

Büchereien, Geowissenschaften und Entwicklungsländer: Beziehungen und Perspektiven

Libraries, Geosciences and Developing Countries: Relations and Perspectives

by

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Keywords:

*Bibliotheken
Entwicklungsländer
Geowissenschaften*

Abstract:

Libraries are true cultural repositories available to citizens. They induce heritage and create necessary conditions for development. Developing countries feel the responsibilities of independence and plan to grow. Often the tradition and past history are not obtainable for planning, due to the colonial heritage that left the libraries mostly orphans, with practically no historical documents. Modern geological growth in the world has left the developing countries to face a challenge viz. excess of publications at exorbitant prices leaving library collections incomplete due to attention given to national priorities such as food, health and education. Thus, among the strategies are central library system and exchange incentives, with organisations and editors to avoid imminent further information deficiency.

Libraries

Libraries could be easily denominated as true cultural repositories, available to all citizens who procure knowledge of the past and present with a view to think of today and tomorrow. Libraries are sites of political and social consciousness leading men to citizenship of a country, or of nations, or of the world. Unrestricted in age, dedicated studious people always find their intellectual appetite attended to in these locales of history, tradition and cultural heritage.

Developing Countries

After the Second World War, numerous colonies have discovered the facets of liberty. Independence not only brings relief from dependence but also imposes

responsibilities of varied types. One such was the lack of proper libraries in all spheres of activity. Neither in sciences, nor in arts, nor in literature, the independent citizens could work out their past and their history or their cultural heritage. This is because documents of significance were kept often in the Central Libraries of their former rulers, who had the free access to the entire history of the newly born nations. Neither history nor traditions could be built in a restricted time. If the *past is key to the present* it is but natural that the independent countries and their citizens should know their past to work out their present and build their future. In this often forlorn search, added to the fast technological evolution and its application in all spheres of activity, the new nations could either become underdeveloped or developing. Among the underdeveloped, the United Nations classifies, some as least developed. Among the developing countries, efforts are being made to see that the gap between the developed and the developing may at least, in imagination, be bridged. With regard to libraries and library facilities in, not all but, some spheres of activity progress is evident. Yet this would refer to the present day or somewhat recent literature in sciences, arts and humanities. This should not be confused with any cultural heritage of a distant country libraries. Here, I am referring to the case of India and Brazil, though they have different histories for narration.

Geosciences evolution

Geosciences here will be limited to geology, for purposes of precision, but could be added by mining and metallurgy as consequences of that activity. The Geological Survey of India has an activity of over a century, where as the Brazilian Department of Mineral production and its former similars have little above half a century of life. The Mining Engineering studies in Brazil are considered as the oldest in South America with over a century of progress. Geology as a University Course has started about thirty years back. In India the Mining School at Dhanbad had celebrated its diamond jubilee, and some Geology Departments have an established name of nearly fifty years. Geology in the world has seen fantastic strides of progress due to the pressure on metal, fuel and energy resources and also industrial minerals. As always, every twenty to thirty year gap is needed for a new theory or a revolutionary idea to emerge like plate tectonics and greenstone belts. But the technological progress, equipments, methodologies, excess of laboratory informations coupled with field data and maps, have paved way for enhanced analytical approaches and new models in geology. The branching of geology into several areas of specializations has demanded a set of new publications by professional publishers, in place of conventional society journals. This increased output for the consumer scientist has created an enormous barrier between the scientific works of developed and developing and underdeveloped countries. Whether this is good or not, we do not yet know. But one thing is certain. This dynamic growth of

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scientific literature can only lead to a technological *dependence* of all the independent, developing to least developed, countries on the developed.

Geology in developing countries

Most of the developing countries were colonies of the European countries. The heritage of this is a sensitive diversity in the approaches and scientific accumen and interpretations. The anglophone countries had their diffusion through publications read by the majority of the world population. As a consequence, the geoscience libraries and the heritage is conditioned to the type of colonial rule each country experienced. Thus, the geological studies were guided by system, either anglophone or francophone or germanic or Italian or Spanish or Portugesish, each with a small to significant difference. This has an enormous influence on the geological output in the country. The professional who usually knows one language has restricted capacity to acquire the wide spread scientific knowledge, even if it is available in the libraries. The effect is simple. The geoscience development in the former colonies can be graded from reasonably well to wanting in the sequence of anglophone, fracophone, spanish, portuguesish, italian, and germanic. There certainly are exceptions. Some anglophone and francophone countries have proven to be quite not developed or least developed.

Geoscience Library Development

A case history from Brazil:

In Brazil, Geology Schools started at five centers in 1957. At that time only the Geological Survey (DNPM) at Rio de Janeiro, and University of Sao Paulo had nice geology libraries with reasonably good collections. They could attend to professional geologists and the graduation in the Natural History Course with geology as option and some subjects in geology. The Brazilian Geological Society, existent at that time, published its Bulletin twice a year. The DNPM had its serial publications called as Boletins and Avulsos etc. which maintained a sequence. The geoscience heritage, for the then created Schools of Geology, was thus very limited but yet quite precious. There was, thus, a need for the organisation of Geology Libraries which demanded finances and perhaps also *strategies*. Since developing countries, normally face financial problems, some *intellectual gymnastics* was necessary in the strategy side. Option was necessarily given to periodicals considered to be *essential* and preferably in English. Depending on the aspects of strategy, even little read or spoken French and German periodicals were sporadically included. Taking into consideration the large number of Geological Surveys, Societies, Universities etc. who had their system of exchange of publications, the Recife University in Brazil intellectual gymnastics resulted in a Boletim de Geologia and an Arquivos de Geologia. Both were cyclostyled with a printed cover, and a pleasant layout and design. Always an English abstract accompanied each paper. The first Boletim was sent to over 150 entities in 1958 in about 80 countries and entities, irrespective of their developmental status, and seeking exchange. The result was spectacular. Within two years the publications that came from the developed countries was just

bewildering. Thus, the Geology School's Library accumulated a very good collection of foreign geological literature, much consulted by students. The name and fame of the library penetrated all private and public organisations of the region and also Brazil, and thus catering to the consultation by others. This is, what is believed to be true technique of creating a system which leaves not only heritage but also culture for the generations to come. Nevertheless, it is necessary to emphazise that habit may be easy to create but to transform it into a tradition is not easy, and furthermore it is difficult ot sustain it. If the libraries created in such a manner with lot of geniality and imagination, are not adequately given a follow-up and supported, they will become just repositories of irregular collections which bear no significance for a community or contribute to a society.

Professional editors and publication inflation

Formerly, in all countries, the professional Societies and Associations in sciences and arts had their regular publications. With the increase in printing and distribution costs, some of them could not survive and had to look for partnership. The resort was to accept the support of professional presses who took up this challenge (ex: Springer, Pergamon, Elsevier, Balkema etc.) Initially it was very nice and constructive venture for the Societies. Presently the profesional presses and editors organised a very dominating system of publications, specially in the area of periodicals. In one respect this has opened new avenues for the specialized research output and its diffusion without much delay. Yet, it had suffocated the activity of professional societies, at least some, which could not maintain their earlier production capacity. Further it had permitted the division of each and every science into several branches, fragmenting (?) and permitting specialization (?) and also causing desunion among them. Today the scientific output ist thus exaggerated, thanks to two reasons:

1. Abundant data produced by modern machines with high precision;
2. Large number of periodicals accepting the scientific output, to construct their numerous volumes, annually.

This inflation had two bad effects on the scientific community in the developing countries:

1. lack of access to the increasing output in specialised branches, due to inflatory prices of the periodicals.
2. Dearth for modern equipment to produce sophisticated(?) scientific data to participate in such competetive modern (?) world.

Certainly the expansion of science needs diffusion through appropriate vehicles of communication. But then the increasing number of periodicals impose their acquisition as a minimum requirement. This costs money, foreign exchange, and often not available in the developing countries. Thus, the scientific gap between the

developed and the developing has to continue, if not deepen due to the following reasons:

1. The difficulties in up-dating of literature; and consequent lack of it.
2. Possible repetition of already found scientific information through investigation.
3. Difficulty and obstruction to scientific diffusion of research in foreign journals, as a consequence of the above factors.
4. Necessity of continued dependence on developed countries to conduct research, competitive in terms of foreign parameters, often not necessarily useful in a developing country for its development programmes.
5. Continued progress of the developing countries in the scientific output where neither the machines are much involved nor the foreign literature is indispensable. For example: Field mapping, prospection and related activities dependent on local literature.
6. This, however, does not lessen the importance and the necessity of fostering more scientific research and output, the distance between the developed and the developing countries, and lessens the cultural heritage that could be derived during this process.

Information and its Value

Information, in any walk of life, is as important as air, water and food. It's the basic ingredient of research. Conducting research in arts or sciences or in geology has now become a routine. But the obtaining information, adequate enough to discuss and propose ideas, needs bibliographic support obtained through references. In Geology both in the US and in Europe entities exist which could furnish the references on any topic or research, with the citation of the title of papers. Most of the cited publications, unfortunately, are not easily or otherwise accessible to most of the developing countries. This is a pity. Even the research supervisors do not usually build for themselves a good collection of periodicals, reprints and books for their investigations. This good habit of the older generation of scientists who had spent time and money in building up their own collections, is being utilized by the younger generation with no greed nor gratefulness. Sometimes the loaned publication is never returned to the owner. Such is the respect for the information. Having faith in a library is a must. The scientists must also find time to guide the libraries to equip themselves with the literature that is most commonly consulted by the research workers. The library directors are not expected to know what is important in each and every science or arts. Funnily, often some professors in developing countries do not have time even to indicate new books or suggest the relative importance of continuation or not of periodicals etc. for research or teaching purposes. But they have time to find fault with the libraries. The students in developing countries, curse the libraries and not their teachers, who truly are the responsible ones for any such fault. Thus,

within the framework of personal collections and libraries, information made easily available does not beget consideration or value or respect by the student or the scholar or the teacher. He simply does not even bother to return the publication, reprint or book to the owner even for a long period. My experience goes further. Such lending system is worse when the borrowers are colleague teachers. He who lends, suffers. Of late, the mechanical reproduction has induced a special lethargy and a new practice known as piracy. In developing countries, specially which have conditions to acquire machines like Xerox and Nasha etc., neither teachers nor students have any respect or consideration for the system of copyright. Some of them even confess that they do not know of this copyright. This is just impossible. In any journal at the footnote of any article, there is the mention of copyright. Then the second argument is that developing countries find the prices exorbitant for their purchasing power. This is no argument since even in our Central Library, usually several copies of much read or circulated books are obtained for use. Respecting copyright is respecting our colleagues, their time, their ideas, the professional and the profession. There are cases when text books are 20-30 times copied and kept for the use of the students. These do not deserve any comments.

Perspectives

Scientific knowledge can only be dominated through the acquisition of culture and education. Basically this is controlled by the heritage that could be transmitted through the libraries to all the generations. Heritage is a logical consequence of mental growth and intellectual formation. Every citizen has the right to obtain it, and its passage is only possible when the earlier generations have their ideas documented and kept them to guide newer generations. Ideas and ideals always were present in every country, and in every citizen. But these have been manifested or not, depends entirely on the liberty the countries enjoyed or the freedom with which the people have expressed what they felt. Yet this logic is typical in case of sciences and more so in geology. This is because sciences form part of the creativity and the genius of the thinker to unravel the unknowns. Geology treats the solid earth, which does not suffer enough change in one's lifetime or more, and could feed the brains of the creator with a variety of options to unearth the secrets hidden down in the depths of the earth. Thus, heritage and culture are different in different themes like politics, society, economics, sciences and geology. They still have one common denominator viz. the documentation. This simple, yet sophisticated instrument should be respected, caressed and protected. Libraries are their homes. This fact should not be forgotten and should be repeatedly inducted in the youth, who often do not have consideration for documentation and the information therein, as long as it is easily available. Information should be well kept, maintained and guarded for times to come. Only then it becomes heritage and integrates in the culture. Strategies are to be formulated in the developing countries to fill the information gap in recent past and conquer space for the future. Geosciences are part and parcel of the conjuncture.

Strategies For Now and Future

The following are the possible practical strategies that could be adopted by developing countries to fill in the recent gap of the past and formulate plans for the future, in geosciences.

1. Establish one Central Library, with assured supervision, organization and maintainance.
 2. Connect it to the Geological Survey or Mining Department of the Federal Government, or the highly respected University with a known library.
 3. Create a Five-Member Advisory Committee with representation from the Federal Government Departments and Universities, to supervise and advise the Central Library.
 4. Arrange in-put of journals through
 - Obtention of regular funds from the Government for the purchase of publications, within a priority list. (Take every effort towards their perfect organization and maintainance).
- Involve subscription of one or two periodicals by each University where a Geoscience Department exists.
 - Insist and obtain exchange of publications with Societies and Geological Survey Departments.
 - Seek volunteer collection from retired professors and professionals, to fill in the recent gap.
 - Make NRC aware of the significance of this central activity to promote expansion and availability of knowledge and information. Circulate information bulletins of the titles from periodicals to all those interested.
1. Affiliate the Library with other traditional libraries in geosciences to exchange informations etc
 2. Make formal requests to Societies and entities or funding agencies (TWAS etc) to fund some expensive foreign journals.
 3. Contact the Editorial Agencies (Pergamon etc). for discounts on books and periodicals, especially for the Central Library.