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FORECASTING THE CURRICULA FOR EDUCATION AND TRAINING
FOR INFORMATION AND DOCUMENTATION IN THE DEVELOPING
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GUADALUPE GARRION RODRIGUEZ

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A B S T R A C T

FORECASTING THE CURRICULA FOR EDUCATION AND TRAINING FOR INFORMATION AND DOCUMENTATION IN THE DEVELOPING COUNTRIES

Although the title of the paper refers in general to curricula for developing countries there is an indication as to its specific coverage: the Latin American region.

The paper is divided into two main sections. The first one presents a brief panorama of the actions that have been carried on in Latin America for the last 15 years in order to analyse the situation of library education in the region with special emphasis to their curricula. Mention is made as to the way in which the most urgent needs have been solved so far.

The second part offers some general considerations about the kind of core curriculum that could be implemented for the 1980's. It is suggested that the core curriculum should be offered at the first level of professional education. In the countries of the region it corresponds to the "licenciante". Attention is given to specific environments in which the professional will be working for.

The general areas to be considered in a core program are indicated.

Several conclusions are derived from the paper.

GUADALUPE CARRION RODRIGUEZ

BACKGROUND

It seems somewhat presumptuous to have accepted to present a paper about "Forecasting the Curricula for Education and Training for Information and Documentation in Developing Countries", assuming that I will be covering in this presentation all of them. I should have defined to the organizers of this Congress the specific content of it long ago. I have not the experience, neither have I done the necessary research to pretend to cover all the "developing nations". I must say at the outset, then, that I will be referring mostly to what has been done in Latin America.

Obviously the delimitation of coverage helps me to talk about a reality that is familiar to me, at least in general terms. I am also more confident as to the more useful and important research sources. After this consideration, I must also state that even placing under one umbrella the different nations of this part of the world is somehow risky, since, and I am sure you are aware of it, their stage of educational, economic and social development varies considerably from country to country. The term Latin America, applies to a geographical area, where one language is spoken in most of these countries - Spanish - with one important exception, Brazil, whose language is Portuguese, both being romance languages. If the Caribbean is to be contemplated under the term

just mentioned, then the language or languages as unifying elements spread over a little more, due to the fact that English, French and even Dutch, - although in small parts of the region - are also spoken.

The difference of languages is one among the many in our countries. Even in the ones with Spanish as a common language and where the Spanish culture and traditions have very strong roots, very clear differences still exist from one country to another, which somehow is reflected in the general education and socioeconomic development attained by each one of them. But, despite these very general considerations, I trust that limiting myself in this paper to Latin America the observations made might throw some light for the development of an information curricula in other developing areas of the world.

PAST AND PRESENT ACTIVITIES

Before entering into the considerations of the type of curriculum that will be needed for our countries in the 1980's, I will refer briefly to what has been done in the past in this region in chronological order. I allow myself this permission because I think it is important to have a general picture of our present situation, and also because even thou I think it is much more important to look ahead and to try to shape the future, we can not ignore the past, which somehow determines how or what the future is likely to be.

Ideally, an educational program should respond to the real needs of a community, or a nation. Basic education is offered with the purpose of providing the most elementary means for acquiring the 'information' that will help people change and improve the way and thus the quality of living. Advanced or special education is offered to respond to more specific demands or eventually, this should be the case. Unfortunately, large areas of the world are still lacking basic education. In the area of librarianship we could identify a rather weak, chaotic and heterogeneous panorama in our countries. Whereas in some instances education in this field has only covered a very small percentage of the needs, there are others in which the professional education has attained a solid status, and postgraduate or special courses did already emerge some years ago.

And this is one of the first differences in our countries. Education in the field goes parallel, with the stage of development attained by the information units -whatever the name - in these countries. It is not the point to explain the reasons or make justifications for this uneven development. I would simply like to point out that at a national and regional level there has been undoubtedly a concern to solve the problem and many actions have been undertaken since 1962-1965 when a Workshop (Mesas de Estudio) at Medellín, Colombia, took place. Among many other studies and discussions there was the interest to analyse the existing curricula and propose a

standard one, which could be a point of departure for countries without a clear idea of where to go and how to reach that point. "The curriculum proposed by the Workshop set as a goal to offer the basic knowledge that our professionals should acquire, and increase the number of leaders that will push actively the development of the profession" (1). Some of the courses proposed then were Introduction to library techniques, The library and its socio educational function, Research methods, Documentation and Planning library services. Those meetings, sponsored by the Organization of American States, have become a major reference for library education in Latin America for the last 15 years.

It is fair to recognize that the lack of guidance, interest or study in the region are not the only factors responsible for our weak development, but rather the almost non existent support that has been offered by governments, due probably, ironically, to the lack of professionals able to show not only the need for library services but what is more important, the real benefit of those services for a given community, for a country. In 1972 the FID's Latin American Commission (FID/CLA), sponsored a "Latin American Seminar on the Preparation of Information Scientists" which took place in Mexico City.

Probably this was the first time when a group of professionals

got together in a regional forum to discuss openly the problem of lack of professionals identified or known as "information scientists".

One of the papers which focused attention on the problem was the one by Antonio Briquet de Lemos: "Present status of the teaching of library science in Brazil and the question of information science" where he said: "In a general way the teaching of librarianship in Brazil reveals that ... there is no integration of library and documentation activities and services that make use of techniques applied to system analysis and that face the various disciplines not as isolated parts, but rather as an organic whole". And he goes on to quote Shera when he said that schools still insist on "empirical suppositions and methods of the old and traditional librarianship, which do not correspond any more to the present complexity of registered knowledge". (2)

A report of the Master's program implemented in 1970 at the Brazilian Institute of Bibliography and Documentation (IBBD), the predecessor of the new Brazilian Institute of Scientific and Technological Information (IBICT), was given by Hagar Espanha Gomes and Celia Ribeiro Zaher in the paper "Experience of IBBB in the preparation of information scientists". IBBB began offering courses on scientific documentation back in 1964 such as: Documentary research, classification theory, automation of information. These courses led some years later to the establishment of the Master's programme.

After revising the literature and checking with the board of directors of the Latin American Association of Library and Information Science Schools (ALEBCI) this seems to be the only program in the region strongly oriented towards information science.

An important statement is made in Gomes and Zäher's paper: the interest for preparing personnel at a professional level must be the response of clearly stated needs of institutions, of government organizations, which will hire those professionals after completion of their studies. The authors refer to this aspect in the following terms: "The government, interested in the establishment of a scientific and technical national information system, as an essential element for the socio economic development of the country, has the responsibility to continue the preparation of human resources for the development of such a system" (3).

The University of Buenos Aires, in Argentina approved also in 1970 a plan for the library science program at the School of Philosophy and Literature, which was to be known as "information science". Ganza Mercado mentions 6 of the diplomas granted at that School, three of which deserve a special reference: "licenciante in information science specialized in librarianship", "licenciante in information science specialized in documentation", and "professor of information science". The curriculum comprises the following subjects which apply directly to this specialization; comparative librarianship; prin

ciples of automation; research methods; reprography and information systems.(4)

In Chile, the program related to the degree of 'librarian' and approved in 1972, at the University of Chile includes 6 credit hours on "information science". (5)

In 1974 the OAS sponsored again another meeting, as a follow up to the Workshop held 10 years before in Medellín. As one of the main conclusions drawn by the participants - experts from five Latin American countries, and professors from the Interamerican School of Librarians at Medellín Colombia - there was the reiterated interest to revise the recommendations of the workshop, including, of course, among the many of them, the curriculum analysis.

By the end of 1976 - in November - UNESCO convened a meeting of directors of Latin American Library Schools in Bogotá, Colombia. Among the working papers prepared for the occasion the one written by Ana Maria Prat pointed to the curriculum aspect as one of the barriers for library development in our countries, and stated, in very clear terms, that "scientific and technological information with its libraries, documentation and information centres, etc., requires now-a-days not only a librarian ready to work in any kind of a library, but a professional, specialized in basic information sources in various disciplines, knowledgeable on new techniques for the

analysis and dissemination of information, and most of all, capable of interpreting and solving special information problems in the various areas of knowledge". (6) This means that besides the need for well prepared professional librarians, there are certainly requirements, for other kinds of professionals engaged in information activities, depending on the need of the community served.

And this is the point, in my personal opinion, which deserves close attention. It is my personal feeling that the problem of our information services will be solved only by integrating other professionals into our field, and by designing a solid curriculum which will be the result of a deep analysis of what we want, and not only of adding arbitrarily new courses or changing the names of the old ones.

The session convened by UNESCO offered not only the participants, but also to the professionals of the region, the opportunity to become aware of the recent developments and problems in library science teaching. It certainly offered the latest information about curricula development in our countries, due to the wide representation of library school doctors from the area. There are written reports of 15 schools from 9 countries. From these we learn that the most frequent courses in the curricula are; automation, communications, information theory and cybernetics, research techniques and documentation. Despite this listing, I am somehow suspicious about the real content of the courses, and whether they really focus

on information science aspects, or whether a new and "a la mode" title hides a traditional program. Some reasons for distrusting what the title conveys is: a) no automated information activities are yet developed in those countries. b) there is a serious lack of professional teachers, even for the 'traditional' courses; who then is prepared to teach the advanced and modern ones? Juanroz points to this aspect when he writes: "For most of the schools the availability of equipment being utopian, there are serious obstacles for the study of electronic information processing, and even more, to do experiments linked to the library and information fields ..." (7)

But despite these problems, there is no doubt that there is a general concern for improving this situation.

As a result of the UNESCO meeting important recommendations emerged which apply directly to the curriculum aspect. It is addressed to UNESCO itself and to the OAS in the following terms: "To contract a commission integrated by librarinas and specialists in curricula design, in order to prepare a working paper... that will help to establish the basic points and adequate strategies in order to design the core curriculum" and "that this working paper should be submitted to all library schools in Latin America to obtain opinions". (8)

All these actions mentioned whether national or international are a clear proof that we are conscious of the problem and that by

analysing it together there are many opportunities to reach a favorable solution. The fact is that our public library systems are still weak and in some cases - difficult to admit - even non-existent. Other libraries special or university are developing slowly, but this does not justify that library schools do not offer a curriculum that responds to these needs which reflects the progress made in other countries and incorporates as much of the progress as will help to form a 'new' professional in the field.

Ronald W. Wyllis, assistant professor at the Graduate School of Library Science at the University of Texas referred to this idea in the following terms: "where weak library systems certainly need strengthening, there is no logical reason why developing countries should re-tread every intermediate step ..." (9)

I have mentioned the actions taken at the regional level to analyse the curricula problem. I would like to mention also, briefly, what has been done in order to start solving the lack of professionals capable of undertaking special activities in information units.

Professional associations, special institutes, national organizations responsible for the operation or implementation of national information systems have been sponsoring during the past 5 to 10 years, short courses, seminars etc., that focus on specific aspects of the information activities such as: indexing, automated retrieval systems, communication systems, telex, computerized data banks, networking, information systems and many more.

These actions prove that if the Schools are not preparing the kind of professional needed for information units, then other means have to be found to solve the problem.

FORECASTING

Despite the analysis of the literature, of the resources and weaknesses of our schools, and considering the characteristics and needs of our region, I have found most difficult to state here a specific core curriculum that should be proposed for developing countries. When talking about a core curriculum, I am referring to a program that is the point of departure at a professional level, that is licentiate or "licenciatura" in our countries, broadly equivalent to the American, B. A.

So as to get a frame of reference on how the problem is solved in other countries and to identify the characteristics of previous curricula, I went thru the 1977-1978, or 1977-1979 catalogs of some 47 library schools accredited by the American Library Association. There is an enormous variety of courses and names. The mere listing of them reflects the most heterogeneous panorama. The number of courses in the field of "information science" offered by those schools varies from one to fourteen. In most cases those courses are optional. I did also check catalogs from British institutions, and the one from IBICT, Brazil.

As for Latin America, I went thru the reports of the directors of schools delivered at the Meeting of School Library Directors in 1976.

In defining a curriculum there is the need to point out, first what its objective will be, what kind of professional do we want to produce, to determine which will be his/her environment, what kind of services or activities this professional will perform. These are not in fact new questions, but they have to be made each time one is facing this problem.

We may think in terms of a professional who will be able to cope with the needs of the society, that will go to his/her users, making them aware of the available information resources, printed and non-printed, of all the different access points that are eventually of interest for and useful to the user to solve an information need; a professional who is eager and keen to interpret the needs of his/her community, and is able to match them with the resources of information available in his/her own information unit, or is capable to locate it in his /her community, or even - which might happen frequently, abroad; a professional that instead of waiting patiently for the user to come is an active promoter of the services offered; a person who is wide open to changes and willing to respond to the user's interest; somebody who knows how to organize and handle the media that convey information, either in a traditional way or thru modern electronic devices.

This kind of professional must be ready to accept a "metamorphosis" of libraries into community resource centres, serving all kinds of

communities: people living in rural as well as in urban areas, and performing all kinds of jobs. The professional has to be capable to select information required by the community he/she serves.

If we are not prepared for such a dramatic change, if we do not conceive that our professional will be interacting with the world at large, if we are not convinced that school curricula must be revised to form a different professional, or a professional with other characteristics and abilities, then we deceive ourselves. Taylor's concern about the permanence of school curricula when he expressed his doubts about those "concerned solely with educating students, whose only goal is to work in libraries" should also be our concern. (10)

Given such a broad spectrum of activities that the professional must perform in our peculiar environments, given our specific backgrounds and faced with the problem of curricula design, I feel sympathetic to what Allen Kent stated in his article: "Objectives for information science education" where he said: "It appears useful, therefore, to attempt to structure the programs in terms of "exit competences" -that is, objectives for the graduates". (11)

When there is such a vast number of activities to be performed in such an heterogeneous environment, where all kinds of needs are there, or are likely to arise, one is confronted, once more with the "What to teach" or "what to leave out". Another observation to be

made here is the fact that professionals from developing countries should be as well prepared as those from other, so called developed countries. Innovations, changes and new attitudes towards the future must take place despite the existing barriers and the weak development in the field. If we do not think in those terms we will always be behind, well behind. Many actions have to be undertaken in order to consolidate the so called "library or information infrastructure," and one of the most important is the implementation of a new curricula.

Professionals in Latin America are and still will be, for some time, faced with a challenge. It is not, I would say, a matter of adding courses to an established curriculum, or changing names of the old ones already established. It is important to contemplate a curriculum that will probably be rather different from the existing ones but thru which, we can be assured that schools will be forming the kind of people we need. This is the more serious and difficult analysis; What kind of professional is needed for the next decade. Our environment might be a constraint, but it is also a clear frame of reference which will definitely help us to define the kind of information specialists that is required.

In previous paragraphs mention was made, as an example, of the Master's "information scientists" program implemented in Brazil in 1970. This program responded to the need for forming professionals for the national scientific and technical information systems.

This is the case. In most Latin American countries a body or an organization responsible for the establishment of a national information systems has been set in this decade. High priority is given to scientific and technological information activities, even though the so called infrastructure, as has been already said, is rather weak.

This leads us to the fact that the professional prepared through a new curriculum will have to be able to deal or cope with two realities. Two sharply different characteristics are present in our countries, the less developed sector which could be represented as the base of the pyramid, standing for the public or school library services, and the other one, the top of the pyramid, representing those services offered by research, technological or higher education institutions which usually serve a smaller but more sophisticated community. This is why it is necessary to contemplate a "curricula based upon the concept of a total national information resources to be made accessible to all segments of society; curricula ... based on country and potential job market for information science professionals. Curricula based not solely on librarianship as a profession, but based also on librarianship as a discipline" (12). In no way can we prevent the top sector of the pyramid from using national or foreign information resources, regardless of the media the means or the technologies available, simply because the other sector still lacks the basic resources.

As an example of this situation, I will refer to Mexico, where a number of actions have taken place in this decade: There are already some specialized information centres, in fields such as chemistry, metalurgy, electricity, food industry - to mention just a few. As to what is happening in institutions of higher education, a good example is the National University of Mexico (UNAM) which last year initiated a very important program: the automation of their library holdings, which will be of direct benefit to that institution, and eventually, within a short time to other similar institutions in the country. In parallel to this, there is the reality of our public and school libraries whose development is still rather weak.

I do not think that even considering the fact that there are such clear differences in our countries, that this means we have to form our professionals thru different forms of curricula. I would say that the basic level, as a point of departure, has to be the same, but schools offering advanced courses or postgraduate programs will complement or enlarge the core curriculum. From the previous observation, attention to the following aspects has to be paid, when structuring the core curriculum:

- * What the content will be: depth: theory and/or practice and proportion of them; depth of coverage.

- * Teaching techniques; backgrounds and characteristics of professors

- * Other resources such as collections, AV materials, physical facilities

- * Entrance requirements.

I will concentrate solely on the content. There is no doubt that this is not the only element to which careful attention must be paid; the other aspects mentioned might be just as important, but my main concern now is on the "what to teach".

Reference is made to a major work by Saunders who in great detail, makes pertinent observations regarding the elements just mentioned and provides excellent guidelines to professionals from Latin America and elsewhere. (13)

In respect of the content, I tend to conclude that the core curriculum should consider the following general areas:

- Services
- Administration
- Communications
- Technological advances
- Organization of documentary resources
- Research techniques

Some clarification might be needed in this subdivision, but I think that the areas mentioned indicate their content by themselves. I

would only like to make clear that when referring to communications; I am thinking in terms of all the means required to communicate, as well as the aspects to determine as exactly as possible the user's needs. This is what Harmon says to place more emphasis on the "demand" side. (14)

In defining that the core curriculum should embrace the basic subjects, there is the problem of deciding which will be the specific ones, in what depth, and what the weight will be in relation to other subjects.

Many articles have been written in this respect. I would like to make reference to a recent one on the subject: "the program must cross discipline boundaries and be of sufficient duration to permit the acquisition of requisite knowledge, familiarity with practice, and behavior pattern. The author also makes a differentiation between the core curriculum and specialization, when she says: "Specialization frequently occurs as a professional matures. Specialization exerts pressure for the inclusion of preparatory education for them" and adds: "When the first professional degree is offered at the graduate level, the most prevalent education pattern is a program of "basics" that is, of fundamentals deemed essential for well rounded professional competence and the work variety that exists in professional practice". (15)

Since many important aspects of interest to professionals have been

left out, it is important to emphasise the postgraduate courses: master's programs, even Phd studies in the near future in our countries, but which still need to be increased and improved. In analysing the various kinds of work that will be performed by our professional, the following representation comes to my mind: Only the smallest group of our professionals should be directly engaged in fundamental research activities, but research, in very general terms will have to be done by all qualified people, engaged one way or another in information activities. This is the justification for offering, in the core curriculum, some techniques to initiate or undertake research other than at a fundamental level. On the other hand, there is no doubt that more sophisticated research will have to be done.

Research is the basis of information work. Research that will offer the intellectual support to the profession, that will shape it according to the real needs of the environment. In order to carry on this kind of research, more specific subjects will have to be taught at other levels, and thru other kinds of programs.

There will be a larger group of so called "administrators" to use a generic name. Professionals who will be able and prepared to manage information units, to make decisions as to the best alternatives that could be applied for instance to the organization of documentary material; to the kinds and types of services to be

offered to the community; to the means to promote and motivate the staff, or to interact with other similar groups; to the decision for establishing links with the community served, and to determine the best ways for defining their information needs, and how to proceed or to evaluate the work done, the services offered.

The largest group of people will be carrying on the everyday activities, such as direct services to users, organizing the documentary resources; using the different media - including for instance a terminal or keeping the basic statistics which help the administrator, or the practical research. The division of activities does not necessarily reflect a division by level of work. Eventually, technicians, paraprofessionals and professionals will be needed in each area of activity.

As an example of a process required for structuring a curriculum, I will refer briefly to the experience that a group of professionals, sponsored by the National Council for Science and Technology (CONACYT), had in Mexico when integrating a master's curriculum in library and information science.

The Mexican group met with a group of professors from the graduate School of Librarianship at the University of Denver. The process started by defining what was needed for the Mexican environment, what the abilities and characteristics of the professional formed thru the proposed curriculum would be.

It is important to mention that the Denver group was formed by professionals with a specialization in different areas. They then proceeded to consider the general areas, and from that, the specific content of the curriculum. This was a long process, where open discussion was indispensable. Several meetings were held with the Mexican counterpart so as to discuss the need to include or withdraw the subjects proposed and to give the appropriate weight to the elements contemplated in them. Table 1 shows the areas and specific subjects which were finally incorporated. As indicated there is also a period of practical work.

I do hope these considerations might be helpful. The development of a core curriculum requires most serious research and has to be structured according to the national needs and realities.

CONCLUSIONS

1. Information services in the region present a clear lack of uniformity public and school libraries being specially weak.
2. Discussion and analysis of library education programs in Latin America has been in progress for some years.
3. There is a wide variety of curricula in use in the various schools throughout the area.
4. Present curricula are not meeting the actual needs of various kinds of institutions.
5. A core curriculum for the region should be viewed as a means to determine the essential areas which must be taught to the future professional, regardless of the specific environment in which he/she will have to work.
6. The proposed general areas to be considered in the core curriculum are: services, administration, communication, technological advances, organization of documentary resources and research techniques.
7. Special attention should also be given to continued education programs - at all levels - as a means of enlarging or going deeper into the spectrum of areas and subjects concerned in the core curriculum.
8. A core curriculum could be determined by a group composed of professionals from different library schools, sponsored by a national or international organization, and submitted for approval to all library schools.

PROPOSED CURRICULUM
FOR
GRADUATE LIBRARY EDUCATION PROGRAM
FOR MEXICO

QTR	USER SERVICES AND RESOURCES	ADMINISTRATION AND RESEARCH	INFORMATION SCIENCE AND TECHNOLOGY
	The Library; Its Community and Collections	The University Environment	Bibliographic Des- cription (Catalog- ing)
	The Communication Process and Refer- ence Service	Administration	Organization of Knowledge (Clas- sification)
	Resources and Re- ference Systems in Humanities, Social Sciences and Science Technology	Mexican Academic Libraries	Technical Opera- tions (Local and Cooperative)
	Specialized Material and Services	Problem Solving (Research Methods)	Analysis and Me- chanization of Li- brary Systems
	FIELD WORK (3 weeks)		
Seminars (7 weeks)			
on			
Library Education		Media Production and Use	
Administrative Problems			

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