### A Management Model for Spanish and Latin American Postgraduate Services

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#### **Abstract**

The conclusion drawn in the World Declaration on Higher Education in the 21<sup>st</sup> century, in line with the 2015 Strategy for Spanish Universities<sup>1</sup>, was that a series of challenges and difficulties resulting from a changing environment, globalization and the ideal of effective positioning within the knowledge society should be addressed<sup>2</sup>. One of these challenges is the design of a Common Management Framework.

This paper reports the development of a Quality Management Model at two Higher Education Centres, in Spain and Peru, which offer Postgraduate programmes or degrees.

This project arose from an international project to conduct a comparative study of the two Spanish and Latin American management models. Both models employ a systematic approach, applying the "plan, do, check, act and innovate" continuous improvement model, irrespective of regulatory frameworks.

The results show that modernization and internationalization constitute a strategy for cooperation and the exchange of experiences not only in terms of knowledge, research and innovation, but also in Quality Management in Higher Education.

#### **Keywords**

Higher Education; Management Models; Process-based Management; Benchmarking

<sup>&</sup>lt;sup>1</sup> Estrategia Universidad 2015. The contribution of universities to Spanish socio-economic progress.

<sup>&</sup>lt;sup>2</sup> UNESCO (1998). World Conference on Higher Education in the 21<sup>st</sup> century. Paris: UNESCO.

#### 1. Introduction

On 25 May 1998, the French, German, Italian and U.K. Ministers of Education signed a declaration in Sorbonne initiating the creation of a European Space for Higher Education [1].

Following agreement by the Council Of Ministers, the Spanish Agency for Quality Assessment and Accreditation (ANECA) was created on 19 July 2002, with the mission of promoting quality assurance in terms of the Higher Education System in Spain and its ongoing improvement through guidance, assessment, certification and accreditation processes, contributing to the consolidation of the European Space for Higher Education and its accountability to society.

A year later in 2003, ANECA created the European Convergence Program [2] to promote and incentivise reflection in Higher Education Institutes on the design of qualifications, in accordance with the Sorbonne (1998), Bologna (1999), Prague (2001) and Berlin (2003) Declarations facing the challenge of creating a national framework of qualifications compatible with the "European Framework" (A Framework for qualifications of the European Higher Education Area) [3]. This marked the starting point involving those countries involved introducing reforms directed at the Convergence of Qualifications. Today, all Spanish Universities have designed an Internal Quality Assurance System [SGIC] and are in the process of accrediting Qualifications.

Meanwhile, in Europe, the Tuning Project was created [4] which aimed to respond to the Bologna and Prague Declarations. The Educational systems of all European countries are now undergoing reform thanks to the Bologna process, a direct effect of the political decision to converge the different national systems within Europe, which will allow comparability of study plans in terms of structure, programs and teaching, striving to achieve convergence points rather than program uniformity. Two Tuning projects were developed in Latin America several years later, in the periods from 2004 to 2008 [5] and from 2011 to 2013 [6] [7], aiming to offer a theoretical-methodological framework of reference for the design, development and implementation of Study Programs, developing three lines over twelve subject areas, the first involving the identification of general and specific skills in teaching, learning and assessment activities, the second on teaching-learning approaches and the last on academic credits [8] [9].

The mission of these initiatives is to create a single Higher Education Space and one of the inherent requirements of these new approaches is the need to develop assessment models to allow the creation of a global cooperation framework with harmonisation of criteria and mutual recognition, and a common methodology in order to design an Internal Quality Assurance System that includes accreditation of Qualifications and the Creation and Accreditation of National/International Agencies [10].

This article describes how an Internal Quality Assurance System has been developed in a Peruvian Higher Education Institute with the collaboration of the Technical Office for Quality, a Spin-off of the University of Oviedo [11] [12].

#### 2. Changes to University Management

Changes in Society in terms of technological innovation, globalisation, competitiveness and the recession have all led to the involvement of Higher Education aiding Universities in the consideration of the use of newer and more efficient and effective organisational management models that differ from the traditional models already used.

The Spanish Agency for Quality Assessment and Accreditation (ANECA) was created in Spain on 19 July 2002 to support Universities in the creation of these models and to comply with University Organic Law [LOU]. ANECA is a state foundation that aims to contribute to improving the quality of the higher education system through assessment, certification and accreditation of courses, teaching and Institute s through a public call for programs, such as the AUDIT program that guides universities in the design of an Internal Quality Assurance System (SGIC) and Monitor programs that monitor official qualifications to check correct implementation and the Acredita Program that performs a valuation for the re-accreditation of official qualifications.

Compliance with these three programs is a basic in order to be able to implement an Internal Quality Assurance System in Universities covering management to training.

In Peru, the National Agency for Quality Assessment and Accreditation, and the National Assembly of University Presidents (ANR) are promoting the AUDIT Peru Initiative in order to support Universities in the creation of an Internal Quality Assurance System. This initiative aims to guide Peruvian Universities in the same way as has occurred within Spanish Universities, developing documents, diagnostic tools and guidelines for the design of an Internal Quality Assurance System for Peruvian University Education.

AUDIT Peru includes SGIC's verification and certification processes, allowing the Universities to ensure compliance with the requisites contained in the SGICs.

Both models are based on frameworks of reference, such as the reform of Article 31 of Spain's University Organic Law, which reflects the need to establish quality assurance criteria to facilitate assessment, certification and accreditation, and considers quality assurance as key to university policy [13]. Later in 2006, Spain's Ministry for Education and Science (MEC) incorporated quality assurance as one of the basic elements to be included in the curriculum and the development of a document outlining the guidelines for the development of university degree and Master qualifications [14]. Meanwhile in Europe, the European Association for Quality Assurance in Higher Education (ENQA) released a document entitled Standards and Guidelines for Quality Assurance in European Higher Education, containing the European guidelines to reinforce university autonomy and implement effective internal quality assurance systems [15].

In Peru, Peruvian legislation relating to Higher University Education contains general approaches regarding the quality of education in Law No. 23733 "University Law" (December 1983), and its later amendments and Law No. 28044 "General Education Law" (July 2003), and its later amendments.

It is worth noting that the enactment of Legislative Decree No. 882 "Law for Promotion of Private Investment in Education" (Nov. 1996) led to the establishment of private universities with organisational and management systems that differ from those referred to in Law No. 23733.

The ANR has been expressing concern about university quality assessment since the '90s, with the creation of the National Committee of University Presidents for University Accreditation, while certain private universities initiated several activities directed towards self-assessment and accreditation.

Since 2002, the ANR has been rolling out a promotion policy intended to encourage action for quality in higher education through outreach and awareness program for an understanding of the scope of self-assessment and ongoing improvement, the reason behind the decision to prepare a "Model of Self-Assessment for Improvement for Engineering University Degree Programs" [16], which is based on the Mercosur experimental accreditation model. In late 2003, following the establishment of the General Directorate for University Research and Accreditation (Now called the General Directorate of University Quality) and dissemination and socialisation of the Model for engineers, teachers from other specialities asked ANR to

provide a model applicable to all university courses leading to the identification of variables common to all courses based on the engineering model, with the publication of the "Model of Self-Assessment for Improvement for University courses" in 2005.

The enactment of Law No. 28740 "Law on the National System of Assessment, Certification and Accreditation of Educational Quality" dated May 2006 (We recommend reading Articles 3, 6, 11, 15 and 19) and Supreme Decree No. 018-2007 - ED "Regulations of Law on the National Assessment Accreditation and Certification System of Educational Quality" dated July 2007 saw the validation of the quality assessment processes in educational institutes across the board throughout the country.

The Board of Assessment, Accreditation and Certification of Quality in Higher University Education (CONEAU) is the body responsible for defining the indicators, criteria and standards to measure acceptable levels of quality assurance in public and private universities as well as encourage the implementation of the measures required for its improvement (Article 29 of Law 28740). In accordance with Regulations on the National Assessment, Accreditation and Certification System of Educational Quality (SINEACE), advanced training in Education, Health and Law are mandatory [17].

SINEACE represents the group of functionally integrated and structured procedures, standards and organisations intended to define and establish the criteria, standards and processes of assessment, accreditation and certification to ensure basic quality standards provided by Institutes in relation to the General Education Act 28044 and to promote its qualitative development [18].

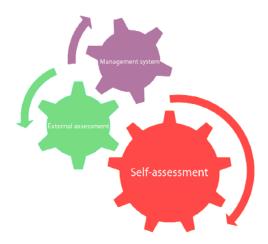
The quality model for accreditation of professional university courses (CONEAU, 2008) refers directly to the systems of quality management as a requirement for accreditation of qualifications through external assessment by assessment agencies accredited by CONEAU [19].

Figura 1 CONEAU: Quality Management Model



The quality model for the accreditation of professional University courses and standards for Educational Courses was created in 2008. In 2010, the Board of Assessment, Accreditation and Certification of Quality in Higher University Education (CONEAU) designed the Quality Model for University Institutional Accreditation.

Figura 2 CONEAU: Quality Model for University Institutional Accreditation.



The basis for the development of internal quality assurance systems can be described with routine, structured and continuous care around quality in terms of its maintenance and improvement [20].

This model is based on the contrast between the Internal and the External Assurance performed by Higher Education agencies. The initial phase involved the design of an Internal Quality Assurance System including the Accreditation Model (Audit-Peru) as one additional process, ensuring coverage of the Accreditation Model.

The mission of the Audit-Peru model is to facilitate the incorporation of strategies based on Higher Education ongoing improvement. This model integrates European guidelines and criteria in areas related to quality assurance, tools and strategies as well as regulation on higher education training.

The model created for Peru differs to the European model in two of its guidelines, namely Research and Continued Education, and the nine guidelines are presented below:

#### G1. Quality objectives and policy:

The University must consolidate a quality policy consistent with its educational model to be expressed in objectives that are in line with its plans and systems.

#### G2. Design of the training courses available:

The University must have mechanisms in place to allow it to maintain and renew its available courses, developing methodologies for the approval, monitoring, assessment and regular improvement of the quality of their teaching.

#### G3. Development of teaching and other actions directed at students:

The University must adopt procedures to allow them to verify that the actions undertaken are essentially intended to promote student learning.

#### G4. Research:

The University must have mechanisms in place to ensure the promotion and development of research responding to the needs of the interest groups.

#### G5. Continued Education:

The University must have mechanisms in place to ensure the development and improvement of continued education actions relevant to the demands of society.

#### G6. Academic personnel:

The University must have mechanisms in place to ensure that access, management and training of academic staff takes place offering the proper guarantees to comply with the specifics of their particular roles.

#### G7. Services, Wellbeing and Material Resources:

The University must adopt mechanisms to allow them to design, manage and improve the academic, administrative and welfare services in the university as well as material resources for the proper training of students.

#### G8. Analysis and use of Result:

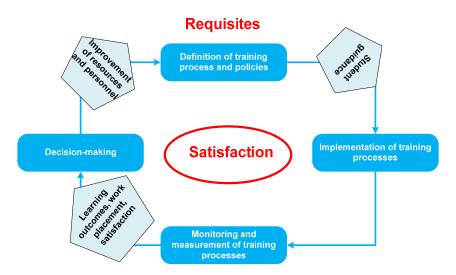
The University must have procedures in place to allow it to ensure the measurement, analysis and use of the outcomes obtained in order to improve the quality system processes.

#### G9. Information to interest groups:

The University must have mechanisms in place to ensure transparency and accountability, publishing regularly updated information related to its performance.

The development of an Internal Quality Assurance System requires systematising and structuring existing internal quality assurance systems in universities and providing for the planning of available courses, assessment and review of its development as well as decision-making for the improvement of educational courses.

Figura 3 AUDIT Peru: Ongoing improvement cycle



This program has two basic objectives:

- 1. To provide Universities with guidelines for the design of Internal Quality Assurance Systems for teaching that is performed.
- 2. To implement a procedure that leads to external recognition of the design of said systems.

# 3. Design of an Internal Quality Assurance System of the International Centre for Postgraduate Studies of the University of Oviedo.

The University of Oviedo designed an Internal Quality Assurance System (SGIC) in 2008 for Degrees and Masters Qualifications in order to respond to some of the ANECA programs, known as the VERIFICA program. Requirements for accreditation of qualifications were incorporated in section 8 of all verification reports for Degree and Master qualifications submitted to the National Agency for Quality Assessment and Accreditation (ANECA). Meanwhile, the University of Oviedo participated in three rounds of the AUDIT program in 2007, 2010 and 2011 with the purpose of designing a university-level SGIC. In late 2010, the

Quality Technical Unit (UTCal) designed the General Internal Quality Assurance System of the University of Oviedo, which was positively validated by ANECA on 17 December 2010, taking the documentation produced from the Bachelor/Master Quality Systems (VERIFICA) and the centres (AUDIT) as a reference with the purpose of integrating common elements.

In 2011, UTCal performed a review of the SGIC general procedures of the University of Oviedo to adapt them to the organisational structure with the creation of the International Graduate Centre (CIP), managing Postgraduate teaching (official University Master Programs, Doctoral Programs and Degrees awarded by the University itself), involving the adaptation of the general SGIC of the University of Oviedo to the teachings of Master and Doctoral teaching in order to promote and achieve ongoing improvement, in the same way this was performed in terms of the Degree programs.

The CIP's SGIC is composed of 14 processes 14 documented procedures and 115 registry formats or templates, containing all the CIP activity. The Qualifications Monitoring process is located inside the service provision process, containing the requisites of the ANECA Verifica, Monitor and Accredit programs.

The University of Oviedo's Quality Technical Unit's re-accreditation process is presented below

## RE-ACCREDITATION OF DEGREE AND MASTER QUALIFICATIONS OF THE UNIVERSITY OF OVIEDO (PR- CA-15 Version 00)

Figura 4 CIP: Process of re-accreditation of Qualifications of the University of Oviedo (Part 1)

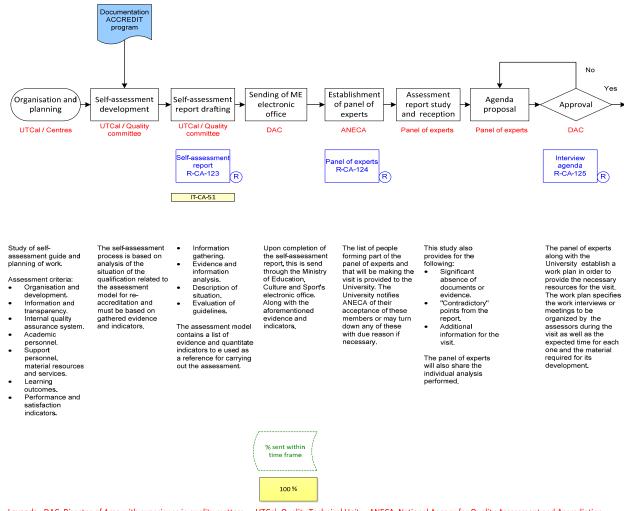
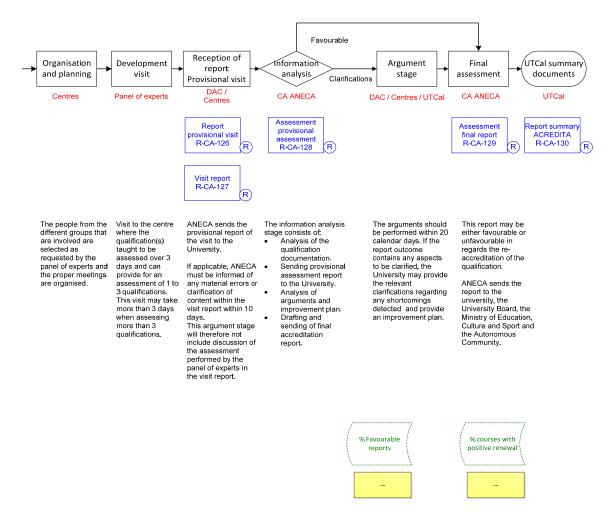


Figura 5 CIP: Process of re-accreditation of Qualifications of the University of Oviedo (Part 2)



Article 27 of Royal Decree 861/2010, dated 2 July, amending Royal Decree 1393/2007 dated 29 October, establishing the organisation of official university teaching in Spain, states that initial accreditation official qualification must be renewed periodically from the date of their verification or from the date of their last accreditation, which in the case of bachelor degrees is within six years, and four years in the case of Masters Degrees.

The main goal of the assessment process to be conducted by ANECA for re-accreditation is to verify the appropriateness of the outcomes of the qualification in question and to help ensure the proper continuity of the delivery of the same until the next re-accreditation period.

During the first half of 2014, ANECA developed a pilot project to allow groups involved in re-accreditation (universities, assessors and ANECA itself) to become familiar with the process of re-accreditation while also evaluating the adequacy of the procedures and tools developed by ANECA for the ACREDITA program.

The following Masters from the University of Oviedo participated in the official qualifications re-accreditation pilot program.

- Master in Orthodontics and Dentofacial Orthopedics.
- Master in History and Sociocultural Analysis.
- Masters in Spanish as a Foreign Language.

The proposed assessment model in the ACREDITA program includes a descriptive and a semi-qualitative evaluation. The outcomes of the semi-qualitative evaluation obtained according to the qualifications of the University of Oviedo participating in the pilot are described below:

Figura 6 Semi-quantitative evaluation summary table (ACREDITA Master pilot program from the University of Oviedo)

	SEMI- QUANTITATIVE ASSESSMENT											
	Α	В	С	D								
MASTER IN ORTHODONTICS	7	15	0	0								
MASTER IN HISTORY	2	15	4	0								
MASTER IN SPANISH	0	20	2	0								

Figura 7 Semi-quantitative evaluation summary chart (ACREDITA Masters pilot program from the University of Oviedo)

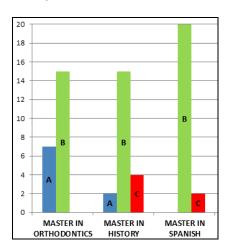


Figura 8 Table containing breakdown of semi-quantitative evaluation (ACREDITA qualifications pilot program from the University of Oviedo)

	DIMENSIÓN 1: QUALIFICATION MANAGEMENT									DIMENSIÓN 2: RESOURCES										DIMENSIÓN 3: OUTCOMES						
	Organisation and development				Information and transparency			Internal quality assurance system			Academic personnel				Support personnel, material resources and services							rning omes	Performance and satisfaction indicators			
	1.1	1.2	1.3	1.4	1.5	2.1	2.2	2.3	3.1	3.2	3.3	4.1	4.2	4.3	4.4	5.1	5.2	5.3	5.4	5.5	5.6	6.1	6.2	7.1	7.2	7.3
MASTER IN ORTHODONTICS	В	В	В	В	В	В	В	В	А	Α	В	В	В	В		В	В		В	В		Α	Α	А	Α	А
MASTER IN HISTORY	В	В	В	С	В	В	Α	Α	С	С	В	В	В	В		В	В		В			В	В	В	В	С
MASTER IN SPANISH	В	В	В	В	В	В	В	В	С	С	В	В	В	В		В	В		В	В		В	В	В	В	В
	MINIMUM B								3	MINIMUM B						MINIMUM B										

The semi-quantitative evaluation is described as follows:

- A, has exceptionally surpassed expectations: the guideline has been consistently satisfied all areas subject to assessment in an exemplary manner.
- B, has reached expectations: while the guideline has been met all areas subject to assessment, there may be room for improvement.
- C, has partially reached expectations: while the guideline has been met the majority of areas subject to assessment, there is clearly room for improvement.
- D, has not met expectations: the guideline has not been met in the majority of the aspects to be assessed. There is scarcely any evidence indicating compliance.

A "reached expectations" B classification must be obtained to achieve re-accreditation in the following criteria:

- Criteria 4. Academic personnel.
- Criteria 5. Support personnel, material resources and services.
- Criteria 6. Learning outcomes.

The outcomes of the pilot at the University of Oviedo are displayed in the tables below, containing the semi-quantitative evaluations:

- Master in Orthodontics and Dentofacial Orthopedics.
- Renew accreditation.
- Masters in Spanish as a Foreign Language.
- Renew accreditation with recommendations.
- Master in History and Sociocultural Analysis.
- Renew accreditation with corrective action plan.
  All the Masters participating in the Pilot have received re-accreditation.

## 4. Design of an Internal Quality Assurance System of the International Centre for Postgraduate Studies of the University of TACNA.

This project grew out of a collaboration of the University of Oviedo and the Private University of Tacna with the purpose of applying the methodology used by the University of Oviedo in the Design and Implementation of the Internal Quality Assurance System.

The methodology used to design the SGIC processes is based on the principles of Total Quality, and uses a process-based approach using a horizontal flow chart that is displayed over 13 levels, integrating management in all the interfaces involved in a process [21].

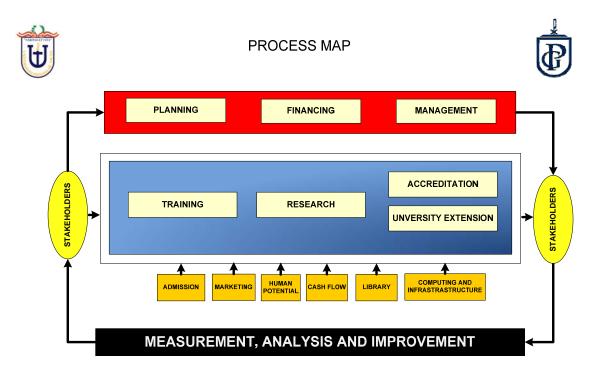
LEVEL 1 / Temporary planning LEVEL 2 / External documents 1 LEVEL 3 / Process Line Activity 1 Activity 3 End Start Activity 2 Decision LEVEL 4 / Responsible LEVEL 6 / Critical Point CP1 RESP 1 RESP 2 RESP 3 RESP 3 LEVEL 7 / Documented Procedure (DP). Technical Instruction (TI) green indicates the environmental character and purple indicates the integrated ones. LEVEL 8 / Record Here you specify LEVEL 9 / Comment observations of each LEVEL 10 / Indicators LEVEL 11 / Objectives LEVEL 12 / Proposal for improving Pl

Figura 9 UTCal: Process approach

LEVEL 13 / Legend

LEGEND: RESP 1- Responsible 1, specification of who it is RESP 3- Responsible 3, specification of who it is Following the training phase, all the documentation of the Postgraduate School's Quality Management System was developed in 2013. This phase requires the systematisation and structuring of existing internal quality assurance processes and includes Strategic, Service provision, Support and Measurement Analysis and Improvement processes along with compliance with the requirements of Standard ISO 9001, determining the requirements for a Quality Management System.

Figura 10 UPT: Postgraduate School Process map.



During this phase of the project, 14 processes, 71 documented procedures and 164 registry formats or templates were designed, containing all the activities of the Postgraduate School and integrating the requirements of AUDIT Peru.

The accreditation process forms part of the Service Provision processes, which includes indicators, criteria and standards required by CONEAU for the Accreditation of Oualifications.

#### 5. Conclusions

The main conclusions drawn from the present study are as follows:

- The implementation of a SGIC ensures the correct monitoring of qualifications included within its scope.
- The visit from the panel of experts during re-accreditation will provide a very interesting outside vision.
- The definition of a scorecard based on the developed processes and indicators defined by the Agencies of reference (ANECA CONEAU) would be very important.
- The information system is considering key for obtaining re-accreditation.

Higher Education attempts to respond to accreditation as a mechanism to promote transparency, consistency and comparability between different higher education systems. This

new paradigm allows the mobility of students, personnel, joint development of programs in different countries, and requires the need for international recognition of qualifications.

Internationalisation is understood to be a response of higher education to the challenges of globalisation and its possibilities. Beneitone (2008), in response to the same, has said: "Internationalisation is the transforming academic response to globalisation. Universities critically observe globalisation, appropriate its positive aspects, and recode the values and trends that contribute to the effective global human development for all system. It transcends educational and social mercantilism, stiff competitiveness and international relations, in favour of building a Knowledge Society supported by horizontal partnership, promoting pertinence, quality, equity and accessibility".

The feeling from society seems to indicate a desire and intention for the integration of higher education. Efforts are being made on both a governmental and on an institutional level in Europe and Latin America. Level one involves the creation of cooperation blocks such as LACEU (Latin America and Caribbean-European Union). In 2000, the Paris Declaration was signed before the 48 Ministries of Education. Agreement was reached at the Ibero-American Summit of Heads of State and Government, held in Montevideo in 2006, to promote partnership, ongoing improvement, research, innovation and quality assurance of higher education through progressive structuring of Latin American Knowledge Spaces".

Almost all the Latin American countries are in agreement with the concept of sub-regional Blocks. Among those who have been operating in South America are MERCOSUR and the Andrés Bello Agreement (CAB) whose purpose is to help expand and strengthen the process of integration of States into educational, scientific-technological and cultural fields. On the former it is worth highlighting the "Experimental Accreditation Mechanism of Degree courses (MEXA)" and the "Regional Academic Mobility Program for the Accreditation of Degree courses" (MARCA) promoting accreditation and student mobility.

The content of this article should lead us to reflect on the need to integrate University Education through internationalisation and the creation of networks, institutional alliances guaranteeing the Quality of University Education Management.

We believe that the project described is an example to these reflections, which have managed to design a SGIC in a Postgraduate School through international cooperation that meets European and Peruvian guidelines, providing a service of reference for the entire Latin American university community.

We envisage the ANECA's ACREDITA program being applied to any of the Masters of the Postgraduate School of the Private University of TACNA in the future to verify if standards are being met.

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