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## ABSTRACT

An analysis of the information service of the Leningrad Institute of Railway Transportation Engineer's libraries led to the following conclusions: Optimal information service for all basic needs of the users in an institute can be ensured by the combined efforts of the libraries and their information services. University libraries should supply timely differentiated bibliographical and factual information to the research institutes and laboratories in many universities first. The content and form of information service at technical institutes should be determined by the requirements of scientists and specialists in their scientific and pedagogical activity. To make information more differentiated, and to cut down on "noise", libraries and information services should provide service only to major projects. The ability of the user to make use of the information system is of prime importance in elevating the efficiency of the Institute's library services. Further improvement of the information service to scientists and specialists of higher education and maximum satisfaction of their requirements is one of the most urgent tasks of the Soviet institute libraries. (M)

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SCIENTIFIC AND INFORMATION ACTIVITIES  
OF INSTITUTE'S LIBRARIES

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Scientific and Information Activities  
of Institute's Libraries

The libraries at higher schools serving a huge contingent of scientists and students are one of the links of the state system of the scientific and technical information in the Soviet Union.

These libraries conduct mass, group and individual information works by organising displays and bulletins of new acquisitions, topical displays and displays-reviews, compiling retrospective bibliographies and lists of literature on the subjects of research and designing work conducted by various faculties issuing numerous bibliographical, factual and graphic references, organising reviews of newly acquisitioned books.

These forms of information are widely used at the higher educational establishments and are of importance in rendering assistance to the scientific and

pedagogical work.

However the steadily growing volume and level of the scientific work at the institutes called for further development of the information activity of the higher school's libraries. The information had to be more differentiated and prompt, contain more factual data and information sources.

In the last 6-7 years the institute's scientific and technical information have improved along the following lines: the organisation of group branch and group topical information; extensive use of centralized and non-centralized book entries for group and individual information; appointing technical informants and reviewers at the institute's scientific branches; developing factual and graphic information; organizing information services at technical institutes and universities.

The information and bibliographical librarian service consists of the system of catalogues, main bibliographical, branch, special, auxiliary and various information and bibliographical publication put out by the All-Union Book Chamber, the All-Union Institute of Technical Information and the central branch information institutes.

The present-day information service at higher schools can be shown on the example of one of them engaged in training specialists in various branches.

The Leningrad Polytechnical organizes information service of scientists and specialists through information and bibliographical section which works in close contact with the engineers responsible for information service at faculties and with reviewers of research institutes of the Leningrad Polytechnic.

Scientists get their information about the Soviet and foreign literature on their subject through their chairs which receive branch issues of "Reference Journal" and "Express-information" of the National Research Institute of Technical Information. Regular displays organized by the institute's libraries acquaint students with new acquisitions. Libraries publish and supply the faculties with branch bulletins with due mention of the corresponding sources (departmental publications, collections of essays of the research works of the All-Union research information centre, etc.) thus informing them about new departmental materials acquired by the library, research works in the country, standards, norms, price-lists, catalogues, etc.

Group information about the Soviet and foreign literature dealing with the work conducted at the institute is organized with the help of card indexes of the centralized and non-centralized entries.

Applications for information of the research institutes are approved by the Polytechnic rector and his

deputy on research work. The time-table of the arrival of information is set on the agreement between the research institutes and the library. Scientific consultants to receive information and keep in constant touch with the library are appointed for the entire period of the research work. After the work has been completed, the issued information is registered as the retrospective thematical bibliographical index.

Mass topical information on the Soviet and foreign literature, on topical problems of science and technology within the range of the work of an institute is popularized by organizing large review-displays at the library and at the faculties. The subject of the display is approved by the Polytechnic prorector on research work.

The study-room of social sciences which has a special book stock, reference files and a staff with appropriate education supplies information in the sphere of social sciences.

At the Saratov State University the information section is the structural subdivision of the periodicals department. Its main task is to cater to the workers of the University research institutes of physics, chemistry and geology as well as faculties of physics, chemistry and geology and the University computer centre. The information and bibliographical work at the rest of the faculties is conducted through the reference-bibliographical department and other subsections of the library.

The information sector provides mass, group and individual information in accordance with the subject of the research work conducted by the research institutes and faculties, by using cards of the centralized and non-centralized entries and annotated cards compiled by the sector's staff.

Once a month an Information Bulletin is published on the basis of the cards received from the All-Union Book Chamber which reflect articles on physics, chemistry, mathematics, mechanics published in the "Transactions", "Scientific Notes", scientific papers of the union republics and the journals of a general nature. Articles from well-known journals are not included in the Bulletin. This make-up of the Bulletin does away with the negative effect of the Bredford's Law about "information scattering".

On request the section provides scientists and specialists with electrographic copies of the articles. Weekly the sector publishes and distributes "Express-information" which contains headings taken from foreign journals and descriptions from the Signal Information of the All-Union Institute of Scientific and Technical Information. Also practiced is the compiling by electrographic method of bulletins on topical problems.

By conducting the retrospective thematic retrieval (usually before the research work is launched) the section

organizes reproduction of subject and author's indexes to the Soviet and foreign journals. The unavailable journals are ordered through the inter-library collection.

The information about unpublished materials is made on the basis of the publications of the All-Union Scientific and Technical Centre.

In addition to the current topical information, the section supplies scientists with information concerning problems which arise in the research process, organizes periodic topical information book reviews at the research laboratories and at the University faculty.

At the Leningrad Institute of the Engineers of Railway Transport the main information work is being carried out by the group of the scientific and technical information working in close contact with the reference and bibliographical section of the library and subordinated directly to the head of the institute.

The main topics of the research work are provided with information on agreement with the scientific chair. On topical requests scientists and research workers receive the required bibliographical and factographical information the content and form of which is determined depending on the character of their requests and the stage the research work is at. Other topics of research work is being handled by the sector according to the "inquiry-answer", service. A number of faculties periodically receives on their inquiries the current

bibliographical information with the help of the cards of the centralized and non-centralized entries.

Bimonthly, the group of scientific and technical information issues and distributes at the faculties an "Information Bulletin" which has the following sections: (1) Official documents (orders and instructions of Ministries and departments which could be of interest for the institute's scientists; (2) Methodological documents such as letters, instructions and so on; (3) information materials (reports about completed research works, new transfers, industrial catalogues concerning railway transport, author's certificates, patents and also information about conferences, meetings, symposiums and their decisions.

Moreover the group conducts methodological control through technical informants, together with the reference and bibliographical section holds twice a month so-called "Information Days" during which new acquisitions to the scientific library are displayed, organizes a thorough information and factographic service.

The reference and bibliographical section carries out topical reference and bibliographical service on requests from the faculties (compiling of topical bibliographies). It compiles branch and special card indexes and twice a month issues "Bulletin of New Acquisitions of the Institute's Library" which comes out in 6 branch

issues covering natural sciences and the institute's topical branches of technology and also social sciences.

The library's branch sections supply mass information. Mass and group topical information for the faculties of social sciences are being supplied by the section of social and economic literature which has its own book collection, reference and bibliographic card index and a staff.

In order to improve the scientific and technical information service at the higher educational establishments a research was carried out in 1969 in a number of their libraries of the information requirements of scientists and specialists.

The information requirements of the differentiated groups of research workers are the factors which determine the functioning of any information system. The viewpoint has found its confirmation at the symposium of the OMSA member-countries "Preparation of Information Consumers and Study of Their Requests" held in Bucharest in November 11-15, 1968.

In the higher educational establishments the problem is particularly urgent and complex. It is urgent because more than half of Soviet scientists work there training highly-qualified specialists and carrying out a great scope of research work. It is complex because combination of the study and research

activities conditions the specificity of the information requests of scientists and specialists and the forms of their satisfaction. A wide range of work and a multi-topical requests, are characteristic for the higher educational establishments, along with the necessity to combine various forms and methods of information service. All these considerations and the insufficient developing of the problem conditioned not only practical but also theoretical character of research.

The research has the following aims:

1. Elaboration on the basis of the analysis of the character and content of the activities of scientists and specialists of the typological pattern of the information consumers. The degree of participation of the separate groups of consumers in the research and pedagogical activity, the topics and the stages of research, the subject of study disciplines and the degree of elaboration of the lecture courses were taken as the basis.

2. Determining requests in information of each group at various research and design stages of work, pedagogical activity and finding ways of its satisfaction.

3. Working out recommendations for the improvement of the organization of scientific and technical information at the institutes, mainly technical, in order to satisfy the requirements of scientists and specialists in information more fully.

Since the research was a variety of concrete sociological research, a methodology selected for it was

characterized by the combined use of methods inherent in the present-day librarianship and sociological research: questionnaires, interviews, account of usage of the library's information sources by scientists and specialists, account analysis of the bibliographical inquiries.

Two basic groups of information consumers were defined: researchers and designers. The division is to a certain extent conditional because there is much in common between the character of the activities and therefore in the information requirements of the two. But there are also considerable differences between them which should be taken into consideration by the libraries and their information services.

Combination of pedagogical and research activity is common to both. The difference is which of the two types is the basic and what are the topic and character of the scientific and pedagogical work.

The analysis of the questionnaires and the interviews has shown that in their prepared readings the first group of information consumers requires chiefly signal information about new Soviet and foreign monographic and periodic literature which have been acquired by the library and is available in other libraries in the country.

Besides the above-mentioned information literature reviews on a more or less narrow subjects had to be on

hand in order to prepare a new lecture course.

Journals, monographies on the topical and related subjects, departmental and serial publications as well as textbooks are the most useful sources of information for this category. Many of the scientist hold that today journals and the material of the scientific sessions and conferences present the greatest interest. The express factographic information is of the lesser importance for this group.

The sources of the review information are publications of the branch institutes of information and the sources of signal information - publications of the All-Union Book Chamber, the Institute of research and technical information, the central branch libraries, various forms of bibliographical information (displays and bulletins of new acquisitions, display-reviews, bibliographic surveys, information with the help of index cards of the centralized and non-centralized entries, etc.).

The information requirements of the scientists in the process of their pedagogical activities are handled by the libraries and their reference and bibliographical sections, while the information services of the institutes are catering to the factographic information requirements of the group dealing with the concrete "enquiry-answer" questions.

The second group of information consumers are scientists researchers. To these belong leading scientists

engaged in fundamental theoretical research or conducting scientific work in the definite branches of technology. Characteristic for this group is the need for current and retrospective bibliographical information on Soviet and foreign literature on the subject of research and on related sciences and also the need for review branch information at the level of the central institutes of information, for bibliographical and factographic references on the research subject and on related problems.

The information sources and the forms of information service for this group are very much similar to those required by the first group. However, the needs of scientists, researchers in retrospective bibliographical information and analytical reviews are greater by far. Scientists engaged in a highly important research also need higher forms of information service - synthesis of situations and scientific-information prognosis.

In higher schools libraries play the main role in satisfying information requirements of this group which arise in the process of their scientific and pedagogical activities and their scientific and technical information service play an auxiliary role which may gain in importance depending on the branch of science and the subject of the scientific research project, particularly in the field of technology designing.

To the third group belong scientists-designers, the

majority of whom also read lectures. But their scientific research and experimental designing work plan drawn up by the institute or the ministry is no less important than their pedagogical activities and for some of them (workers of the research institutes and laboratories) is the basic type of activity.

The basic stages of scientific work: preparatory, experimental-research and experimental-designing have been singled out for a more thorough study of the information requirements of this group.

Research has shown that the information service specific both in qualitative and quantitative aspect is required at different stages of the research and designing projects. The data obtained corresponded with the logics of scientific research.

At the preparatory stage it is the review and retrospective bibliographical information about the present state of the problem and the perspectives of its development, the current information about new literature and factographic information that is mostly required.

At the experimental-research stage the need arises in the additional bibliographical information on related topics, in factographic information illustrating the levels of the projects on the basis of comparison of technical data, in the data about apparatus, separate units and design components, etc., and in the current information on the state of the problem as a whole in

the Soviet Union and abroad.

The experimental-designing stage requires large amount of information about patents, state standards and specifications, etc. The requirements of the third group will probably be fully satisfied with the help of the information service on condition that the traditional forms of the bibliographical information be combined with the forms of information service characteristic of the scientific research institutes and designing bureaus.

The information service of the institute's library should directly participate in the scientific research and designing work by supplying timely scientific information analysis and rendering service at all its stages. The organisation of an information service seems to be most rational when scientific-information analysis is conducted in close contact with the scientific worker engaged on the project and the required information is supplied to his enquiries.

To obtain an objective data about the significance of various primary information sources and the role of the reference and bibliographical service in satisfying the request of scientists and specialists the scientific and technical library of the Leningrad Institute of the Engineers of the Railway Transport have besides questionnaires and interviews also conducted a research in two directions.

Scientists who turned for information to the reference and bibliographical section of the library were given a form to be filled for the bibliographical reference or a literature index and also forms with the help of which libraries found out the topics and aims of requests, the sources used and the extent to which the given request has been satisfied. It was established that to the most useful information sources belong (by degree of importance): Soviet journals, monographies, foreign journals, express-information, reference journals, publications of the central and branch institutes of information.

Over two-thirds of <sup>or</sup>enquiries dealt with scientific work. Less than half of those who filled in the form think that they have received the entire information they wanted. The data obtained testify that the traditional librarian-bibliographical service is by far insufficient.

As from September 1968 the library conducts a multi-aspect statistical analysis of the use by scientist and specialists of the basic book stock with the help of the electronic computer. The survey will be completed by the end of 1970. However, the data obtained thus far allow to make the conclusion that periodic and serial publications of the last 3-4 years are most important as the primary information sources. Naturally not only these sources and not only within the named chronological boundaries have information value - the heightened interest in the latest literature is also characteristic

for a technical institute.

An analysis of the information service of the institute's libraries and the materials of the surveys allow to draw certain summary conclusions.

Optimal information service for all basic categories of the information consumers of an institute, technical as well as polytechnical, can be ensured by the combined efforts of the libraries and their information service.

It seems expedient that the university's libraries had in their structure information services to supply timely differentiated (address) bibliographical and factographic information first of all to the research institutes and laboratories functioning in many universities.

It is also desirable to set up a humanitarian information service at technical institutes, the information content and form of which will be determined by the requirements of scientists and specialists arising in the course of their scientific and pedagogical activity.

In order to make information more differentiated, to cut down its many-sidedness and "information noise", the libraries and their information services should provide service not to all and every research and design projects but only to major ones. The information services should give them maximum attention, while

offering other projects "inquiry-answer" service and using card information mainly within the frames of concrete enquiries of the scientific groups. The traditional forms of the bibliographical information and reference-bibliographical service highly important for the satisfaction of the requests of scientists and specialists should also be improved and widely used.

Experience has shown that at all the institutes it is expedient to have technical information or reviewers and a special information worker at the faculties and in the research laboratories with an exceptionally large volume of work which requires timely factographic and review information. It should be borne in mind that the content of the work of the informators in the technical and humanitarian institutes and even at different faculties ~~is one and the same, institutes~~

Decisive here are the information requirements of the scientists, conditioned by the work trend of the scientific division, topic and scale of scientific work.

The degree of preparedness of the information consumers, their ability to make use of the information system are of importance for raising the efficiency of information service of the institute's libraries.

They systematically carry out a number of measures in enhancing the information culture of their readers: conduct lectures, practical sessions and consultations on the fundamentals of bibliography and information,

send out to the faculties annotated lists of information publications, organize their reviews and displays, prepare and put out various bibliographical aids.

However the specific features of the present-day stage of the development of science and technology incessantly demand that this work be intensified, that students, scientists and specialists be taught more thoroughly the methods of use of the system of scientific information.

The preparing of the information consumers, along with supplying them with the particulars of the existing types of publications, information service systems and methods of scientific information activity, should aim at instilling the skill of conducting a dialogue between the scientists and the information system, because this dialogue is a component of the scientific creative work.

Further improvement of the information service of scientists and specialists of higher school and maximum satisfaction of their requirements is one of the most urgent tasks of the Soviet institute libraries.