The Current Situation and Development of Study on the Domestic Institutional Repository Based on the Literatures Analyses

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Abstract

Take CNKI-collected books about institutional repository as the target of research, use bibliometrics to analyze the statistics obtained from the time distribution of the materials, their types, subjects, key words frequency, and the time distribution of fund-financed articles, to obtain knowledge on the current situation and development of study over the domestic institutional repository, to provide with suggestions for constructing institutional databases.

Key words: institutional repository; literatures; statistical analyses; bibliometrics

With the disclosure of store and fetch as background, institutional databases have already become the focus of research of library science and informatics both at home and abroad. After many years of theoretical ayalyses and experiments, our country's organizational databases analysis has achieved great development as well as remarkable academic outcomes. Based on the quantative and qualitative analyses of the specialized literatures on institutional database, the paper is to reveal the state of development of the institutional databases over the past decade and give advice for studying and constructing institutional databases.

1. Data Sources and Analytical Methods

Using CNKI as the tool for selecting datas during which the author chose the option Cross-Database Search and performed with the words 'organizational database_organizational classics_organizational store_organizational library' at the books' name column in the advanced search page with deletion of overlapped and irrelevant results, we got 708 articles (by the date Sep.28,2015) and use bibliometrics to conduct statistical analyses to them.

2. Research Results Adding-up and Analyses

2.1 Time Distribution of IR Literatures

The variation of number of published works in different years is the key indicator of the state of development of a certain research field. Via the statistical analysis to the time distribution of papers on organizational databases, we can learn more about the developing course of the discipline.(See table 1)

Table 1: Time Distribution of IR Literatures

years	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	total
amount of IR literatures	1	4	17	28	59	101	92	89	73	85	103	56	708
Percentage (%)	0.1	0.6	2.4	4.0	8.3	14.3	13.0	12.6	10.3	12.0	14.5	7.9	100

The article *Library VS Organizational library, Reflection on the Strategic Development of a Library* written by Wu jianzhong, in 2004,as an investigation found out, was the earliest paper introducing the institutional databases in China. Seen from the time distribution of organizational databases , we can divide it into three stages: Start-up with no more than 10 papars at average in total from 2004 to 2005; Exploratory stage in which the number accounts for lower than 10% in the total from 2006 to 2008;Fast-track stage from 2009 to 2014 in which the number climbed to over 10%, especially in 2014 when the number hit the record of the previous ten years and reached 103, which signals growing concerns of scholars with organizational databases.

2.2 Distribution of Literatures Types
Table 2: Distribution of Literatures Types

type	periodics	thesis	meeting documents	scientific yeilds	news papers	patents	total
amount	664	31	6	3	3	1	708
Pencentage (%)	93.7	4.5	0.9	0.4	0.4	0.1	100

We can find in the data of table 2 that periodical are the major form of the databases analyses, with a relatively small percentage occupied by academic thesis, meeting documents, scientific reports, patent materials and so on. And we have also discovered the tendency of diversification in the types of documents. Particularly, the emergence of scientific achievements and patent documentation which had come from the previous analyses indicates that our research of organizational databases has reached to a certain depth and has brought about pragmatic yields with high academic level.

2.3 Distribution of the IR Literatures Themes
The research theme is the major character of literature contents. With calculation of the literature themes, we can figure out the existing conditions, direction and characters of the research and define research focus and its developing trend in later days. by analyzing the literatures on the levels of their titles, abstracts or even the whole passages, we conclude the research themes into seven types:

1. On basic concepts: it discusses the origins, definitions, characters function of the organizational databases and about the insight to them, exisiting situation and developing trend.

2. On technology and platforms: it talks about the function models, introduction and comparation of software's and systems. evaluation, installation and test, technical approach to develop systems and platforms.

3. On the construction of institutional databases: It talks about mechanism of construction, content filling, quality control and actual examples.

4.On management and service: It talk about management of knowledge, service and appraise system.

5.On policies and regulations. It covers mutilevels including the state's macropolicy, management and

policies within one organization and even some particular items of a certain execution unit. The things it studies can be intellectual property, copyright, disclosed store and fetch rules, copyright agreement, data management rules, knowledge sharing permit, optical and compulsory store policy and so on.

6. On investigation towards organizational repository and literature analyses: it talks about conducting investigation and comparison of the databases at home and overseas and calculating the number of literature on organizational databases.

7. On disclosed store and fetch system and resource sharing: it talks about resource sharing, disclosed store and fetch, IR alliance.

See more details about the distribution of the literatures themes in table 3.

Table 3: Distribution of the IR Literatures Themes

themes	amount	Pencentage (%)
the construction of institutional databases	178	25.1
technology and platforms	104	14.7
IR research and materials analyses	104	14.7
Overviews of theoretical study	89	12.6
managements and service	83	11.7
policies and regulations	76	10.7
disclosed store and fetch	75	10.6
total	708	100

As shown on the chart of distribution of literature themes, we discovered that the theme of the construction of institutional databases occupied 25.1% in the total number of literatures and it was the principle topic of the research in recent ten years. Moreover, Papers on theoretical study of institutional database, technology and platform, repository investigation and literature analyses, management and service, policies and regulations, disclosed store and fetch and resource sharing were all above 70 and occupied over 10% in the total number, which suggests that they have received equal attention from the specialists.

2.4 Analysis of Key Words Frequency

The key words frequency is a way for finding evidences and analysis in a way of connecting various factors in one literature. And it is an important part of bibliometrics. The key words frequently shown on the papers of any area of discipline should reflect the research hot spots in that area and their variation should mirror the developing trend.

Table 4: key words with over 10 occurance in the IR databases literatures

key words	frequency	key words	frequency	key words	frequency
institutional repository	513	resource service	29	users' need	17
disclosed fetch	115	institutional classics database	28	IR construction	16
institutional databases	113	knowledge base	28	digital library	16
high school	84	evaluation system	26	knowledge management	16
open access	82	promote strategy	24	knowledge service	15
institutional storage	55	resource sharing	24	OAI	14

university library	54	software	31	Management of scientific achievements	14
DSpace	49	autosaving	21	intellectual property	14
library management	47	content construction	20	copyright	14
IR construction	42	literature bibliometrics	20	resource construction	12
IR	37	Taiwan	19	electronic storage	11
academic exchange	37	quality control	19	academy	17
IR leagues	34	metadatas	18	Chinese Academy of Science	11
copyrights	29	policies	18	knowledge sharing	10

According to the statistical result of Table 4, we can assort the frequently used words into the following types:

(1) The Chinese translation versions of Institutional Repository (Abbreviated as IR) includes '机构知识库'，'机构库'，'机构仓储'，'机构典藏库'and so on, and the most frequently used Chinese name among all of them is '机构知识库' with 513 occurrence in the database.

(2) The construction of IR and involved institution: including the construction of IR, content construction, quality control, metadata, IR developing, resource building, digital store, high school, university library, academic institutions, Chinese Academy of Sciences and so on. From these key words, we can see much attention of the researchers draw to the construction of the database content and its quality control, as well as academic institutions like Chinese Academy of Sciences and high school are the important force of carrying out the study and development of the institutional database.

(3) Disclosed repository fetch and resource sharing: including unveiled fetch and store, IR leagues. resource sharing and knowledge sharing. They suggest that IR came into being with the principle of unveiled fetch and store principle as its background and is a system for knowledge emission and provider of knowledge in a way of academic institutions having the fruits of their members captured, stored, managed, saved and open for public use. As a result, the study of disclosed repository fetch should be one of the important part of our works.

(4) IR management and service: including library management, academic exchange, resource service, appraisal system, user needs, knowledge management, knowledge service, management of scientific achievements and so on. It means we care for the needs of the users and much concerns of the scholars on the management of scientific results, knowledge management and service for providing the users with knowledge.

(5) Technical and system platform: including Dspace, system software, OAI and so on. Dspace which have enjoyed a comparatively high occurance is the most common open-source software in the database.

（6) Policies and regulations: including copyrights, policies, intellectual properties, auto-saving and so on. They mean that In order to ensure the implement of unveiled fetch and store of digital resource and a long-term saving of IR, related policies and regulations to conduct the users's action and to protect the rights of information providers is needed. Therefore, it is indispensable to conduct the research of policies and regulations.

2.5 Analysis of Fund-financed IR Literatures

Among 708 IR research papers, there are 220 articles are fund-invested and they have received 252 funds as investor in total (for in some cases that a paper will be subsidized by more than one funds).

The source of finance involves 32 from the state level, 51 from provincial, 63 from science academy, 51 from high school programs, 10 from institutions, 19 from others. See more details about the quantity of private fund literatures in Table 5.

Table 5: time distribution of fund-financed literatures

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	total
amount	2	7	13	22	25	28	23	26	55	20	220
Pencentage (%)	0.9	3.2	5.9	10.0	11.3	12.7	10.4	11.8	25.0	9.0	100

As the time distribution of the financed literatures pointed out, in 2006 the IR began to receive capitals from funds, and the number have rose to more than 20 since 2009 per years, and it hit a record in 2014 particularly accounting for 25% in the total number of fund programs, which signals that the construction of IR have invited more attention from the authorities interested, and that the IR experts take serious considerations in applying for investment, take active parts to attract supports from the administrators at various status, to create a favorable environment for the building of IR and to enhance the quality and standard of it.

3. Summary

Through the statistical analyses of IR literatures, we can find out (1) the tendency of the rising number of IR published works and fund-invested literatures, which suggests the all the more popular concerns from experts and authorities interested. (2) The scholars both pay attention to the construction of IR and to the disclosed fetch, resource sharing, study of policies and regulations, management and service. (3) With the future of IR in sight, as the expert Zhang xiaolin pointed out, the IR will evolve with three trends in the future: the equipment of services to provide store and usage of text message, to assist education and research, to help with the strategic knowledge management in organizations in a way of transforming literature serving to knowledge serving, literatures spreading to knowledge sharing. As the basic facility of institutional knowledge, the IR will become a platform for serving knowledge.

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