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Global and Regional Phenomena and their Projection on the Models of Developing Information Literacy

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Abstract

Considering the question of information literacy the author firstly demonstrate a new universal scheme of social communication and points out, that any library to reserve its role must work in a mixed technological environment, and its development should be directed at forming communication chains with reader, publisher and other libraries via Internet. And a reader should possess a set of definite habits and skills to get necessary information. But this general global tendency, as the experience shows, conflicts with some factors, which are supposed to display themselves differently in different parts of one country, let alone different countries. And only the knowledge of this very regional specific character may assist in making an optimal model of the algorithm to solve the problem of information literacy. In the report the authors shows, how some of these factors manifest themselves in developing Internet in Russia and Siberia, electronic document delivery technology and organization, in the work of Continuous education centers and their programs in different parts of Russia.

Introduction

As is known, the term "information literacy" appeared in 1974 (according to other sources – in 1977) in the USA. Since that time it usually denotes abilities, knowledge and valuables,

regarding to information and knowledge search and access, their assessment, organization and spreading. Nowadays to denote this essence use is made of the terms: electronic information literacy, literacy in the field of information technologies, media-literacy, library literacy, network literacy, Internet-literacy, hyper-literacy.

In Russia the question of information literacy (here this topic is called "information culture") has become of great importance in the middle of the 90-s, during the period of radical changes in the means of communications - developing electronic publications, full-text electronic data bases and Internet as a way to access, transfer and getting information. And information literacy as such just consists in mastering this new way of social communication (fig. 1) and knowledge of information sources.
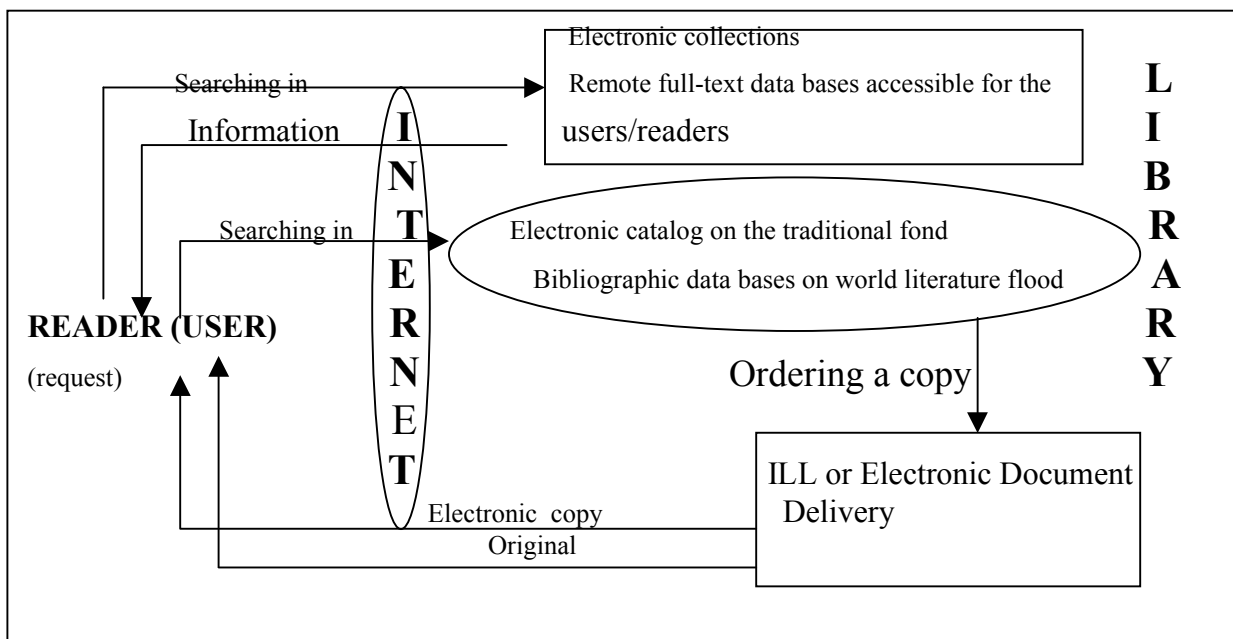

Figure 1– Modern information environment

It seems, that Internet and electronic publications are global phenomena, and any library in the world (in any case scientific ones, in Russia they are university libraries, regional and those within Academy of sciences) to reserve its role in social communications must work in a mixed technological environment, and its development should be directed at forming communication chains with reader, publisher and other libraries via Internet. And a reader should possess a set of definite habits and skills to get necessary information (to use e-mail, full-text electronic publications, various data bases including electronic catalogues, electronic document delivery (EDD)) and to create it in the electronic environment. And this is a general global tendency. But as the experience shows it conflicts with some factors, which are supposed to display themselves differently in different parts of one country, let alone different countries. And only the knowledge of this very regional specific character may assist in making an optimal model of the algorithm to solve the problem of information literacy.

Development of Internet in Russia and Siberia (chronology and figures)

As a rule, the level of telecommunication development is characterized by such factors as:
- stable communication channels with high capacity;
- acceptable access (technical, financial) to these communication channels.
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In 1995 – 1996 Russian Internet-space was a separate unstable region. During 1999 Ru-net volume increased 5 times as much, the number of servers increased in 2 times, and web-pages – in 4 times. At present annual Internet growth in Russia is 150%. According to the number of Internet users Russia occupies the 5th place in Europe (12 million persons) after Germany (23 million), France and Great Britain (17 million each) and Italy (14 million). But despite this Russian Internet is in its babyhood. Its development falls behind USA Internet on 5 – 7 years and Western Europe – on 3 – 4 years. Nevertheless according to the forecast of our Communication Ministry, in 2005 in Russia there will be 64 million users, that are 44% of citizens.

But the distribution of information and communication Internet infrastructure is rather irregular. Main commutation means (communication lines, networks and data transfer channels), information flows management – are in the European part of the country, in the largest cities of the Urals, Siberia and the Far East. Moscow and S-Petersburg are the main centers for Internet development. All the rest cities fall behind on 2 – 5 years from them.

To characterize regional Internet it is necessary to mention one more component – Internet-auditorium. According to the data of Public opinion fond in summer 2003 the Russian Internet-auditorium was distributed as follows (fig.2)
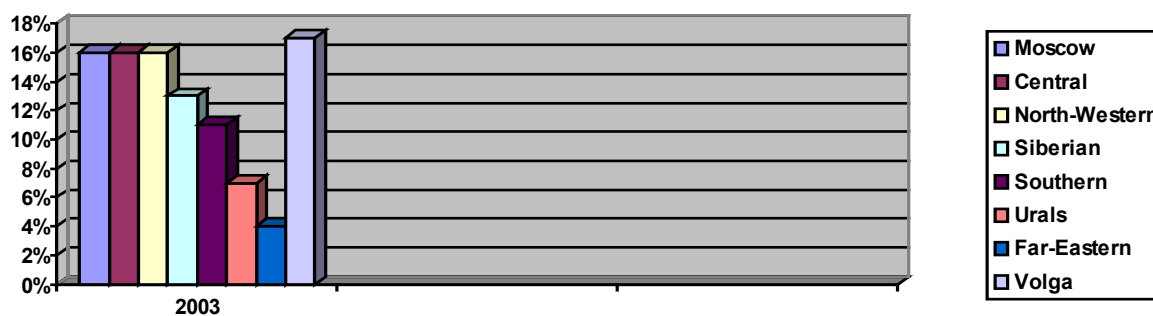

Figure 2 – Proportion of Internet-auditorium in Russian regions

Differences in users activity are explained by high and low development of telecommunications, different economic and political situation.

Let's consider Siberian federal region – its social and intellectual characteristics and its Internet-space. The territory of the Siberian federal region is the largest one in Russia, here there are 132 cities and towns, its capital is Novosibirsk. In the region there are branches of 3 scientific academies with more than 100 research institutes, more than 400 secondary special schools or colleges and 110 higher schools – universities, academies and institutes. It has 900 libraries – it is the 5th place in the country. The largest number of research institutes, colleges and higher schools are in Novosibirsk. Thus, we see that Siberia is the region, which occupies a vast territory and has

a highly developed scientific and educational space. That formed a reliable base to develop Internet and information resources.

Internet space reached Siberia in 1996 (Novosibirsk – in April). At the end of 1999 the analysis of its mastering by the libraries of different types was made. The availability of e-mail, home-page, electronic catalogue, different services and products for remote users served as indices for this analysis. The conclusion was as follows.

Along Siberia Internet moved from the West to the East in fact along the Trans-Siberian railway main line, along the way paved by science and higher education. And at first Internet-space was just only "over" the large cities – regional centres: Novosibirsk, Krasnoyarsk, Irkutsk, and Omsk. In Tomsk, Kyzyl, Kemerovo, Tumen, Ulan-Ude communications were very poor at that period. And nothing of the kind was "over" districts centres, let alone small towns and rural areas. E.g., in Novosibirsk region only one district centre –Berdsk – had Internet and only one its library had access to it.

None of the eight national district libraries (districts where people of northern nationalities live) had access to Internet. That meant that all Northern nationalities were out of modern information space. And that lead to the growth of breaking-off in the social and economical levels of life for the citizens of that part of the country. Unfortunately since that time this situation hasn't changed much. And at that time libraries Chita and Barnaul were out of Internet were.

Different financial conditions, persistence and professional attitude to new technologies were also revealed in access possibilities to Internet. E.g., in one and the same geographical point a library of one department (Ministry) worked in Internet, and of another one – didn't. That was observed in Tumen, Ulan-Ude, and Kyzyl.

As is known thanks to financial support of G. Soros at the end of 90-ties our universities organized Internet-centres. All five state universities and their libraries in Siberia immediately got access to Internet. Certainly it was very important. But the readers of public national (there are 4 of them in this region), some regional libraries could only envy them. Such an access 15 regional libraries got much later.

Electronic document delivery (EDD): comparison of technologies and organizational models in Russia, Europe and USA

There is much in common in the technological schemes of EDD services, as they are based on one logical succession of operations and the same technical means. Nevertheless each library or library association develops its own technological schemes to get orders and deliver e-copies in. Our investigation of this phenomenon allowed to determine the constructing EDD-system is influenced mainly by 1) the structure of the information base it is organized on; 2) the quality of communication channels; 3) economic factors; 4) copyright.

According to the structure of the information base – united fund / distributed fund / metafund it is possible to single out three EDD basic organization models:

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1) a two-level model with vertical links «end user - information system (EDD service)». This is typical for national libraries, information centers and commercial firms. An order enters the system (a definite library, centre, firm) and then it fulfils it, mainly using its own fund or that of its partners.
2) a model with horizontal links where the participants of the information system are both end users and providers. An order arises within the system and it fulfils it. This is how the work of library networks and associations is organized.
3) a multilevel model «end user - information system», where the role of information system is played by an information intermediary with multiple constant and temporary information links. An order enters an information system without definite borders but which guarantees its fulfilling. Information base here is meta-information on the location of a source requested.

The first model is typical for Europe, the second one - for the USA. The 3rd one – for commercial information firms. USA university libraries began to experiment with EDD by fax at the end of 60-s, British Library – at the end of 70-s. And there were no Russian EDD services in libraries up to the second half of the 90-s –only with the advent of Internet. Their organizational models are the mixture of those of the 1st and 2nd type. This is, firstly, due to the historically formed state governing system, secondly, due to low capacity of EDD-services and funds in all main libraries of the country. That made main libraries providing e-copies to cooperate and fulfill the functions of both provider, client and in all cases – an intermediary. In Russia there are no EDD-services of the 3rd type, mainly because information firms won't have commercial success, lack of full-text data bases with Russian scientific journals.

USA and European EDD- services differ from those in Russia in the character of information sources being copied and their chronological limits. USA and European EDD-services provide 1) copies of old (issued long ago) or rare sources and 2) access to own or licensed full-text data bases with journal articles, published mainly during the last 10 –15 years. Russian EDD-services in libraries provide copies from both "old" and fresh Russian and foreign journals.

A characteristic feature of technological schemes in Russia is the presence of some mechanisms to solve one and the same task. E.g. FTP and e-mail are used as delivery mechanisms Faxing is not used at all.

The basic difference in requesting and delivery mechanisms used by foreign and home EDD services is that the latter use computer networks only, as, first of all, this resource for the Russian libraries is free of charge. Moreover, as usual, a foreign user places an order in a library or an information firm if only he is sure that it has the source. In Russia, due to the lack of exhaustive bibliographic information in electronic catalogues and data bases, a request is sent to an EDD service «just in case».

In Russia we observe a great variety of technological schemes used: from traditional ILL with some electronic stages (orders sending and receiving, their treatment and statistics) but in some cases combined with the possibility to search in an electronic catalogue, a data base on CD-ROM or via Internet - to an information system where receiving an order, its treatment and delivery are made electronically. The reasons of this variety are: different technical, communicational and financial possibilities of libraries and users. That's why all services are oriented to the technical possibilities of end users.

Education centres and their programs

In Russia there are 169 institutions of different status where one can get special education to work in a library. Among them are: 80 colleges to get special secondary education, 46 higher institutions. Certainly graduates who left higher school 1 – 6 years ago possess modern knowledge in information technologies.

In the country there are 43 institutions (different centres), which provide additional education, that very life long education. It was very interesting to discover that only 8 of them in the short description of the education subject mention new technologies, informatics, and informatization. Two of them are in Moscow (there are 6 institutions of such a type here), others – in Novosibirsk, Kemerovo, Magadan and some other cities. All the rest mention library and information activities only.

It is clear that there is no correlation between the availability of centres and levels of communication development. That makes us think that in our country the state of information literacy greatly depends on the needs in information as such.

Approaches to overcome information illiteracy (Kemerovo experience)

The desire to reach universal information literacy firstly lead to the use of generalized teaching methods aimed at to embrace more users and not to meet specific needs of different groups. Our colleagues in Cameroon state university on culture and arts and Research institute on information technology in social sphere, working on the UNESCO program "Information for all" have chosen another way. First, they developed the conception of information culture. According to them it is a part of a general person's culture and is cumulation of person's information outlook, knowledge system and habits in the work with printed and electronic resources. Within the conception they have developed the principals of effective organization of information universal training.

They have divided all users in several groups and started with developing the model for training a teacher the bases of information culture. That was done for the students of pedagogical collage. As well they prepared the complex of school programmes "The principals of information culture" for pupils of 1 – 4 forms. Thus, the 1st stage is realized and one group of users has everything to learn and to be trained.

Now our colleagues are developing the programs for both teachers and pupils of middle and senior forms. Their aim is to put to practice the course "The principles of information culture" in the plans of all educational institutions of all levels: from pre-school to post-graduate education.

It should be noted that the university of culture in Kemerovo solves this task. Kemerovo is the centre of Kuzbass, it is a miner's industrial region, where people with special secondary education comprise 18%, and with higher education – only 11%. This is a region with low life index. But I suppose that in this case a great role is played by the personality factor. The engine of this program and its realization is professor Nathalia Gendina. More details about this program one can find at http://nii.art.kemerovonet.ru.

Conclusion

The main professional valuables of a librarian are to serve readers, intellectual freedom, preservation of documents and providing equal possibilities for access. I hope that I have managed to show the factors, which add regional colours to global phenomena and tendencies. These factors are:
- common level of population needs in information;
- formed traditions in libraries interconnections and interlibrary structures as communication systems together with general governing structure in a country;
- development rate, level and quality of telecommunication systems (technical, social and political aspect);
- the level of technical "well-being" of libraries and users (economical aspect);
- the attitude of users to electronic information and their desire to use Internet (educational and age level);
- personality factor.

And all these should be taken in account in the models of Developing Information Literacy.