students and researchers as well as handicapped
- To expose the scientific information of Iranian origin through accumulation, processing and dissemination of research findings
- To hold seminars and workshops as well as publish printed and computerized reports.
- To support equipping libraries with technical and management facilities as well as preparing the ground for interlibrary cooperation

3- Scientific Information Database (SID)

As the greatest comprehensive up-to-date data bank, the Scientific Information Database (SID)(www.SID.ir) has commenced its grand activities from August 07, 2004 among which the most prominent services in Persian and English parts are free access to the *latest* research-scientific journals of Iran with their full text papers, categorized in scientific groups of

- Agriculture & Natural Resources
- Arts and Architecture
- Basic Sciences
- Engineering and Technology
- Humanities
- Medical Sciences
- Veterinary Sciences
- Scientific Journals
- Journal Citation Reports (JCR) via Impact Factor (IF) and Immediacy Index (II) in a selected year from 2000 to 2010 through which different reports are extracted to view
 - JCR for a distinct scientific group
 - JCR for one journal
 - most cited papers
 - most cited authors
- Abstracts of Iranian papers published in International Journals indexed by the international publishers (such as Thomson Reuters, Science Direct, etc.)
- Abstracts of ACECR Projects
- Online Submission
- the setting of Iranian Scientific Conferences and Workshops
- Ordering books and papers from the British Library
- Online search among the international databases (like Thomson Reuters, Science Direct (Elsevier), Springer, Emerald Library, British Library, Wiley Inter Science, etc.)
- Advertisement in SID

Indexing the Latest Research-Scientific Journals of Iran

Divided into two sections of Persian and English, SID supplies the most recent Iranian research- scientific journals categorized in scientific groups of Agriculture and Natural Resources, Arts and Architecture, Basic Sciences, Engineering and Technology, Humanities, Medical Sciences, Veterinary Sciences and Scientific Journals. Based on the issued research-scientific journals lists from the Ministry of Science and Ministry of Health, these journals are indexed in the time span of 2000 (1379) onwards with free access to most of their full texts.

Journal Citation Reports (JCR)

Based on scientometric factors, Journal Citation Reports (JCR) are extracted for all journals on SID via *Impact Factor (IF)* and *Immediacy Index (II)* from 2002 onwards in six different options. First, JCR may be reported for one distinct journal of a scientific group in a determined time period. Second, all journals of a scientific group may be compared regarding their IF and II in a special time span. Third, one may search part of a journal's name to view JCR report of that journal by choosing the desired year. Fourth, most cited papers in one year or a preferred time span are extracted in JCR section. Fifth, most cited writers compared in all scientific fields in one year or an assumed period of time are displayed in JCR division of SID website. Finally, self-citations may be traced for one year or a selected duration of time as one of the other services in JCR part.

As the nature of science is dynamic, SID services are also in a way that more JCR factors are being studied to be applied on the invaluable scientific products.

Indexing the Abstracts of Iranian Papers Published in International Journals

By the everyday growth of science worldwide, Iranian scientists have accomplished to dedicate a large portion of scientific production to our country. Being published and indexed by the international websites such as ISI Web of Knowledge and ScienceDirect, the abstracts of Iranian productions which are indexed internationally in different websites are indexed in SID as well.

ACECR Projects' Abstracts

The research deputy of Academic center for Education Culture and Research (ACECR) prepares an opportunity for all researchers to conduct their projects in every aspect of knowledge. Afterwards, the abstracts of those projects are indexed by SID via free access policy to those abstracts. However, the full texts of these projects are possible to be accessed by defined users.

Online Submission

All users from any region are able to submit their manuscripts to a research-scientific journal indexed in SID. This worthy service can help the authors to decrease the cost of printing and posting manuscripts as well as creating a safe medium to submit them. One of the valuable parts of this service is "tracking" which enables the users to see every message sent by journal's office such as the status of manuscript's evaluation. Hence, Online Submission of SID provides a possibility for journal's office to receive the manuscripts and use "tracking" to send messages to the authors. This trustable service enables users, either authors or journal's offices, to conduct the process of submitting manuscripts and their evaluation more secure and rapid.

References

1. Chua, Alton. Knowledge management system architecture: a bridge between KM consultants and technologists. *International Journal of Information Management* 24, 1, 2004: 87-98.
2. Lau, Adela, Tsui, Eric. Knowledge management perspective on e-learning effectiveness.
3. Knowledge-Based Systems. 22, 4, 2009: 324-325.
4. Henderson, Kay. "Marketing strategies for digital library services". *Library Review* 54, 6, 2005:342-345. Available at: <http://angelina.emeraldinsight.com/10.1108/00242530510605467>
5. Tycoson, David. "On the desirableness of personal relations between librarian and readers : the past and future of reference services". *Reference services Review* 31, 1, 2003: 12-16. Available at: <http://angelina.emeraldinsight.com/10.1108/00907320310460834>
6. Kay Ann Cassell. "Focus on collection development: a report on ALA Midwinter 2008", *Collection Building* 27 2, 2008.
7. Blair, "Knowledge Management: Hype, Hope, or Help?" 1999. [Online].
8. http://www.sciencedirect.com/science?_ob=RedirectURL&_method=externObjLink&_locator=url&_cdi=6556&_issn=00991333&_origin=article&_zone=art_page&_plusSign=%2B&_targetURL=http%252F%252Fwww.lic.gov.uk%252Fpublications%252Fexecutivesummaries%252Fkmskills.html.
9. Kovacs, D. *The decision-making process for library collections*, New York: Greenwood Press, 1990.
10. Edgar, William B. Toward a theory of collection development: an activities and attributes approach. *Library Collections, Acquisitions, and Technical Services*. 27, 4, 2003: 393-423
11. Atkinson, Ross W. Managing traditional materials in an online environment: some definitions and distinctions for a future collection management. *Library Resources and Technical Services* 42 1, 1998: 7-20. View Record in Scopus | Cited By in Scopus (14)
12. Hannaford William E. Toward a theory of collection development. *Collection development in libraries: a treatise, part B*. In: , JAI Press, Inc, Greenwich, CT, 1980: 473-583.
13. Osburn, Charles B. *Collection development and management*. In: M.J. Lynch, Editor, *Academic Libraries: Research Perspectives*, American Library Association, Chicago, 1990: 1-37.
14. Creth, Sheila D. The organization of collection development: a shift in the organization paradigm. *Journal of Library Administration* 14 1 , 1991: 67-85. Full Text via CrossRef
15. Hannaford, William E. Hannaford, toward a theory of collection development. *Collection development in libraries: a treatise, part B*. In., JAI Press, Inc., Greenwich, CT, 1980: 473-583.
16. Osburn, Charles B. *Collection development and management*. In: M.J. Lynch, Editor, *Academic Libraries: Research Perspectives*, American Library Association, Chicago, 1990: 1-37.
17. Creth, CrethSheila, D. The organization of collection development: a shift in the organization paradigm. *Journal of Library Administration* 14 1, 1991: 67-85. Full Text via CrossRef
18. Quinn, Brian. The psychology of group decision making in collection development. *Library Collections, Acquisitions, and Technical Services* Volume 32, Issue 1, 2008: 10-18

19. Evans, G. Edward. Developing Library and Information Center Collections. Libraries Unlimited. 2000: 15–16. http://ucblibraries.colorado.edu/collectiondevelopment/I_definition.htm
20. Reitz, Joan M. ODLIS (Online Dictionary for Library and Information Science). [Online]. http://www.abc-clio.com/ODLIS/odlis_c.aspx