

Library Knowledge Service: Meeting the New Requirement in the Development of Shanghai

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On the one hand, the development of Shanghai has placed new demand on and called for creative knowledge services to be provided by the library; on the other hand, the combination of virtual and real resources, the optimization of networking environment, and the new trend of library transformation, not only causes challenges to the conventional knowledge services, but also provides a new space for developing creative knowledge service models. The status quo and challenges versus opportunities of the knowledge services in the Shanghai Library are analyzed, and suggestions have been raised for developing creative knowledge services. This discussion is based on the field investigations of government agencies, industrial associations, research institutions and enterprises for their actual demands.

Shanghai, the most developed industrial city of China, is on the track towards an international metropolis. The city of Shanghai is leading the 16 cities in the Yangtze Delta Region of China and becoming the 6th biggest metropolitan city in the world. As a central city, Shanghai is obliged to provide comprehensive services to hinterland and other coastal areas in the region. The World Exposition with the theme "Better City, Better Life" will be held in Shanghai in 2010. These special missions impose particular high requirement on the city development of Shanghai, and hence places special demands on libraries, acting as knowledge service providers for the city people. Analysis has been made on the transformation of knowledge service models operating now in the Shanghai Library, and creative models are explored through field investigation and expert interview with government agencies, industrial associations, research institutes and enterprise groups.

1 Key Issues of the City Development for Shanghai

The goal of city development for Shanghai is to build the city into an international metropolis through upgrading urbanization and to make Shanghai as the global centers for business, financial, trade and shipment. The key issues for city development are highlighted in the following aspects.

Table 1: Key Issues of City Development for Shanghai

Key issues	Industrial upgrading	Urban construction	Education and talents absorption	Government duty transition
Priority and direction	Establishment of advance manufactures and modern services through accelerating reconstruction, transition, upgrading and innovation of the local industries	Harmonic and sustainable development of the city, to make the habitat more fitful for people	Development of both the school education and lifelong social education, increase of the civilization of the city people	Administrating the city bided by the law, strengthening social services of the government agencies, to build an honest, diligent, pragmatic and efficient government

The soul of the city development, however, is to implement the strategy of “invigorating the city through developing science and education”, and to carry out the strategy into “conscious action of all industrial sectors, and tremendous huge material forces of the city”, quoted the Shanghai mayor as saying so.

As early as in December of 2003, the 4th plenary meeting of 8th Conference of the Shanghai Government Committee revised and approved the <Action outline for Shanghai to implement the strategy of “invigorating the city through developing science and education”>. According to the theory of “secondary modernization for China”, the city of Shanghai is in the current stage of transiting from industrial era to intellectual era, from industrial economy to intellectual economy, from industrial society to intellectual society, and from industrial civilization to intellectual civilization. The future growth mode for Shanghai shall be shifted from “maintaining economical development as the core priority”, to “a harmonic development of the economy, society, and culture”, so as to greatly improve the quality of local living standard by production and distribution of information and knowledge. Shanghai will favorably encourage the projects of high priorities, priority fields of study and key technology, organize science research & key technology problem-tackling in important industries, form industries or industrial chains with core competitive competence, erect the public service platform for the strategy, intensify the system innovation, excite original creativity, build an innovation-favored policy & regulation environment, promote science popularization and vocational education and step up cooperation with central and local research institutes.

2 City Development and the Knowledge-service of Library

The city of Shanghai develops rapidly, accordingly, the knowledge-service industry, or consulting industry, as referred in China, including advertisement, engineering project consulting, financial & investment consulting, marketing planning, decision-making & management consulting, market-research, human resource & personnel intermediary service, trade distribution, accounting office, attorney office, asset appraisal, conference & exhibition, cultural dissemination media, R&D center, design center, data process center, education and training, etc., is thriving at an unimaginable rate. The rapid growth of the knowledge-service industry itself, on one hand, forms part of content of the so-called science and technology innovation and education development in the strategies of city development and

“invigorating the city through developing science and education”, on the other hand, the knowledge-service has laid foundation for, penetrated into, highly integrated with and held inseparable from, any industries and ranks of social lives already.

Knowledge service, as well as the Information service and value added information service, such as education & training, cultural dissemination media, economy, technology and market research, is part of important constitutions of the knowledge service of library. In addition, the knowledge service practiced by the library provides a great amount of fundamental work for other knowledge services. With the rising of leading functions in economy of Yangtze delta region in China, within the radiation range of Shanghai economic zone, Shanghai will focus on development of economy, finance, trade, shipment and information service, in order to become a center for comprehensive services in the Yangtze delta region. In the current, Shanghai is actively proceeding with the construction of the “information port”, accelerating construction on information network and cultivation of information market, and is developing the information consulting and information processing industries at great effort, to serve customers coming either from the city of Shanghai, or elsewhere in the Yangtze delta region.

Harmonic and sustainable development of the city requires scientific planning and administration, which should be based on comparison on mass data reflecting successful expertise or failure experiences of urban constructing of diverse cities throughout the world. Scientific & technical innovation, enterprise competition, and overseas investment require a great amount of information relevant to technology, patent, commercial and industrial evolvement. For education, library is not only a lifelong education classroom, but also the knowledge paradise for advance science and technology. For promoting education with all-around development, library is the construction foundation for cultural and ethical progress as well as the city civilization. Legitimacy construction and duty transition of governmental administration call for researches on basis of a lot of information at home and abroad. Therefore it concludes that the knowledge service of library could serve the city development in either direct or indirect ways. Any well-known public library in world metropolis such as New York, London, or Tokyo, has the well-operated abundant knowledge services welcomed in the city. The definition of core-capability of the library, has changed from assessing the quantity and management on its information resources, to the information services and knowledge services it can provide.

3 The Knowledge Service Status Quo of Shanghai Library

Since Shanghai Library merged the Institute of Scientific & Technical Information of Shanghai (ISTIS) in mid-nineties, the knowledge services, integrated and developed out of the original forms from either entity, come into stable forms in the present. Among them, “City Classroom”, a brand representing lectures given by the Shanghai Library, focusing on cultural, economic and social subjects, herald by attendants and generating intensive social influence, has been hold for 900 times totally. The education & training center of Shanghai Library, grows from faculty education for the ISTIS at the beginning, to an annual scale of

100 classes, 5,000 students, and hundreds of thousands of applicants trying to pass through the academic exams. As the first-grade new product & technology appraisal agency, the Infolib Consulting Group of Shanghai Library, conducts more than 1,500 items of appraisal each year to provide backing data for the technical evaluation of product as well as qualification to high-tech accreditation for the enterprise. Also, the strategy information group, with the "Infolib Express" weekly, elaborating on hot and problem-resolving topics of the city development, is affecting decision-making of the local officials. The table below incompletely illustrates the existing knowledge service models, indicating the fact that in compare with any other large-scale public libraries in the world, Shanghai Library is by no means inferior in its knowledge services evaluated by whatever kind, quantity, quality or social influence.

Table 2: The Existing Knowledge Service Conducted in the Shanghai Library

Existing model	Content	Quantity /a	Major achievements
Lecture	Hot topics on Science & technology, economy and culture	102	The formation of brand City Classroom
Exhibition	Science & technology, economy, culture and social life	72	Conference and exhibition economy
Education & training	Fundamental /vocational education	*	An accredited important vocation and training center in Shanghai
Service for World Expo '2010	Information collection, Research and Conference	Non-periodic	Becoming the research and designed conference center for World Expo' 2010
News clipping	Mainstay industry, economic hot field	1,168 periodicals in 15-variety	Newspaper cut for World Expo., financial analytical material, collections on real estate
Cooperation on genealogy project	Digital family tree resource development	1	Development of digital family tree information, cooperation for 10 years
Competitive information training for company staff	Competitive information theory and practice	5	The early research center for CI in China
Market Research	Industrial and product field	17	Accredited by the Statistic Bureau of China, specialized in industry and product analysis and research
Government purchase service	Science & technology planning, macro economic report	30	Long-standing cooperation with city governmental agencies
Information providing for governments' decision making	Hot topic information provided for city government official, on subject of social, economic and scientific & technical aspects	1,000	<Shanghai Library Express>, <Science & Technology Bulletin>
Science & technology appraisal	Technology appraisal for new/advance product & technology	1,639	The first-grade appraisal center accredited by the government

Translation service	Scientific, technical and economical material	18.44 million characters	Translation service provider accredited by Shanghai Science Committee
Patent Consulting	Patent retrieval, consulting and representation	39	Licensed organization for patent representation
Publication	Books in fields of Science, technology, economy and culture	324	A big specialized sci-tech publishing house

*Library faculty training: 664 persons in 9 classes; social training: 1,700 persons in 39 classes; cooperative training: 2,800 persons in 53 classes; and training for computer exams: 5487 persons.
Source: <Annual report of the Shanghai Library>, 2003; Statistics from the heads of departments in Shanghai Library.

4 Creative Models of Knowledge Service the City Development Demands on Shanghai library

Though Shanghai Library has contributed painful effort on the construction on knowledge service and parallels the famous world public libraries on this aspect, it still lags behind some libraries if measure by the width and depth of its services, examples like the knowledge service provide by the New York Public Library to small company customers there, like the “fix subject push” service developed by the Chicago University Library, etc. The implementation of “city development” and “strategy to invigorate the city through developing science and education” is the inevitable option for Shanghai to adapt to domestic and foreign challenges. The special development mission of the city of Shanghai has placed new demand for the creative knowledge service as well as the conventional models on Shanghai Library, built as a cultural landmark in the city.

In a bid to assess the knowledge service of Shanghai Library and explore creative knowledge service models from the viewpoint of the government, industrial institute and enterprise, field investigation and expert interview are conducted outside the library to find out some real demand and practical prospect, while conventionally, the assessment and exploration used to be made from library sector and from viewpoint of librarians.

1. Knowledge service in preference to advance manufacture and mainstay industry of Shanghai

Government, industrial institute, association and enterprise pay more regards to knowledge service that involves advance technology and mainstay industry of Shanghai to meet the domestic and global challenges. Therefore, Shanghai Library is required to pay more attention to construction of the relevant information, based on a pro-advance industry purchasing and collecting policy. The providing process (including shelving, processing) shall be accelerated and reference service in the field shall be enhanced. The existing knowledge service of Shanghai Library is unsatisfactory, so, researchers have to buy new books, if in need, from bookstores.

2. Knowledge service focusing on the latest industrial information

Research institutes, associations and large group companies more concern about the

latest development of the global industry, competitor's information, and about the media recording the competitive intelligence like international conference materials, papers and documents, and are willing to pay the cost for obtaining the information. Measured by the time-efficiency, many conference materials collected by Shanghai Library is obsolete and unattractive to most of large-scale group companies.

3. Knowledge service on training affairs

Patent and intellectual proprietary right (IPR) are keys to construction of the enterprise competitive competence, so the training service shall be tightened, and door-to-door training seems to be more favored. Some interviewee suggests that the knowledge service of Shanghai Library on patent not remain at the "representation" level, rather, more new service modes be developed. Some says that the patent service of the Shanghai Library cannot be clearly identified: more appropriate title like "IPR retrieval and research" could be used.

4. More economic statistical data and more customized fix-subject or professional knowledge service

Industrial information institute, including some consulting and researching agencies, are conducting a lot of industrial statistical analysis, group companies are more interested in product statistics, while market research organizations are in most cases likely to use list of enterprises. Therefore, it is needed to collect and supplement economic statistics of diverse industries, and send them via a "Push service" to the customer's table, through a payment for the cost, or a way of reference service.

5. Subject librarian knowledge service

When researchers look for materials in Shanghai Library, they often meet librarians unable to catch with what is really interesting to them because of highly specialty or uniqueness of the research subject although the librarians are deeply aware of the collections in library. Hence, it is rather helpful to raise the service quality of Shanghai Library, by cultivating and training subject librarians who have wide and deep knowledge in one or two subject corresponding to "advance manufacture or mainstay industries" of Shanghai.

In contrast, results by field investigation reveal that the pay-services of commercial databases, which are widely looked upon by the librarians, are uninteresting to some industrial associations and group companies, since the databases are already available to them. But, whether the pay-services are still interesting to medium or small-scale enterprises, remains unknown. The personalized or high-grade services of library, face the opposite attitude, and need to be determined through further interviews. It is, however, much more impressed that while studies about the library services are keenly carried out in the library sector, they are hardly known to outsiders. It implies that in the networking environment, the service of library still restrains in library building, and is inaccessible readily to the customer. Promotion and marketing for library's information resources and knowledge services are rather insufficient to satisfy customer's demands. At the time when Shanghai Library was merging ISTIS, reporting was intensified, later, sporadic reporting, although seen in the paper, are

illustrations of the achievements only. Introduction and dissemination of the value-added information service and knowledge service are hardly found, and are unknown to most interviewees. For example, many interviewees get to know the "Lecture of Shanghai Library" in most cases when they come around Shanghai Library. It is suggested that economical forum or professional address be introduced to industrial associations, large or medium scale enterprises via issuing special notices, while advertised on the mass media simultaneously.

5 SWOT Analysis and Suggestion

SWOT analytical model has been applied to study on the knowledge service of Shanghai Library to meet the need of city development and the strategy of "invigorating the city through developing science and education". Conclusions are made in the following.

Table 3: SWOT Analytical Results of the Knowledge Service of Shanghai Library

Weakness	Contradictions exist in personalized service against public service, fundamental information service against value-added services, personal and personnel benefits against public good, profit taking against free-of charge principle, etc, as Shanghai Library is a non-profiteering institute
Threat	Digital library mode, optimization of networking environment, commercial database development imposing heavy impact on traditional library and conventional library service
Strength	Abundant information collection, good academic background, highly-educated professional, long-time expertise, rising reputation, rich material resources such as library buildings, branch libraries in different communities
Opportunity	A great amount of information and knowledge services required in city development, rapid IT growth linking future library more intimate with the customer, and providing strong technical support for upgrading knowledge service quality and developing creative knowledge service models

Hence, seizing the opportunity in front of the challenge, Shanghai Library could test on creative knowledge service models based on conventional ones to satisfy key focus of city development and strategy "to invigorate the city through developing science and education", taking into comprehensive account of actual demand of government, industry, research institute and enterprise, as described as follows.

1. Test on new functions of library education

Distinguished universities like the Stanford University of the United States, measure the new applicants on all-around qualities including information literacy, social competence, etc., rather than scores of examination exclusively, the way unknown and inconceivable to most Chinese applicants. The domestic education system, following the modes of former Soviet Union, is completely out of date in that the education is largely disconnected to social practices, which has severely restrained cultivation on talents. There is not any development of information literacy for students. The library, through communicating educational administration agencies,

could cooperate with schools to train students for establishing comprehensive problem-tackling competence including finding out problems, making strategy, retrieving information, collecting and analyzing the information, assessing the process and handing the result. It is essential to build a “team work” spirit in their participations in the activities.

2. Knowledge service stressed for medium or small sized enterprise

The said knowledge service comprises technical intelligence resource, commercial intelligence resource, patent analysis, training to information staffs on information literacy in the networking environment, competitive strategy analysis, etc. In the present, large-scale group companies such as Bao Steel, Huayi Chemical Group, Household Chemical Group, Shanghai Telecommunication, realize the importance of such knowledge services and purchase them Shanghai Library, while none of local medium or small-scale enterprise specifies the need. In fact, large-scale companies in overseas countries are usually unlikely to be customers to knowledge services of the library since they have their own professional information resources and knowledge service channels long accumulated, in the opposite, medium or small-scale enterprises, due to restrained affordability on money, human and material resource, are often the major customers.

3. Construction on information resources and knowledge service system in favor of advance manufacture and modern service and establishment of the subject librarian system

Through raising salary, hire and train subject librarian, and particularly, let participate in large activity organized by the industry and enterprise to trace development of the academic science and technology, give suggestion to resource construction, and plan and schedule the cooperation with enterprise and industry on information and knowledge service. By doing so, most of the subject librarians can really become leading researchers of the information science. Some researchers say that librarian should be “set free” from tedious and complex document service, and all join in “exposition and excavation” of the information content. Academic teams formed by librarians and outside researchers to join in a complete problem-tackling process for the customer, i.e., a matrix administration frame of “subject librarian + librarian + part-time library staff”, is worthy of consideration.

4. Promotion and marketing effort for knowledge service of library

The promotion and marketing for knowledge service of library should be different from the profit-taking commercial activity: its goal is to attract more customer and for better use of the information resource and knowledge service of the library. Since library is a non-profitting organization, different means saving more money should be adopted in its promoting and marketing activities. Manchester Commercial Public Library of Great Britain, takes use of channels affiliated to news agency, links and contacts diverse economic and social entities, distributes leaflets, or, employs liaison persons.

5. The feasibility of pay-service for latest economical information

Some interviewees said that although the retrieval cost for standards is cheap in Shanghai Library, the collection is found incomplete. Often, they have to get what they need from the Standard Research Institute at much higher price. It is widely acknowledged that the conference document of Shanghai Library is already unmatched with the latest development of the industry and economy status quo of Shanghai, which is nevertheless more interesting to industrial and enterprise researchers. It implies, that if the real need of customer is unable to be satisfied, "public service" without cost is by no means more appreciated by the customer, than the more accurate and efficient pay service. In many situations, resources are wasted dramatically under the excuse of "public" but ineffective service. It is therefore for Shanghai Library to consider a more efficient way of knowledge service on conference material purchase and pay-service.

6. Other suggestions

More social interviews shall be used to know the feasibility of "fix-subject push" and other knowledge service models. It is suggested to apply further merger & acquisition by the Shanghai Library, to absorb industrial information institutes in Shanghai, but that could be managed only through appealing to authorities. The Central Library concept, however, is widely known and welcomed by the customer, if more fundamental information services could be stemmed to district and community libraries, the results is better. In the networking environment, with the advent of virtual library versus the real library, it can be realized without arousing enormous investment. If the library can take the lead in resolving the copyright issue with the publishing houses, Shanghai Library, along with any other local branches, is promising to become one of the repositories of all the thoughts and culture of mankind in the world.

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