

# Problems relating to the transfer of information to non-English speaking clientele in the field of Micro, Small and Medium scale industries and possible solutions emphasizing some electronic alternatives.

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In this information era, information is being recognised as an increasingly important element in the modern society as well as its other resources. It is highly accepted that the open flow and sharing of information are essential conditions to support the growth process of a economy. Hence 'Information' is now spoken as "New Capital" as the future basis for economic prosperity.<sup>1</sup>

So that the Challenge faced by the modern librarian and information officer cannot be taken lightly. The main strategy to go forward with this kind of challenge is to discover and disclose necessary information ore, process it and make available for the users. Every large or small organisations have hundreds may be even thousands of information pieces information services and information sources, both manual and automated, strewn all over the organisational landscapes.

However few organisations knew who uses which information and why, who does not use these information and why, for what purpose the information is used, what kind and type of information is sought after most by a particular clientele, at what cost a particular piece of information could be marketed etc. On the other hand management of the few organisations are bothered about acquisition of knowledge in different forms - processing and dissemination of the same for the focussed user community- information

provision supplied by its own information centre to out side clients other than to its own staff and the role to be played in the society it belongs. Also few people in an organisation know who depends upon them and who generate and supply specialised knowledge.

What good does all these information do if a searches takes hours, days or even weeks and hire legions of assistants and intermediaries just to help to find out about its existence and availability, the detailed and often complex procedures that must be learned to access it, the various technical modalities that must be employed to search and retrieve it and ways it can be delivered.<sup>2</sup>

In brief the problem is both too much of the wrong kind of information as well as too much of the right kind but which is badly organised, poorly indexed, uneconomically and inefficiently retrievable in user-unfriendly ways.<sup>3</sup> The matter gets worsen when there is a communication barrier stands amidst the information flow, specially the language barrier, which tends to widen the information gap in some user communities.

Information transferred is always need oriented. Any discussion of information needs will be based upon three basic conditions.

- There must be a willingness to communicate
- There must be an awareness where the knowledge is located, which might be relevant to the need

- There must be a degree of understanding between the parties who exchange information.

Out of these three, third point could not be satisfied if there is a communication problem exists between parties exchange information, particularly when two parties understand different languages. There are also other situations where communication between parties is interrupted, as low literacy level in IT applications, disability of persons, infrastructure problems etc.

In a country like Sri Lanka, approximately 80% of the micro and small scale industrialists are not English literate and the awareness relating to their own industry or business is comparatively low with the medium and large scale industrialists. Some of them understands little spoken English but not the technical language and terminology used in most of the documents and information materials distributed among the customers in the finance and banking sector and in the industrial and technical information service. On the other hand some people in this category speak good Sinhala but the level of understanding of terminology of technical nature in the same language is low.

Information needs of micro and small industrialists are mainly three fold. a) Information to obtain financial assistance to start a business industry. b) Information to continue the business/industry c) Market information to sell the product/services.

It is the point (b) discussed in the paper, that is the technical information required by the industrialists to develop a product or service. It was observed that there is a problem in communicating in English, which has the prominancy in publishing industrial and technology information in this country within the literary levels of these communities. The other two points mentioned above ( a and c) also has communication barriers to some extent but it has been seen as not severe as in the point (b). In the banking sector information is disseminated person to person in most cases so that the literacy level affects very little in transferring the financial informa-

tion to industrialists. Library / information officers in banks play insignificant role in dissemination of financial information to the bank customers as their main client group is officers employed in the bank itself. Volume of the production of the micro, small and medium (MSM) category is also just to cover up the total cost (The cost is not systematically accounted too.) and to maintain the family budget. It is a common habit that these products are marketed in their own locality in most of the cases recorded, which means their marketing horizons are not expanded or the possibilities / opportunities are not known.

It has been identified that there is a increasing trend in developing service institutions in the field of business/industry promotion. The RRDP (Regional Rural Development Project of Kandy) under IRDP (Integrated Rural Development Project) identified 70 such organisations including ministries government departments, trade / commerce chambers , R and D projects affiliated to institutions and organisations, semi governmental and non-governmental organisations and many multilateral and bilateral donors. The Directory compiled by the ITI under the sponsorship of National Science Foundation also had identified the R and D organisations in the country engage in field of science and technology.<sup>4</sup> It has also been seen that these organisations and institutions act in an uncoordinated way and led to inefficient information exchange and imparting of information to end-users.<sup>5</sup>

Dissemination of information to MSM users are taken place in the following way.

1. Through individual reference (using libraries/information centres etc.)
2. Through packaged info-kits (technical/business information packages and technological packages)
3. Through seminars/workshops/forums/trainings etc.
4. Through extension services

MSM users who look for obtaining information through the first method that is individual reference, using libraries/ information centres, face difficulty in obtaining information in technical nature when there is a communication barrier. Other three methods are always conducted through participation of intermediaries.

The institutes and business/industrial information services which transfer information to industrialists try their best to meet the demands from Sinhala, Tamil speaking industrialists by providing translation services, repackaging information, organising workshops, counseling and advisory sessions, seminars, exhibitions, training courses and extension services in institutional level and village level etc. Despite all these efforts taken by the institutes and industrial information services, the problem of closing the gap of information transfer in indigenous language still remain unsolved.

The technological information centres which are widely known in disseminating industrial and technological information like ITI, CITIS, NSF, EDB etc. and other governmental and non-governmental institution and regional projects, found that it is increasingly difficult to cope up with the growing demand from non-English literate industrialists for new technological information. About 85% MSM inquiries handled by most of the institutions through *individual reference* were accomplished by translating original information which are in English to Sinhala by the library staff orally the communication is not successful in all circumstances. Centre staff in these libraries and information centres are technically qualified in handling this kind of inquiries but in many cases not proficient in translating scientific text to Sinhala/Tamil. Hence translating task is difficult, time consuming, strenuous and not very accurate too. The terminology used is very much technical in nature even though it is successfully translated and a layman finds it is more difficult to grasp the meaning of terminology translated to Sinhala or Tamil. What is needed here is the current technical information to be available in layman language or at least Sinhala technical terminol-

ogy with near meaning that an end user could understand. (there are scientific terms, chemical names which has no Sinhala/Tamil words officially accepted).

In this paper it is expected to sought out some possible and attainable remedies for the problem of dissemination of information in Sinhala/Tamil languages. Basically there are two ways.

- a) Structural solutions
- b) Alternative solutions

Under structural solutions the remedies lies within the prevailing social or organisational structure it self.

As a very simple and obvious solution employment of official translators could be proposed. Unlike scientific and technological sector official transtors are readily available and have long history in legal sector in Sri Lanka as legal procedunes written in Portugese, Dutch, Latin and English were to be translated to Sinhala under various circumstances.

The problem relating to the scientific translation should be treated with a great care as the accuracy of the very information carries success of industrial research, industrial processes, product development etc. In Sri Lanka many attempts have been made by various information services and institutions to solve the problem of translating technical literature for MSM clients. But the translation services provided by these information centres services were not proved effective or successful in keeping the target user community informed and in keeping abreast with the information explosion in the field of science and technology.

Several attempts that have been made to solve the problem are still underway through structural and institutional bottlenecks. It is some times difficult to employ translators on permanent basis due to institutional barriers ( recruitment policies, cadre revisions, funding problems etc.) but unutilized expertise is available with the retired work force. Details can easily be collected from the ministry of education and from the Universities about retired English and science

teachers/lecturers those who are willing to work on contract, part time or piece rate basis. There are many other officers available and suitable for the purpose but the resource can be tapped only through a paper advertisement. Some people in this category may be ever willing to provide their service and free time for a work which gives some respect and recognition to them again in their retirement.

These translators could be used in repackaging information for target groups, in conducting reference interviews and face to face dissemination of required information. These people can also act as intermediaries in assisting readers in browsing directories, encyclopaedias, industrial formulary/processes, in identifying product and machinery information, etc. and in exposing information from the electronic media. Some times specialised type of information/data are to be obtained from other institutions and may to be referred them for such institutions. However it is a task of library management to train this new category of staff for information handling activities.

According to the survey done using the directory compiled by the ITI on industrial institutions and the development projects registered under provincial councils, there are many information packages put out by many of those institutions and organizations in Sinhala and Tamil for MSM sector. It is also obvious that this task was accomplished with great difficulty by librarians or information officers in many cases except in non governmental projects.

Another solution lies within an organizational structure in disseminating information in Sinhala or other indigenous languages. That is transferring the technological information through face to face transformation media. Many institutions/projects/non governmental organizations studied conduct technology transfer programs by means of workshops/trainings/seminars etc. Government ministries also has been trying to participate in this process through distributed business development projects/divisions like Janasaviya. Technology Transfer and Quality Control Project of Ministry of Industries,

Samurdhi, Regional Development Divisions etc. Eventhough some knowledge had been transferred through these Media, it was very much visible that the participation of information scientists/technologists/scientists in these programmes are very low. Most of the time these propaganda campaigns are handled by special publicity units in view of disseminating information on technology /industrial packages developed by the research units of the institutions. There are very few organizations like CITIS and ITI who engage in preparation of these technological packages offer some contribution for translation. (Many end users do not understand the difference between Information Packages and Technology Packages) The language used in these kind of seminars are also too technical to understand by people with low level of literacy. Service of trained translators could be successfully in these kind of seminars by building up a productive conversations between library and the publicity/propaganda/business development units of the institutions.

Under the alternative solutions use of multimedia and communication systems can be considered in transferring information. Using Audio-visual materials is one option available though some view this solution as expensive. But it has a trend of providing productive and fruitful results. The fact was proven in delivering information to rural communities, for example in African communities, in some Indian provinces, in Arabic speaking communities etc. Audio-visual materials can be used to some extent in giving different and sensible touch in delivering information across which is difficult to express easily.

There can be two kinds of solutions in providing this category of services, One is Centre-based solutions which is based in an information centre like public library. Centre-based solution is the best way to use multi media options, since the facility is expensive. Since Sri Lanka do not have community information centres, this kind of service can be operated through public libraries, regional institutions affiliated to ministries, through provincial councils or any other suitable regional bodies etc.

Second solution is an Industrial/ Business information services in operation could simply use audio cassettes to record information, industrial process instructions, speeches conducted at workshops/ seminars in native languages enabling the user to hear and understand in his own language. Some people may prefer to listen recorded information leisurely and it allows the user to take down his own summary or notes. The facility in this way is much useful for old and handicapped people. This facility could be centre based or loan based and the same could be operated as a lending service or the cassettes may be made available for selling at a reasonable price.

Use of video cassettes is another effective media in providing demonstrative information. Industrial process demonstrations with instructions in native languages could be recorded at laboratory level, pilot plant level, proto type level, workshop level etc. Technology and industrial information transfer is very much effective through this media as the user see and understand how an equipment is operated, an instrument/apparatus is used, way of handling a process, measuring quantities etc. than information or knowledge derived from a written material. This facility may be effectively made available to the users as information centre based solutions. Depending on the availability, demonstration videos can be lent out. Many video presentations available at organisations in Sri Lanka one designed as publicity materials, as program calanders, even highlights historical accounts of organisations etc. Eventhough it is argued that the facility is too expensive to operate in a country like Sri Lanka, the benefit that could be derived cannot be overlooked and the VCR/ VCD facilities are now commonly available.

Designing slide programmes in the library with separate viewing carrels is another suggestion. Slides can be prepared by the library and/or in collaboration with the research section to indicate processes the production processes which is researched by an institute, information on product/ raw materials/ chemicals/ equipment / machinery information etc. Desk top publishing

applications could be used in designing slide programs in Sinhala/Tamil with the introduction of Sinhala and Tamil fonts. The slide programmes are also bear higher weight in carrying demonstrative and pictorial information to the MSM users.

Multi media presentation software allows to add audio and video clips to the usual slide show of graphics and text material. There are systems that connects inexpensive video camera, a micro phone and range of stereo speakers integrated to the PC with telecommunication connection for video-conferencing (e.g. Video Lab's FlexCam, Connectix's QUICKCam). Animated instructional and training multi media, when designed as a simulation of the real thing let the trainee to turn valves, regulators or flip switches to see what happens. All these solutions sound marvelous but putting these into practice in remote areas would be questionable. Other multi media materials like CD Roms, DVDs, Optical discs, special multi media programs, could also be designed for MSM but designing/production of which are expensive when comparing with the production of audio and video cassettes.

Computer Aided Designs (CAD/Cam images) can also be developed for machinery and plant layout, construction designing etc. European Product Information Corporation (EPIC) had developed a CAD/CAM image interface developed with hypertext for Optical Product. Technological Information for Construction (OPTIC). CompInfo<sup>6</sup> is another hypertext based database for company information.

Library referral services, counseling, advisory programs, instruction programs can be designed using computer hyper card based applications. Main advantage of this program is the ability to give instructions using sound recording facility. Hence these instructions can be recorded in any desired language. Far example Apple Macintosh has this facility.

Development of multi language user interfaces like AISON<sup>7</sup> give some light to the language barrier in communication. AISON is an automated in-

formation system for social sciences and is a special software package which has been developed for the users who are not competent in computer based searching. The package searches for problem and task oriented databases (problem oriented databases consists of search results from online searches down loaded into different databases, which are very useful in non-English speaking communities in rural regions) and handle the linguistic difficulties providing different search languages, and taking into account the content of the databases with respect to the users' language.

Above all, some countries are clever to develop translation software for their own languages, which reduce the strenuous task of transliteration or incorporating non English text generated through other language fonts. Egypt had developed a software called, ABJAD HAWAZ for Apple Macintosh to translate scanned or OCR read information to Arabic<sup>7</sup>. According to the source translation capacity, word power and the accuracy is not 100% perfect in the existing version but another advanced version of the same software is underway. Eventhough these kind of solutions are not available in our part of the world the time had come to think about alternative solutions in solving linguistic problems in less developed communities.

Among these development another development is recorded from China, using CDS/ISIS 2.3 version. In 1992 a large-scale Chinese-Japanese language translation system was developed in Pascal after completion of CADAIS ( Automatic Indexing System for Chinese Academic Documents) project in 1991<sup>8</sup>. The new translation interface translates 2800 Chinese words per hour with an accuracy of 70%. Developing this kind of information and language processing packages sounds very expensive in every kind of aspects and which should be accomplished at the national level project and may not be attainable at the organisational level.

Another common method known to everybody can also be proposed. That is a radio service dedicated to MSM category. Radio programmes

attached to main radio channels dedicated to different fields like agriculture, cottage industries, horticulture etc. are already available but there is no dedicated line for MSM industrialists where they can learn and experiment interactively with the speaker (if telephone connections available) from their remote locations. This kind of service is very much helpful to them as they can hear it from their own homes. Feasibility of starting this kind of service again falls at the national or ministerial level.

It is also obvious that the government sponsored organisations are in problem of harnessing with expensive solutions for language barrier for communication even though they are projecting to. Other non-governmental organisations and projects are not operating permanently in one country and not affiliated to a government department or ministry eventhough they have a central funding source hence central planning and coordinating of services are not possible. However exploitation resources lying within organisational structure adopting inexpensive alternative remedies without attempting drastic changes in cadres and budgets may not be too difficult. However as a developing country, before planning for very sophisticated solutions as initial thought should be given to the problems facing by non English speaking communities in case of industrial information transfer as the first step. The next step should be planning better communication system with existing resources and the advance step will be adopting modern solutions with a style. In all three levels the information officer or the librarian should be the main coordinator as an expert in dissemination of information.

This paper is based on a report submitted at IGSS 94 and modified with a mini survey done recently and a sample extracted of governmental bodies recorded in the Directory of Science Technology personnel in Sri Lanka and of other non governmental projects and institutions registered with the Ministry of Plan Implementation.

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