



**CURRICULUM DEVELOPMENT IN LATIN AMERICAN
EDUCATION: NEW PERSPECTIVES**

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Editorial

by Byron F. Radebaugh

This issue of *Thresholds in Education* represents the continuing interest that Thresholds in Education Foundation has in international education. It also represents two 'firsts' for us. This is the first time *Thresholds* has produced an issue utilizing Issue Editors from a country other than the United States. We were fortunate to have Dr. Carlos H. Lépez, Ana López, and Cecilia Gómez

from the Universidad Nacional, Heredia, Costa Rica, serve in this capacity. It is also the first time that an issue of *Thresholds* will be translated into a language other than English (Spanish in this case), and be distributed to educators and others in Latin America.

As I perused the articles in this issue, I was surprised to find that many of the problems and issues faced by educators in Latin America are also problems faced by educators in the USA. It is my belief that an awareness of the insights and perspectives of our

colleagues in Latin America on how to deal intelligently with these common educational problems has the potential for aiding all of us.

Thresholds in Education Foundation is pleased to present this issue on *Curriculum Development in Latin American Education: New Perspectives*, and commend it to our readers in the USA, Canada, and elsewhere in the world, as well as to our friends and colleagues in Latin America.



Byron F. Radebaugh is Professor of Education, Foundations of Education Faculty, Department of Leadership and Educational Policy Studies, Northern Illinois University, DeKalb, Illinois, and the Executive Editor of Thresholds in Education. He also served as the USA liaison for this issue of Thresholds.

Editor's Note

by *Carlos H. Lépez*

Education in Latin America has experienced two problems which are interrelated: an unequal development of curricular theory and practice, and a lack of correspondence between curricular plans and the socio-cultural needs of the respective countries. As a direct consequence, there exists a dispersion of institutional efforts, lack of cooperative mechanisms among countries, and limitations for publishing the different experiences that are being

carried out in the area of curriculum development.

Within this framework, the purpose of this issue of *Thresholds* is to offer a general view of curriculum development in Latin America, in terms of its common problems, issues, and new perspectives.

The articles were written by specialists from different Latin American countries. They explore the curriculum development process and its subprocesses of design, development, implementation, and evaluation, as well as theoretical frameworks and contributions.

This issue is intended to serve as an anthology about a topic of great impor-

tance for the development of education, as well as a means of communicating some of the achievements and highlighting its significance and limitations.

For the specific professional field and for education in general, this issue is aimed at encouraging cooperative efforts in the area of curriculum development, and setting the ground for different research projects that could eventually address some of the problems and issues presented.

For instructors, this issue is expected to offer valuable insight into innovative efforts that are carried out in the different Latin American countries.



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Carlos H. Lépez

Arguing for Post-Positivist Research Methodologies and Coherent Ethical Rules for Legitimate Curriculum Development Processes in Costa Rica

by *Carlos A. Mendez C.*

The purpose of this article is to point out that the current positivistic-statistical research approach for curriculum development observed in Costa Rica, strongly attached to academic-nationalistic and technological conceptions of curriculum, is not enough anymore, and to suggest that more coherent theories and methodologies, and stronger ethical support for different curriculum inquiry approaches, now within the domain of the country's education academic community, make it necessary and feasible to pose and to confront innovative curriculum development questions with 'post-positivistic' (Lincoln & Guba, 1985) research paradigms.

First, let me propose a commonly used and generally accepted definition of curriculum: "The substance (content, processes and values), and the functional structure of knowledge that configurate a plan, or program of study, or a whole system of education." Curriculum development refers "broadly to all the processes of constructing and implementing curricula" (Zais, 1977).

There are two important elements in the definition above: "the substance and the functional or dynamic structure of knowledge." Let us assume that this is an artificial (probably unhappy) division of no discrete entities. It is presented in that way only for didactical-explanatory reasons. For this particular article, 'substance' is to be interpreted as the content (knowledge in the form of disciplines, or any other form), and the explicit and non-explicit values and beliefs sustained by the school. Functional structure of knowledge refers to the organization and administration components of the substance.

When social groups privilege some knowledges, values and organizational curriculum processes, particular educational practices develop and translate into identifiable patterns that configurate what has been labeled as curriculum trends or conceptions.

Eisner and Vallance (1974), among other authors, have differentiated five conceptions of curriculum: curriculum as the development of cognitive processes, as self actualization or consumatory experience, for social reconstruction-relevance, as academic rationalism and as technology.

Different curriculum conceptions by and large determine curriculum re-

search topics, scope, methods and ethics. Historically, Costa Rican educational practice has been clearly associated with curriculum as academic rationalism and more recently as a blend of the former with technological conceptions. It then comes as no surprise at all that Costa Rican curriculum research, as limited as it may be, directly responds to those particular conceptions.

Within an academic rationalist conception, curriculum research focuses on problems related to the transfer of a discipline's knowledge, the architectonics of content and the search for methodologies, and instructional procedures and evaluation approaches for teaching different subject matter (Magendzo, 1985).

When curriculum is conceived in technological terms, curriculum research focuses almost exclusively, on the linear relationships between instructional and methodological means and a priori unambiguously stated ends. The curriculum is featured by instructional designs which translate into prescribed operationally defined objectives, with a strong emphasis in the organization of instructional means, and criterion referenced measurement instrumentation and practices. Research is more concerned with the study of the inter-

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relations between discrete curriculum components and academic achievement and learning. The 'teacher proof curriculum,' the mastery learning issue, the educational technology approach, the units of knowledge, the benefit-cost analysis and the use of statistical methods are deeply rooted in this conception.

...within the Costa Rican educational community have been increasingly strong dissenting voices questioning both a vast array of curriculum and instruction practices associated with the academic-rationalist and the technological conceptions of curriculum, and the positivistic research methodologies and ethics, historically adopted by most curriculum researchers.

However within the Costa Rican educational community have been increasingly strong dissenting voices questioning both a vast array of curriculum and instruction practices associated with the academic-rationalist and the technological conceptions of curriculum, and the positivistic research methodologies and ethics, historically adopted by most curriculum researchers.

It is true that positivistic-statistical oriented research has brought to light

the devastating deterioration of selective quantitative and qualitative national education data elsewhere documented. But, it is true, too, that typically, those studies do not explain the phenomena in terms of the social contexts and agents (students, administrators, community leaders, teachers, parents) the studies should refer to. Despite that research limitation, efforts have been made to generate and to impose solutions on persons.

It is not enough anymore to restrict research questions to those exclusively derived from academic-rationalist and technological perspectives.

There is a necessity to obtain more basic information as Valke (1981), Ehlers (1981), Magendzo (1985), and Noll (1987), have been asking for. It must become clear that societal needs and ideals play a heavy, if not decisive, role in the selection, definition, and ascendancy of virtually every 'piece' of knowledge that deserves to be included as curriculum substance (Zais, 1976). Simultaneously, the ideals and values sustained by different groups or societies are profoundly influenced by the very sui-generis underlying anthropological presuppositions about men, reality and knowledge (Lincoln & Guba, 1985).

A phenomenon that is now of interest to many curriculum planners is neatly represented by a multiplicity of complex, concomitantly interacting social realities constructed by the several participants, including of course the very same reality perceived (constructed and interpreted) by the inquirer. After all, the task of a curriculum planner is not to work alone and define exotic curriculum development paths, but to interpret perceptions, understandings, and feelings of individuals, and try to guide their own developmental processes (Zais, 1976).

To put it short, the phenomena studied by curriculum planners, that is, the nature of school knowledge and its organization, the underlying ideals and ideologies of parents, teachers, and administrators which configure a multiplicity of complex social constructions, the profound degree of 'researchers-informants' interactions and the high degree of 'indeterminacy' that such interactions will introduce, the particularly high levels of 'context dependence,' the exiguous probabilities of establishing

'causal-type connections,' the crucial role that values will have in the outcomes, and curriculum development studies, seem more likely to match the basic assumptions or axioms about reality, knowledge, and values assumed by post-positivistic paradigms than those expressed by the conventional (positivistic) paradigm.

For example, in reference to the nature of reality (ontological axiom), it is recognized that contrary to what positivistic methodologies assume, realities are multiple, socially constructed or created, and holistic, rather than single, tangible, and discrete.

...adopting post-positivistic research approaches creates the need for clarifying what may be considered ethical and unethical behavior in both the production and the use of knowledge.

As to epistemological axioms, specifically in reference to the relationship between 'knower and known,' it is believed that, 'they' configure a single entity, inseparable, while positivistics implicitly recognize dualistic or independent phenomena. Also, the possibility of generalizations as time and context determined, is assumed only for post-positivistics, so nomothetic statements are of no consideration but idiographic. Positivistics assume that it is possible to establish antecedent or concomitant with effect causal type linkages (linear causality), as opposed to a state of mutual simultaneous shaping that makes it impossible to determine 'causes from effects.' In axiological terms, it is assumed by post-positivistics that inquiry is heavily value laden, not value free. It is value-

bound because inquiry, particularly social inquiry, is influenced by the inquirer's values (when selecting a problem for example), by the paradigm that guides the investigation into the problem, by the choice of substantive theory that serves the purpose of guiding the collection, analysis and interpretation of data, and 'by the values that inhere in the context.'

Finally, it becomes clear that adopting post-positivistic research approaches creates the need for clarifying what may be considered ethical and unethical behavior in both the production and the use of knowledge. Consider the following rules:

1. *Credibility should be honored for tacit or non-propositional (Polanyi, 1965) as well as explicit knowledge.*

2. *Emotional and/or value neutrality should not be predicated; instead, emotional-political commitment is an instrumental condition for the achievement of truth (it is ethical to admit and to know his/her biases, interests).*

3. *In post-positivistic inquiry, all have morally equal claims for the construction and possession of truth, as opposed to conventional positivistic research which claims that some men (researchers) discover and possess knowledge.*

4. *While secrecy and all restraint or control becomes an immoral act in conventional mores, sometimes some secrecy and control that goes beyond mere private property rights, such as disposition of shared (inquirer-inform-*

ant) truths becomes a necessary moral act in post-positivistic axioms.

5. *A researcher must concern himself/herself with the consequences of his/her shared explanations. To do any less is to make the inquirer into an immoral agent who has no concern for the moral consequences of his activities.*

6. *Construction of new knowledge by research into the general sustenance of man is as important as any other activity and is to be supported as such; elitism is to be frowned on.*

7. *Exercise of judgment should be restricted to particular community cases; statements should always be context and time restricted.*

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The Teaching of Geography in Latin America

by *E. Flores-Silva*

Introduction

The evolution of the concept Geography and its projection as a teaching subject matter in the Latin American educational context has developed parallel to socio-political progress.

Other facts have also influenced Geography such as curriculum administration, progressive democratization of the structure of the State, and the evolution of this science at the universities. One thing is absolutely clear: the contents of school geography, as well as history, on account of its humanistic character, have been very carefully selected, on purpose or not, before they form part of the school teaching content.

Since they were official, it was considered that they did not affect the quality and usefulness of the knowledge the student should get. Nowadays, we can state that the quality and updating of this subject matter does not correspond to the teachers' criteria.

It is important to clarify that some expressions and data that are taught were strongly criticized and objected to by twenty Latin American high school teachers in a workshop on the Teaching of Geography in Quito, in CEPEIGE (See Note 1). The workshop took place during January and February, 1988.

Brief Chronological Synopsis

It seems logical to accept that during the long colonial period--in spite of the valuable work on Natural History done by Jesuits--the teaching of geography was aristocratic oriented, deviated and enumerative. Obviously, the Spanish Crown or King was interested in presenting facts from their point of view. There were individual and meaningful efforts for reform. For example, Alonso de la Veracruz, a priest, created San Pablo high school in Mexico. He provided it with a very good library and collection of maps, globes and scientific instruments. In 1796, a group of priests demanded from Tribunal del Consulado the establishment of a school and the teaching of arithmetic, geography and drawing (Labarca, 1939).

During the second part of the eighteenth century, the very many expeditions that came to the New World (Humbolt, Frezier, Jorge Juan y Antonio Ulloa, Bondpland, la Condamine, d'Ibigny) gave new insights as to Latin America reality. However, this new knowledge was incorporated into the already poor teaching contents, in a very weak way.

The consolidation of our independence, in general, started during the second third of the nineteenth century. It increased foreign influence (by 1810) in our countries. This trade, introduction

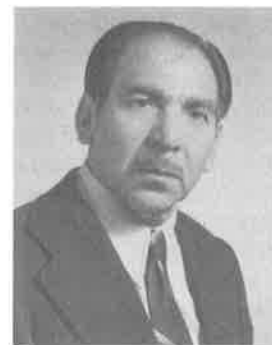
of new mining techniques, funds for creating a transportation infrastructure and bus companies, increased.

Parallel to this, many European professionals and academics were hired to teach and show the most relevant characteristics of each country to well educated citizens through tours, observations and measurements. They drew the first maps, and made the task of colonization easier for immigrants of their own countries. They made reference to basic natural resources and taught at the universities. All these events made geography very attractive and interesting to certain governmental and political sectors. This is why there were many persons who translated, adapted and created textbooks for the teachers. They also established statistics, methodology, etc.

As a consequence, there appeared some amount of a rationale in teaching and a laicization of education. Teaching became a professional matter, and educational reforms took place.

In this new movement, geography always had an outstanding role in the new curriculum. Sometimes as independent subject matter, or as part of history or the natural sciences. However, in the planning of the content for geography, the influence that Europe and America had is evident in the works of Humbolt. This was obvious in the relevance that physical geography had. (It was preceded by astronomy notions.) Ritter's influence was clear in the or-

E. Flores-Silva is from Chile. He has held the cathedra in his specialty, geography, in several Latin American universities and has published several articles, essays and books.



ganization of space (continents, countries) for historical purposes. The postulates of Ratzel were less frequent, as they considered the state to be important in the constitution of territorial space. Prejudice and disdain from white people towards the colonies were evident. Consequently, studying general geography, and geography of Europe was more important for authorities in education. American and national geography were irrelevant.

The teaching of the geography of Haiti began later than general geography and almost at the same time as National History. At the beginning, it was not compulsory and in some schools it would be included in their programs, while in others it would just be ignored (Pressoir et Trouillt, 1954).

Another example of this strong foreign influence was found in the program adapted for the junior in 1850, at the Imperial Colegio Pedro II, in Rio de Janeiro, Brazil. It was as follows: American; general divisions; oceans, regions, gulfs, straits, main islands, bays, lagoons, lakes, mountain ranges, volcanoes and main rivers.

The pattern was the same for the other continents and in the senior courses (3 and 6) they would only go into more detail by countries.

On the junior level a mixture of cosmography, geography, physics, and ethnography was taught. Atmosphere, the moon, volume, movements and phases; length and height; solar circle; earth's circles; zones and climates; inhabitants of the earth compared with their shadows; inhabitants of the earth compared with the height and length in which they lived; the Zodiac and its symbols, etc., was also included (Vieira de Fonseca, 1956).

Innovation

It was not until late in the Twentieth Century, perhaps during the fourth or fifth decade, that clear objectives were formulated.

There appeared more balanced and less encyclopedic programs. However, the importance they gave to physical geography and continental geography (specially Europe) is still evident in some countries. Also, probably influenced by international organizations and the big amount of bibliography they

produced, the following themes were included: problems related to the Latin American man as a social being; world and regional population; increasing population rate; inhabitants' distribution; importance of vital data (birth rate, mortality, life expectancy, etc.); urban phenomena and life in big cities; rural population and obsolete agrarian structures; and characteristics of underdevelopment.

Greater importance was assigned to the study of national geographies. The need for planning and deregionalization began to be discussed. Latin America, at a world level, is a term that expresses a regional category. Studying far away countries (Africa, Australia, Asia) is hardly considered. Geography does not pretend to give a detailed knowledge of the world, but to show problematic situations that must be faced.

*The teaching of
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Unfortunately, the elementary school can still be terminal for some children; and, that is why, contents are universal in the sense of pretending to teach a great part of geography during the second half of school and then repeat it more in detail during high school.

It is also true, however, that there is a tendency to match mental development and daily experiences of the learners with teaching content.

The Minister of Education in Mexico recommends that high school teachers take into account the environment that surrounds men (physical and social), since its influence is definite in the way they live. Physical environment is the nature of the place in which the child lives; social environment is the group of elements which constitute life

in the community. So, the teaching content for first grade includes: day and night, and division of the year into months.

For second grade: ubication of the classroom and school, its situation and limits; the main problems in the locality; and the main occupations of the people who live there (Organic Law for Education, Mexico, 1951).

School textbooks with big printed outstanding titles and subtitles, some very well illustrated with pictures, colorful maps, graphics and statistical data began to appear. Some textbooks included sketches of the models that scientists have created to classify and find solutions to economic and urban problems, etc.

In several countries (see Note 2) (Brazil, Chile, to mention only two countries), the government donated textbooks to elementary schools.

Wall cartography of the territory is produced now on a great scale and it is attractive and scientific.

High school teachers' education and training have reached an excellent level, not only in understanding and scientific interpretation of facts, but in modern teaching techniques, and psychology. Only twenty years ago, Orbezo (1965) denounced, "Teachers in Peru are prepared to serve individual's interests over national ones."

A Role Dilemma

The importance of geography in structuring the curriculum and its influence on the individual has been strongly debated. Fortunately, it will continue to improve with the help of new theories in education, contributions of teaching technology and the emerging of means not yet in existence. As Harvey (1973) states, "Once the learning process and educational system have been included in any organization, they will reflect the interests of that society." As a consequence, some subjects such as urban shacks, transnationals' actions, over-exploitation of natural resources, contamination of the environment, etc., are not included. Thus, it could be said as (Lacoste, 1977) did, "The geography that is taught in our schools has served as a mean deceiver, it has silenced unanswerable questions. It has kept the

'status quo,' its neutral and aseptic critics either satisfy or dissatisfy everybody; therefore, it does not give an answer to questions on evident political and social problems, because teaching contents are official."

The teaching of geography has served the interests of those in power and their ideology since colonial times.

High school teachers, then, must be very brave if they want to make of their subject matter something valuable from the social and educational point of view. This is why 'educational means of geography' have been formulated and will continue to be. That is, geography should not be mere description, but it should explain and interpret social phenomena.

These teachers should not be afraid of criticism which is only interested in keeping geography as an apparent science. With this in mind, UNESCO (1951) published a manual on the importance of geography for international understanding. This was very important because it gave relevance to the contribution of people all over the world, their knowledge and value; not only to white people.

Geography must be a means of revealing the work of men all over Latin America who have come to realize that their territory (plains, pampas, Australian cold lands, slopes and valleys in the Andes, the hot intertropical

land) is a permanent home and that less importance should be given to the very absurd problems related to boundaries.

In 1980, the Geography Committee IPGY (1980), published a very valuable manual for didactic purposes for teaching geography on an intermediate level. Unfortunately, its distribution and influence has been limited because they did not dare to insist on wider usage.

Specifically, geography of Latin America should be a school discipline whose main objectives should be to give the students the necessary information, so that they can draw holistic, reasoned and true conclusions about the most fundamental problems of the region. No doubt, the contents are quite heteroclit; they include from Tierra del Fuego (Patagonia) to the Amazonia and the Mexican deserts, and from the Andes to the international trade uses. However, syncretism that synthesis demands is one of the biggest values geography has as a teaching subject matter.

A local, regional, national, continental geography must present such scenarios, not in themselves, but related to the ones with which they form a total whole unit. This unity is quite reliable in relation to historic, ethnic, and common history, because side perturbations affect somehow the totality (for example, alteration of democratic mechanisms).

The problems of feeding, providing water, housing, education and health to larger and larger populations in America, and the close interrelationship between countries, cannot be solved in states progressing in autarchy.

On the contrary, dependence is an actual and real fact. Zamorano (1969) wrote that the specific particularities that geography has, denotes its educational value. It is a humanistic science that raises solidarity feelings and transmits a complete knowledge of the human dimension as it is.

Nature's devastating actions, so common in our subcontinent, urges the need of unity among countries for better results.

The devastating actions of nature have been produced by the destructive actions of men. Unconsciousness of Capitalism has contributed to over exploitation of natural resources. The states have not increased social investment; ignorance promotes waste.

Because of this, geography has taken, though in a weak way, the role of protecting and denouncing situations of environmental disorder or unprotection. It also takes care of integration. Sepúlveda (1987) writes, "The process of regional or subregional integration affects Latin American territory in a multiple way and the teaching of geography has the role of promoting the best understanding of this objective."

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Note 1. Centro Panamericana for teaching and investigation of geography, sponsored by Instituto Panamericano de Geografía (IPGH). It also receives monetary and technical assistance from Organizacion de Estados Americanos (OEA).

Note 2. An example of this type of textbook is Ed. Universitaria, Geografía de Chile 2 Medio written by X. Toledo and E. Zapatar. In the chapter related to Biogeography, an ecosystem concept is included; the one related to population deals with the ethnic homogeneity of people from rural Chile and its impact on urban growth. The chapter related to Economical Geography, chapter 13,

discusses raw materials, energy, marketing, and labor. A. Weber's theory on industrial market is mentioned. In 168 pages there are 96 pic-

tures in black and white and in color. This has undoubtedly been a worthy edition. We have also seen some Brazilian textbooks for basic teaching

which seem to be the best in Latin America.



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- "School, Church and State Reconsidered," Fall, 1983, 35 pages.
- "Varieties of Pluralism," Fall, 1985, 30 pages.
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A Curricular Design Model for Higher Education

by Ana López and Cecilia Gómez

Introduction

Curricular theory encompasses a group of concepts, propositions, and conceptualisms relative to the educational praxis, that describe, systemize, and interpret the education process, explaining its cause, its performance, and its goals in accordance with educational science. Thus, curricular theory is indispensable for the development of education as a science.

The curricular process includes a group of related actions of design, development, execution, and evaluation of a study plan. The activities, strategies, and instruments, or tools that facilitate implementation of the process constitute the administration of the curriculum.

The curricular design permits convergence of the three principal functions of the Latin American university: teaching, social action, and research. Due to the interdisciplinary character of the design, a clear understanding is required of all the components of the process, the problems raised in elaborating the study plan, and the ability to offer solutions.

Therefore, the theoretical basis for the curricular model is in keeping with

the academic model of the university, is consistent with a philosophical framework, and is a guide to decision making. Emphasis on one (or some) of the philosophical referents characterizes the curricular model, which involves the following relationships: man–society, man–science, science–society, and man–society–science in establishing the respective design models.

Models of Curricular Design

Models of curricular design can emphasize the development of man, of science, or of society. Thus, for example, when the first element—man—is referred to, the models can be based on the theories of Piaget, Rogers and Maslow, or Dewey, depending respectively on which of the following is the most important factor: cognitive development, the predominance of affectivity, or social development.

Those models favoring knowledge as the basic element advocate division by academic areas, or disciplines, and frame the objectives in the theories of Gagne, and of Briggs, King, and Brownell.

The third focus, centering on social development, advocates several positions. The first is promotion of community development as proposed by UNESCO. The second is reconstruction of society by means of awareness and

participation, as postulated by Paulo Freire and his followers in Brazil and Mexico. The third involves training of human resources to satisfy the demands of a productive system that favors behaviorist theories and has been used in socialist countries.

The model provides two types of information. The first type involves theoretical relationships at the following levels:

macro: to determine models of design, development, performance, and evaluation,

meso: to generalize logically inter-related definitions, concepts, and propositions, by systematic interpretation of curricular phenomena,

micro: to determine design criteria for programs, projects, and academic actions.

The second type involves the use of the model as a methodological tool at the macro, meso, and micro levels to: develop strategies, establish procedures, and determine criteria of performance, respectively.

Integration of the components cited constitutes the academic infrastructure. This integration permits identification of the cognoscitive categories, and identifies the referential elements for career development. In this way the infrastructure provides a framework within which an institution formulates study plans to satisfy the needs of the society it serves.

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Theoretical Referents

Design and curricular development take into account philosophic, anthropological, sociological, and psychological variables which are translated into indicators, and are converted into procedures that reflect the dynamics of the institution. In this way, they permit diverse results in accordance with the curricular concepts selected.

The curriculum is based on anthropological theories and concepts in order to create the appropriate conditions for endoculturation, cultural transmission, and innovation.

From the sociological point of view, the curriculum is social development strategy.

The contributions of psychology permit the formation of people capable of facing a changing world, fostering change, and favoring cultural continuity.

The Curricular Design Model of the Universidad Nacional (National University)

The National University of Costa Rica, by means of its academic model, is defined as an "autonomous, democratic, scientific, and formative institution, which orients its academic and administrative process by means of the principles of useful rationality, and has as its mission to contribute to social transformation and to national development in order to try to solve the

problems of the entire population of the country" (Universidad Nacional, 1985).

To reach these goals "it conjugates university teaching, research, and cultural extension harmoniously, placing them at the service of the national community and permanently affixing them to developmental needs" (Universidad Nacional, 1986).

Teaching at the National University is oriented toward "the formation of professionals who not only are prepared in their major field, but who can also critically confront the historical process, and who are dedicated to democracy, social reform, and the humanization of society" (López y Gómez, 1987).

Research is considered to be the focal point of university activities, and cultural extension interrelates the university and the community.

Administration, as a process, serves as the academic infrastructure, but at all levels of decision, administrative and academic officials of both groups, as well as the three groups—teachers, administrators, and students—share responsibilities.

Therefore, the UNA's model of curricular design is tridimensionally structured, taking into account the elements of the teaching-learning-evaluation process, the levels of appropriation of knowledge, and the strategies involved.

Human resources, the specific field of knowledge, the processes, the products, the educational technology, and the institutional and social context, all characterize the teaching-learning-

evaluation process, and are the basis for the curricular sub-processes.

The levels of appropriation are the conceptual and operative divisions which are established in a specific field of work to make it adequate for the teaching-learning-evaluation process. In accordance with the characteristics of the subject matter or contents, these levels permit varying degrees of difficulty at the undergraduate, graduate, and postgraduate levels.

The operative formulas coherently convert policies to practical performance that integrates methodological concepts, processes, and logistics with aspirations, needs, and possibilities. This is done in order to achieve the objectives, and these formulas are called 'strategies.' Strategies are identified with the elements of the curricular structure, as well as of learning levels.

The formulas can be classified into strategies for making the specific field of work appropriate, making the teaching-learning process adequate, organizing the academic task, and integrating knowledge.

In this context, one inserts the design models for elaboration or readequation of the study plans in the study plan document, where the process is then completed.

Translated by Beulah Díaz and Barbara Lininger

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Curriculum: Criteria for the Future

by *Raquel Glazman*

In working for the formulation of rules for the design and analysis of situations related to the curriculum, Mexico has gone as far as some Latin American Countries: a great influence of works done in the United States and England, later criticism, the intent of building proposals that correspond to the historic, social, and academic situations of the country and the different educational institutions.

In terms of the national conditions, different situations could have given their particular touch to the curricular work of the country such as the following: the power of the students' movement in 1968, the promotion and the decentralization of the educational instances that come as a result of the increase of the school population and the expectation of social rise through scholarliness, the official educational policies during the last twenty years, the increment of the investigation centers and the educational services related to the different school levels and their interest in curricular problems. It is stated here as a constant of the work done, that the proposals for investigation which have risen from the national institutions of investigation and teaching—somehow deep—were based on the conditions and particular necessities of their academic contexts.

It is worth referring with enthusiasm to the width and extension of both the reflection and the simultaneous production of materials made for curricular changes, but probably this enthusiasm would not be the same when we review their incidence in the school life, or when we evaluate the innovations in school practice. The educational institutions, from the lowest level to the highest, have vices that have been discovered, analyzed and studied for twenty years and the specialists in curriculum have had very little influence on decisions of the national and institutional type which are frequently made by political or school authorities.

Curriculum, however, keeps on being a relevant aspect of educational investigation, educational formation, and academic and political discourse. It changes itself constantly by means of both the vigor of its processes and the persistent expectation of achieving an academic overcoming through the improvement of the curriculum. It is in terms of the renewal of the problems that education has to face, that what here we refer to as some interests and challenges for the future that are related to the curriculum. These challenges will require deep reflection on the national contour—strictly speaking—on the development of a critical capacity and a reconsideration of the limits and possibilities in the transmission of knowledge.

The old problem of developing a critical capacity has changed because of

the necessity of effective solutions to the social, scientific and technical controversies that Mexicans are facing as a result of their economic, social and political crises.

Curriculum investigators who think that more emphasis should be given to the development of the critical capacity say that future generations cannot be educated in thought processes previously defined from the limits of knowledge or from the dominating ideologies. This is why the big impulse to the development of the capacity of reflection, the imagination, and the possibility of transcendence as a guide for the educational task, has to be put into practice.

During the last decade, critical education has been questioned about some of its educational forms, but it has not gone farther than the level of discourse. Beyond the susceptible rhetoric from a proposition of this kind, it is imperative that the search for such a scholastic practice continue. It is the case that in some educational groups hard work must be done which is directly related to the clarification of the social and academic conscience of teachers. How can we transform structures that have been ruled so long by what has been established and centered in the formal aspect and the norm (model) in order to achieve the necessity of transcending through knowledge, and push this same force into the students? How can we apply

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this knowledge to the solution of the problems that our country is facing?

One of the most important curricular discussions is centered on the precision of the concept of critical capacity, on the possibilities of developing it given the conditions and the existing resources and on the definition and analysis of the concept, in social, psychological and didactic terms and their curricular implications which are related to the specific situations of the students.

In modern societies both the impulse to uniformity and original responses coexist; the critical capacity joins to the autonomy. This is why it is important to emphasize the explicit intention to confirm the development of such a capacity and the psychological substratum that lies in its base: individual and social transformation.

The development of a critical capacity is based on knowledge, imagination, and questioning. It has to do with attitudes and values; it is a kind of organization of thought that goes beyond formal knowledge. Its reflection in educational practice is related to the whole of the curriculum and to a diversity of school activities. It lies in the critical ability of teachers themselves and in the possibility for them to encourage in their students a confirmation of a conception of the world which takes into account their own particular conditions.

One of the most censured vices to the formulation of objective plans of study for the development of critical capacity was the break between substance and method, which tended to minimize the importance of the contents in order to obtain some beauty in the formulation of such objectives from pre-established features.

This has alerted those specialists that propose the necessity of analyzing the characteristics of knowledge in one or several fields (Acuña, 1975; Galán, 1983) and one in the interdisciplinary field (Folary, 1983).

Two aspects of this situation have special interest to the present proposals. One deals with the object of knowledge, or the objects that make up a field of teaching, and the other is imposed by academic and social conditions (guild

or trade-union influences, mechanisms of hegemonic groups in the educational institutions, and others) that determine the selection of contents included in the official plans and programs (Apple, 1979).

The actual tendency for re-examining the elements of curricular content is coming both from the objects of knowledge perspective and from the disciplines; this would lead us to actualize, ponder, arrange, and integrate the curricular contents, both on different educational levels and in university careers, and to manage these contents strictly joined with the most modern ways of teaching.

The social and academic conditions for the development of critical capacity are related to the location of the curricular processes in a dynamic reality and it has been an object of great interest for those specialists that have wanted to influence changes in scholastic practice through the curriculum. In opposition to a fantasy, of some importance in the works done in the seventies, that a photographic apprehension of school conditions was a proper basis for formulating a study plan, the interest is now focused on the movements and relations in the school enclosure. They are related to the main processes of the educational institutions: the dynamics of knowledge, interdisciplinary relations, problems not foreseen in the professional enclosure; they are related to the subjects of the educational processes; the variety of students that are the result of their historical conditions of personal and social type, teachers that have been prepared in different situations with different conceptions about the teaching job, deeply crossed by opposing ideologies (Glazman & Ibarrola, 1985).

In this kind of situation, the selection of content itself constitutes the object of a dispute and an academic negotiation: among authorities, among authorities and teachers, among professional groups, in different movements, with representatives of several generations, and the content of the plans of study is the result of a consensus or of the authoritative decisions.

Finally, it has been said that today in Mexico, the proposals of develop-

ment of the study plans vary with different expressions between two opposing ends: on the one hand, the authoritative decision that is guaranteed by the norm and the stability of the rule, but lacking the freedom and general assent demanded by the processes of the transmission of the knowledge. On the other hand, the indefiniteness and the absence of lineaments that could have the advantages of the promotion of the interval of liberty and the initiative of the parts that have to do with teaching, creativity, role of the imagination and the sense of responsibility, but it brings with it some difficulties derived from the lack of structures: incoherences, disintegration, lack of security of teachers and students in relation to what they teach and the tendency to the substitution of the variety of wealth by chaos.

Between these two ends the work goes on. Teachers, investigators and students keep on searching for the conceptual and practical elements of developing critical capacity, and understanding, the relations and dynamics that help develop an awareness of the knowledge and ways of solving the social and academic problems related to education in Mexico.

Translated by José Ramírez.

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Toward a Scientific Practice of Teaching

by *Sylvia Neira-Lermanda*

Throughout many years, it was believed that to be a teacher, it was fundamental to have what was known as 'teacher's soul.' In this context, statements such as "He was born to teach" became a guarantee of being 'a good educator.' However, this judgment has radically changed during the past years. In addition to the desire to teach, a sine quo non condition of a teacher (whether preschool, elementary, secondary or college teacher) is that he should have a solid theoretical background which allows him to exercise his profession in the classroom in a scientific way.

In spite of the latter, it is pertinent to point out that there is still a lot of ignorance on the part of our teachers of the theoretical knowledge that underlies and orientates their job in the classroom.

Why is the existence of a theory of instruction important? What does it mean? This is what we will try to answer in this article.

Gimeno Sacristán in his book *Theory of Instruction and Curriculum Development* (1981) states several reasons that justify the need of a didactic theory.

A theory has as its principal function that of systematizing knowledge within a scientific discipline; namely to structure the data, concepts, points of view, etc., in order to give them unity

and congruence. This is very important in our case: If both (unity and congruence) are present at the theoretical level, they will be also present at the time of the practice of teaching. This will not leave up to the 'good judgment' of the educator the actions to be taken.

A theory necessarily guides research in a variety of fields related to the discipline in question. Research not only corroborates the theoretical postulates but also poses questions whose answers sometimes lead to total or partial changes in the theory. This is an indispensable aspect in our field. Unfortunately, the educator has a tendency toward repeating without questioning what others state, instead of carrying out his own research projects in order to enrich or change what already exists in the teaching field.

The binomial theory and practice is inseparable. Theory guides practice and the latter at the same time verifies or modifies the former. A didactic theory orientates the teacher in his job, without leaving at random or to his judgment the initiatives he has. The pedagogical task, we insist, needs a theoretical support so that it is carried out scientifically.

The scientific character of a discipline is reached with the existence of a theory which lays the foundations of it. To theorize means to stay away from reality—the obvious and daily aspect of life. A significant contribution of a theory of instruction is that of structuring, explaining and predicting the

didactic act, reaching in this way, the category of a scientific discipline.

The latter leads us into the second question we raised before. An essential function of a theory of instruction is to analyze, select, and order the elements it has available; this will obviously depend on the development of a didactic model. The purpose of this model will be to structure the resources that lead to the accomplishment of the proposed objectives as well as to scientifically ground instruction so that it stops being an empiric and personal action.

When we refer to the didactic model or instructional model, what do we understand by model? According to Gimeno Sacristán (1981):

It is a representation of reality that entails a withdrawal from it. It is a symbolic, conceptual, and consequently, indirect representation which, being necessarily schematic, turns into a partial and selective representation of aspects of such reality, focusing the attention on what is considered important and discarding that which is not (this is the way he understands it), and that which it does not deem pertinent to the reality it considers.

This definition explains what we have been mentioning in these brief reflections. The didactic model, due to its conceptual character, has a clear ob-

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jective: to structure the practice of instruction from a scientific perspective.

In general terms, reality is not unique and this is also applicable to the reality of instruction. The history of education gives us clear evidence that there have been many and varied models, each of which has outlined a diverse understanding of the reality of instruction without exhausting it. That is why these models should be considered as a provisional and approximate approach to the reality under study, without excluding each other.

In past years, there have been different attempts to explain the didactic act from a more integrated perspective, including aspects which were not considered in previous models, for each one explained instruction from its own perspective.

One of these models has been the systemic model proposed by Gimeno Sacristán (1981). This model has two significant aspects which are necessary to emphasize. The first one is to consider it as a systemic structure (in Sacristán's own words, a didactic sub-

system). The second one has to do with including the psychological component (psychological subsystem) understood as a valuable theoretical contribution that would lay the foundations of the teaching and learning process and not as a practical extension of itself.

Another contribution has been that of Colom Cañellas (1982), who approaches education from a cybernetic perspective. According to the author, the systemic view does not explain education as an act: the actions that lead to specific behaviors (goals): reality in its constant realization. On the contrary, from a cybernetic point of view, aspects such as the exchange of information and its usage for its own control, etc., are emphasized.

On the other hand, we should not forget the instructional model based on the development of competencies (Leonard & Utz, 1979). This model, in force in many of our educational systems, organizes all the elements of the teaching and learning process around the behavioral theory of learning. This conception of instruction has been

severely criticized for the rigidity of the approach and for the topics or elements it rules out, such as creativity, individual differences, etc.

Finally, it is important to point out that our concern to make instruction more scientific has not limited itself to mere speculation. In our General Didactics Programs, we have developed ways of making our students aware of the issues we have raised in this article: instruction is not just a good will or inspirational act; on the contrary, each step we take in the classroom should have a theoretical background that ought not be ignored by any educator.

We know that if we make our students—future teachers—become aware of the importance of mastering and applying the theoretical foundations of instruction, we will have taken a big stride toward the scientific practice of teaching.

Translated by Miguel Gutiérrez.

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Experiences in Curriculum Administration in Colombia

by *Julia Mora*

Introduction

Colombia is the only South American country which borders on the Atlantic as well as on the Pacific oceans. With a land area of 439,530 square miles, it is the fourth largest country in South America, with a population of 28 million inhabitants.

The 1988 reforms of the Ministry of Education, according to government policy, intend to achieve deep changes and transformations required by the educational system to enforce in the local communities a solid self-management principle. The orientation of the policy towards modernizing the state, giving autonomy to the regions, is on the other hand, intended to achieve that purpose. The acute crisis in which the country is immersed requires the commitment of all the people to reach out for solutions taking the grass roots level as the starting point.

According to law, the educational system comprises four levels of education: preschool, basic—which integrates five grades of basic primary and four grades of basic secondary education; middle vocational education—which includes two grades; and higher education. Despite the fact that this structure was approved by law twelve years ago, the process of adjusting the

curriculum to the new structure has been quite slow. Consequently, in practice, education is offered at primary and secondary schools. Specific programs are offered for adult literacy and for adult primary and secondary education.

Higher education offers programs at three levels: technical and technological education, professional, and postgraduate education. Particular reference will be made to curriculum administration at the primary, secondary and higher education levels. The purpose of this article is to describe curriculum administration at the three levels of education pointed out above. Besides this introduction, the article includes a brief conceptual frame of reference for the description of curriculum administration in Colombia, a description of the present organizational structure of its educational system and curriculum administration processes in primary, secondary and higher education, with particular emphasis on the university level. Reference is also made to the main educational reforms which require transformation of the roles that different levels of the organizational structure of the educational system will have to play in the development of curriculum process and its administration.

1. Conceptual Frame of Reference

The description of curriculum administration in Colombia is based on a

brief conceptual frame of reference which includes concepts of curriculum, curriculum process and curriculum administration.

Curriculum is understood as inter-related sets of learning opportunities, learning materials, learning strategies, learning environments, learning outcomes and the processes to bring them about. These processes take place in a particular historical and social context which affects and is affected by, the educational process in which the curriculum operates, as it is here conceived.

Curriculum process is conceived as the nucleus of the formal educational process which integrates sets of actions through which curriculum is designed, developed, executed and evaluated. In the context of formal education, the orientation of the curriculum process is determined by the national, regional and local educational policy which is based on philosophical and ideological principles of the state in general, and particular government orientations.

For didactic purposes, four inter-related phases are recognized in the curriculum process: **first, the curriculum design phase** which is understood as integrated sets of activities through which the aims, purposes and objectives of a particular educational program are defined; curriculum areas, components, problems or general topics are selected and organized, and general evaluation strategies and techniques are identified. The starting point of this phase is the in-

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terpretation of the educational policy through the light of particular characteristics and priorities of the content.

Second, the curriculum development phase, assumed as integrated sets of activities through which specific learning objectives are formulated, specific problems, projects or topics, are selected and organized into teaching-learning (or only learning) activities, and specific materials and specific evaluation strategies and techniques are designed and developed. All of these are referred to specific characteristics of the contexts in which the formal education process is to take place. The starting point of this phase is the curriculum plan, which is the result of the curriculum design phase.

Third, the curriculum implementation phase, understood as the operation of the teaching-learning process, adjusted to the particular characteristics of students, teachers and community members and taking into consideration particular characteristics of the context in which the educational process takes place.

Fourth, the curriculum evaluation 'phase' which is not in fact a phase, for it accompanies the curriculum design, development and implementation processes. These phases, including curriculum evaluation, constitute the objects of evaluation. Learning achievement is considered as one of the aspects to be evaluated.

Curriculum administration is conceived here as integrated sets of actions which make possible and facilitate the curriculum process, in particular contexts according to different levels of education management: national (frequently referred to as the central level), regional (departmental), and local. These sets of actions are related to planning, organizing, coordinating, evaluating and controlling resources in order to make possible, or to facilitate, the operation of the curriculum process. The curriculum administration process, as well as the curriculum process, take place in a particular organizational structure which integrates the different educational management levels mentioned above.

This conceptual frame of reference constitutes the basis upon which a description and analysis of curriculum

administration in Colombia has been made and is presented in this article.

2. The Organizational Structure of the Educational System

Four distinctive levels are identified in the structure of the educational system in Colombia:

2.1 The national level integrates the central office of the Ministry of Education and several decentralized institutes responsible for particular programs. Among them it is important to mention the Colombian Institute for the Promotion of Higher Education (ICFES) to which reference will be made later.

2.2 The regional level (the departmental level which is a political division of the country, somehow similar to a state in other countries) which comprises two decentralized instances of the Ministry of Education: the Experimental Pilot Centre (CEP) responsible for in-service education of school personnel, curriculum adjustment to particular characteristics and needs of the region, and design and production of specific teaching-learning materials, and the Regional Educational Fund (FER) responsible for the management of funds for the development of education. At this level, the departmental government includes a Secretariat of Education responsible for the general management of schools and programs for primary, secondary and adult education.

2.3 In some departments, a so called 'School Map' structure has been implemented. Consequently, there exists an intermediate organizational level called district which is divided into a number of educational development 'nuclei' (NDE) that constitutes the largest dimension of the local level. In departments in which 'School Map' is not yet operating, the management of schools is directly undertaken by the Secretariat of Education.

In departments in which 'School Map' is not implemented, there exists school provinces at which a school inspector is located. At the local level (municipalities) teachers are organized among themselves and coordinated by a so called 'group director.' The executive line at the central level is, then,

composed by the Minister of Education under whom there is a Vice-minister and four directors: one of In-service Education of School Personnel, Curriculum and Educational Media, a second of Inspection and School Administration, a third of Educational Services and a fourth of Adult Education. At the regional level there are: a director of the CEP, a director of the FER and under the Governor, a secretary of education. Under the last there exist district heads and under them, directors of Educational Development Nuclei. Where the 'School Maps' have been implemented, school heads are under the directors of NDE; in those departments in which the 'School Map' have not been adopted, school heads are directly under heads of specific units of the Secretariat of Education, or under heads of particular units at the Central Office of the Ministry of Education, depending upon the type of program and the level of education offered at a particular school.

Bodies of supervisors work at the central as well as at the departmental level and specifically at the district level.

3. Curriculum Administration at the Elementary and Secondary School Levels

Historically, curriculum design for elementary as well as for secondary school education takes place at the Ministry of Education, at the central level of the management structure of education. One of the units of the Directorate of In-service Education, Curriculum and Educational Media, is responsible for curriculum design for elementary and secondary education. At present, the 'curriculum renewal' policy includes the preparation of a 'new curriculum' which has been developed from the first to the fifth grade. Curricula for grades six, seven, and eight are being tried out through pilot experiences.

The head of the formal Curriculum Unit has the responsibility for planning the curriculum design process, organizing task-force-groups for curriculum design, and managing basic human, material, financial and space resources and time. He reports to the Director of In-service Education, Curriculum and

Educational Media, who is responsible to the Vice-Ministry for the quality of curriculum design.

Curriculum design at the central management level includes the production of basic general materials for teachers and students. This means that part of the curriculum development process, particularly for primary education, is accomplished at the central level of the organizational structure of education.

At the departmental level, the CEP has the responsibility for curriculum adjustment, in-service education of school personnel, and production of specific materials for teachers and students suited to specific regional characteristics. It is the responsibility of the Director of the CEP, to plan, coordinate, promote, assist, evaluate and control, the processes of curriculum adjustment, in-service education and production of educational materials. He is also in charge of the management of all types of resources.

Educational personnel from the central level of the Ministry of Education provide assistance and advice to the Director of the CEP and its staff on the development of curriculum activities as well as on administrative processes.

Curriculum implementation is the responsibility of the schools with the assistance and supervision of district heads and directors of NDE where the 'School Map' has been implemented, or by supervisors where it is not in operation.

At the elementary school level, curriculum implementation—the teaching-learning process—is managed by the heads of the school assisted by the directors of NDE. For those schools in which the teacher himself is the head, he assumes the administrative role. This is very common in rural areas.

The secondary school usually has a curriculum coordinator who is responsible for time allocation, and particularly for the preparation of schedules for all educational activities. Supervision is supposed to assist schools in guaranteeing the quality of the teaching-learning process; supervisors, however, are in reality more concerned about checking and controlling administrative aspects of schools than about providing assistance for improving the quality of education.

At present, the appointment of teachers for elementary schools is the responsibility of the Secretary of Education at the department level. A law giving power to mayors of cities and towns to administrate educational personnel has been recently approved. The central government, however, is responsible for financing education, and the Ministry as well as the Secretariat of Education are responsible for the orientation and quality of education. Salaries are, however, paid by the central office of the Ministry of Education; secondary school teachers are appointed by the central office of the Ministry of Education and those for departmental schools are appointed by the Secretary of Education. Administration of educational personnel is the responsibility of the directors of NDE or principals of schools at the elementary school level; for secondary schools, this responsibility is in the hands of school principals. Calendars are fixed by the central office of the Ministry of Education. They are of two types: calendar A operates from February to June and from July to November while calendar B runs from September to December and from January to June.

4. Curriculum Administration in Higher Education

Even though universities are said to be autonomous institutions, ICFES is responsible for promoting, evaluating and controlling higher education. As was mentioned earlier, higher education includes technical, technological, professional and post-graduate programs. Technical and technological programs are offered by specific institutions as well as by some universities.

In this article, reference is made only to curriculum administration at universities, including the participation of ICFES in this process.

Despite the fact that there is a general organizational structure for universities prescribed by law, each institution is allowed to interpret that law and adjust its organizational structure to its particular conditions. To facilitate the comprehension of curriculum administration at the university level in Colombia, this description is based

upon the experience of the Universidad del Valle, Cali, Colombia.

The Universidad del Valle has a particular structure for the management of the curriculum process. This structure comprises collective as well as individual instances for decision-making and for carrying out of the curriculum process including its administration. The smallest unit of this structure is the **educational program**; each program is headed by a director, assisted by a curriculum committee called the 'Program Committee.' The program director reports to the Vice-dean, who is in charge of the administration of the educational process in each school (called facultad). The Vice-dean is assisted by a Curriculum Committee, the School Curriculum Committee (Comite de Curriculum de Facultad) integrated by all the program directors and the Academic Secretary of the school. At the central level an Academic Vice-President (vice-rector) is responsible for the educational process at the central university level. He is assisted by a central curriculum committee made up of the Vice-deans of the different schools and the Director of the Registration Office. It is coordinated by a Dean of Curriculum Affairs who is under the Academic Vice-President of the University. The Academic Vice-President represents this structure at the Academic Council of the University and the President (Rector) represents the curriculum sector at the Superior Council of the University.

Curriculum plans are designed or reformed by the Curriculum Committee (the Program Committee) and coordinated by the Program Director, who is also responsible for the management of resources and allocation of time for the development of this process. Once the curriculum plan has been designed, or reformed, it is presented for evaluation, to the Curriculum Committee, at the school level; when it is approved, the Vice-dean presents it to the School Council which analyzes aspects of it related to viability and consistency with the school development plan. Once the proposal is approved, the Vice-dean is responsible for the administrative aspects concerned with the approval of the proposal by the Central Curriculum Committee. An interdisciplinary team is charged with analyzing the proposal.

The curriculum proposals which have been approved are presented by the interested dean, or by the Academic Vice-President, at the Academic Council of the University where it is analyzed in relation to its consistency with the University Development Plan. If the creation of the program is approved by this council, the President of the University presents it to the Superior Council which finally approves or denies the creation of the program. Minor curriculum reforms are introduced with the approval of the Central Curriculum Committee; substantive curriculum, or program reforms follow the same process as new programs.

Once the program, or main reform, has been approved by the Superior Council, it remains still as a proposal to be presented by the President of the University to the Colombian Institute for the Promotion of Higher Education (ICFES). ICFES studies the proposal in its curricular, administrative and financial aspects as well as in its relation to the needs the country and the region might have for this type of graduates.

Once a program, as well as its respective curriculum plan, has been approved, curriculum development is the responsibility of academic departments of the Universidad del Valle, which function as a parallel structure to the curriculum structure. Teachers are appointed to academic departments according to their field of specialization and interests; students are assigned to the program; they are under the program director, assisted by the Program Committee which participates in evaluating proposals for courses as well as the general achievement of students and the implementation of the curriculum plan.

It is the responsibility of the heads of academic departments to plan, coordinate, and evaluate, from the academic point of view, the design and development of course proposals and materials, as well as the development of educational activities such as courses, seminars, workshops, theses, field projects, etc.

The head of the academic department, assisted by a department council, is responsible for planning, coordinating and controlling the implementation of the teaching-learning process through academic activities, related to academic areas under the responsibility

of the department. Organization and integration of curriculum implementation starts from the office of the program director, who requires the departments to offer specific academic activities according to his program's curriculum plan. Departments report to the School Council their academic plans, which include the academic activities they assume for a particular semester. These plans are analyzed, approved and reported to the Registration Office through the Academic Secretariat of the School after he has considered demands and offers. The Central Academic Office, in coordination with the school's secretariats, integrates demands and offers for all programs at the university, assigns academic spaces and prepares schedules. Complete information is reported to the academic community through a bulletin. The teaching-learning process is controlled by two instances: by the heads of academic departments from the administrative as well as from the academic points of view and by the program director and committee, from the point of view of quality of the teaching-learning process and adequacy to the curriculum plan. The sources of information for the first is the teacher and for the second, the student; problems related to teachers and students are at first instance, solved by the department when they are related to administrative aspects: absences, delays, etc. Academic problems related to the quality of the teaching-learning process are solved in conjunction, by heads of departments and program directors. When necessary, the intervention of curriculum committees is possible, and is based on established norms.

5. Main Educational Reforms in Process in Colombia and Their Relationships with Curriculum Administration

At present, Colombia is committed to substantive educational reforms which directly affect curriculum administration. These reforms subscribe to the Government's will to modernize the state as well as the processes for regional autonomy. This implies a strong commitment to the regions and the localities.

Within this spirit, the curriculum process for secondary education is un-

dergoing a substantial reform in its content as well as in its administration. It is being proposed that the central office of the Ministry of Education should decide on the basic principles on which the educational process is to be based, as well as the general guidelines concerning general purposes of education, main areas of content, and the minimum time duration of educational periods. It will be the responsibility of the secretariats of education at the department level, supported by the Curriculum Division at the Ministry of Education, CEP, and the regional universities to define specific principles for carrying out the educational processes, general-specific objectives, specific content for each area, specific teaching-learning strategies and resources, and specific evaluation strategies. It is the responsibility of the school to adjust decisions made at the regional level to the particular characteristics of the locality. Community participation at this level is strongly encouraged. Responsibility for planning, coordinating, evaluating and controlling this process at the regional level is in the hands of specific units of the Secretariat of Education; at the local level, the head of the school and the coordinator are responsible for the adjustment required by the implementation and evaluation of those aspects of the curriculum process which take place at the school level.

A second main project being carried out by the Ministry of Education is the reform of educational institutions charged with the preparation of teachers for the elementary school level. A general curriculum plan is being designed with the participation of regional and local representatives through a process of consultation. Regional workshops are being conducted to consult the opinion of teachers, students, and community members about the orientation and options to be emphasized in the training of teachers.

The administration of processes involved in the development of this reform is under the responsibility of the organizational unit at the central office of the Ministry of Education charged with the administration of teacher training institutions, with the active cooperation of the administrative staff of the institutions.

These reforms are carried out in the context of process. This means that curriculum administrative responsibilities in the hands of central units of the Min-

istry of Education are being transferred to regional and local units. Quality control through evaluation activities are motivated from the central level but car-

ried out through the different levels of the Ministry of Education.



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Curricular Perspectives for Experiential Learning

by Carlos H. Lépez

Experiential learning is an educational modality which is coming into wider use in Latin American institutions of higher education. For years, it has taken the form of curricular activities such as field experiences, independent study, sessions away from campus, and proficiency examinations.

In the last fifteen years, several universities have developed programs to facilitate the accreditation of learning acquired through non-formal activities such as: work, travel, volunteer service, non-collegiate seminars or workshops, skill development programs, and cultural or recreational activities. Some of these institutions are: Instituto Universitario Pedagógico J. M. Siso Martínez, universities Simón Rodríguez and Rafael Urdaneta (Venezuela), Universidad de Panama, Universidad Federico Villarreal (Perú), and Universidad Eugenio M. De Hostos (Dominican Republic).

In this article, we will look at the future development of experiential learning from four perspectives. First, we will concentrate on faculty development as a necessary condition for the implementation of programs. Second, we will address the need to move from an emphasis on written examinations to more appropriate methods for evaluating learning. Third, we will identify

some principles underlying the accreditation of experiential learning. Fourth, we will refer to the necessary use of theoretical frameworks.

In the last fifteen years, several universities have developed programs to facilitate the accreditation of learning acquired through non-formal activities such as: work, travel, volunteer service, non-collegiate seminars or workshops, skill development programs, and cultural or recreational activities.

The Faculty Development Perspective

This perspective calls traditional faculty development practices into question. It is based on the assumption that instructors must become aware of the need to move from their function as transmitters of information to developing a stronger commitment to the idea that a learner can best be served by a choice among a wide range of alternatives.

As stated by Whitaker (1978), the conditions for faculty development in experiential education are "full commitment to, and full support of, new approaches to combining traditional and nontraditional modes of learning." In this sense, to realize the potential of experiential learning in Latin American education, faculty development should be oriented to overcoming the narrow perceptual and methodological approaches to the learning process rooted in traditional education.

As considered here, faculty development is expected to improve the overall teaching and learning process, to broaden faculties' perspectives, and to enhance and motivate faculty renewal (Lépez, 1983). Based on similar expectations, a general categorization of faculty development has been presented by Siegel (1980).

This categorization is based on the following dimensions: professional, instructional, curricular and organizational development.



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The first dimension includes activities to promote interpersonal skills, training projects, and career counseling. Instructional development covers such activities as teaching diagnosis, and teaching skills training.

Curricular development emphasizes activities associated with course design and learning materials; organizational development focuses on the creation of an effective environment for learning through interpersonal relations, team functioning, and policy formulation activities.

This categorization provides a comprehensive and practical basis for the assessment and satisfaction of faculty development needs in experiential learning programs.

The Theoretical Perspective

A second perspective calls for the identification of the theoretical basis for experiential learning.

Although there is an abundance of literature about methods and techniques, the theoretical aspects are less numerous and are dispersed throughout many publications. Among different models of learning (Argyris & Schon, 1974; Bateson, 1972), the Kolb (1976)

model is one of the most helpful for understanding the theoretical basis of experiential learning. This model consists of four phases, represented in Figure 1.

The direction of the arrows indicate that the learner has an immediate, concrete experience which constitutes the basis for observation and reflection. These are then assimilated and formulated into abstract concepts and generalizations, which are tested in new settings. This testing, in turn, results in new concrete experiences.

Kolb (1976) referred to this learning cycle indicating that "experience is translated into concepts which in turn are used as guides in the choice of new experiences." This theory also explains that certain abilities are required in each phase of the cycle and that, depending on the situation, they may contrast with each other. In this case, the learner has to choose the most appropriate abilities to use in a particular situation.

Kolb's theory conceives learning as a permanent refinement of experience and as a process in which learning moves from basic information to the integration of knowledge.

The model also represents a sound rationale with important implications for designing and developing experien-

tial learning programs in higher education institutions.

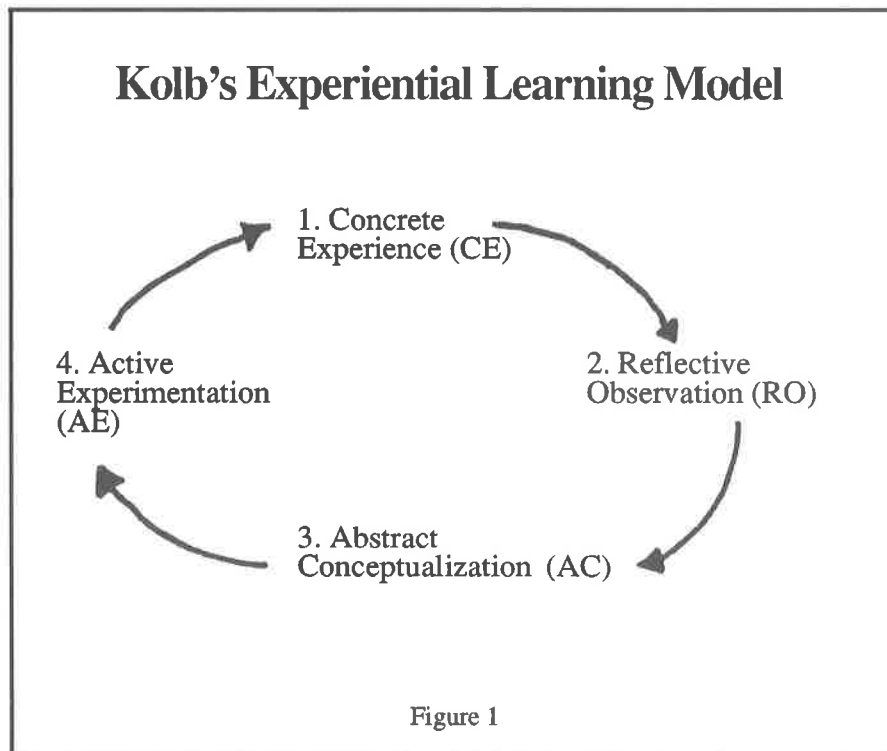
The Principle Clarification Perspective

This perspective calls for a clarification of principles underlying the recognition of experiential learning on the part of higher education institutions. This need has generated a number of expectations on the part of researchers and practitioners. Sansregret (1987), for example, identified several possible ways in which they can be useful: promoting knowledge of the ideology and understanding of the methods involved in the process; providing an explanation for the reasons adults have for requesting recognition of experiential learning; and finally, understanding the need, on the part of adults and educational institutions, for recognizing experiential learning.

A useful categorization of principles for the recognition of experiential learning has been presented by Sansregret (1987). She identified two categories based on ideological and methodological principles. The former corresponds to the reasons adults and institutions have for the recognition of experiential learning.

Ideological principles refer to justice and equity, ethics and morals, and responsibility. Justice and equity address the rights of learners to develop in a changing society and to have their experiential learning recognized by educational institutions. As Meyer (1976) wrote, "To do less would be to perpetuate a system of social injustice." These rights refer specifically to the need for obtaining degrees in order to have better employment possibilities and to continue growing and satisfying those developmental needs promoted by societal changes.

The principles of ethics and morals refer to the moral obligation institutions have for developing valid and reliable methods for assessing experiential learning and guaranteeing that the accreditation process responds to ethical and moral norms, similar to those applied in traditional education. The principle of responsibility in adults is present when they demand from educational institutions proper responses to their needs to prove the quality of their



learning. On the other hand, educational institutions have the responsibility of assisting students in proving what they claim to have learned and recognizing their learning according to the aforementioned principles.

The Learning Evaluation Perspective

Another perspective has to do with the large dependence that traditionally higher education institutions have had upon written examinations. In this respect, it is important to realize that much of the learning achievement does not lend itself to assessment by test or other written examinations.

This traditional dependence has produced a great deal of negative reaction to the idea of granting credit by using experiential learning methods.

Among the different methods for assessing experiential learning are: product assessment, performance tests, simulations, essay examinations, interviews, and the portfolio. The latter is considered the most appropriate one. Knapp (1981), for example, indicated that the portfolio has become the chief assessment model in prior learning programs.

This model is described as "a file or folder of information that has been accumulated about a student's past experiences and accomplishments. It can be the vehicle for organizing and distilling raw prior experiences into a manageable form for assessment...it is a process by which prior experience can be translated into educational outcomes or competencies, documented, and assessed for academic credit or recognition" (Knapp, 1977).

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- Bateson, G. (1972). Steps to an ecology of mind. New York: Ballantine.

Parts of a Portfolio

To develop a portfolio, Forrest et al. (1977) enumerated the following parts:

- a resume listing the student's educational, employment, community or volunteer experiences and other pertinent data;
- a narrative, autobiographical in tone, with the student's claim to learning;
- a statement requesting credit in a specific subject area or recognition of one or several competencies;
- a set of documentation providing evidence that the experiences took place.

The accreditation of experiential learning is coming into wider use in Latin American education.

It is important to clarify that there is not a unique model of portfolio, since there is no one correct way of presenting evidence for experiential learning.

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Institutional programs vary widely in terms of their approach to portfolio development and assessment which can be viewed as a strength of experiential learning. In this perspective, every effort should be made by higher education institutions for developing experiential learning programs in ways consistent with student characteristics, individual needs, learning styles, and institutional goals and purposes.

Conclusion

The accreditation of experiential learning is coming into wider use in Latin American education. Through institutional programs, credit is awarded toward degree programs for college level learning resulting from life experiences.

To develop the potential of this educational strategy, institutional programs are to follow several perspectives. In this respect, efforts have to be made to overcome perceptual and methodological obstacles for faculty members in developing professional competence as experiential learning educators.

The principles of justice and equity, ethics and morals, and responsibility are to be pursued for diverse learners.

Learning theories should be used to facilitate understanding of the learning process and clarifying the reasons for the adoption of particular strategies in institutional programs.

Among other methods for assessing experiential learning, the portfolio is recommended as one of the most appropriate for use in the recognition of this type of learning.

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Curricular Innovations in Costa Rica: Policies in the Vocational Education System

by *Lorenzo J. Guadamuz Sandoval*

1. The Present Costa Rican Educational Situation

Nowadays, Costa Rican education is perceived as being in a state of deterioration. Both public criticisms drawn from newspapers and media, and statistical studies as well as official reports indicate a decrease in the quality of education. However, longitudinal studies and a systematic database upon which such comparisons can be made with past educational reforms are not commonly found. One could easily speculate that the decline in quality is not a recent phenomenon, but one that has not received much attention until recently. Thus, the present effects over those that might have been operative in the past become more salient.

Indicators of the quality of education appear to be recent, at least since the 1970's; therefore, it is important to discuss the quality of education in relative terms, and more importantly in the present, to consider its relation to the growing economic constraints of the past fifteen years (Guadamuz, 1986). In that period, the expenditures of the Ministry of Education, expansion of educational delivery, and greater dependence on the state, heightened by the influx of

87,000 immigrants who are legally registered and, on the other hand, 140,000 refugees of which 50% are Nicaraguans according to the Census (Farias, 1987), have virtually overtaxed the educational system.

Linked to the international financial situation, modernization, and economic development, Costa Rican education fares poorly.

In the midst of this situation, the average Costa Rican citizen (taxi drivers, store clerks, sellers, and others interviewed) is unaware of the impact of these conditions on his/her own productivity. He/she tends to blame the national government, and international agencies such as the Inter-American Bank, the World Bank, and the Agency for International Development for poor salaries, inflation, and unemployment.

(Manifestations of this situation took place during the September 15th celebrations by farmers in San Jose and was reported on TV Channel 2.) Thus, it is interesting to note that while austerity measures are frequently discussed throughout the educational system, in every day discussions, it is usually the state that is held responsible and not the individual. The state is somehow viewed as an abstract entity, separate from the concrete realities of the individual, on which the blame is squarely laid (Montero-Sieburth, 1987).

The real educational situation is sharply made evident when one visits schools and notices the poor conditions of the facilities, the lack of chalk and materials, and the growing dependency of schools on parental financial support.

One needs to understand that Costa Ricans have relied so heavily on legislation to provide for the equal distribution of goods and services that it is not surprising that the connection among policies, laws and actual implementation remains fuzzy and misunderstood. The array of laws and their contributions to curriculum and learning, stand in sharp distinction to the prevailing tone of what has commonly become known as the 'economic crisis and social crisis—a general malaise in which there is disenfranchisement and fragmentation of the youth, adults, children, family, community, schools, and stu-

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dent-teacher relationships' (Guadamuz, 1987).

The crisis in education is viewed in relation to development in which the credibility in the system has been eroded, the educational quality has declined, and there is basic disappointment in the role of education. Linked to the international financial situation, modernization, and economic development, Costa Rican education fares poorly.

Nowhere is this felt more strongly than in the educational sector where even though indicators of access and coverage are at their highest for the primary grades (104.2%), at the 7th grade (789.3%) a noticeable drop is seen and this continues to decrease for secondary grades. According to the comparative quotas on attainment of schooling (escolarización) between 1975-1986, over half (55.4%) of the preschool age students are able to attend, less than half (48.5%) attend the secondary or (Cycle III) and less than one fourth (24%) enroll in academic and technical secondary branches (Educación Diversificada), with only six sixth enrolling in higher education (Guadamuz, 1986). Figures for 1986 indicate that approximately half a million are enrolled in the formal system, with an additional sixty thousand in higher education—university and para university, that is, well over 25% of the total population of the country is involved in schooling (Guadamuz, 1986).

The budget for education was also reduced drastically between 1978-1986 when roughly two thousand million colones were allotted to education including university expenditures, to an allotment of eight thousand million colones in 1986. This relates to a 5.9% to 3.7% shift from 1978 to 1986 of the domestic internal product. Over 40% of the educational budget is allotted to the four state universities (Universidad de Costa Rica, Universidad Nacional de Heredia, Instituto Tecnológico de Costa Rica, and Universidad Estatal a Distancia) with the remaining 60% being shared by preschool, primary (Cycle I and II), secondary (Cycles III and IV) including technical and academic education, special education, and adult education. The most basic material resources, school facilities and maintenance, light, security, chalk,

paper, books, etc., are in disarray with operational costs being covered only by 0.04% of the budget.

In short, Costa Rican education is presently faced with the following problems clustered around: 1) access and coverage; 2) issues of rural and urban differences; 3) qualitative stagnation with regard to content, teacher training, conceptual orientations, and research; and 4) rising education costs. At the same time it is devoted to:

1. Meeting the demands of preschool education for students in outlying areas and for atypical cases;

2. Raising the internal efficiency of the system by reducing dropout rates and retention, thereby enhancing promotion. This problem tends to generate an increase in the absolute numbers of functional illiterates, and psychosocial problems, and it is a financial burden on the system;

3. Making the curriculum content of the primary education relevant to meeting the needs of regional, rural, and urban-marginal contexts, while at the same time, preparing students to fuller economic and productive integration;

4. Restructuring post-basic education, except for technical schools, from the linear and university directed focus to more flexible alternatives (*salidas laterales*) which will tend to stabilize the relationship of education to the job market;

5. Reducing duplication of higher education careers and their costs;

6. Providing equal educational opportunities to equalize the access, retention and promotion of underrepresented and socially stratified student populations;

7. Allocating and equitably distributing educational opportunities in the educational regions of the country;

8. Enhancing community participation in education;

9. Developing critical analysis of the imported scientific and technological models as to their appropriateness in the Costa Rican context, thereby developing questioning skills, critique, and creativity;

10. Analyzing the cultural transmission or reproduction within the educational system and the role that 'counter cultural' groups produce, particularly through the media;

11. Restructuring the administrative or management functions and responsibilities of a highly centralized system which in turn has made Regional Departments less functional, assessment and supervision inoperable, and central administrative offices unchangeable.

12. Supplying the demand for teachers, approximately 600 per year for I and II Cycles, which is presently being filled by non-credentialed personnel. In this regard, the Ministry of Education and the universities will need to coordinate efforts towards enhancement of teacher training.

13. Counteracting the downward spiral effects of a diminishing budget and inadequate educational delivery from the Ministry of Education to the schools, their facilities and minimum requirements for education. This problem invariably affects the quality of education.

Given these problems and commitments, it appears that the Ministry of Education will need to be selective about the policies and the strategies it adopts and can reasonably expect to have implemented. While the short term objectives as specified in the *Situación Actual de la Educación y Políticas Educativas de Corto Plazo* are to increase the educational budget in service oriented functions and to promote financial distribution to the local areas (*Juntas Administrativas and Juntas de Educación*), to organize sources for teacher support—*Centro Nacional de Didáctica, Sistema Nacional de Estímulos*, (National Teaching Center and National Reward System), to restructure the administrative structure of the Ministry of Education and its Regional Offices and personnel, and to promote stronger inter-institutional ties with decentralized parties, these goals will need to find the most adequate means to offset the decreasing educational budget, inadequate distribution and coverage of educational services, and the poor quality of education and administrative structure. Such promethean tasks require optimizing the use of available resources to the maximum before expanding any other goods or services, and organizing and managing the concentration of human and material resources in efficient and effective ways. Thus, educational out-

comes can be achieved, not by increasing costs, but by improving the management of already existing inputs in the system. In this regard, Fuller's definition of educational quality captures the essence of the task by viewing two functions:

...(a) the level of material inputs allocated to schools per public (resource concentration) and, (b) the level of efficiency with which a fixed amount of material inputs are organized and managed to raise pupil achievement (Fuller, 1985).

2. Policies in the Vocational Education System

2.1. Policies in the Field of Educational Microplanification

The policy of the Ministry of Public Education related to the Educational Microplanification is directed toward making an analysis of supply and demand that shows the requirements of technicians on the local level.

This analysis of supply and demand will be done through a specific project of the Ministry of Public Education, financed by "Fondo de Preinversión del Ministerio de Planificación y Política Económica—(MIDEPLAN)."

The IICA (Inter-American Institute of Cooperation for Agriculture) will coordinate the continuation of farm planification studies in the agriculture-cattle high schools, which involve an analysis of human resources and the formulation of projects for agriculture-cattle production.

2.2. Policies in the Academic Field

Vocational education should be oriented toward the formation of a man, competent to incorporate himself into the productive activity of our country, with a humanistic and technical perspective, that allows him to give all his human potential to the service of society. That's why vocational education should highlight the technical aspects, but should not forget the academic, philosophical and moral formation that is essential for the human being.

The programmed content in the different types of vocational education such as Agriculture, Agroindustrial and Industrial, should have a scope of action in which they can be actually performed.

They should not forget that the binomial theory-practice and practice-theory, should be closely related in every learning process..

This binomial is fundamental in vocational education.

2.3. Policies in the Technological Field

In the technological field, the Ministry of Education helps the modernization of the productive system of the country; they seek new ways of incorporating new technologies that can help in the development of each region; they also take steps to attain the introduction of new procedures that tend to achieve the best and the most of the national production.

They emphasize specially the agriculture-cattle field in which the objective is to encourage the studies about irrigation and drainage, all together with the National Service of Agriculture-Cattle Irrigation (SENARA) in the Itiquis Irrigation Project.

But, they should also emphasize in this period the artificial insemination technique (with the GTR Group from Germany); the apiarian technology; the science and sea technologies and the reforestation technologies.

Another important objective of the Ministry of Education in the technological field is the introduction of the Micro-computer Science, related to the vocational education programs. They want to graduate well-prepared students, competent to work with this new tool.

2.4. Policies in the Production Field

The Minister of Education, Dr. Francisco A. Pacheco, has clearly established that work and production is the central axle of all the policies in the field of vocational education with the objective of incorporating the graduates, as productive beings, into the national economy.

a) *The trilogy education-work-production is another policy that the*

Minister of Education has proposed with more emphasis on vocational education, since the beginning of his period.

One of the main aspects in this field is to encourage the farming of nontraditional and unperishable products for the local market, looking for the opening of new markets in order to export these products in a short term. If they want to succeed, they should strengthen the coordination ties with the Center of Investigation and Food Technology (CITA), Coalición Costarricense de Iniciativas de Desarrollo (CINDE) and other national institutions that are supporting this productive policy.

b) *The development of agroindustrial, agroforestral and industrial projects, is another policy of the Ministry of Education.*

In this sense, they take steps to attain the coordination with the National Banking System, in order to get credits that help in the development of these projects.

It is extremely important for vocational education to carry out these projects in the agroindustrial and agroforestral field.

c) *It is also very important for the Ministry of Education to promote the cooperative system; that's why we have started an aggressive program of cooperatives for students and teenagers.*

This project is specifically oriented to the development of associative forms among students, teachers and parents, to help them learn how to make use of their free time in a productive way (including the vacation period). They also want to make use of the school buildings, which are not used during the vacation period. All these projects are coordinated with national institutions dedicated to improving the cooperative system in order to combine efforts.

d) *4-S Club and M.E.P. Production Programs*

The teen-agers of 4-S Clubs, boys and girls, are very interested in farming. So, the Ministry wants to coordinate with F-S Clubs, in order to integrate Second, Third and Fourth Cycle students into the national agricultural production.

2.5. Policies in Educational Administration

a) The Procedures at the Local Level.

The Ministry of Public Education has proposed that the General Management of Technical Education coordinate with the InterAmerican Institute of Cooperation for Agriculture (IICA), so that through studies in this area, they define new administrative procedures for the Technical Schools' farms and projects in order to determine which ones should be applied in the internal organization, as an educational system, and which ones in the external, as a sub-system.

b) Simplification of Administrative Council procedures.

The Administrative Councils have their own administrative procedures. The Ministry wishes to implement those administrative forms in such a way that they permit a greater agility in the handling of funds, a greater power of immediate purchase, and rapid approval of their own administrative procedures. This implementation will permit the Administrative Council to become the financial entity that administers the various funds with which the Educational Center operates, especially, those funds designated for production.

c) Diversification of Financing Options.

Converting the educational entities of technical education into productive enterprises is the objective of the Ministry of Public Education in the field of financing diversification options.

The ministerial policy seeks to make various stages of production in the vocational education institutions self-financing, without forgetting the formative and educational function which

concerns them as entities of the Ministry of Education.

d) Internal Administrative Policies in Educational Centers.

In this field, four objectives comprise the policy of the Ministry.

i. To avoid centralization, as much in operations as in activities, in such a way that a functional organizational chart orients us toward an adequate deconcentration of functions and to a distribution of responsibilities among the various parts that compose the organization of the vocational education school.

ii. To avoid bureaucratization of communications, so as to attain agility in their performance, and a greater efficiency in their organization. This should be done especially in that which pertains to the carrying on of communications intended to raise the quality of education and of everything concerning the administration of the curriculum.

iii. To improve the work climate within the Technical Education Institution, a climate which permits the development of harmonious activity among the management, faculty, the Administrative Council, the Parents' Associations, the pupils, and the community.

iv. To encourage and improve the leadership in the technical schools, especially in the organization of them.

2.6. Policies in the Area of Formation and Training of Personnel

The institutions of vocational education will be within the Plan of Training and Formation that the Ministry of Education activates through the Center of Investigation and Improvement of Technical Education (CIPET).

In this area, CIPET will rely on the technical support of the Spanish Technical Aid Commission.

The training and formation will be offered at the level of each of the regional educational institutions or groups as required, with priority to those in service, in such a manner as to deconcentrate the training activities.

A short, medium, and long-range training program has been put in practice together with the Canadian Agency for International Development (CAID) that includes the travel of 31 scholarship holders for periods from six months to two years (Technical School Teachers) to Canada.

At the same time, specific training activities will be developed which were begun in 1987, with SENARA in the field of irrigation, the University of Costa Rica, CITA, IICA, and the National Institute of Apprenticeship (INA).

2.7. Policies of Promotion of the Development of the Small Enterprise

That the student will be able to organize his own enterprise, in an individual or collective form, self-managed or co-managed, is one of the central objectives that the Ministry of Education wishes to achieve in the institutions of vocational education.

The accomplishment of this objective will open other sources of work in such a way that his/her entry into the work force will not depend solely on private or state employment.

The attainment of this objective will also allow the young man/woman to develop his/her livelihood productivity and contribute to local and regional development.

These are developments which favor a greater national progress.

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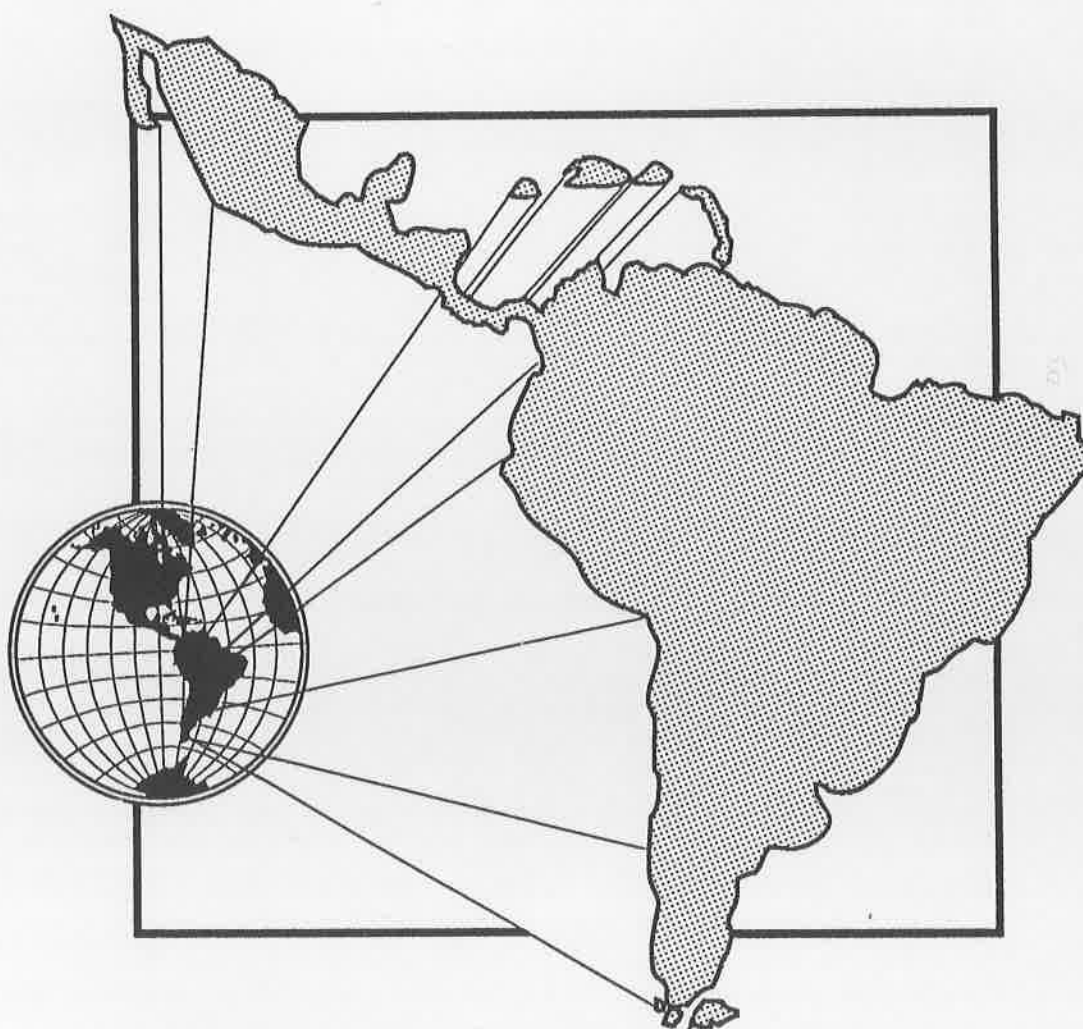
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