

REVISTA INTERNACIONAL DE INVESTIGACIÓN E INNOVACIÓN EDUCATIVA

David Cobos, Fernando López, Almudena Martínez, Juan Agustín Morón y María del Carmen Muñoz. Innovación universitaria con impacto social...

Innovación universitaria con impacto social: evaluación de una experiencia de posgrado en América Latina

University innovation with social impact: evaluation of a postgraduate course in Latin America

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RESUMEN.

La actual situación socio-económica de Nicaragua evidencia la necesidad de formar recursos humanos de alto nivel en el campo de la Educación. Debido al poco número de profesorado con titulación de Doctor/a y las problemáticas que presenta este país en temas de salud y desarrollo comunitario, se planteó la necesidad de implementar un proyecto que incrementase el número de docentes con titulación de posgrado que pudieran actuar como agentes dinamizadores de intervención socioeducativa y desarrollo comunitario en su entorno. En este documento se describen algunos antecedentes de colaboración, el desarrollo de la propuesta, las principales características y algunas conclusiones preliminares del programa de Doctorado en Educación e Intervención Social de la UNAN-Managua, impartido en colaboración con la Universidad Pablo de Olavide, de Sevilla (España). La evaluación de la intervención pone de manifiesto que la iniciativa supone un avance determinante para fortalecer la calidad de las capacidades científicas, técnicas, sociales e innovadoras de los/as profesores/as de la universidad para abordar con mayor competitividad y efectividad los desafíos planteados en la dinamización del desarrollo, así como la importancia radical de una involucración efectiva de los agentes locales como elementos de transformación social.

PALABRAS CLAVE.

Educación Superior, Cooperación al Desarrollo, Cambio, Sociedad del Conocimiento.





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ABSTRACT.

The current socio-economic situation in Nicaragua demonstrates the need for high-level training in human resources in the field of education. Due to low numbers of professors holding a doctorate and the problems the country faces in terms of health and community development, the need was raised to deploy a project which would increase the number of lecturers with postgraduate qualifications who could help towards invigorating socio-educational intervention and community development in their environment. This document describes some previous collaborations, development of the proposal, its main characteristics and some of the preliminary conclusions from the Doctorate in Education and Social Intervention at UNAN-Managua, conducted in collaboration with Universidad Pablo de Olavide, Seville (Spain). The evaluation of the intervention highlights the initiative as a determined advance towards strengthening the scientific, technical, social and innovative capacities of professors at the university, allowing them to better tackle the challenges raised through invigorating development. It also highlights the fundamental importance of effective involvement of local agents as elements of social transformation.

KEY WORDS.

Higher Education, Development Cooperation, Change, Knowledge Society.

Introduction.

Even though universities have been working in the field of international development cooperation for more than a decade, it is now that they truly start to overcome the traditional concept of asymmetric collaboration defined as, "between two entities in cooperation, the one which receives is the one which has problems and the one which administers the cooperation provides the solution" (Brovetto, 2008). Fortunately the current model is trying to avoid such asymmetrical situations, encouraging the active participation of all actors, working from the needs as felt and detected by the *receiving* party itself in order to – going further than one-off actions of a palliative nature – lay the foundations which promote an authentic process of sustainable development.

In this regard, by working with other actors in the field of cooperation, university cooperation for development focuses principally on the following lines of action: strengthening the university systems of member countries, research on the processes of development and cooperation, training in these fields, education for development, the transfer of technology adapted to local conditions, and research applied to critical problems in development (Spanish Government, 2012).





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In the case of Andalusia, its universities have taken an important role in the development of the autonomous region and they boast broad experience in cooperation projects, particularly in Latin America and North Africa. In this context, Andalusian universities can contribute to generating processes of development for southern towns by concentrating on various key points, amongst those, the institutional strengthening of university systems via the transfer of knowledge, technology, infrastructure and equipment (Regional Government of Andalusia, 2015). Under these new approaches, education and health have become two of the key elements for the development of human capital, owing to the immediate way in which these sectors are able to highlight quality of life, increases in productivity, and development in the long term (Bulmer-Thomas & Douglas, 2000).

The cooperation project between Universidad Pablo de Olavide and Universidad Nacional Autónoma de Nicaragua-Managua which is described in this document takes these approaches into consideration. From the experience of intervention accumulated over the years, we are left convinced of the need for actions to be sustained over time, and the vital importance of effective involvement of local agents able to act as elements of social transformation, if we really want to get to the point of having a significant impact (Morón, López & Cobos, 2012).

1. Topic Development.

1.1. Collaboration background.

Due to low numbers of professors with a PhD and the problems Nicaragua has regarding health and community development, the need was raised to deploy a project which would increase the number of lecturers with postgraduate qualifications who could help towards invigorating socio-educational intervention and community development in the country.

For this to be implemented, the project we present is backed by collaborations, grants and previous agreements which have determined the need for such a programme to be put into action. Some of these are previous research projects, such as "Reinforcement of teaching and research capabilities in the areas of Education and Health Promotion of the teachers at UNAN-Managua-FAREM-Chontales de Nicaragua", resolution from 04/06/12, the Andalusian Agency for International Development Cooperation from the Regional Government of Andalusia, Universidad Pablo de Olavide and Universidad Nacional Autónoma de Nicaragua-Managua, or, "Institutional Strengthening in the area of education for workplace health and risk prevention at UNAN-Managua", A1/040008/11 programme of International Cooperation and Scientific Research (PCI) convened by the Spanish Agency of International Cooperation for Development (AECID).

Moreover, the publications co-edited by Universidad Nacional Autónoma de Nicaragua-Managua and Universidad Pablo de Olavide are diverse. Amongst them, we are highlighting Morón, López & Cobos, 2011: *The AIDS problem: a social educational approach*. Seville: Universidad Pablo de Olavide and UNAN-Managua. Resulting from the long history of collaborations, various Ibero-american mobility grants have been obtained for young professors and researchers from Universidad Pablo de Olavide, as well as various research stays as invited professors at both universities.





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1.2. Justification for the proposal.

Amongst the serious problems facing Nicaragua, poverty is still the main priority for community development. The country also faces other problems; malnutrition, poor health, shortages of drinking-water and illiteracy being amongst the most notable. Exploring the theme of intervention, in Nicaragua in 2011, 6,864 people were registered as affected by AIDS, of which 941 have died. The rate of prevalence per 100,000 inhabitants was 100 and the incidence was 19.88%. Regarding the consumption of alcohol, it is the country with the largest alcohol dependency problem in Latin America. It is also the country with the largest proportion of teenage pregnancies. 26.3% of pregnancies are amongst adolescents, this is to say that 110 of every 1000 teenage women (between 15-19 years old) are mothers. According to statistics released by the ministry of health, between 2000 and 2009 the number of births where the mothers were between 10 and 14 years old increased from 1,066 births to 1,577, which represents 0.47% of all of the girls in that age bracket.

We consider education to be a basic pillar for the reduction of these factors, and the educational statistics show the rate of illiteracy in Nicaragua at 7.5% amongst people over 15 years old, with the net enrolment into primary level education at 91.8%, secondary education at 45.4% and tertiary education at 18%. In light of this data, UNAN-Managua-FAREM-Chontales arrived at the conclusion that it was necessary to strengthen research and teaching capabilities in the fields of social educational intervention in order to contribute to development and improvement of quality of life.

Regarding academic data, according to the "Informe de la Ejecución Física Financiera (primer trimestre, 2013)", a government report from the first quarter of 2013, UNAN-Managua has 33,360 students in degree and postgraduate programmes. This represents 21% of all public and private higher education enrolment in the country. The faculty consists of 1,683 professors, (703 permanent, 224 contracted and 711 temporary). Of these, 3% (34 permanent, 15 contracted and 3 temporary) hold a PhD. Moreover, until now, none of the PhD holders were educated at UNAN-Managua itself, with the institution lacking its own doctorates programme able to meet growing demand.

In its 2011 report, the National Council of Universities (CNU) affirms that from its universities, 9,336 students graduated from degree courses, of which 32% came from UNAN-Managua; it is the university with the highest number of postgraduate courses and graduates, 43% and 4,484 graduates respectively. In light of this, as a centre of higher education, there is an urgent need for it to raise the academic level of its faculty.

Regarding the aforementioned project, given the problems which exist in different parts of the world, for scientific progress, and owing to the quick dissemination of knowledge, the need for less developed countries to advance towards achieving the highest level of education is becoming ever more evident in order that the differences between both groups of countries are reduced (González & Arrechavala, 2011). It is worth noting that development of a country demonstrates the need of quality training in human resources: academics, researchers, administers and business leaders in the field of education, working towards strengthening educational processes, providing suggestions and proposals to further the quality of education in Nicaragua, and taking on the most widely recognised weaknesses.





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For all of the above reasons, UNAN-Managua is currently undergoing a process of changes related to curricular and accreditation transformations arising from its strategical plan. As an institution of science, culture, technology and humanism, it is aware that development of human capabilities and available practical experience is a cornerstone, something which should support development strategies.

1.3. The Postgraduate System at UNAN-Managua.

The philosophy of the Continuing Education and Postgraduate Studies System at UNAN-Managua was built an epistemological and humanistic concept for the vision and mission of the institution. It is inspired by the creative spirit of the National Postgraduate System (SINAP) and the National System for Research of Higher Education (SINIES), from the National Council of Universities (CNU).

The philosophy behind the postgraduate courses is aimed at guaranteeing the scientific, technical and humanistic quality of professional training UNAN-Managua provides to graduates from the fourth level of the educational system. It proposes contributing to transforming social reality for the better in terms of overall development of the country and the well-being of the population. In May 2006, the Postgraduates Commission approved a proposal and started a reflection process regarding each faculty, research centre and other associated centre which offered postgraduate courses.

The process furthered the exchange of knowledge, experiences and expectations which led to a consensual drafting of the postgraduate philosophy at UNAN-Managua, with the goal of guaranteeing its effective implementation, to help ensure that this level of education is increasingly centred in a systemic and contextual conception of reality. Amongst different parts of the new proposal we draw attention to the following points:

- Develop academic networks which facilitate the implementation of the National Postgraduate System (SINAP) and the National System for Research of Higher Education – SINIES, from the National Council of Universities.
- Elaborate, execute and evaluate strategic and operational postgraduate plans which guarantee quality and relevance.
- Institutionalise postgraduate courses amongst high-level university directors.
- Identify and facilitate the management of study and research grants or loans for national and international institutions.
- Looking from a social perspective, harmonise the basic fiscal criteria for postgraduate courses.
- Amongst postgraduate courses, promote a systematic focus on contextual or social vision.

All of this has been part of generating the necessary strategical momentum behind developing the first postgraduates programme at UNAN-Managua. This was undertaken, as previously mentioned, in collaboration with Universidad Pablo de Olavide, as a result of the aforementioned synergies.





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1.4. The Doctorate in Education and Social Intervention.

The doctorate programme "Education and Social Intervention" (DEIS) has been developed with the aim of furthering the academic qualities of the professors and directors at Universidad Nacional Autónoma de Nicaragua (UNAN), in the field of education, in their academic, scientific and technological training; aimed at achieving impacting results in their research, teaching, outreach and management, in line with the institutional vision, mission and strategic plan.

The programme's design is based on requirements arising from new projects or educational trends, and from the needs demanded by Nicaraguan society of the different educational institutions.

In this way, the project is put forward with the goal of contributing to the training of high-level professionals, who, through the building of their skills and competencies, will become involved in the development of theoretical and practical proposals in education at all levels and for all purposes. All of this is addressed through analysis, interpretation and promoting change in light of the realities and educational models found in countries in Latin America and throughout the world, from the perspective of sustainable human development.

It is based on being a programme to strengthen and establish solid alliances between involved Ibero-american universities, to form international teaching and investigation teams, to promote student mobility, thereby forming professionals who are committed to local social demands without loosing their global outlook, able to achieve significant contributions to society through research, from an academic position.

Highlighted as general objectives in the development of the programme we find:

- Contributing to the training of researchers who generate knowledge and apply their learning in a creative and innovative way to solving problems involving the different subsystems in the educational system at a national and international level.
- Improving the academic, scientific, technological and pedagogical preparation of teachers to improve their performance in processes of teaching, research, social projection and educational management.

To give the project the widest possible coverage, the academic and professional profile was established as those with a university education in any discipline, who have a job with a substantial function in education.

1.4.1. Organisational Structure.

The doctorate programme concentrates learning methodologies into four study phases: tutoring, teaching, research and producing a doctoral thesis. All of these subject to the ideas implied by knowledge management and cooperative work. The teaching phase of the Doctorate in Education is developed under a teaching model which is based on a collaborative work philosophy, underpinned by a combination of in-class and online work. On all of the courses group-work, debate forums, and workshops with a reflexive perspective aimed at research, are proposed. As one of its central aims, this learning methodology tries to take advantage of the possibilities offered by virtual education, to connect doctors and researchers from different educational backgrounds, to enhance their





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formative process and to help them further their research in an interdisciplinary manner. The following table (table 1) shows the sequence of teaching modules to be followed over the twelve month teaching programme for the doctorate.

Table 1: Teaching modules for the Doctorate in Education and Social Intervention.

Modules	Name of Course	In-class Hours	Practical Hours	Total Hours	Credits
1	Educational Sciences in the 21 st Century: Challenges and Perspectives.	75	120	195	9
2	Education and Research.	90	150	240	11
3	Pedagogical Foundations in Social Education: Contemporary Theories and Models.	75	120	195	9
4	Participative Methodologies in Higher Education.	90	120	210	10
5	Schools: Politics, Systems and Cultures.	60	90	150	7
6	Socio-educational Intervention and Socio- cultural Animation.	90	150	240	11
7	Socio-educational Research Methodology I: A Quantitative Perspective.	90	150	240	11
8	Socio-educational Research Methodology II: A Qualitative Perspective.	90	150	240	11
9	Socio-educational Research Methodology III: Educational Ethnography.	90	150	240	11
10	Evaluation, Design and Management of Socio-educational Programmes.	90	120	210	10





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Modules	Name of Course	In-class Hours	Practical Hours	Total Hours	Credits
11	Risk Prevention, Health Education and Quality of Life.	90	90	180	9
12	Key Topics in Social Education.	75	90	165	8
	Sub-total.	1005	1500	2505	117
	Thesis Credits.				10
	Total.				127

In this way, each module consists of subjects, and the development of each subject combines; a) the professor demonstrating lines of work, b) bibliographical guidelines throughout the work's exhibition, and c) text and case analysis. All of this is aimed at autonomous work by students via online tutoring. The mixed teaching system, based on the meetings model, gains an eminently practical sense during in-class sessions, in which the faculty supports itself with innovative and dynamic presentations where they can generate educational spaces for sharing experiences and guiding research and social intervention models, with the aim of being able to present all of the problems inherent to concept analysis and open lines of investigation, having available a theoretical framework and a rigorous methodology able to carry out any work offered up.

Accordingly, the framework for the evaluation model is in qualitative terms and for this reason the characteristics of the different courses are kept in consideration in a whole sense, and the strategies will be carried out in a systemic, formative, participative and summative way, so that each facilitator will have the flexibility to apply methods and techniques pertinent to the course and modality (online or in-class).

In evaluation, a quantitative grading scale is established from 0 to 100 and, in line with the Commission of Continuing Education and Postgraduate Studies, 80 points is the recognised minimum for an independent pass on each course in the study plan.

Each topic is marked from 0 to 100%, with the PhD student needing to achieve a minimum of 80% in total to be able to reach a satisfactory level and advance. All components of the evaluation system are listed in the graduate regulations in the corresponding articles.

Once the theoretical phase is passed, it will be authorised by the completion of a graduate's thesis, also requiring a minimum of 80% to pass. Following this, the students will proceed to their doctoral thesis, as a continuation of their graduates thesis, which will also be authorised in a continuous form by their doctoral adviser.





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1.4.2. Duration and Accreditation of the Study Programme.

The programme is made up of 12 thematic modules (table 2). The number of hours, and thus credits, has been assigned in accordance with the relevance of each module. In the same way, the number of classroom and practical hours is subject to the same logic and also to the complexity of a particular field of investigation.

The study programme has a three year duration, of which two correspond to theoretical classes, practical classes and the graduates thesis. After finishing both, students leave with:

- A Master's Qualification in Education and Social Intervention.
- A Doctorate in Higher Education from Universidad Nacional Autónoma de Nicaragua-Managua.

Table 2. Structure of Hours and Credits for the Doctorate Programme.

Duration	Total	Practical	Theoretical		Doctoral Thesis
36 months	2500 hours	1500 hours	-Classroom hours -Independent work	600 hours 400 hours	
		000/	40 %		
	100% 127 cr	60% 50 cr	67 cr		10 cr

Before obtaining the doctor's degree, the students who aquire 67 credits for theoretical work, 3 for practical and 6 for the thesis, will obtain a master's degree.

Figure 1. Academic structure for the Doctorate in Education and Social Intervention.

Training Courses+
Master Thesis Work

Masters Degree

IP+ Doctoral Thesis

Ph. D.





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The programme is subject to the academic framework at UNAN-Managua, which takes into consideration criteria for admission, promotion, and student graduation.

1.5. Results.

At present the programme has already completed the public presentations of graduates' theses in the second stage. Following the start of the teaching year in August 2013, and once finished in July 2014, the assignation of doctoral advisers was carried out, a phase which saw the initial number of students – 35 professors from UNAN-Managua from different disciplines and faculties – surpassed.

In the first two stages of public presentations of graduates' theses, 27 students are already able to obtain the master's qualification in Education and Social Intervention, and soon around a dozen students will publicly present their first doctoral theses, a significantly high percentage of those who enrolled in the programme. Moreover, as a result of this work, the first scientific productions and intervention projects produced by this group of students are starting to see light in the form of contributions to conferences, seminars and publications.

Conclusions.

As raised initially, the Nicaraguan Government's Human Development Plan (2012-2016) estimates that at the end of its scope, the university student population will have gone beyond 200,000, which will demand a higher level of preparation to allow the relevant and sufficient development of education processes in general.

The proposal of the Nicaraguan National Education Plan is to equip the country with a referential framework to guide changes in the educational system, to face challenges in overcoming poverty, and to strengthen the modernisation of the state. The aim is to help in achieving sustainable development for the country and furthering equality.

We start from the consideration that the ideal mechanism for training researchers is linked to doctoral training, and development of doctoral programmes in the region is in early stages, delayed by comparison to the development and consolidation of research groups. In fact in this sense, North America, the EU and Oceania surpass the values demonstrated by Latin America and the Caribbean by between 5 and 10 times (Santelices, 2010).

Thus, the inter-university team which makes up the design and development work-group in this initiative has decided to help with this challenge, positioning itself as strongly in favour of institutional strengthening at UNAN-Managua. In this sense, aware of still being half-way towards the initial goal, we can define the first implementation of an official doctorate at this Nicaraguan public university as a positive experience.

As indicated by Cisneros (2004), we should promote participative processes for the interaction of educational subsystems with one another, and with their relative social and economic environments.





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What Cisneros is expressing is relevant to the spirit of this doctorate, which seeks to strengthen teaching capabilities, at the same time implying proposals with a significant socio-educational impact, allowing the appropriation of education in a Nicaraguan context, its scope and limitations, and successfully meeting the challenges faced by the knowledge generation and its transference into society, thereby helping the country's development.

It starts from the consideration that the ideal mechanism for training researchers is linked to doctoral training. The development of doctoral programmes in Central America is emerging, delayed in comparison to the development and consolidation of research groups. Costa Rica has the highest number of doctorates programmes, which is in keeping with its research development. (UNIVERSIA & CINDIA, 2010).

Facing the relentless fight to eradicate poverty and social inequalities in the world through that which has been contemplated in the Millennium Development Goals, UNESCO's World Conference on Higher Education 2009, stated in item number two on social responsibility that, "Faced with the complexity of current and future global challenges, higher education has the social responsibility to advance our understanding of multifaceted issues, which involve social, economic, scientific and cultural dimensions and our ability to respond to them. It should lead society in generating global knowledge to address global challenges, inter alia food security, climate change, water management, intercultural dialogue, renewable energy and public health" (UNESCO, 2009).

It is important to note that this doctorate gives the necessary theoretical framework to prepare individuals capable of analysing the Nicaraguan educational phenomenon and its social implications, individuals capable of recognising and reflecting on problems, and making relevant proposals for social interventions from "a research model based on reflection within action and change" (Delgado, 2015).

This is essential because, as Lopez (2015) points out, the more interactions between teaching, investigation and outreach are produced by the university, the better the level of acquisition, introduction, generation and dissemination of knowledge and information between the university and its surroundings will be.

In consideration of what has been discussed, amongst its main goals and in accordance with similar results noted by Guzmán (2013) in a Middle American context, the doctorate programme is achieving the integration of scientific strengths, human resources, infrastructure and materials, utilization of ICT in facilitating access to the postgraduate, participant satisfaction in the process of development, fostering of interdisciplinary work and the incorporation of new doctors in university's processes of research and social innovation. In consideration of the points made above, the initiative to introduce the doctorate in Education and Social Intervention implies a decisive advance in terms of strengthening scientific, technical, social and innovative skills amongst professors at UNAN-Managua, allowing them to deal more effectively and competitively with the challenges faced in galvanising development and fighting poverty.

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