Open Distance Learning (ODL) for Vocational Education: an IGNOU Experience

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This paper evaluates the provision made for training professionals for the STM (Scientific, Technical and Medical Books) publishing industry in India, in the 'Postgraduate Diploma in Book Publishing' that IGNOU is currently developing. The first section of the paper looks at the STM book publishing scenario in India and attempts to identify its training needs, while the second section considers how higher education institutions and vocational training institutes, and especially the ODL system in the country have made provision to meet these needs.

I. The Context: The Book Industry in India Today:

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, 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, says 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, 2006:275). 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,2006:13). 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.

The expansion of publishing is indicative of the general growth in the Indian economy. Again, the size and increasing affluence of the Indian middle class who mostly constitute the buyers of books in the country, has boosted book production in India. The size of the literate population who constitute the readership of Indian books is again huge – according to the 2001 census, around 65% of India's 1 billion people were literate. Though much remains to be done on the literacy front, the number of Indians who are able to read and are therefore likely to buy books is huge - it is this presence of a potential market that further encourages publishing activity.

STM Publishing in India

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. At a recent conference on "Professional Publishing in Asia" held at New Delhi, 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. Interestingly, Mehra also observed that STM titles published in India are being adopted as classroom texts in other countries including USA and China and that 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 his article 'Publishing of Science Books', Mehra attempts an overview of STM publishing in India, giving clear indications of the directions that STM publishing is taking. Though STM publishing began to expand from the 1960s, it was from the 1970s that the real progress began, with Indian publishers no longer seeking reprint rights from foreign publishers, but developing their own original programmes in their respective fields and publishing not only text books but even 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 (Mehra, 2006: 306-309).

Training Needs in Indian STM Publishing

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, it lacks trained personnel. Increase in specialization, says Butalia, demands an increasing professionalism and very specific skills. It is therefore important for publishers to have people specializing in different areas of publishing (Butalia, 2006: 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 (389).

II. Existing Provision for Training Professionals in STM Publishing:

The National Book Trust (New Delhi), The Institute of Book Publishing (New Delhi), the College of Vocational Studies (Delhi University) and Kolkata University are some of the institutions offering short / long term publishing courses. Kolkata University offers a comprehensive one year 'Postgraduate Diploma in Book Publishing', covering all aspects of book publishing. The course is offered in collaboration with the publishing industry and offers theoretical and practical inputs with provision for hands-on training. There are a limited number of seats, the selection to which is done on the basis of an entrance test. The classes are held in the evenings and minimum attendance is compulsory (Source: www. caluniv.ac.in). The College of Vocational Studies (Delhi University) also offers a 'Postgraduate Diploma in Book Publishing', which offers scope for specialization in editing or book production and can be taken up by graduates (Source: www.cvsdu.com). The Institute of Book Publishing (New Delhi) organizes condensed courses for publishing professionals (usually of 1-2 weeks duration), which

aim to give an exposure to all aspects of publishing through lectures, group discussions, workshops and hands-on exercises (Source: www.ibpindia.org). The National Book Trust (New Delhi) periodically offers 4 week courses, primarily intended for new entrants to the world of publishing. The courses are intended to provide an overview of publishing, hone the skills of young publishing professionals and help learners get absorbed into the industry (Source:www.nbtindia.org). Though these courses are offered from the NBT headquarters in New Delhi, shorter versions are offered at various centres all over the country.

IGNOU has also been offering a 'Post Graduate Certificate in Copy editing and Proof reading' (PGCCP) from 2005 onwards, to address the demand for trained copyeditors and proof readers. The target audience includes those aspiring to enter publishing and practising professionals interested in upgrading their skills and knowledge. The programme covers 4 compulsory courses (Source: Programme Brochure of PGCCP Programme of IGNOU compiled by Prof. S. Kumar). This programme gives the learner insights into the publishing process, the roles of the people involved, the significance of various publishing functions and the journey of a book as it is transformed from a raw manuscript into a well produced, attractive and readable product on the bookstore shelf. However it is seen to be deficient in meeting the varied training needs of the publishing industry as its primary focus is (as the title implies) on copy editing and proof reading. Though the printed material is supplemented by audio / video materials and teleconferencing sessions, there is no scope for teaching practical skills. Though computer fundamentals are taught as theory, learners are not expected to demonstrate their practical computer skills. Also, no provision has been made for apprenticeship / training and hands-on experience. In order to overcome such drawbacks, IGNOU plans now to offer a full fledged 'Post Graduate Diploma in Book Publishing'.

Before proposing the programme, the concerned faculty undertook an extensive need survey with the following objectives:

1. Identify the precise training needs of the publishing industry

2. Identify existing publishing programmes offered by other institutions and gaps of training provision in them.

A survey of these courses revealed the following facts:

The courses already on offer are almost always over-subscribed which means that these institutions are unable to cope with the demand for places. Some of these institutions face constraints of space in expanding their infrastructure. Most of these courses are Delhi based, which means that learners from other parts of the country are seriously disadvantaged. Some of these are full time courses and cannot therefore be taken up by working professionals who would like to change professions or upgrade their skills. Some of these institutions charge fees that are not affordable by the average Indian learners. Almost all of them insist on rigid entrance requirements and thus deny access to those who may not possess the prescribed qualifications, but may still be interested in gaining new knowledge and skills. Except the PGCCP of IGNOU, all the other courses insist on minimum regular attendance, which can again create barriers for those learners who are part-time/ full time employed. It was clear that though these courses incidentally touch upon STM publishing as a topic, there is no provision for specialization in STM editing / publishing, despite the fact that a huge chunk of books published in India are STM books.

The need survey highlighted the actual needs of the Indian publishing industry and provision already available to train publishing personnel. It was clear that IGNOU, with its national reach and extensive network spread across the country could offer a programme that could overcome many of the barriers experienced in existing programmes. An ODL based publishing programme offered by IGNOU would be cost effective (therefore less expensive and affordable by larger numbers of learners). It would be offered countrywide and would be available to learners even in the remotest village and not merely in metropolitan centres which are already pockets of publishing activity. Being an

'open' programme it would allow freedom of pace and time to learners who would not be able to attend full time courses.

Subsequent to the need survey, IGNOU is now designing a publishing programme which will address the actual needs of the industry and provide opportunities to job seekers to tap the immense employment generation potential of the publishing sector in India and across the globe. The needs of the STM publishing sector will be taken care of in an elective course 'Editing STM.'

Programme Structure: The Post Graduate Diploma in Book Publishing as envisaged now, will be a 28 credit programme with 4 compulsory courses, 2 elective courses (to be chosen by the learner out of a total of three on offer) and 1 project / internship. The four compulsory courses are being designed to provide a detailed picture of the working of a publishing house, and the nuances of various pre- press activities, book production and promotion strategies. The programme provides opportunities for the learner to specialize in editing: three courses on editing different types of books (children's books, text books and STM books) are being designed. The final course of the programme will be an apprenticeship / internship with a publishing house where the learner will have an opportunity for hands-on experience of publishing related activities.

The programme has the potential to satisfy several training needs of the STM publishing sector. While it introduces learners to the multifaceted process that publishing is, and the cross connections and interlinkages between various branches of publishing, it also offers the scope to aspirants hoping to enter STM publishing, to specialize in 'Editing Scientific, Technical and Medical Books'. This course would begin with an overview of STM publishing in which the learner would be introduced to the fundamentals of science communication, the language of science, language selection, the significance of accuracy and precision in scientific documentation, assessment of a text in terms of suitability for the target readership and the realities of STM publishing in India. From the

fundamentals, the course moves on to issues in editing different types of scientific documents (research writing, popular science books), editing essential components of scientific documents such as illustrations, tables, charts, graphs, mathematical expressions and chemical formulae. The specific issues in editing IT and technical books, Indexing, comparison of printed books and E-Books, advantages and limitations of E-Books, types of medical books, aspects of editing various types of medical writing are other issues that the course will focus on. The course will also introduce the learner to software resources available to the STM editor and the creation of multimedia packages for scientific communication. The content areas have been finalized by experts across the broad field of scientific editing taking the suggestions of STM publishers into consideration. The course materials are now being prepared by a team of experts and faculty.

The course aims to give the learner a sound theoretical introduction to various types of scientific writing, the specific requirements of these types and the skills required to actually edit different types of scientific texts. The focus would be on skill development through a combination of print material, interactive radio sessions, teleconferencing and face to face counselling. The partnership formed by IGNOU with the Federation of Indian Publishers, will help learners identify STM publishers for their internships. This interface with the industry can be crucial in teaching practical skills, providing hands-on experience and for offering oneself for recruitment to prospective employers. An e-mail discussion group is also being planned for students to interact with peers, faculty, counsellors and publishers.

How does this course widen access?

The programme makes the facilities for training in publishing related activities available to a much larger number of learners than those catered to by the existing provision in the conventional system. It would be especially useful to women learners seeking to upgrade their skills in order to be productively

employed part-time in the publishing sector, even while pursuing their domestic/family responsibilities and commitments in the traditional Indian family set-up. The course 'Editing STM Books' offers learning opportunities not otherwise available in other institutions. Since the course is being developed after a survey of existing provision, it is related to the actual needs of learners, unlike the rigid course structures of the conventional system.

How can barriers in the present course be removed and more flexibility built into the course design?

- The entrance requirement prescribed (graduation with specialization in science) may be relaxed in order to encourage those without these qualifications, but interested in skill/knowledge enhancement to join.
- The present course caters only to the needs of the English language STM books industry, and is not tailored to meet the needs of the hundreds of regional language STM publishers. Translation of learning materials into regional languages and adaptation of materials to suit regional needs would help to make the course more relevant to learning needs.
- Course materials could be replicated in various media combinations to widen access for differently abled learners, using appropriate software for learners with visual, aural or other impairments.
- Since this course would potentially attract practising STM publishing professionals, a scheme for accreditation of prior learning will be worked out.
- After offering the course for two cycles, a questionnaire / opinionnaire will be administered to the learners to assess their profile, their feedback about expectations from the course and suggestions for making it more flexible and learner centred.
- In order to ensure that the print material is written with an understanding
 of current research and scholarship and that the presentation is learner
 friendly, it will be peer reviewed.

- Efforts will be made to ensure that students have access to computers, audio-video facilities and teleconferencing facilities at the nearest IGNOU study centres.
- Short-term courses in printing technology, graphics and illustrations, layout and design, binding etc. could be planned to offer more learning options to students.

Career options:

A student who completes the publishing programme with the editing STM elective is optimally expected to have sound theoretical knowledge about publishing processes in general and STM publishing in particular and the necessary skill set to enter the demanding world of STM publishing. He/she could then 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.

Conclusion:

The 'Editing STM Course' will help generate employment, significantly boost the STM publishing sector and provide a major fillip to the documentation of scientific research. It will help in creating knowledge workers who will further the cause of science communication for development in India. Our experience in planning and designing this course makes it is clear that the ODL system of IGNOU can provide flexible vocational training and increase access to training to those seeking meaningful livelihood education.

As observed by the Honourable Vice President of India at the recent convocation of IGNOU "… open and distance education is the best means for skill enhancement and retraining; these are essential features of a knowledge economy. A significant component of our GDP is from the services sector where continued

skill development is essential. This can be done in a cost effective manner through distance education".

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- 1. While GDP grew at 9.4% in 2005-06, the figure for 2006-07 was 9.6% and the estimate for 2007-08 was a slightly lower but still healthy 8.7% (*Economic Survey* 2007-08, Government of India). As pointed out in 'The Hindu', 29th February 2008 :"With the annual GDP growth exceeding 8% since 2003-04, the economy has moved decisively to a higher trajectory".
- 2. There are 20 Central Universities in the country at present 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 figures for 2002-03 were 1195 and those for 2006-07 was 1522 (*Annual Report of the Department of Higher Education*, Government of India 2006-07). At the 'Professional Publishing in Asia Conference' held in January-February, 2008 in Delhi, N. K. Mehra, leading STM publisher presented the following statistics for the number of graduates entering the STM workforce annually:

Current Figures: Projected figures for 2015

Engineers: 35,000 Engineers: 1.4 million

Medical Doctors: 25,000 Medical Doctors: 60,000

PhDs: 12,000 PhDs: 50,000. (Mehra: 2008).