

## IRANIAN SCIENTIFIC AND TECHNICAL INFORMATION POLICY DEVELOPMENT PROGRESS

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In the past century, in Iran and elsewhere, science research publications have increased in number exponentially as has the number of full-time research workers. This growth has been called an information explosion, but it has represented primarily the dramatic increase in number of scientists and their institutional publication pressure. The problems of avoiding research duplication and locating relevant titles from the international mass of material have increased annually, so much of a conscientious researcher's time must be spent on literature searching and reading. In an effort to control this flood, technical publishers have issued increasing numbers of indexes, abstracts, and guides and used increasingly sophisticated publication equipment. Efforts have been made to summarize and repackage information to facilitate use.

In many nations, scientific and technical information (STI) is considered to be a valuable commodity, one to be collected, organized, analysed, stored, retrieved, disseminated and studied and to be bought and sold at high prices. Its usefulness rises as its size grows, and major social, educational, agricultural, health, industrial and research programs depend on it. National problems can be studied only with access to full sets of foreign and domestic research literature. The urgent need for national planning and decision-making information has justified substantial public and

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private sector budget allocations to information programs.

Centers to service useful information within the framework of specific local objectives are widespread in Eastern and Western Europe and in North America and are represented in Iran. Improving service thru data processing equipment use was started more than a generation ago in North America and half a generation ago in Iran. In many nations, as publication has proliferated and demand grown, the modern STI center has enlarged rapidly in size and service.

Various international organizations have sought in additional ways to facilitate progress. Unesco's UNISIST program, for instance, was planned to prevent duplication, economize on expense, facilitate international information exchange and assist in establishing national STI policies.<sup>1</sup> It attempted to establish universally accepted and comprehensive policies for material selection thru publication.

In view of many nations' increasing information dependence for important national research and development projects, it has been logical for national governments, led by several Eastern European nations, to take the initiative to establish specific national STI policies and guidelines to insure relevant information availability. While such statements have become well known to many western information scientists, they are less familiar to developing nation colleagues and to citizens working outside the information field, so careful development and extensive discussion are required before they can be given full consideration.

In order to move forward STI conservation and use and representing the Iranian government, soon after it opened, the Iranian Documentation Centre (Irandoc), Tehran, sponsored or encouraged a series of activities designed to study the Iranian STI situation, to explain information's role in social and technical progress, to explain its problems, and to develop recommendations for improving service delivery. This paper summarizes these activities.<sup>2</sup>

During the period, 1960-78, Iran developed rapidly in

industry, government, education and research. The existing research and information problems retarded growth, however, so they were examined in several studies. These studies identified three STI user groups: the staff members of universities and research institutes, the public and the private sectors.<sup>3</sup> In 1970, almost half of Iran's research groups related to higher education, and in 1971, higher education research expenditure was \$5.5 million in government funds.<sup>4,5</sup> Total 1973-74 complement was 10475 persons, among whom the faculty members were determined, by Ministry of Higher Education and Culture survey, to average 12.9 hours per week lecturing and 9.7 hours researching. Almost a third of all Iranian researchers were located at the large University of Tehran.

Research on library service provided for university faculty members showed capability to be poor. As an example of inadequate literature provision, the University of Tehran Faculty of Science Library was found to contain a large monograph and only a small serial collection in reflecting of faculty preference and use and in contrast to STI use patterns in other nations. Extensive ministry recommendations were made to raise these library services to a decent standard.

In the second major user group, in 1971 comprising 78 units, 1976 public sector research projects cost \$130 million with medicine, engineering, and agriculture being most productive.<sup>6</sup> Careful study of public sector information centers and libraries showed service to vary from fair to very poor with the latter commoner than the former. Most organizations were unaware of ongoing research projects, programs and publications in Iranian universities and private sector agencies serving the same field.

As a public sector example, fifteen leading special libraries were surveyed by Irandoc and found to be poor in many ways, particularly in disseminating information about material available.<sup>7</sup> No more than 20% provided the following recommended services: reference, photocopy, bibliography, abstract bulletin, and selective dissemination of information (SDI). Only twenty

librarians worked in these libraries. The problems of the government organizations and their libraries called for many types of improvements if research program quality was to be raised.

Private sector users were found to be even less interested in Iranian and more dependent on foreign research reports than were university and public sector researchers. Generally, this group's research and survey quality and quantity were poor. In fact, industrial effort weakness was a fundamental Iranian economy problem. If the private sector was to contribute usefully to social and economic development, the results of well organized Iranian research projects must influence its policies. A central cause of all Iranian research's slow development was uncertainty about the national priority of higher education, research and libraries.

While this dismal picture of research and information service was being surveyed and considered in the 1970s, several new STI centers and services were being inaugurated in Tehran to supplement older special libraries, with Irandoc's participation and support. While in the earlier development stages, they represented significant examples of STI progress. The Nuclear Information Center was established within the framework of the Iranian Nuclear Energy Organization to form a unit of the International Nuclear Information System (INIS). The center subscribed to many international journals, published several information analysis titles, and contributed Iranian research abstracts to the INIS data bank and network.

After extensive planning, the National Medical Library of Iran was established in 1975. It had the Middle East's only MEDLARS terminal, a large material budget and modern service policies. Early in its history, the library ordered both current subscriptions and complete retrospective files for all 2400 *Index Medicus* serial titles. Cataloging was assisted by CATLINE information, and the media section grew rapidly. In cooperation with the World Health Organization Eastern Mediterranean Regional Office, Alexandria, the library provided literature searches for the entire region.

In 1974, the Ministry of Agriculture inaugurated a series of studies and eventually appropriated funds for a major research library and information center to serve both regional and national interests. Thru close cooperation with the Food and Agriculture Organization's AGRIS system, the Ministry planned both to contribute extensively to and obtain information from the international agricultural community.

In 1971, with Unesco assistance, the Institute of Standards and Industrial Research of Iran Documentation Center was established to deliver service for useful Iranian, foreign and international standards reports and research material and to improve manufactured product quality. Unesco assisted, also, in establishing the International Adult Literacy Documentation Centre which used modern STI techniques on that field's literature problems and developed a publication program. Significant modern libraries or information centers were started in the government Plan and Budget Organization, the Ministry of Health Family Planning Organization and the Rezaie Cardiovascular Hospital, also.

Surveys indicated that a limitation on these old and new centers' effectiveness was their lack of national and international cooperation and coordination. To improve this situation, in 1974 Irandoc formed a voluntary council of information center heads to discuss duplication, cooperation and networking. Fourteen center representatives were included. In the same year, following other nations, the Iranian National Unesco office established the Iranian National UNISIST Committee to assist in unifying policy and developing a national STI network.

The Iranian Interlibrary Loan Network and the *National Iranian Union List of Serials* were Irandoc-headquartered projects designed to stimulate cooperation and improve service.<sup>8</sup> The interlibrary loan project, begun in 1969, involved fifty five libraries at one time and depended heavily on the two volume 1971 Union List. In cooperation with the Tehran Book Processing Centre and the Iranian Library Association, Irandoc provided

special workshops and internships for information center staff members, offered consultant service, and published useful STI development bulletins and manuals.

As a result of Irandoc's interest in improving STI nationally, in 1976 the government Institute for Research and Planning in Science and Education commissioned a brief study by M. Moureau, Petroleum Institute Documentation Centre, Paris.<sup>9</sup> It recommended developing a Persian language material union catalog, foreign secondary source SDI and retrospective searching service, international on-line data base use, and an STI news bulletin for public sector officials.

Irandoc's activity series resulted in the 1977 convocation of a Tehran conference with international experts to discuss STI policies.<sup>10</sup> This conference recommended establishing a national focal point (NFP) for an integrated STI system. To encourage cohesion and STI policy implementation, Iran was said to need a national council to shape policy, a secretariat to implement it, a separate budget allocation and coordinating committees. The NFP must have a clear charter and a prominent public sector location. National research and development priorities, policies and guidelines must be identified before those on STI can be considered. Considerable conference discussion occurred about establishing objectives, defining an information policy, pilot studies, coordination, existing resource surveys, user identification, standardization, national planning policy coordination, information center standards, automation, seminar organization, information specialist education, user education, cost effectiveness vs. self support, research program, Unesco assistance, and referral service.

As a conclusion to this activity series, a late 1977 report was issued to provide a final assessment of Iran's STI status, coordinate earlier conclusions, and make these recommendations for attacking problems:

- a. Establish an Executive Planning Council of specialists to

especify STI policy and guidelines. This council should use available information in Iran and abroad in accordance with national capabilities and assist in creating facilities for Iranian information programs.

- b. Appoint an existing information center to implement council decisions, coordinate the activities of all documentation centers, liaise with international information organizations and networks and establish an Iranian government and academic information-oriented organization network.
- c. Establish a unified retrieval policy using existing data processing facilities for organizing, retrieving and disseminating information.
- d. Adopt the following Moureau report proposals:
  - (1) Use the French national information system (CNRS) programs for technical planning in order to profit from computer and other technical capabilities.
  - (2) Establish on-line communication with international information banks and networks.
  - (3) Appoint certain centers as collection, analysis and dissemination focal points for national SDI service.
- e. Encourage universities to improve their library service significantly in order to meet modern standards.
- f. Facilitate private sector library and information center organization to improve STI service there, cooperate with similar centers in higher education and government, and further develop the national network.

At the conclusion of this decade-long activity series, Irandoc brought its recommendations before the appropriate government officials. Ministry consideration was given to them in mid-1978, but, due to a variety of factors, especially the public sector instability, inactivity, uncertainty and budget curtailment which preceded and followed the Iranian Revolution, no decisive action was taken on them, Irandoc's initiative ceased, and STI develop-

ment halted. When this major project can be reactivated is uncertain, probably not for several years. This series of activities remains, however, a model for other nations to study. Iranian information scientists hope that this project will receive renewed attention and favorable action eventually.

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