



# *Training of structures for the harmonization process of Education majors in Nicaragua.*

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## **ABSTRACT**

The topic of higher education and its relevance to the formation of quality professionals, integrated and committed to the social development of the country, is a subject of debate that has occupied experts in the field. All in the quest to respond to social needs and demands from the academic training of citizens. For this reason, the university, concerned about its social responsibility and the quality of teaching and learning, has sought alternatives that allow this society-university link.

This article describes the process of harmonizing the education careers of the country's public universities as an alternative for academic improvement following the demands and needs of society. At the same time, it highlights the training of teachers in skills and curriculum design through readings, workshops, and advice at work tables by career.

The experience lived during this process leaves great learning regarding the conception of a design built from practice, experience, the science of each profession, needs, and context among other elements that contribute to comprehensive and quality training.

## INTRODUCTION

In recent years, the Universidad Nacional Autónoma de Nicaragua, UNAN-Managua has made substantial changes through different methodological strategies that allow it to improve the curriculum in search of better development of the teaching and learning process. Among these substantial changes is the migration to a competency-based model, seeking a logical correspondence with the social demands of the country.

Hence, the purpose of this article is to describe the process of harmonizing the curriculum of educational careers in the public universities affiliated with the National Council of Universities, in Spanish (CNU), specifically with the formation of structures and the training of teachers who are the protagonists in the construction of the curriculum design of educational careers.

## DEVELOPMENT

As previously stated, the change in the curricular model has implied a rethinking of the development of professional competences. For this reason, the following lines internalize the meaning of *competence*.

The term competence can be interpreted from different fields, and from now on it will refer to educational competence, understood, according to EcuRed, as integral actions to identify, interpret, argue and solve problems of the context with suitability and ethics, integrating knowledge to be, knowledge to do and knowledge to know.

Tobón (2010) defines competences as “integral processes of action in the face of activities and problems of personal life, the community, society, the ecological environment, the labor-professional context, science, organizations, art and recreation”, all contributing to the construction and transformation of reality through the integration of knowledge of being that refers to self-motivation, initiative, values and collaborative work with others. It is also necessary to integrate the knowledge to know what it is to conceptualize, interpret, and argue, and not least the knowledge to do understood as applying procedures and strategies.

Extending Tobon’s dissertation concerning the competences, he defends that:

(...) integrates theory with practice in the diverse activities; promotes continuity between all educational levels and between these and the work and coexistence processes; encourages the construction of autonomous learning; guides the formation and strengthening of the ethical

life project; seeks the development of the entrepreneurial spirit, as a basis for personal growth and socio-economic development; and bases the curricular organization on projects and problems, thus transcending the curriculum based on compartmentalized subjects, giving rise to the construction of a new conceptual model that integrates competences, based on complex thinking and the historical development of the concept of competence. (Tobón, 2010, p.91)

Starting from the understanding of competences and highlighting the benefit of these in education, the question arises:

### **Why implement competences in the university?**

We are living in an era in which the technological revolution leads us to make substantial changes in society. This constantly changing society has led us to an accelerated pace of life. This translates into changes that must be made in different areas, among them and very importantly, the educational field, thus allowing us to change ways of thinking, ways of life, teaching, student training, and work.

In this sense, universities are responsible for contributing to social change through the transformation of educational processes that lead to the formation and scientific preparation of competent professionals for life.

As stated by De Faria (2010) “fundamental competences are considered, the essential competences that all human beings need to face the demands of the different contexts of their life as citizens” (p.16). The university is the best reference to know if society is demanding professionals with competences according to the needs, so there must be a close relationship between university education and society. “The development of competences through formal education is relevant insofar as the knowledge acquired at school is a possibility to be used in performance conditions”. (Trujillo-Segoviano, 2014). In other words, today’s world of work demands competent professionals to carry out their functions, with a profile that allows them to insert themselves into the work and social life.

Therefore, and in correspondence with Trujillo-Segoviano, formal education, specifically the university, commits to create conditions so that professionals are in the possibility of finding a job according to their training. This is in line with Tobón (2006), who expresses that the current demands of society and with the rethinking of a change in curriculum, schooling seeks to respond to pressures of a social, economic, and disciplinary nature.

In social terms, it seeks to rethink education for life and work with quality; in economic terms, it seeks to respond to the demands that companies make on educational institutions in terms of training professionals to enable them to compete with other companies; and in disciplinary terms, it implies the mobilization of knowledge through the search for information, processing, analysis and application of knowledge in a relevant manner.

In search of correspondence between society and the university, UNAN-Managua initiates a process of curricular transformation, applying a model based on competences that allow the competent and integral professional formation, contributing to social development through disciplinary practice.

The application of the competence-based design begins with the process of harmonizing education careers in which the country's public universities and members of the National Council of Universities (CNU) participate: (UNAN-Managua, UNAN-León, BICU, and URACCAN).

### **Harmonization**

Curricular harmonization consists of establishing a certain convergence between different curricula. Different educational aspects can be the object of harmonization: harmonization in the degrees awarded, in the duration of studies, in the minimum contents, in the levels of deepening at each level of study, in the unit of measurement of the effort required for learning (university credit), in the academic attestations of the professors, in the quality of guarantee of the programs, among others.

To begin the process of harmonization, working commissions were formed and education teachers were trained. The process is explained in the following lines.

### **Stages in the preparation of UNAN-Managua teachers in the process of harmonizing education careers**

Concerning teacher training, according to Álvarez (2011), assuming a competency-based design implies the transformation of the different actors in education, specifically teachers and students. The former must change their philosophy regarding education and the traditional way of teaching, and the latter must be aware of their responsibility for their learning.

The training and preparation of teachers for the application of a competence-based model seek to give them tools to “know how to manage curricular projects, avoiding content inflation and favoring lifelong learning, as a means to solve the ephemeral relevance of not a few contents” (Pérez and Gonçalves, 2013, p.4). There, the main challenge of the application of a new educational model.

### **Training of team of advisors**

The team of undergraduate teaching executives was trained by Dr. Roberto de Armas from the University of Havana, who through full days of work, explained the competence-based model. Among the representative topics in the training, the following stand out:

- The process of assembling the competency-based educational model.

- The experience of the University of Havana in the subject of competences: transition process, implementation, and current development of the curriculum.
- Theoretical-methodological elements for curricular transformation by competences:
  - Elaboration of the referential framework of competences.
  - Design of integrating axes.
  - Learning results.
  - Evaluation of learning generated by the development of competences.
- Workshop on the design of integrative axes and their evaluation that allow the competences declared in a professional profile to develop articulated, integrated, and contextual learning.
- Workshop on the integration of institutional values in the curriculum that allows the internalization of these values in the students' learning.

The training concluded with the elaboration of a document entitled: *Guidance for the elaboration of the curriculum to develop competences at UNAN-Managua*. This document was presented to the Rector of UNAN-Managua. Subsequently, due to the university's participation in the harmonization process of the education courses in which the four public universities of Nicaragua participate (UNAN-Managua, UNAN-León, BICU, and URACCAN), the different harmonization commissions were trained using the document mentioned above.

### **Formation of Harmonization Committees**

**I. The National Committee for Harmonization** is a working body that seeks to ensure fluid communication between them to coordinate actions aimed at the process while respecting the particularities of each university. This commission is made up of six members:

<b>Position</b>	<b>Institution</b>
Vice-Rector for Undergraduate Teaching	UNAN-Managua
Academic Vice-Rector	BICU
Academic Vice-Rector	URACCAN
Dean of Education and Languages Faculty	UNAN-Managua
Dean of Educational Sciences and Humanities Faculty	UNAN-León
Director of Educational Program of MINED	MINED

The National Committee for Harmonization was trained through the reading of the step-by-step document elaborated by undergraduate professors under the title *Orientation Guide for the elaboration of the curriculum to develop competences at UNAN-Managua*, to which they made observations and contributed through suggestions. Besides, a series of meetings with the executives formed part of the training sessions to understand the process.

As part of the results obtained in the preparation of the National Committee of Harmonization are:

- Understanding of the harmonization process by applying the competency-based model
- Decision-making concerning the proposals presented by degree teachers through the step-by-step process.
- Formation of the Committee for Harmonization by career, which will be explained in the following lines.
- Swearing in of the Committee for Harmonization by degree.
- Formation of an Executive Committee, which will be explained in later lines.

One of the functions of this commission is to guide the degree executives on the actions to be taken for the execution of the harmonization process, decision-making regarding the execution and monitoring of the process. On the other hand, this commission reports on the progress of the harmonization process to the rector's office.

**II. The Executive Committee** is a working body responsible for ensuring the operationalization of the harmonization process through consensus among the members. This committee is made up of four members:

Position	Source
Academic Vice-Rector	BICCU
Academic Vice-Rector	URACCAN
Dean of Education and Languages	UNAN-Managua
Dean of Education Sciences	UNAN-León

The Executive Committee was trained by reading the step-by-step. Also, it was part of the training and meetings with the executives of the Teaching Degree to understand the process.

As part of the results obtained from the preparation are:

- Understanding of the harmonization process by applying the competency-based model.
- Decision making about the proposals presented by undergraduate teachers through the step-by-step process.

The functions of the committee include:

- Information to the harmonization committees by career on the actions taken to give continuity to the process.
- Delivering documents related to the harmonization process to the Harmonization Committees.
- Guarantee of the realization of workshops to the Harmonization Committees per career as well as the logistics for it.

**III. Harmonization committees by career** seek to execute the process in the academic groups. These commissions are made up of professors from different universities in the process of harmonization. Each committee has a coordinator who is the guarantor of harmonizing the proposals presented in the harmonization work tables.

No	Career	Members of the Committee
1	Language and Literature	7
2	Mathematics	4
3	Physics-Mathematics	4
4	Social Science	6
5	English	5
6	Early Childhood Education	5
7	Elementary Education	4
8	Physical Education and Sports	3
9	Natural Science	6
10	Educational Computing	6
11	Special Education	5
12	Innovation and Entrepreneurship	4
13	Culture and Art	4

The Harmonization Committees by career have been prepared through pieces of training, workshops, the reading of the step by step, and the advice received by the accompaniment team.

As part of the results of the preparation of the Harmonization Committees are described:

- Understanding of the harmonization process by applying the competency-based model
- Understanding of the process of curriculum design by competency

The functions of the committee include:

- Resolution of exercises related to the harmonization process with the academic groups of the career.
- Assure the work of harmonization in the academic groups.
- Presentation of proposals for consensus and decision making related to the harmonization process during the workshops

Below are the dates of the workshops with the Harmonization Committees by career.

Date	Topic	Participants	Location
July 2019	Curricular model for the development of competences: the professional profile, vertical axes, integrating axes, evaluation	Teachers from UNAN-Managua and UNAN-León	UNAN-Managua
August 2019	Curricular model for the development of competences: the professional profile, vertical axes, integrating axes, evaluation	Teachers of BICU and URACCAN	URACCAN Nueva Guinea

To develop these pieces of training, we started with an awareness of the meaning of *harmonization*, allowing us to know the teachers' point of view about the process that was starting.

Then, the flowchart was presented, which explains the phases in which the tasks of this process are implemented.

After these training, the Harmonization Committees by career were in the process of executing the first phase, which referred to the realization of diagnosis to define the tasks of the profession, definition of the tasks of the profession, validation of the tasks for the profession, the definition of the fields of action, the areas of action and the object of study of the profession.



This exercise was carried out by each career in every University where the academic groups were involved.

Date	Topic	Participants	Location
September 2019	Meeting of the Harmonization Committees by career to harmonize the proposals of each university in terms of: tasks of the profession, fields of action, areas of activity, and the object of study of the profession.	Teachers from UNAN-Managua, UNAN-León, BICU and URACCAN	UNAN-León

From this meeting, the next phase is oriented towards the definition of specific competences.

Date	Topic	Participants	Location
October 2019	Meeting of the Harmonization Committees by career to harmonize the proposals of each university in terms of specific competences and professional profile.	Teachers from UNAN-Managua, UNAN-León, BICU and URACCAN	UNAN-Managua
	Construction of disciplinary axes		

**IV. Academic groups:** they are the teachers of the different careers who carry out the exercises corresponding to each phase of the harmonization process. Each group of academics constructs the proposals that are presented in the workshops where the harmonization commissions meet by career.

The collectives have been prepared through the reading of the step-by-step provided by the director of the department of the career being harmonized.

The result of this preparation is:

- Understanding of the harmonization process by applying the competency-based model.
- Execution of the harmonization process through the construction of the career design.

Its only function is to contribute to the resolution of exercises referred to the harmonization process of the career to which it belongs.

It should be noted that as the process has advanced in each Harmonization Committee, the follow-up has been provided through visits to the academic groups we are preparing in the process.

## CONCLUSIONS

The process of harmonization of educational careers that is being experienced in the public universities of our country marks a milestone in the academic progress of higher education.

In this process, different moments have been experienced: from the conception of a new educational model that has led to the formation of the actors involved in the process to the execution of the same, all accompanied by different feelings that have emerged in teachers, such as uncertainty, fear, anxiety, etc., related to a change in thinking, teaching, way of working and attitude. But it is this change that allows for social growth. Hence, this is the time to initiate processes of reflection in the search to respond to the demands of society and contribute from professional training to the solution of environmental problems.

There is no doubt that this process has been conscious, thought out, reflected upon, and agreed upon, and the decision-making process sets the tone for collaborative, integrated, and intra-, inter- and even transdisciplinary teamwork. It is time to look for alternatives that allow the approach between students, teachers, and the teaching of the 21st century. The challenge and commitment to academic achievement are in the hands of all.

On the other hand, the conception of a new educational model leads to curricular innovation, and not an adaptation to it, as expressed by Álvarez (2011). However, it should be noted that this transformation will be successful in the commitment, maturity, and responsibility of all.

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