UNIT 2 STM PUBLISHING IN INDIA

Structure

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2.0 OBJECTIVES

Courses 1 – 4 of this Programme have introduced you to various aspects of book publishing and the cross-connections and interlinkages between different publishing processes. In the previous unit of this course (Block 1 unit 1) we have discussed the fundamentals of STM communication. As editors of STM books you would need to have an overview of STM publishing in India, an assessment of the demand for STM books and the size of the market, and an understanding of the nature of the readership and the kind of professionals who are required to manage the STM publishing scene. This unit introduces such issues and a study of this unit will help you to

1. critically review:
   the main trends in STM publishing in India.
   the links of Indian STM publishing with the global scenario.
   science education and research in India during the post Independence period.

2. identify:
   the readers for STM books in India
   the training needs of the STM publishing industry
   the skill set necessary for entering STM publishing in editorial capacities

3. define
   the roles of the STM publisher and editor in the communication of scientific scholarship

2.1 INTRODUCTION

As you already know, book publishing is a key activity in the knowledge economy, where creation of and access to knowledge are basic to the functioning of society. Despite the overwhelming presence of the internet and the obvious advantages of
electronic publishing, the book continues to be a major cultural artifact of our times and is still perceived as a repository of information, knowledge, ideas and creative intellectual activity. This is reflected in the dynamic global book industry. In India, the multilingual book publishing scenario is vibrant, diverse and growing fast. There is a sense that the Indian book industry is, as P.K. Nanda observes in an article in ‘The Tribune,’ growing “by volumes” and “riding a wave of success” (Nanda: P.K. 2006). In the same article in ‘The Tribune,’ Nanda quotes Shakti Malik, then President of the Federation of Indian Publishers, as estimating that the worth of the Indian publishing industry in 2006 was Rs. 80 billion and that the industry was recording a growth of 15% every year, with exports comprising Rs. 4.6 billion as compared to Rs. 330 million in 1991. “India”, according to leading publisher R.C. Govil, “ranks third in the publication of English books, immediately after the USA and the UK, and seventh in the world in terms of total publishing. It is the largest book producing country in the developing world and perhaps the only country in the world that publishes books in 24 languages” (Govil: 275). India is the only country to be conferred the Guest of Honour status twice at the Frankfurt Book Fair, and this, says Govil is “...a recognition of the rapidly expanding publishing trade of India and its presence on the map of international publishing” (271). According to statistics published by the Federation of Indian Publishers, the total number of books published in India in 2005 was around 82,500 with around 16,000 publishers active in the field (Malhotra: 13). Apart from these figures, the scale of book promotional events, the number of bookstore chains coming up across the country and India’s participation in international book fairs convey a palpable sense of exuberance. Clearly, the mood in the Indian publishing sector is buoyant, reflecting an industry that is organized and poised to grow.

If India is now a major player on the global publishing scenario, it is noteworthy that a large number of the titles published every year are scientific books. This is not surprising, considering India’s significant achievements in science education and research. The country has some world-class research institutions and scientists involved in cutting edge research. It is the widespread interest taken in science education throughout the post Independence period that has created a flourishing STM publishing industry in the country. STM publishing in India caters to the needs of the large numbers of students, teachers and researchers in science, medical science and engineering related disciplines, as well as readers of popular science books.

### 2.2 STM PUBLISHING: BOOKS AND JOURNALS

Books and journals are the most significant instruments in the communication of information in scientific research. They keep the flow of information constantly alive both within the scientific research community and from the world of academic science to the lay reader.

Journals have traditionally been the most important tools in the dissemination of current scientific research. With more and more journals developing online versions, scientific journals have widened their readership and continue their flagship role in science communication. As pointed out in the paper ‘Scientific Publishing in Transition: an Overview of Current Developments’,

Journals form a core part of the process of scholarly communication and are an integral part of scientific research itself. Journals do not just disseminate information, they also provide a mechanism for the registration of the author’s precedence, maintain quality through peer review and provide a fixed archival version for future reference.
The above paper also estimates that the global market for STM journals was around 5 billion dollars in 2006. According to the paper, there are about 23,000 scholarly journals in the world publishing around 1.4 million articles a year.

STM books may not have the same significance for the academic research communities as journals, but they are equally important for the general reading public. While journals are highly specialized and address a specialist audience, books can cover a wide range. STM books include highly specialized research publications, textbooks for a variety of age groups and types of learners, popular science books for a general readership, scientific books for children and awareness creation materials. STM books and journals are usually published by commercial publishing houses, academic societies, government agencies, educational and research institutions. The STM publisher today has to constantly negotiate the ever-changing and expanding world of scientific research on the one hand and the demands of commercial publishing on the other.

Check Your Progress 1

1. Why is publishing important for
   
   (a) the scientific research community
   
   (b) the lay reader?

2. What do you think are the major differences between STM journals and STM books in terms of content, readership etc.?

3. You may have come across debates on the implications of open access for academic publishing. Write a short note on your understanding of the open access debate and what it means for STM publishing and scientific communication.

2.3 STM PUBLISHING IN INDIA: TRENDS AND FIGURES

In a paper presented at a conference on "Professional Publishing in Asia" held at New Delhi in January 2008, Mr. N.K. Mehra, leading STM publisher observed that India publishes around 7000–8000 STM titles every year. STM publishers are spread out across the small towns and cities of the country. STM books published
in India are being adopted as classroom texts in other countries including USA and China and Indian STM books are being translated into Chinese, Russian, French, etc. Foreign publishers not only publish in India, but are also outsourcing publishing processes to India, depending on the strong delivery capabilities and experience of Indian BPOs in composition and editorial services (Mehra: 2008).

In an article ‘Publishing of Science Books’, Mehra gives an assessment of the current STM publishing scenario in India, giving clear indications of the directions that STM publishing is taking. At the time of Independence there were a few Indian publishers bringing out STM books, but books were mostly imported from the UK. The 1960s witnessed the Indo-US textbook programme, with US publishers licensing rights to Indian publishers to reprint American books. Indian STM publishing started to expand from the 1960s onwards. Mehra especially notes the role played by regional publishers all over the country, who publish a small number of STM books yearly and market them in their region. National research institutions have also been active in STM publishing. From the 1970s onwards, STM publishing has made real progress with Indian publishers no longer fully dependent on reprint rights from foreign publishers. Indian publishers have been developing their own original programmes in their respective fields and publishing not only textbooks but also research monographs. In the post-liberalisation era (after 1991), major foreign publishers started operating from India. Indian STM publishing is now globally competitive and not restricted to an exclusively Indian readership. A welcome development has been that the Indian publishers now look at the global market and do not restrict their readership to the scientific community in India alone. Indian STM books are today competing globally with western publishers and have a strong presence in Asia, Africa, the Middle East and other regions. Foreign authors are now interested in publishing in India because of the advantage of affordable prices and the fact that publishers make their books available globally, soon after their release in India (Mehra, 2006: 304-309).

It is clear that STM publishers worldwide see India as a growing market for STM books as well as an alternative provider of low cost publishing services.

Check Your Progress 2

1. Write a note giving your assessment of the current book publishing scenario in India with special reference to STM books.

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2. What are the major changes that the STM publishing scenario in India has undergone in the post Independence period?

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2.4 THE MARKET FOR STM BOOKS IN INDIA: WHO ARE THE READERS?

Who are the readers of STM books in India? To understand the kind of readers who form the market for STM books in the country, it is important to look at the massive efforts made to support science education and research and to popularise science in India.

According to the UNESCO Science Report, India stands out among South Asian countries in terms of national investments in R&D, and endowment of Science and Technology human resources, and maintains the lead in S&T publications. The Report also notes that S&T development and science education have been national priorities since the time of Jawaharlal Nehru. Government initiatives such as the launch of the Nanoscience and Technology initiative, increased budgetary allocations for the Indian Institute of Science to improve is scientific base, the Millennium Indian Technology leadership initiatives to boost the capacity for innovation in new technologies and other schemes introduced by the Department of Science and Technology are noted in particular in this report. The report also notes that at a public ceremony in 2004, the Prime Minister of India had mentioned that India ranked 24th out of 192 scientifically proficient nations (p 245 - 247).

Again, tracking the impressive work done on the science education front during the post Independence period, the India Science Report says:

After Independence, science education in India received a fillip with Jawaharlal Nehru’s vision of a resurgent India rising on the wings of science. Nehru’s vision was translated into working plans through a policy frame that has evolved over the years. Science education in schools as well as higher science education received great emphasis and the pragmatic policies followed over the years ensured that the country came to possess one of the largest and one of the most diverse science education infrastructure. To impart science education and training there came up several national institutes, the Indian Institutes of Technology (IITs), more than 200 universities and over 12,000 colleges. This infrastructure has successfully produced one of the largest scientific manpower in the world. (p5)

Beginning with Jawaharlal Nehru, science education has always been viewed as crucial to economic development and progress and the importance of massive efforts to educate the huge population of the country in science and scientific methods has always been recognized. For instance, in his Presidential address at the Indian Science Congress, the premier association of Indian scientists, Dr. S. M. Sircar pointed out:

Science education is the principal means of conveying scientific literacy to our population as well as for creating the scientific and technical manpower indispensable for economic and social advancement…In a developing country like India with increasing population, the problem of science education needs a massive approach, for, the very fact that quite a large proportion, more than 40% of the population is illiterate and teaching science will be a formidable task, whereas at the same time, there is no other way for rural development…(p 1089).

With India poised to become a major player of the 21st century, efforts to create a strong scientific and technical knowledge base continue at governmental and institutional levels. This is reflected in the decision to adopt science education as the
focal theme at the 96th Indian Science Congress held in January 2009. In his address to the Science Congress, the Prime Minister of India highlighted the recent efforts of the Government to widen the science education base. The Government, he said, has invested in the creation of 30 new central universities, 5 new Indian Institutes of Science Education and Research, 8 new Indian Institutes of Technology and 20 new Indian Institutes of Information Technology. The Indian Institute of Space Science and Technology in Thiruvananthapuram, and the National Institute of Science Education and Research in Bhubaneswar have been established to nurture world class scientists. He also mentioned the various promotional measures introduced to strengthen the Research and Development base in the country and called upon Universities to do more to foster a research environment. In recognition of the fact that the present juncture is critical for Indian science and that positive attempts would help it to take India to the position of a global leader, the Indian National Science Academy and the Indian Academy of Sciences have made recommendations to the Planning Commission for increased investments and allocations in higher education in the sciences in the 11th Five Year Plan.

In his paper presented at a conference on “Professional Publishing in Asia”, Mr. N.K. Mehra, leading STM publisher attempted to create a clear picture of the numbers involved in the scientific, medical and engineering fields in India. He highlighted the fact that India has the second largest pool of scientific manpower in the world after America. He presented the following statistics for the number of graduates entering the STM workforce annually:

**Current Figures:**

- **Engineers**: 35,000
- **Medical Doctors**: 25,000
- **PhDs**: 12,000

**Projected figures for 2015**

- **Engineers**: 1.4 million
- **Medical Doctors**: 60,000
- **PhDs**: 50,000

(Mehra: 2008)

It would be useful to look at some other statistics related to science education in the country:

According to the National Science Survey conducted by the National Council of Applied Economic Research, a total of 3.29 million students were enrolled in higher education in science in 2003-04, with 1.78 million in natural science disciplines, 1.07 million in Engineering, 0.36 million in Medicine and 0.09 million in Agriculture/Veterinary disciplines.

(Source: India Science Report)

The UNESCO Science Report 2005 has the following figures for human resources in S&T in India for the year 2000:

- Engineering degree holders: approx. 1000,000.
- Science degree holders: above 3,500,000.
- Medicine degree holders: approx. 400,000.

There are 20 Central Universities in the country and 222 State Universities, and science education and research is a priority in almost all of them. The figures showing the growth and distribution of degree level engineering institutions in the country are indicative of the emphasis given to technical education: while there were 562 such institutions in 1997-98, the figure for 2002-03 was 1195 and that for 2006-07 was 1522 (Annual Report MHRD 2006-07).
1. Trace the development of science education in India in the post Independence period, giving relevant statistics wherever necessary.

2. Identify 5 major science research institutions in India. Do they have independent publishing programmes? What kind of books do they usually publish?

2.5 CAREERS IN INDIAN STM PUBLISHING

2.5.1 Training Needs

It is clear that a massive effort to train scientific, technical and medical personnel is on in India, surely a good sign for the STM publishing sector. Moreover, Indian STM publishing is making its presence felt in the global scenario. Such a dynamic industry that is fast expanding has the potential to generate hundreds of jobs across the publishing sector – from content creation, editing, graphics and illustrations, to binding, cover design, typesetting, copy editing, proof reading and so on. Publisher Urvashi Butalia notes that though Indian publishing is on the fast track to growth, Indian publishing lacks trained personnel. Increase in specialization, says Butalia, demands more professionalism and specific skills. It is therefore important for publishers to have people specializing in different areas of publishing (Butalia 386-387). Butalia highlights the crucial significance of training publishing professionals:

"... with the recent increase in the number of publishing houses, as well as the growing visibility of books (which has a spin off effect in making publishing attractive as a career option), there is space for new jobs, and a need for professional people. As publishing houses expand their lists, and begin to specialize, they generate a need for trained professionals who have particular areas of specialization – for example, editors of medical books and marketing people who can access specific markets – and for all of this, training becomes necessary" (p.389).
2.5.2 STM Publishing and Outsourcing:

According to market researchers, India provides companies all over the world with a low cost alternative to manage their publishing operations. Large global publishing companies and educational institutes have been saving between 30% and 50% of their costs by offshoring their processes to India. STM publishing is the largest segment in publishing outsourcing. India now has subsidiaries of several large publishing houses, as well as publishing service providers (Outsourcing Research by Valuenotes). In an article in ‘The Hindu Businessline’, Pratap Raveendran points out how globally, the STM segment dominates outsourcing in publishing. The UK and the USA are the prominent countries in STM publishing. While STM publishers have been outsourcing their requirements for a long time, offshoreing is gaining momentum now. Almost all leading STM publishers, according to Raveendran, outsource their requirements to India.

Editorial and typesetting services constitute almost one third of the total cost for the STM publisher and has been offshored significantly over the last two decades. Apart from being the largest cost component, almost all the services under this head are “offshoreable”. These services range from composition, proof reading, copy editing, image redrawing to project management. The costs for providing editorial and typesetting services are approximately 40% cheaper in a destination like India. These have gained momentum as they involve non-physical transfer of data and account for a significant cost head for the publisher (STM Offshoring and Beyond: The Hindu Businessline, 2005/9/17).

STM publishing therefore has several career options on offer to aspiring professionals, in areas ranging from content creation, editing, copyediting and proof reading, to composing, typesetting, graphics and development of software. Publishers see several advantages in outsourcing editorial processes to India: the presence of a technically skilled workforce, excellent English language skills, a community of trained scientific personnel, and comparatively low labour costs. If you wish to enter the STM workforce as an editor, you would need to have a background in science, an interest in current research, an awareness of the reading tastes of the public, good writing skills, computer skills and familiarity with software resources available for scientific editing. An aspiring publishing professional could consider self-publishing as a career option or join one of the hundreds of STM publishers working across the country. Another option would be to become involved with the various jobs outsourced to India by foreign STM publishers.

Check Your Progress 4

1. What kind of opportunities are available in the STM publishing industry for publishing professionals? Try to collect information from publishers, newspaper advertisements, etc.
2. Why do you think foreign STM publishers are interested in outsourcing publishing processes to India? Make a list of large global publishing houses outsourcing publishing services to India.

2.6 SUMMARY

Before you proceed to the blocks of this course which are devoted to specific aspects of editing various types of STM documents, we have tried in this unit to give you an overall picture of STM publishing in India, placing it in the context of the global STM industry. The vibrant STM book publishing scene in India has to be viewed against the background of the national commitment to science education and popularization. Hence, we have touched upon some key facts relating to science education in India, in this unit. We have also discussed in brief, the potential of Indian STM publishing in generating employment and also tried to give you an idea about the skills and knowledge that will help you enter the STM publishing scene in editorial capacities.

2.7 UNIT END ACTIVITY

Identify one or two STM publishers in your locality. Find out the number of titles published by them annually for the last 5 years. What have their priorities been? Do they publish in English or in the regional language? What is the market for their books? Discuss the various editorial jobs done by their personnel.

8. GLOSSARY

archives : a collection of manuscripts, documents and records which are preserved for future reference.

knowledge economy : “In the knowledge economy, as distinct from the peasant and industrial economy, where economic wealth was produced by using human manual labour and machines respectively, the process of generation, dissemination and exploitation of knowledge produces economic wealth predominantly. Thus, the emerging knowledge society is one in which productivity is based on acquisition or generation, dissemination and application of knowledge or information.” (MSO003 MA Sociology, IGNOU, Book 2 p132)

offshoring and outsourcing : offshoring is “the practice of a company in one country arranging for people in another country to do work for it”; outsourcing is the practice of arranging for “…someone outside a company to do work or provide goods for that company.” (Oxford Advanced Learners’ Dictionary).
open access: the movement that aims at making the findings of research freely available online.

peer review: a common practice in academic research in which a research paper or article in a particular field of study is reviewed by experts in the same field to examine its originality and the contribution it makes to knowledge.

2.9 REFERENCES

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