Case Study

United Nations
Educational, Scientific and
Cultural Organization

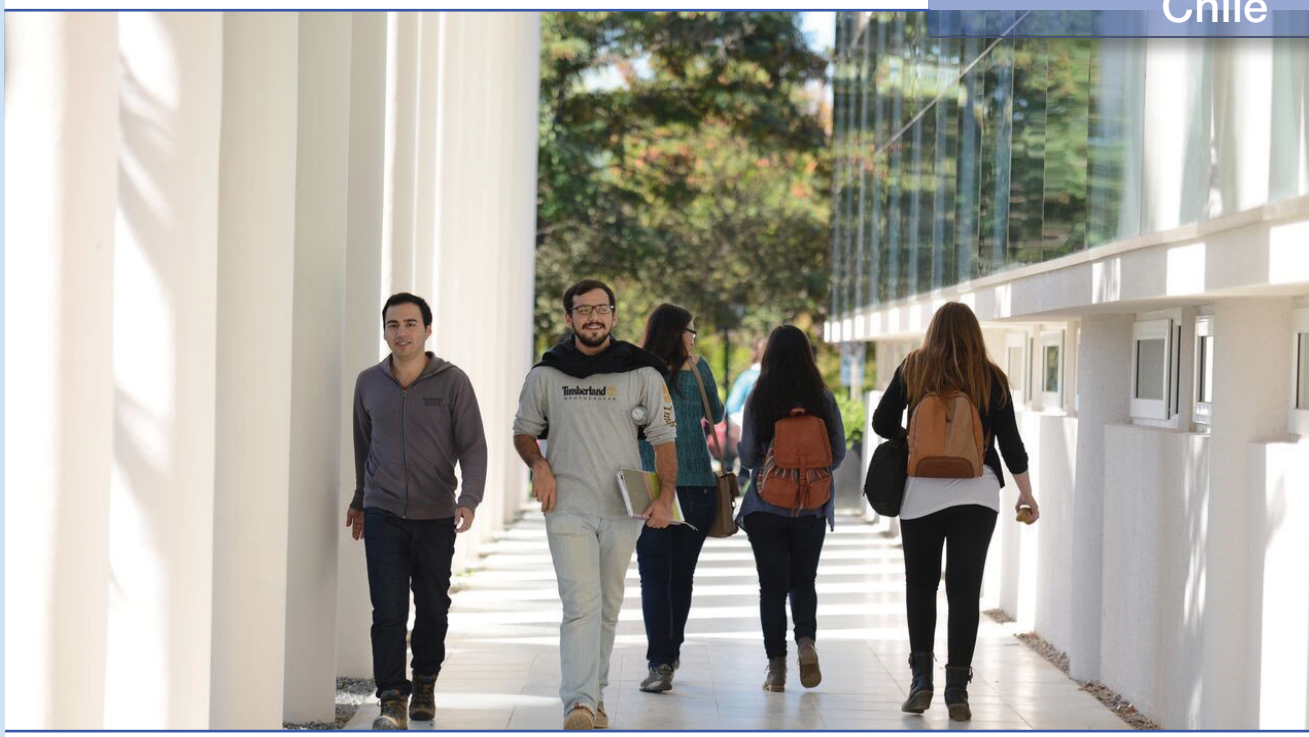
International Institute
for Educational Planning

Mainstreaming Internal Quality Assurance with Management

University of Talca, Chile

Pablo Villalobos, Álvaro Rojas,
Francisco Honorato, and Sebastián Donoso

Chile



New trends in higher education

Mainstreaming Internal Quality Assurance with Management

University of Talca, Chile

Pablo Villalobos, Álvaro Rojas, Francisco Honorato, and Sebastián Donoso

United Nations
Educational, Scientific and
Cultural Organization

International Institute
for Educational Planning

IIEP's Country Notes are documents which the Institute makes available in electronic format only for their value as contributions to the debate on issues relevant to educational planning for development. Country Notes are not formal publications of IIEP.

The views and opinions expressed in this paper are those of the authors and do not necessarily represent those of UNESCO or IIEP. The designations employed and the presentation of material do not imply the expression of any opinion whatsoever on the part of UNESCO or IIEP concerning the legal status of any country, territory, city, or area, or its authorities, or concerning its frontiers or boundaries.

Published by:
International Institute for Educational Planning
7–9 rue Eugène Delacroix, 75116 Paris, France
info@iiep.unesco.org
www.iiep.unesco.org

Cover photo: © Dirección de Comunicaciones – Universidad de Talca (2012)
iiep/web/doc/2016/03

Contents

List of figures and tables

Figures

Tables

Acknowledgements

The researchers wish to thank most sincerely all those who contributed, and those whose comments and recommendations helped the successful completion of this study.

In particular, we thank the faculty and students of the Faculties of Engineering, Health Sciences, and Economics and Business for their active participation in focus groups. Similarly, we also thank administrative and academic staff who responded to the survey (online).

We can't thank the team of the Office of Institutional Planning and Analysis enough, especially Juan Manuel Mardones, for their contribution to the Internal Quality Assurance System and Juan José Troncoso for the time he dedicated to reviewing the study.

We are convinced that the results presented in this study will help to substantially improve the quality management at the University of Talca and likewise, will serve as an example to other universities in the national system of higher education.

Pablo Villalobos, Álvaro Rojas, Francisco Honorato, and Sebastián Donoso

This case study was edited by Michaela Martin (Programme Specialist, IIEP) and Jihyun Lee (Consultant, IIEP).

Abbreviations

CASEN	Socio Economic Characteristics Survey
CDU	Compromiso de Desempeño de Unidades (unit performance target agreements)
CHES	Chilean higher education system
CNA	National Accreditation Commission
CNAP	National Undergraduate Accreditation Commission
CONAP	Commission for the Evaluation of Postgraduate Programmes
CRE	European Council of Rectors
CSE	Council of Higher Education
CRUCH	Council of Rectors for Chilean Universities
DACUM	Developing a Curriculum
DFC	direct fiscal contribution
HEI	higher education institution
ICORE	Regional Competitiveness Index
IFC	indirect fiscal contribution
IQA	internal quality assurance
IT	information technology
OECD	Organisation for Economic Co-operation and Development
PI	professional institutes
SCADA	Target Agreement and Self-evaluation of Academic Performance System
SIES	Sistema de Información de Educación Superior
SIMCE	Education Quality Measurement System
SINAC	National Quality Assurance System
TTC	technical training centres
UT	University of Talca

Introduction

In 1981, Chile introduced a major programme of higher education reform intended to advance the privatization and deregulation of the sector. These reforms restructured the Chilean higher education system in terms of its legal basis, institutional types, and mode of financing. They relaxed regulations on the establishment of new higher education institutions, diversified the higher education sector by facilitating the growth of private providers, and shifted the financial burden to individual students and their families. These structural changes led to a marked increase in both student enrolment and the scale of the academic offer. In order to alleviate the emerging tension between increased access and the need to ensure quality, a higher education quality framework was created at the beginning of the 1990s, including: (1) quality control (licensing or authorization of institutions and academic programmes based on a set of criteria), (2) quality assurance through accreditation (checking whether a programme or institution is satisfactorily meeting its objectives and mission), and (3) promoting quality (fostering self-evaluation and continuous improvement at the level of higher education institutions).

The University of Talca (UT) is a public university. It was established in 1981 by the merger of the Talca centres of two existing universities: the Universidad de Chile and the Universidad Técnica del Estado. Since its creation, the university has developed from a small teaching-only higher education institution to a medium-sized university, which emphasizes quality teaching, research, innovation, and technology transfer. With its two main campuses located in the central-southern Región del Maule, the university is focused on serving the human resource, knowledge, and innovation needs of its region, which is disadvantaged in terms of average income, poverty levels, and educational attainment, compared to the national average. Today, the University of Talca offers 21 master's programmes and eight doctoral programmes across four specialisms. In 2015, 8,128 undergraduates and 1,291 postgraduates were enrolled at the university's five campuses, each of which specializes in a particular academic area. UT serves a student population drawn, predominantly, from within the Región del Maule, the majority of whom are first-generation students. Enhancing the employability of its graduates is an important strategic orientation of the university.

Internal quality assurance (IQA) has been part of the development of the university, which has operated a comprehensive IQA system since 2009. An important feature of the IQA system is that it is entirely mainstreamed with the different components of the university management system, i.e. strategic management, the operationalization of strategic goals through the development of plans and programmes, target agreements, and management control. The structure of IQA is organised at institutional, faculty, and programme levels, and is thus fully aligned with the organizational structure of the university. Together with its quality policy, the university uses a range of IQA instruments to achieve its mission and strategic objectives, and to comply with the needs of quality enhancement and graduate employability.

The University of Talca was invited to participate in a UNESCO International Institute for Educational Planning (IIEP) project exploring 'good principles and innovative options for internal quality assurance in higher education' and 'their effects on academic quality, employability, and managerial effectiveness'. This case study aims to describe the IQA system at the university and to demonstrate the level of staff awareness of IQA instruments at the university, and the extent of their participation in them. Stakeholder awareness and participation is considered important to the effective functioning of an IQA system. The effects of IQA on teaching and learning, graduate employability, and management are then investigated, as are the external and internal conditioning factors that facilitate the

effective functioning of the IQA system at UT. Lastly, the case study examines overall perceptions of the system's effectiveness.

In order to achieve these objectives, the study adopted a multi-stakeholder approach. The stakeholders included academic and administrative staff, students, and personnel in academic and administrative leadership positions. Perceptions of academic and administrative staff were investigated through two online survey questionnaires. The surveys were specifically adapted to those IQA instruments with which academic and administrative staff are typically familiar. Semi-structured interviews with senior academic leaders and focus group discussions with heads of departments and programmes, from the faculties of Engineering, Health Sciences, and Economics and Business, and students were also conducted, in order to triangulate perceptions and identify differences in opinions. The three faculties were selected because they represent different academic cultures and allow for an analysis of variations in perceptions of the IQA system. The literature on Chilean higher education and official documents on the University of Talca were analysed as secondary data sources to establish the national and institutional contexts for the IQA system at the university.

This introduction is followed by a description of the Chilean higher education system, as well as the national quality assurance system, in *Chapter 1*. *Chapter 2* describes the institutional environment of the University of Talca in terms of academic offer, strategic orientation, and governance structure. This chapter particularly highlights the institutional practices used to improve graduate employability. *Chapter 3* outlines the internal quality assurance system at the University of Talca with a specific focus on policies, structures, and instruments, while *Chapter 4* presents findings in relation to staff awareness of and involvement in those IQA instruments. Their effects on teaching and learning, employability, and management are also examined in *Chapter 4*, as are the conditioning factors and overall effectiveness of the IQA system at the university. The conclusions drawn in *Chapter 5* are used to generate recommendations for both the university and other higher education institutions.

1. The Chilean higher education system

The chapter describes the main characteristics of the Chilean higher education system, with specific reference to its evolution over the last three decades, focusing on its reform, organization, financial and legal aspects, institutional fabric, and articulation among higher education institutions (HEIs). The growth of Chilean higher education is reviewed in terms of the existing academic offer in order to better understand its quantitative development. Finally, the National Quality Assurance System (SINAC), its institutions and functioning methods, mechanisms, regulations, criteria, and standards are explored.

1.1 The Chilean higher education system

The reform of Chilean higher education that began in 1981 brought profound change to the sector. The primary objective of the reform was to introduce stronger market mechanisms to the system, as part of a wider effort to incorporate these mechanisms into the public sector, dating back to 1975. To achieve this goal, significant changes were made to the higher education system in terms of its financial structures, regulations, and institutional types. The guiding idea was to promote privatization and deregulation so that the Chilean education system would better interact with the market.

Until 1980, the Chilean higher education system (CHES) consisted of eight universities: two state-owned public universities, the Universidad de Chile, and the Universidad Técnica del Estado; and six private universities, three of them private institutions with public rights (Universidad de Concepción, Universidad Austral de Chile, and Universidad Técnica Federico Santa María). The remaining three universities were under the direction of the Catholic Church: Católica de Chile, Católica de Valparaiso, and the Universidad Católica del Norte. In Chile, public and private universities are generally understood to be similar, in that both are generally in receipt of public funding.

The university system, with help from public funding, grew from eight universities in 1980 to 25 in 1981. From the branches of the two state-owned universities, 14 new public universities were formed, varying in size, projection, and trajectory, thus creating a heterogeneous conglomerate of 16 state-owned public universities. The Catholic Church created another three private universities, making a total of six Catholic universities and nine private universities overall.

These 25 universities, known as the 'traditional universities', are grouped together under the Council of Rectors for Chilean Universities (CRUCH). CRUCH was created in 1954, with the basic mission to bring together the oldest HEIs which were in receipt of public funds. This funding represents a contribution that fluctuates between 15 and 40 per cent of the institutions' total annual costs. It should be noted that public resources assigned to all levels of education, including higher education, underwent a reduction of 24 per cent during the 1980s (Gonzalez, 2003: 610).

To secure the funding of the higher education sector, the 1981 reform relaxed regulations for the creation of new HEIs, opening up more opportunities for the creation of private ones. Under the Organic Constitutional Law for Education (LOCE, *Ley Orgánica Constitucional de Enseñanza*), a set of procedures aimed at the enhancement of institutional autonomy in the higher education sector were established. In particular, higher education institutions were given the autonomy to provide any type of education they wanted, provided a minimal set of basic regulations were observed.

The reforms led to the diversification of the CHES, with two new types of institution in addition to universities: technical training centres (TTCs) and professional institutes (PIs). TTCs were created to provide technical and sub-technical degrees, while professional

institutes were to provide professional education but not grant academic degrees. Universities continue to offer both undergraduate and graduate degrees as well as professional certification. Only universities can offer training for prestigious professions such as medicine and law.

The 1981 reform also resulted in a radical change in the financing of higher education. Under the new funding system, while universities continued to receive a direct fiscal contribution (DFC) (DFL 4, 1981), an indirect fiscal contribution (IFC) was introduced as a financial reward for those institutions which attracted students with the highest scores in university entrance exams. Only the 25 CRUCH universities are eligible to receive the DFC, while the IFC is, in theory, available to all types of higher education institution, whether a university, a PI, or a TTC. Nevertheless, nearly all IFC allocations go to universities, particularly the oldest and best-established institutions. As a result, a large number of HEIs became fully privatized in their operations, with no or little public funding available to them. The new funding scheme, coupled with budget reductions, prompted institutions to shift the financial burden for higher education to individual students and their families.

1.2 Development of academic supply

Enrolment grew by between 5 per cent and 6 per cent annually during the first decade of the new century, though it has levelled off over the last three years. Roughly 40 per cent of the population aged between 18 and 24 years are now enrolled in higher education (SIES, 2014). The large increase in enrolment indicates that previously excluded socio-economic and cultural groups and first-generation students have greater access to higher education, thus creating a more diverse student profile (Donoso and Cancino, 2007). The transition rate from secondary to higher education has risen steadily as well. In 2006, 36 per cent of high school graduates entered higher education programmes the following year, while in 2012 the figure was close to 49 per cent (SIES, 2014). Using the year 2006 as a point of reference, twice as many graduates from technical high schools entered directly into higher education in 2012. As for students from municipal schools and private ones in receipt of public subsidy, the rate of immediate entry rose by 12 percentage points over same period. However, students from these schools, who tend to be of lower social, economic, and cultural status, are more likely to enter technical programmes that are shorter and that offer fewer rewards in terms of income and employability.

Institutional growth and greater diversity have been accompanied by an expansion in the academic offer, most notably at undergraduate level. Chilean HEIs offered more than 21,500 study programmes in 2014, of which 17,725 were at the undergraduate level, as can be seen in *Table 1.1*.

Table 1.1 Basic data on the higher education system according to the type of institution

Type of institution	Autonomous	Accredited	Undergraduate programmes 2014	Academic staff (equivalent to full-time employment)	Publications 2008–2012
University CRUCH public	16	16	1,482	8,378	16,995
University CRUCH private	9	9	886	7,329	17,813
Private university	33	20	4,875	14,774	3,894
Professional institute	33	19	6,119	7,807	0
Technical training centre	38	20	4,363	3,873	0
Total	129	84	17,725	42,161	38,702

Source: SIES, 2014.

Table 1.2 shows that the increased offer of student places surpasses the number of enrolled students. Since 1990, undergraduate student enrolment has increased fivefold in Chile (CNA, 2015). These developments have occurred unequally for the different types of institutions and modes of ownership. It can be observed that public universities that belong to the Council of Rectors of Chilean Universities grew by 5.3 per cent in a five-year period, while private CRUCH universities of grew by 10.1 per cent. At the same time, private universities not associated with CRUCH grew by 13.5 per cent. In the case of professional institutes and TTCs, the percentages of increase were 56.7 per cent and 14.8 per cent, respectively. Privatization of higher education from 1981 on has contributed to an impressive gross enrolment ratio, which was close to 60 per cent in 2014.

Table 1.2 Evolution of total undergraduate enrolment

Type of institution	2010	2011	2012	2013	2014
U. CRUCH public	162,284	159,643	158,192	166,232	169,614
U. CRUCH private	119,402	122,945	124,687	129,430	131,722
Private university	303,785	333,535	348,491	349,693	344,103
Professional institute	224,301	260,692	293,519	324,579	351,184
Technical training centre	128,566	138,574	140,031	144,365	147,982
Total	938,338	1,015,389	1,064,920	1,114,299	1,144,605
Net enrolment coverage	33.5%	35.9%	37.2%	38.6%	39.3%

Source: SIES, 2014.

The increase in enrolment of graduate students is even more impressive (*Table 1.3*). In 1990, students enrolled in graduate studies (2,143 people) accounted for less than 1 per cent of total higher education enrolment, while 46,806 graduate students were enrolled in 2014, representing almost four per cent of the higher education system (CNA, 2015: 13). In 2014, there were nearly 5,000 doctoral students in the system, an increase of 24 per cent over five years. The number of students on masters' programmes increased by 16 per cent over the same period (CNA, 2015: 13).

Table 1.3 Evolution of enrolment in graduate studies by level of education

Education level	2010	2011	2012	2013	2014
Doctorate	4,055	4,052	4,471	4,653	4,925
Master's	29,330	30,350	36,730	42,073	41,881
Total	33,385	34,402	41,201	46,726	46,806

Source: SIES, 2014.

Although analysis of students' educational progress indicates positive outcomes in terms of employment and income, there are two areas which cause concern: the high dropout rate in the first year and the low rate of timely graduation (see *Table 1.4*). It takes students on average a third longer to graduate than, in theory, it should, suggesting internal inefficiency. This situation not only affects higher education institutions, but also students and their families.

Table 1.4 Indicators of the educational progress of undergraduate students in the CHES

Type of institution	Dropout 1st year	Real duration	Formal duration	Rate of timely graduation (RD/FD)	Average wage in 4th year of work (*)	Employability one year after graduation
University CRUCH public	20%	13.6	9.9	1.38	1,686	86.4%
University CRUCH private	18%	13.8	10.1	1.36	1,900	86.0%
Private university	30%	12.2	9.4	1.30	1,500	80.2%
Professional institute	36%	8.1	6.3	1.30	1,115	74.4%
Technical training centre	37%	6.9	5.0	1.39	838	68.5%

Source: SIES, 2014.
Note: (*) Estimated in US $ (US$1 = 580 CLP)

1.3 Development of national quality assurance systems

The Chilean higher education quality framework was developed to include the three main elements of a standard quality assurance system: (1) quality control (licensing or authorization of institutions and academic programmes based on a set of criteria), (2) quality assurance through accreditation (establishing that a programme or institution is satisfactorily meeting its objectives and mission), and (3) promoting quality (fostering a culture of self-evaluation and continuous improvement in the daily activities of an institution and in the academic programmes it offers, as well as educating the public about quality and accreditation characteristics, limitations, and benefits).

Since the capacity of the Chilean government to directly regulate the sector is limited, the accreditation system is widely used as an external mechanism for quality assurance. The quality assurance system began with the creation of the Council of Higher Education (CSE), which became responsible for the compulsory licensing of new HEIs. This was followed by the establishment of commissions for the evaluation of undergraduate and postgraduate programmes (CNAP and CONAP, respectively). They were tasked with developing voluntary programme accreditation for undergraduate and graduate programmes. In 2004, CNAP became responsible for institutional accreditation as well (OECD, 2013).

The National Quality Assurance System (SINAC) for Chilean higher education was established in 2006 under Law 20.129, in response to difficulties created by the reforms of 1981. SINAC was created with two key ideas in mind: that an external quality assurance system must be based on criteria and parameters, and that accreditation is an indispensable condition for quality assurance. SINAC established that 'institutions created after 1981 must go through the accreditation process, while those that have obtained licensing, and thus received full autonomy, can choose to be accredited'. The development of these mechanisms embodies a conviction is a powerful accreditation system must be the backbone of a quality system. This was followed by the development of a set of external evaluation procedures for higher education institutions at various points of development.

Both institutional and programme accreditation follow similar procedures. The processes include the preparation of a self-evaluation report, followed by a peer review, and additional requests for data. For institutional accreditation, it is obligatory to be approved in at least the following two areas: institutional management, and undergraduate teaching and learning. Institutions can also opt for accreditation in three other areas: graduate studies, research, and community outreach. The greater the number of areas in which an institution gains accreditation, the better its quality is understood to be. This is reflected in the number of years assigned by the accrediting agency as the duration of accredited status.

Table 1.5 shows the number of autonomous institutions and their level of accreditation. As of August 2014, most Chilean HEIs had undergone licensing and were thus autonomous (128 of the total) while 15 were in the process of licensing, two of them universities (SIES, 2014: 14). Among the autonomous institutions, all 25 CRUCH universities are accredited. Fourteen private autonomous universities are without accreditation, along with nearly half of all professional institutes and technical training centres. Most of these are relatively small-scale institutions.

Table 1.5 Number of autonomous institutions by stage of accreditation 2014

	Accredited	Not accredited	Outside the system	Total
Technical training centres	20	3	15	38
Professional institutes	19	6	8	33
Universities	43	10	4	57
Total	82	19	27	128

Source: SIES, 2014.

In approximately 10 years of functioning, SINAC has made considerable progress in developing a national framework for improving quality in higher education. It has transitioned from a regulatory system based on the traditional concept of controlling institutions and academic programmes to one of semi-independence, based on self-evaluation and peer review consistent with the prevailing practices in most countries. Although the quality assurance system has become stronger over the past decade, a great deal of work has been required to grow confidence, validate standards, and install appropriate and consistent measures to demonstrate the differences in quality between institutions and their programmes.

There remain, however, a number of shortcomings of the Chilean quality assurance system. First, programme accreditation in Chile continues to be of a voluntary nature. The percentage of institutions with accreditation of programmes or degrees was around 53 per cent in 2014 (CNA, 2015: 10). When the Organisation for Economic Co-operation and Development (OECD) conducted an evaluation of the Chilean higher education system in 2008, this was recognized as one of the main problems with the accreditation system in Chile (OECD, 2009). Officials are currently discussing the replacement of the 'voluntary' system of accreditation with one in which it is obligatory for every institution to achieve initial accreditation in institutional management and undergraduate teaching.

A second shortcoming of the accreditation system concerns the fact that the duration of accreditation (in terms of the number of years) is different at institutional, undergraduate, and graduate levels. This makes the system rather difficult to understand for outsiders. For example, it is possible to find universities that are not institutionally accredited but have undergraduate programmes that are accredited. There are also institutionally accredited universities with few undergraduate study programmes accredited. Similar situations can be found at graduate studies level.

The legal and regulatory framework for accreditation also needs to be improved, and, given the various kinds of pressure facing accrediting agencies, operational models that strengthen their independence should be considered. This implies evaluating whether there should be an autonomous, decentralized public agency in charge of all these processes or a mixed model comprising the National Accreditation Commission and private agencies.

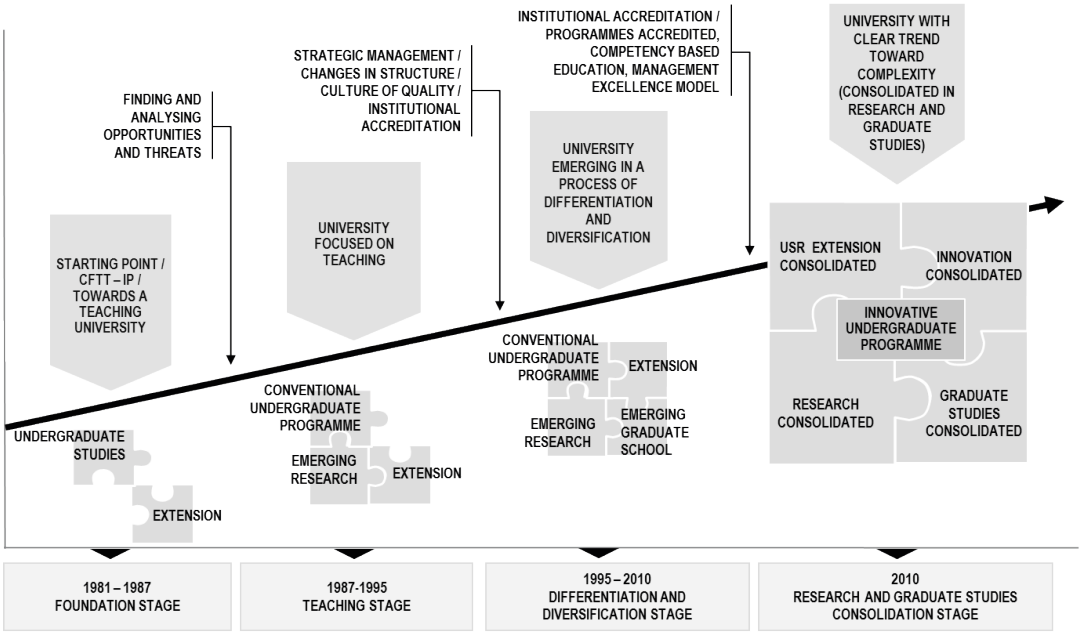
2. The institutional environment of the University of Talca

The chapter outlines the main characteristics of the University of Talca in terms of basic statistics and academic offerings. It describes four developmental stages which the university has passed through in the transition from a teaching-only institution to a comprehensive university with a strong regional orientation and a fully integrated research function. The chapter also presents the strategic orientation of the university and its current governance structure.

2.1 Main stages in the development of the institution

Since it was created in 1981, the University of Talca has undergone significant change and transformation in its institutional development, a process that can be broadly categorized into four discrete stages: foundation (1981–1987), restructuring of teaching (1987–1995), differentiation and diversification (1995–2010), and consolidation of its research capacity and graduate studies (2010 to present).

Figure 2.1 Evolution of the University of Talca



Source: University of Talca, 2014.

The foundation stage involved the university dealing with the issues that arose from the merger which created it. During this first phase, the regulatory and administrative foundations of the university were established. The second stage was characterized by the restructuring of undergraduate programmes. This phase included a significant reduction in teacher-training programmes and the introduction of new fields, such as engineering, health sciences, economics, agricultural science, and forestry. During this phase, study programmes at the university adopted a competency-based approach. The third stage was characterized by further diversification of the university's academic programmes to make them more responsive to human resource development needs in the Region del Maule. Greater emphasis was also placed on knowledge production and technology transfer for the main industries in the region. Significant attention was

given to the strengthening innovation and research capabilities through the attraction and training of advanced researchers, the generation of project research funding, and the creation of strategic alliances with international centres of excellence. The research infrastructure was considerably improved during these years. Finally, in the fourth stage, graduate study programmes and research capacity have been consolidated. As a result, there are now 21 master's programmes and eight doctoral programmes, across four main specialisms. In 2015, all master's programmes were fully accredited and 80 per cent of doctoral programmes were accredited.

Figure 2.1 schematically represents the organizational development of the university, highlighting the institutional development stages and the growth in different areas.

2.2 Value, vision, mission, and strategy

The institutional values of the University of Talca are the guiding principles for the work of the university community. They were defined in the early 1990s as shown in *Figure 2.2*.

Figure 2.2 University of Talca institutional values

Tolerance	**Critical thinking**	**Solidarity**	**Environmental awareness**
Honesty	**Democratic conviction**	**Professionalism**	**Responsibility**
	Social responsibility	**Aesthetic sensibility**	

Source: University of Talca, 2014.

The university is committed to national and regional development through the provision of quality education and scientific research. The entire community of the institution participates in the process of defining UT's mission, through the collective action of all institutional actors (students, academic staff, administrative staff, and graduates) and the basic academic units, faculties, and research centres. Based on the priorities for institutional development proposed by these groups, the governing body periodically reviews and reformulates the institution's mission statement. From its mission and vision, the university has developed a set of fundamental goals which are reflected in its medium- and long-term strategic plans. Each goal reflects the public nature of the institution and is in alignment with national policies for higher education and regional development needs.

Based on these guiding principles, the university's mission and vision were plotted into its most recent strategic plan (2010–2015), as follows:

- Develop an innovative undergraduate programme governed by the principle of social inclusion and by competency-based education.
- Prepare advanced human resources through graduate studies and specialization.
- Enhance the employability of university graduates by means of quality education, competency development, and active citizenship.
- Generate knowledge in areas where location offers a comparative advantage, whether in terms of geography or the concentration of advanced human capital.
- Provide technological innovation through centres of technology and ensure its transfer to industry, social sectors, and regional public administration.
- Enhance scientific productivity in areas of national and international relevance.
- Develop a model for social responsibility, working closely with internal and external stakeholders.

- Establish links with national and international scientific networks through formalization and strategic management of inter-institutional cooperation agreements.
- Engage in broad cultural extension programmes aimed at preparing audiences, reinforcing artistic heritage, and culturally educating citizens.
- Implement new models for management excellence (such as the Baldrige Excellence Framework for Education) to introduce best practice in university management.

2.3 Institutional context

In the course of its history, the University of Talca has evolved from a primarily teaching-oriented university to a comprehensive university with a regional orientation and an emphasis on research, innovation, and community outreach. In 2015, the university enrolled 9,128 undergraduate students and 1,291 graduate students. It has five campuses located in the cities of Talca, Curicó, Santa Cruz, Linares, and Santiago. The main branches of the university are located in the cities of Talca, capital of the Region del Maule, and Curicó.

Table 2.1 shows total enrolments at the five campuses of UT, the number of enrolments from within the region, and the total higher education enrolment for the region.

Table 2.1 Undergraduate student enrolment and population by region, 2015

Undergraduate student	Santiago	Colchagua	Curicó	Linares	Talca
Enrolment	595	202	1,777	170	6,671
Undergraduate enrolment at UT from within the region	295	136	706	90	2,709
Undergraduate enrolment in the region	590,543	4,477	13,170	2,483	36,368
Population of the region	4,977,637	222,405	272,752	255,945	371,783

Sources: SIES, Department of Institutional Analysis of UT and Statistic National Institute of Chile.

The different campuses of the university each have their own specialization. The Talca campus concentrates on scientific-technological studies; the Curicó campus on engineering sciences and innovation; the Santiago campus on social science; the Colchagua campus in Santa Cruz on technical training related to wine production; and the Linares campus on technical-professional training and new-generation pedagogy.

The organizational structure of the University of Talca is set out in University Resolution 440/2015. It is characterized by vertical differentiation over up to seven levels. The university's statute gives powers, duties, and functions to single-person authorities and collegial bodies, as well as establishing the scope of their authority. The first level of the hierarchy is the board of directors, which establishes and oversees the implementation of institutional development policy and the institution's medium- and long-term plans. The next level responsible for the university's administration is the office of the rector, where the rector is the highest sole authority. The pro-rectory, the general secretariat, and the office of the comptroller are part of senior administration and fulfil transversal functions for the whole institution. As a public institution, the university is subject to the control of the Comptroller General, under terms established by Chile's political constitution and the comptroller's organic law. Five vice-rectories occupy the same level as the three aforementioned positions, though they have specific duties: academic, undergraduate studies, outreach, student development, and innovation. There are also eight faculties and five institutes with specialized fields of research.

University governance is based on single-person authorities and collegial bodies, as set out in its legal framework. The individual authorities are the rector, the pro-rector, the vice-rectors, the secretary general, and the comptroller. One of the institution's most important collegial bodies is the academic council, the advisory body to the rector in all matters related to the administrative operation of academic activities. It is the principal body of academic deliberation. Another collegial body is the board of directors, the highest authority of the institution. The board consists of three directors appointed by the President of the Republic, three external university professionals appointed by the academic council, and three internal senior academic staff members who do not hold an administrative position, also appointed by the council.

2.4 Socio-economic context

Around a third (33.6 per cent) of Region del Maule's population live in rural areas, the highest of any region in the country, according to the latest census information (2002). The 2011 Socio-Economic Characteristics Survey (CASEN) found that 16.2 per cent of the region's population live in poverty, while the rate of illiteracy is the highest in the country, at 7.8 per cent (CASEN, 2011).

It is important to note that 63 per cent of high school students in the region are enrolled in different types of municipal (public) schools, a significantly higher proportion than the national average. Likewise, the proportions enrolled at semi-private or private schools are 32.1 per cent and 3.2 per cent, respectively, equivalent to half the average national share of enrolment in these schools, which typically attract the more affluent segments of the population (Informe Proceso de Actualización Estratégica Regional del Maule 2008–2020). In the 2011 national education quality measurement SIMCE test, second-year high school students in the region achieved an average of 257 points in reading comprehension and 259 points in mathematics, values that are well below the national average.

Agriculture and the service industry are the predominant economic sectors in the region. Seed production (accounting for 60 per cent of the national surface area dedicated to the industry); fruit growing (20 per cent); wine making (40 per cent); forest plantation (30 per cent), and various annual crops such as potatoes, beans, and corn constitute the basic agricultural activity. The service sector, for its part, is linked mainly to state administration, retail, transport, and education. Region del Maule has been identified as being at risk in terms of competitiveness, being ranked 15th on the 2011 Regional Competitiveness Index (ICORE) created by the Centre for Economics and Business Studies at the Universidad de Desarrollo. In 2012, per capita income for the region was 69 per cent of the national average (INE, 2012).

The socio-economic environment of the region impacts heavily on the University of Talca. According to the Department of Institutional Analysis, in 2014 around 75 per cent of students came from disadvantaged backgrounds, that is to say, the first three income quintiles. Furthermore, nearly 75 per cent of students at the university are first-generation students. Therefore, UT makes a substantial contribution to social inclusion and advancement, and thus plays a full role as a public HEI.

2.5 Employability in the University of Talca

To improve the employability of its graduates, as specified in its strategic plan, the university has taken a number of systemic measures. It introduced a jobs portal for degree holders in 2005, which has helped shorten the length of time it takes for graduates to enter the labour market. An alumni portal was also developed to collect information about graduates.

In 2005, the university created the Office for Graduate Tracer Studies and Employer Links. The purpose of this office is to promote graduate employability through the collection of

information on the university's graduates and their labour market entry. This office has been placed under the Vice-Rectory for Undergraduate Studies, which is responsible for the progression of students through to their entrance to the labour market. This linked students' experience at the university directly with employers.

In 2006, the Centre for Job Placement and Young Professionals Programme was established. This centre aims to provide a link between employers and recently graduated young professionals. The centre has become well recognized in the region, systematically increasing public demand for young professionals selected by the centre.

3. Internal quality assurance system at the University of Talca

This chapter describes the university's internal quality assurance (IQA) system in five sections. The first section highlights the main milestones in the development of the system. The main background elements, the quality policy and the quality documentation, are discussed in the following section. The third section describes the main IQA processes and their connections with the university management system. The fourth outlines the structure for IQA while the fifth describes the instruments used. All the sections emphasize the innovative aspects of internal quality assurance at the University of Talca, which differentiate it from other universities in the Chilean higher education system.

3.1 Evolution of the internal quality assurance system

The IQA system at the University of Talca has developed in tandem with the overall evolution of the institution. There are three stages in the development of the university's IQA system: (a) the founding phase, (b) the modernization of the quality assurance system, and (c) the consolidation and innovation of the IQA system. At each stage, mechanisms and instruments for internal quality assurance have been defined, creating a comprehensive quality assurance system which requires the involvement of both academic and administrative staff at the university.

Founding phase (1981–1995)

In the first phase of development, the university focused on integrating the institutional cultures of its two founding organizations. The university needed to develop its own system of standards and regulations, thus doing the groundwork for the following stages. The first set of academic regulations was established in 1986 to standardize the academic processes for the quality of teaching, while the administrative and regulatory processes were restructured during the same period. In the mid-1990s, new institutional units were established in order to monitor and evaluate the quality of academic processes.

Modernization of the quality assurance system (1995–2010)

During the second stage, the university streamlined processes for ensuring quality through the introduction of strategic management, self-evaluations, and accreditation processes. The first strategic plan was developed in 1997, with subsequent plans in 2004 and 2010. Performance target agreements were implemented from 1996, with the objective of aligning individual academic activities (teaching and research) with the institution's strategic plan. The Office of Institutional Accreditation was established in 1999, with the first institutional evaluation implemented by the European Council of Rectors (CRE) in 2000. This was followed by accreditation of master's and undergraduate programmes, in 2002 and 2003, respectively. Together with institutional and programme accreditations, self-evaluation policies were institutionalized for the university as well as for its programmes. Finally, a comprehensive quality assurance system was introduced in 2009.

System consolidation and innovation (2010 – present)

The third stage was characterized by the consolidation and innovation of the IQA system. A data warehouse was developed in 2013 to monitor the indicators and goals of the strategic plan. Furthermore, the Office of Institutional Accreditation was divided into the Accreditation Office for Undergraduate Education and the Graduate School Quality

Assurance Unit. The former body was created in 2013, becoming, in 2014, the Office for Quality in Undergraduate Studies. The office comprises the following two departments: the Department of Teacher Evaluation and Quality Assurance and the Department of Undergraduate Programme Accreditation. The Graduate School Quality Assurance Unit was established in 2014. The system for the monitoring and evaluation of graduates and employers has also been significantly consolidated since 2012. Finally, the coverage of institutional accreditation was expanded in 2014, to include undergraduate, graduate, research, outreach, and institutional management.

The consolidation of the IQA system has allowed the development of learning capacities and the better utilization of the resources and opportunities provided by the national quality assurance system. Today, it is supported by an institutional culture oriented towards quality, a commitment to high institutional performance, and an appropriate organizational structure.

3.2 Quality policy and manual

The University of Talca's quality policy represents the commitment of the entire university community to ensuring quality, making it the focal point of its institutional mission and objectives. The general objective of the quality policy is to develop a quality culture oriented towards continuous improvement in all domains, while responding to the needs and expectations of the university community and external stakeholders and complying with the highest national and international standards of quality. The quality policy supports the following principles: (1) active participation, (2) continuous evaluation, (3) systematic revision, (4) accountability, and (5) innovation.

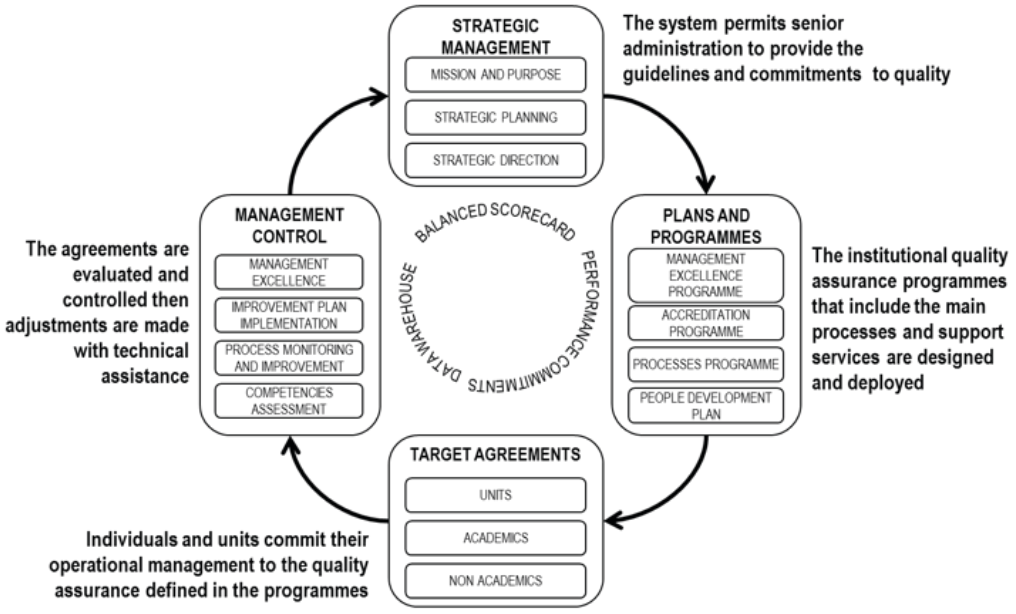
The university does not yet have an institutional or centralized guide or manual. However, different administrative and academic units have developed documents, such as a manual for creating programmes of study, guides for carrying out artistic and cultural extension activities, and manuals for budget preparation and implementation, financial and administrative procedures, among others. The documents are in different stages of development, with some still being piloted while others are fully formalized.

3.3 IQA processes

As *Figure 3.1* shows, the IQA system at the University of Talca follows a cycle of constant improvement across four consecutive phases: strategic management, operationalization of strategy through the development of plans and programmes, target agreements, and management control.

During the strategic management stage, the university's senior managers establish guidelines for the commitment to quality through determination of the university's mission, objectives, and strategies. The strategies are then translated into plans and programmes which comprise actions related to management, accreditation, and the development of processes and staff. These programmes and plans are implemented by departments, units, and academic and administrative staff through target agreements. The target agreement is the operational management tool that allows for the translation of objectives into targets to be implemented by units and staff and their latter evaluation. Specialized software is used to support the process of target agreements, the results of which are presented in the form of a balanced scorecard for each unit and staff member. This supports the implementation of the management cycle, with the aim of achieving alignment of units and staff with institutional objectives, constant improvement, adaptation, and strengthening of the strategic orientation of the university.

Figure 3.1 Articulation of the internal quality assurance system



Source: University of Talca, 2014.

3.4 Structure of the internal quality assurance system

The university's IQA system is structured over three levels: (a) institutional, (b) faculty, and (c) school, as shown in *Figure 3.2*. Each level is characterized by coordination between academic and administrative staff, with specialized technical staff providing additional support for further improvements.

Responsibility for the development and regulation of procedures, and the enforcement of sanctions for underperformance, mainly falls to the main collegiate bodies of the university, the board of directors, the faculty councils, and the school councils. The different administrative authorities, such as the pro-rectory, vice-rectories, dean's offices, and school and department administration, oversee the implementation of quality assurance mechanisms and instruments. Quality processes are managed by sub-committees of the university, including the Institutional Administrative Committee, the Graduate School Academic Committee, the Research Advisory Committee, the Teaching Council, and the Unit Self- Evaluation Committee.

Below are detailed descriptions of the internal quality assurance processes operating at different levels of the university, in line with the organizational structure of the university.

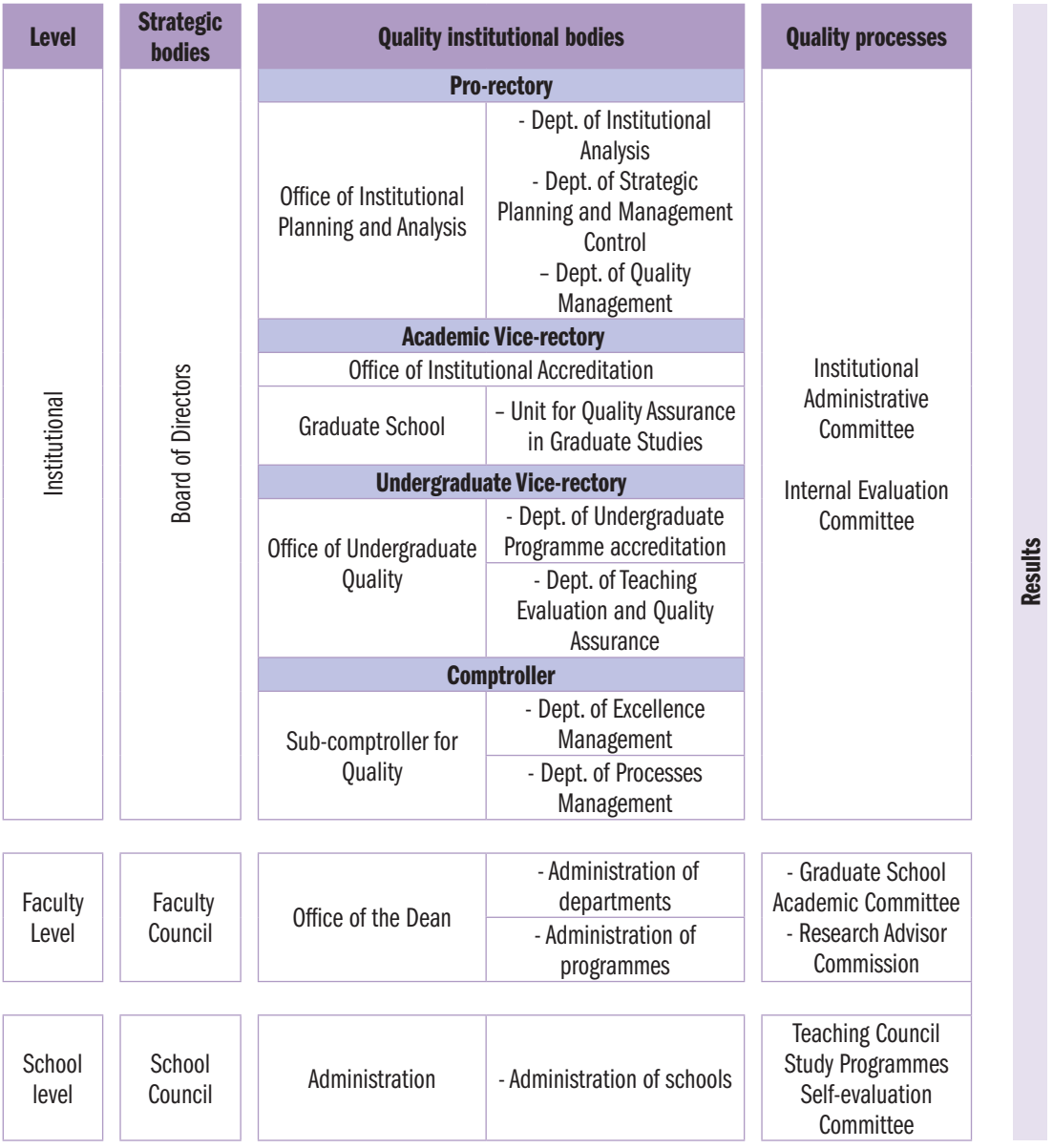
Institutional level

With regard to quality processes at institutional level there are two decision-making bodies: (a) the Institutional Administrative Committee and (b) the Internal Evaluation Committee. The first is a senior advisory body comprising the rector, pro-rector, and vice-rectors. The second is an advisory body that oversees the implementation of the institutional accreditation process and of improvement plans agreed by the university as the result of the former.

Dependent on the Office of the Pro-rectory, the Office of Institutional Planning and Analysis has the main function to perform planning, analysis, control and monitoring of institutional strategy at both strategic and tactical levels, ensuring the compliance of the institutional plan through a quality assurance and management excellence system. This office is responsible for the implementation of the Malcolm Baldrige Performance

Excellence Model and the execution of Process Management programme, among others. In addition, this unit is responsible for measurement and analysis of internal information. It is also responsible for providing official data to stakeholders.

Figure 3.2 Organization of the internal quality assurance system



Source: University of Talca, 2014.

Under the vice-rectories, different support units for quality assurance have been established. In the area of undergraduate study, the Office for Quality in Undergraduate Studies was created, comprising the Department of Teacher Evaluation and Quality Assurance and the Department of Undergraduate Programme Accreditation. The Department of Teacher Evaluation and Quality Assurance designs, validates, and applies diagnostic instruments at undergraduate level; evaluates the undergraduate student satisfaction; generates knowledge concerning the institutional monitoring and evaluation of the competency-based educational model; provides academic tutoring for first-year students; and supports the curricular design and implementation of undergraduate programmes of study. The Department of Undergraduate Programme Accreditation provides technical advice to undergraduate programmes on the different accreditation

stages, assists in the preparation and follow-up of programme improvement plans, and systematically monitors national and international standards for undergraduate programme accreditation processes.

The Graduate School is part of the Academic Vice-Rectory and is integrated with the departments for quality assurance, curricular administration, and student and graduate administration. The Department for Quality Assurance in Graduate Studies, in particular, has a technical advisory function in the creation and modification of projects and graduate programmes, the self-evaluation and accreditation of graduate programmes, the creation and follow-up of programme improvement plans, and the systematic monitoring of national and international accreditation processes for graduate programmes (master's and doctoral).

The Sub-comptroller for Quality is an autonomous and independent unit. It is responsible for internal quality control of all Institution processes through quality audits according to an annual audit plan.

Faculty level

The faculty council is the highest collegial body, consisting of the dean, school directors, department heads, and academic staff. It is responsible for making decisions concerning teaching in the faculties, the creation of new undergraduate degrees, study plans, and internal regulations. Each faculty is governed by its own council.

There is also an academic council overseeing the Graduate School, presided over by the Graduate School director. The Graduate School Academic Committee consists of master's and doctorate programme directors. The duties of the council are to assist the Graduate School director in meeting objectives and completing tasks, to establish and evaluate general programme regulations, to establish and ensure that the standards of quality are met within each programme, to promote the development of new programmes, to supervise the self-evaluation process for national or international accreditation of programmes, and to propose regulations or modifications for programmes of study, theses, scholarships, and any other pertinent item to the academic vice-rector in order to achieve programme objectives.

Regarding research and process implementation, there is a Research Advisory Commission overseen by the Research Office. The main duties of the commission are to create research policies, regulations, and procedures, and to collaborate in the evaluation of instruments for research development.

All of the above-mentioned councils are constituted by senior members of academic staff (full professors and associate professors). Appointments are made by the academic council on the basis of the proposals of the academic vice-rector.

Programme level

The school council is the collegiate advisory body that supports the school director in the management of the school. Its main functions are to study and propose modifications in study plans, evaluate the curriculum, and analyse and recommend solutions to exceptional situations encountered by students enrolled in the programmes. The council meets regularly, but the frequency of meetings is uneven across different schools.

The teaching council is the body responsible for the quality processes of undergraduate degree programmes. Comprising all undergraduate school directors, its mission is to propose policies and specific teaching standards to the university's academic council, collaborate with administrative services, and make decisions concerning exceptional academic situations related to teaching. Similarly, self-evaluation committees have been created within all undergraduate programmes, consisting of academic staff from the

school. Their main mission is to implement the programme's self-evaluation process and to develop any subsequent improvement plans.

3.5 IQA instruments

A number of IQA instruments, relating to the enhancement of teaching and learning, graduate employability, and management, have been developed at the University of Talca to support the three main IQA processes outlined above.

IQA instruments for teaching and learning

Module evaluation

Module evaluation is a formative evaluation of the syllabus of every programme of study. Its purpose is to evaluate their coherence, consistency, and congruence with the institution's competency-based education model, as well as their contribution to the development of student learning. The process for each syllabus includes initial approval by the director of the school. Once approved, it is sent to the Department for Teaching Evaluation and Quality Assurance for formative evaluation according to a rubric that is validated by an expert. Finally, a report is generated for each syllabus and given to the director of the school. This occurs in every academic period during which a syllabus is created or updated.

Programme evaluation

The purpose is to formatively evaluate the efficiency and effectiveness of student study plans. The evaluation involves the consultation of both internal and external actors. It begins with an investigation of national and international best practice from similar study programmes. Focus group discussions with employers are then carried out as to the professional performance requirements, while a self-evaluation is undertaken by degree holders concerning their professional education. Other instruments sometimes used include case studies, surveys, and observation checklists. The information is analysed to improve the study programme, before the analysis is formalized in the form of an evaluation report. The programme evaluation is conducted every time degrees are granted to a cohort whose study plan was subject to modification.

Programme self-evaluation

Programme self-evaluation is conducted in preparation for programme accreditation, in accordance with the criteria of the National Commission for Accreditation (CNA). The process begins with the definition of processes by the self-evaluation committee, which is presided over by the director of the school. The committee, following a frame of reference set by the standards that have to be met, systematically verifies the progress, strengths, and weaknesses in each programme. A report is drafted on the basis of results of the self-evaluation, and submitted for comment to the appropriate academic community before being sent to the CNA. The director of the school, the academic and administrative staff, and the students enrolled in the programme are consulted. The evaluation is typically carried out one year prior to the end of the accreditation period. The instruments used include checklists, databases, focus groups, surveys, and interviews.

Teacher supervision

To date, a formal and regular method for supervising teachers has not been established. Systematic teacher evaluation is carried out by students through course evaluation, though these evaluations consider only certain selected aspects of teaching. However,

some academic staff voluntarily request colleagues to observe them during class in order to receive feedback for improvement purposes.

Programme monitoring

Programme monitoring is designed to ensure the learning objectives stipulated in each study plan are met during each academic period. The objective is to obtain information on the level of student achievement in comparison with declared learning objectives for each programme of studies. Students are given a questionnaire to determine the extent to which they consider they have achieved their learning objectives. The findings are then analysed and a report is prepared for the director of the school. Finally, the director discusses this information with the curricular committee and the academic staff involved in the study programme to determine actions for improvement.

Student workload assessment

Student workload assessment consists of measuring student academic workload each semester and comparing it to the estimated average academic workload contained in the respective study plan for the programme. Every study plan estimates the academic workload of students through a systematic and rigorous process. The process begins with the development of instruments according to individual learning paths. At the end of the academic year, the instruments are administered to students and a comparative achievement report is prepared and given to the directors of the schools. The information on student workload is used to make decisions about the revision of study plans.

IQA instruments for employability

Graduate tracer studies

Graduate tracer studies assess the job situation of graduates from the University of Talca to ensure the continuous improvement of education opportunities organized by the university, with a view to facilitating graduate entry into the labour market. The tracer studies can be conducted either by alumni renewing their employment data voluntarily or through the Office for Graduate Tracer Studies and Links with Employers or school directors circulating survey questionnaires to gather specific data for study and statistics. Other instruments used for these studies include surveys, newsletters, email, and subscription to a list of specific activities and websites.

Employer satisfaction surveys

The purpose of employer satisfaction surveys is to solicit the opinions of employers regarding the competencies of graduates in the areas of communication, teamwork and ethics, and social responsibility. The surveys are sent to employers via email, and are sometimes followed up with a telephone call. The survey was developed using a questionnaire created by the CNA for the self-evaluation process as a model, adapting it to the specific needs of the University of Talca. Each year, about 70 employers are surveyed. The results are used in various ways, for example in the accreditation process, the curricular committees, and the planning and management control process. Databases with employer information are managed by school administration and the Office for Graduate Tracer Studies and Links with Employers.

Employer involvement in study programme revision

Employer involvement in programme revision takes place at institutional and programme levels. The framework for the process is curricular harmonization, where the curriculum for each programme is aligned with the competency-based education model. Institutionally, a series of curriculum development meetings are held with employers who have already

hired university graduates (using DACUM, the Developing a Curriculum process) in order to solicit their opinions on issues related to the employability of university graduates. The DACUM methodology collects opinions and perceptions of employers about programmes offered in the institution. Through various instruments, the relevance of programmes is assessed on the basis of whether they are appropriate for the labour market. At study programme level, each school develops instruments and arrangements through which a systematic dialogue between academics and employers is generated. This typically involves different representatives from the region being called in to meetings, business lunches, and workshops.

Jobs market analysis

Labour market analysis is carried out by the Office for Graduate Tracer Studies and Employer Links with the purpose of identifying the generic and technical skills demanded by the jobs market. The process consists of defining the segment of the labour market to be studied and then conducting an analysis of the offerings published on jobs portals. Each year, job offerings from more than 250 businesses are included. Generic and technical abilities are investigated in relation to a position with low, medium, or high responsibility as demanded by employers in regional and national companies. A report is then developed for each undergraduate programme to provide feedback to school administration.

Assessment of student competences

The process of assessing student competencies includes evaluation of skills associated with each of the competencies that form part of the generic profile of the institution. Among the skills and capabilities included are reading comprehension, oral and written communication, self-esteem, meta-cognition, social skills, attitudes, and values. Special importance, particularly from a teaching point of view, is given to having professors provide systematic feedback to students about their progress, not only in terms of generic but also specific competencies established in each study programme.

IQA instruments for management

Internal evaluation

Internal evaluation is a quality assurance practice that has been applied at the university since 2003. Its purpose is to systematically evaluate consistency between the university's mission and existing practice. The internal self-evaluation process begins two years prior to the forthcoming accreditation period. Each unit generates a self-evaluation report and interviews the key informants. From this, an improvement plan is proposed. Finally, a report is compiled and appendices generated. Internal evaluation is overseen by an internal evaluation committee comprising the academic vice-rector, the director of Institutional Analysis and Planning, the director of Institutional Accreditation, and a coordinator from each accreditation area. Although there are specific committees and working groups which operationalize the internal evaluation processes, all members of the university community participate in the process.

External evaluation

The main purpose of external evaluation is to measure the extent to which the institution meets the necessary conditions to assure systematic progress toward the achievement of stated objectives. A self-evaluation is conducted before external evaluation begins. External evaluation starts with an evaluation of financial sustainability by an external advisor. This is followed by a meeting in preparation for a visit from the evaluators. The visit begins with a meeting with the authorities, followed by meetings with the staff in charge of each area as well as with other key actors. To complete the process, the peer

evaluators give an oral report, later providing the institution with a written report to which it can respond. Once the reports have been completed, the National Accreditation Commission (CNA) will make a final decision. If the institution is not satisfied with the result, it can make an appeal. An institutional improvement plan is developed to respond to problem areas identified by the peer observation and the CNA decision.

Certification

The certification processes are specific to the work performed by individual units, such as, for example, in the areas of information technology (IT), food handling, dangerous substance processes, and security protocols. Consequently, not only the specific certification process but also the details vary according to the technical characteristics of each unit. There is certification of both units and individual people. In the first case, the unit produces the necessary resources and engages in the process, based on the requirements of the organization which provides the certification. Where people are involved, a special unit within personnel management supports the certification process.

Performance target agreements

The University of Talca has three levels of target agreement: units, academic staff, and administrative staff. The unit performance target agreement, known as the Compromiso de Desempeño de Unidades (CDU), is a management tool that aligns the operation of the units with the institutional strategic plan. Target agreements are applied to the following units: the offices of the pro-rector and vice-rectors, faculties, institutes, and general offices. The process begins when each unit formulates its annual target agreement on the university's website. The agreement is then revised by the Office of Institutional Analysis and Planning. Once approved by the rector's office, there is a further, intermediate, revision by the Office of Institutional Analysis and Planning. Every December, a self-evaluation is carried out by each unit and evidence as to the outcome of each agreement is provided.

At academic staff level, the performance target agreement is the instrument which defines the amount of time and work involved in each assigned task, together with the expected outcomes. These target agreements apply to both tenured and non-tenured academic staff regardless of the number of contract hours. Each academic makes a commitment toward the end of the year concerning activities to be undertaken, assigns a schedule, and defines the expected results on the university's website. Higher-level administration approves the agreement or generates corresponding observations until it is approved. Before the end of the academic year, each professor engages in a self-evaluation and the target agreement process begins again. Both the agreements and the self-evaluations are further used as resources in various decision-making processes at the level of the university management system.

With regard to administrative staff, each individual formulates personal targets for his or her unit. Each member of the administrative unit commits to both general performance targets and a number specific to the unit. A significant focus of the agreements is the improvement of personal performance in relation to unit objectives. Both permanent administrative staff and those on hourly contracts are required to engage in the development of target agreements, regardless of the number of hours for which they are contracted to work. The process begins in March of each year, when individuals formulate their target agreements on the university's website. Finally, each person conducts a self-evaluation, indicating the percentage of targets achieved. The results and analysis of the agreements are used in various ways for decision-making, evaluation of personnel, statistics, and public accounting. Those who meet their targets on time and as stipulated in their agreements receive a bonus in their remuneration.

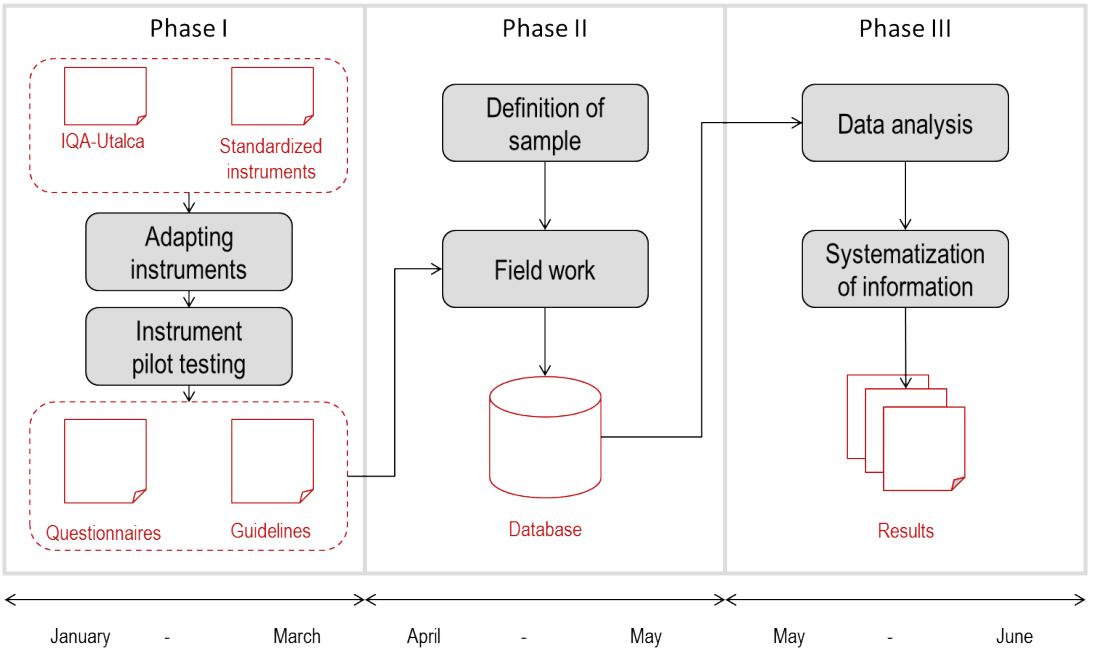
4. Effects of the internal quality assurance system on the teaching and learning process, employability, and institutional management

This chapter describes the methodology used to investigate the project's research questions before presenting the findings of the study in relation to IQA awareness and involvement of actors, the effects of IQA tools on teaching and learning, employability, and management effectiveness, the factors that condition the effective functioning of the IQA system, and perceptions of the overall effectiveness of the IQA system at the university.

4.1 Research methodology

Following the guidelines provided by IIEP in their research framework, the University of Talca defined three project stages, as shown in *Figure 4.1*: (1) adapting the research instruments to the local conditions of the university and piloting them, (2) defining the sample and carrying out the field work, and (3) analysing and systematizing the findings of the study.

Figure 4.1 The three phases of the research process



During the first phase, the University of Talca's research team translated and adapted the academic and administrative survey questionnaires to the tools and instruments used by the internal quality assurance systems of the university. Similarly, the guidelines for individual interviews and focus group discussions for academic staff, students, and decision-makers at the university were adapted. Once the necessary modifications had been made to the instruments, they were piloted with the respondent groups of the university community in order to analyse their comprehensibility.

The second phase involved defining the sample and carrying out the field work. Three faculties were chosen to take part in the focus groups: Engineering, Health Sciences, and Economy and Business. The choice of these faculties was made in light of the following considerations: (1) the three units represent distinct areas of knowledge and different academic cultures (health sciences, exact sciences, and social sciences); (2) the number of undergraduate students enrolled in these faculties amounts to more than 1,000; (3) the faculty in each unit consists of more than 40 full-time professors; (4) all the units have more than three undergraduate programmes; and (5) all units have graduate programmes, at both master's and doctoral levels. *Table 4.1* provides a summary of the characteristics of each faculty.

Table 4.1 Characteristics of the selected faculties

	FACULTY		
Components	**Engineering**	**Health Sciences**	**Economy and Business**
Number of undergraduate students	1,891	1,999	1,611
Number of graduate students	46	108	219
Supply of professors	69	47	39
Undergraduate programmes	7	6	3
Graduate programmes	2	7	4

The third phase of the study involved analysis of the information gathered and the systematization of the results. For the development of both sub-stages, a matrix analysis of the results (from the interviews, questionnaires, and focus group discussions) was undertaken, cross-referencing the compiled information with the defined objectives of the study.

4.2 Main results

The results presented in this chapter have been divided into five sections: (1) participation statistics, (2) findings on awareness and involvement, (3) findings on effects of IQA instruments on teaching and learning, employability, and management, (4) findings on conditioning factors, and (5) overall appreciation of the IQA system by actor groups.

Participation statistics

In order to investigate different stakeholders' perceptions of the university's IQA system, both quantitative and qualitative methods were employed. Online survey questionnaires were administered to 387 academic staff, 120 (31 per cent) of whom responded, and 73 administrative staff, 60 of whom (81 per cent) responded. The perceptions of other stakeholders were investigated by individual interviews as well as focus group discussions. Individual interviews were conducted with staff in academic and administrative leadership positions, namely school directors, graduate school directors, and department heads from each of the three selected faculties. Students in their second to fifth year of studies at these three faculties were also invited to participate in focus group discussions.

Survey questionnaires: academic staff

Table 4.2 indicates the disciplines of the respondents. Of the 120 academics who responded to the questionnaire, more than 30 per cent worked in health sciences, 20 per cent in natural sciences, and 14 per cent in engineering. The rest were fairly evenly distributed, with none of the other departments scoring more than 10 per cent.

Table 4.2 Disciplines (academic staff)

Topic	Percentage of respondents
Health Sciences (e.g. Medicine, Psychology, Nursing, etc.)	34%
Natural Sciences (e.g. Biology, Chemistry, Geography, etc.)	20%
Engineering (e.g. Materials Engineering, Logistics, etc.)	14%
Business and Management	7%
Humanities (e.g. Philosophy, Religion, Philology, etc.)	6%
Education (e.g. Teacher Training, Cognitive Sciences, etc.)	6%
Law	3%
Formal Sciences (e.g. Mathematics, Informatics, Statistics, etc.)	2%
Economics	2%
Social sciences	1%
Others, namely: Foreign Languages (2.5%), Music (0.8%), and Design (1.7%).	5%
Total number of respondents	100%

Table 4.3 shows that almost half the academic respondents were lecturers (44.2 per cent), followed by assistants (32.5 per cent). Full professors accounted for only 12.5 per cent of total academic respondents.

Table 4.3 Academic positions (academic staff)

	Full professor	Assistant	Instructor	Lecturer	Other	Total
Percentage	12.5%	32.5%	0.8%	44.2%	10%	100%

According to *Table 4.4*, half the academic respondents (50 per cent) did not hold a leadership position, while a quarter indicated that they did. Heads (or deputy heads) of programmes and heads (or deputy heads) of department accounted for 14.2 per cent and 7.5 per cent, respectively. Only a few academic staff respondents held the position of dean (or vice-dean) of faculty or were members of a committee or board (both 2.5 per cent).

Table 4.4 Leadership positions (academic staff)

	Head (or deputy head) of programme	Head (or deputy head) of department	Dean (or vice-dean) of faculty	Member of a committee or board	No leadership position	Other	Total
Percentage	14.2%	7.5%	2.5%	2.5%	50%	23.3%	100%

Table 4.5 shows the distribution of academic staff respondents in terms of length of experience. More than a third (32.5 per cent) had worked at the University of Talca for less than five years, with a quarter of academic respondents (25 per cent) saying they had worked for between five and 10 years. Twenty per cent of academic staff respondents had between 11 and 20 years' experience at the university, while those with more than 20 years' experience accounted for 22.5 per cent.

Table 4.5 Length of experience (academic staff)

	Less than 5 years	Between 5 and 10 years	Between 11 and 20 years	More than 20 years	Total
Percentage	32.5%	25%	20%	22.5%	100%

Survey questionnaires: administrative staff

According to *Table 4.6*, 60 administrative staff members responded to the survey questionnaire. The fields in which administrative staff respondents worked were fairly evenly distributed, with most accounting for less than 10 per cent. The most prominent fields of work for administrative staff respondents were undergraduate teaching administration (15 per cent), student services (10 per cent), and research services (10 per cent).

Table 4.6 Fields (administrative staff)

Topic	Percentage of respondents
Student services (registration, assessment, counselling)	10%
Research services	10%
Strategic/academic planning	6.7%
IT services	6.7%
Legal affairs	6.7%
Financial management	5%
Facility management (incl. transport services)	5%
Human resource (administrative) management	5%
Quality assurance/quality enhancement	3.3%
International relations	3.3%
Institutional leadership	3.3%
Library	1.7%
Institutional research	0%
Academic staff development	0%
Public relations/marketing	0%
Others, namely: university social responsibility 3 (5%), graduate teaching administration 1 (1.7%), undergraduate teaching administration 9 (15%), graduate tracing 1 (1.7%), and technology transfer management 4 (6.7%).	33.3%
Total number of respondents	100%

Table 4.7 shows that nearly three-quarters of administrative staff respondents held a leadership position, either as head or deputy head of administration or section. Only a quarter of administrative respondents (23.3 per cent) reported that they did not hold any leadership position.

Table 4.7 Leadership positions (administrative staff)

	Head (or deputy head) of administration	Head (or deputy head) of unit	Head (or deputy head) of section	No leadership position	Other	Total
Percentage	43.3%	10%	21.7%	23.3%	1.7%	100%

Unsurprisingly, given that the majority of administrative staff respondents held a leadership position, *Table 4.8* shows that almost half the respondents held a master's degree as their highest educational achievement (48.3 per cent). Those with bachelor's and PhD/doctoral degrees took up 31.7 per cent and 20 per cent, respectively. None of the administrative staff participants cited a secondary school diploma or vocational training as their highest educational achievement.

Table 4.8 Highest educational achievement (administrative staff)

	Secondary school diploma	Vocational training	Bachelor	Master	PhD/ doctorate	Other	Total
Percentage	0%	0%	31.7%	48.3%	20%	0%	100%

In terms of length of experience working at the university, the respondents were fairly evenly distributed among the different time periods, as *Table 4.9* shows. More than a third had either less than five years' experience or between five and 10 years' experience at the university. Those whose length of experience was between 11 and 20 years accounted for 25 per cent, with 20 per cent citing more than 20 years at the university.

Table 4.9 Length of experience (administrative staff)

	Less than 5 years	Between 5 and 10 years	Between 11 and 20 years	More than 20 years	Total
Percentage	26.7%	28.3%	25%	20%	100%

Interviews and focus group discussions

Table 4.10 describes the functions of the interviewees and focus group discussion participants. Interviews were conducted with the rector (i.e. the president of the university), the academic vice-rector, the vice-rectors for undergraduate studies and finance, two members of the board of directors, and the deans of the selected faculties (i.e., Health Sciences, Engineering, and Economics and Business). Two focus group discussions were conducted in each faculty, one for academic staff and one for students. The academic staff participants included the undergraduate programme directors from each faculty, the department heads, and those responsible for graduate programmes. For the student discussions, a group of students between their second and fifth year of study were convened from the different programmes in their respective faculty. Between 12 and 15 people were invited to take part in each focus group discussion.

Awareness of and involvement in the quality assurance system

This section presents data regarding awareness of and involvement in the IQA system among stakeholders at the University of Talca. It first presents the findings of the academic and administrative staff surveys. These are then triangulated with the interview and focus group discussion findings in relation to the perspectives of university management, selected academic staff, and students.

Awareness of and involvement with the quality policy and manual

The survey questionnaires investigated the extent to which academic and administrative staff were aware of the quality policy at the University of Talca. Since there is no single quality manual developed for IQA processes at the university yet, this dimension was not investigated in the survey.

Table 4.10 Interview and focus group discussion participants

Members of the Office of the Rector		
Interviewed actor(s)	Type of interview	No.
Academic vice-rector	Individual interview	I
Director of Finance	Individual interview	II
Dean of Agriculture	Individual interview	III
Faculty of Engineering		
Interviewed actor(s)	Type of interview	No.
Dean of Engineering	Individual interview	IV
Directors of schools and departments	Focus group interview	V
Students between 2nd and 5th year	Focus group interview	VI
Faculty of Health Sciences		
Interviewed actor(s)	Type of interview	No.
Dean of Health Sciences	Individual interview	VII
Directors of schools, departments, and centres	Focus group interview	VIII
Students in 5th year or higher	Focus group interview	IX
Faculty of Economics and Business		
Interviewed actor(s)	Type of interview	No.
Dean of Economics and Business	Individual interview	X
Directors of schools and academic staff	Focus group interview	XI
Students in 5th year or higher	Focus group interview	XII

- Survey questionnaire data (academic and administrative staff)

When academic and administrative staff were consulted about the quality policy, 66 per cent of academic staff knew that it existed and 52 per cent of them indicated that it was useful (see *Table 4.11*). For administrative staff, 67 per cent knew that the quality policy existed and 56 per cent responded that it was useful in their work. This finding seems consistent with the fact that a majority of administrative staff respondents held a leadership position at the university, making them likely to be better informed in general about university policies than those staff who do not hold a leadership position. There were, however, also close to a third of academic staff respondents (31 per cent) and fifth of administrative staff respondents (21 per cent) who said that they did not know the quality policy existed. This suggests that while a majority of both academic and administrative staff were well aware of the existence of the quality policy at the university and its benefits for their work, awareness could be further enhanced, in particular among academic staff, and perhaps also among administrative staff without a leadership position.

Table 4.11 Existence and usefulness of policies according to academic and administrative staff

		Quality policy
Yes, the document exists and is useful in my work	Academic staff	52%
	Administrative staff	56%
Yes, but the document is not useful in my work	Academic staff	10%
	Administrative staff	7%
Yes, it exists but it is not necessary for my work	Academic staff	4%
	Administrative staff	4%
No, the university does not have this type of document	Academic staff	3%
	Administrative staff	12%
I don't know	Academic staff	31%
	Administrative staff	21%
Total	Academic staff	100%
	Administrative staff	100%

- Interview and focus group discussion data

Although evaluation of the quality policy was generally positive, there was some lack of knowledge as to the existence of the university's quality policy. Some of the interviewees and focus group participants reported that directors of school are more familiar with and engaged in the quality policy than are academic staff with no leadership position. The directors of school also found that some academic staff 'made mistakes' because they lacked knowledge about procedures for carrying out IQA processes.

The students indicated that they appreciated the institutional effort in promoting quality and that they had participated on various occasions in quality-related matters. They identified quality topics within the university strategy, but did not identify specific elements of internal quality assurance or indicate that a particular policy or unit exists.

Awareness of and involvement with IQA instruments

The survey questionnaires also investigated the extent to which academic and administrative staff were involved in IQA instruments at the University of Talca, received feedback, used it, and found the instrument useful. The specific IQA instruments presented in the academic survey questionnaire were related to either teaching and learning or graduate employability, while instruments for management were included only in the administrative staff survey questionnaire. The specific IQA instruments for teaching and learning presented in the academic staff questionnaires were: (1) module evaluation, (2) programme evaluation, (3) teacher supervision, (4) programme self-evaluation, (5) programme monitoring, and (6) student workload assessment. The tools for employability were: (1) graduate tracer studies, (2) employer satisfaction surveys, (3) employer involvement in study programme revisions, (4) jobs market analysis, and (5) student competencies assessment. The following tools were presented as tools for management: (1) internal evaluation, (2) external evaluation, (3) certification, and (4) target agreements.

- Survey questionnaire data (academic and administrative staff)

Table 4.12 summarizes the responses of academic staff as to their involvement in IQA instruments, the feedback they received, and the extent of their use and usefulness. The below averages were calculated from numerical values associated with response categories ranging from very important (=5) to not at all (=1) on a Likert scale. Overall, academic staff seemed to be more involved in IQA tools related to teaching and learning than in those for employability.

Table 4.12 Academic staff involvement in IQA tools for teaching and learning and employability

	Involvement	Feedback	Use	Usefulness
Module evaluation	3.1	3.6	3.6	3.4
Programme evaluation	2.6	3.3	3.5	3.7
Teacher supervision	1.7	2.9	3.0	3.5
Programme self-evaluation	3.1	3.9	4.0	4.2
Programme monitoring	2.6	3.6	3.7	3.8
Student workload assessment	2.0	3.3	3.5	3.7
Graduate tracer studies	1.9	3.3	3.3	3.6
Employer satisfaction surveys	1.7	3.3	3.5	3.9
Employer Involvement in study programme revision	1.5	3.1	3.4	3.7
Jobs market analysis	1.5	3.3	0.7	3.9
Student competences Assessment	3.2	3.6	3.7	3.7

Note: Averages were calculated as follows: 1. A numerical value was attributed to response categories with, for instance, 5 = very much and 1 = not at all. 2. Averages were then calculated in the following way: (number of responses x 5) + (number of responses x 4) + (number of responses x 3) + (number of responses x 2) + (number of responses x 1) / the total number of responses.

The IQA tools with the highest levels of academic staff involvement were module evaluation and programme self-evaluation, both with averages of 3.1. This was followed by programme evaluation and programme monitoring. Involvements in teacher supervision and student workload assessment were rated lower by academic staff respondents, with an average of 1.7 and 2.0, respectively. This can be explained by the fact that teacher supervision is not regularly implemented as a method for evaluating teaching performance. Even though the instrument does exist, its use is restricted to those who request it on a voluntary basis. Student workload assessment is also not the responsibility of individual academic staff since it is done by each programme director together with the administrative office of undergraduate studies. In terms of feedback, academic staff indicated that they had most feedback from programme self-evaluation (3.9), with many of them also indicating higher levels of feedback from module evaluation and programme monitoring, both with averages of 3.6. Similarly, they perceived programme self-evaluation as both the most used and most useful instrument, with averages of 4.0 and 4.2, respectively.

Overall, involvement in IQA instruments related to graduate employability were significantly lower among academic staff. This lower involvement is explained by the fact that the instrument is either not yet being implemented or is not a part of individual academic staff responsibility. Although graduate tracer studies have been used since 2011, they are not currently carried out with graduate school alumni as the instrument is

designed to be put into use in 2016. As for the employer satisfaction survey, the instrument is applied either through the programme directors or through the Office of Planning, which consults employers about their degree of satisfaction with graduates. Similarly, employer involvement in study programme revision is overseen by the school administration and the Accreditation Advisory Committee for each school, without any involvement of individual academic staff. Jobs market analysis is done directly by the Planning Office. Despite the lower academic staff involvement, feedback rated fairly evenly across all the instruments with no average below 3.0. In terms of their perceptions of use, jobs market analysis was the IQA tool least used by academic staff, although it was perceived as highly useful, as was the employer satisfaction survey.

Table 4.13 Administrative staff involvement in IQA tools on management

	Internal evaluation	External evaluation	Certification	Target agreement
Involvement	3.1	2.8	1.5	4.0
Feedback	3.4	3.6	2.3	3.7
Use	3.3	3,5	2.5	3.9
Usefulness	3.8	3,9	3.1	4.2

Note: All figures are averages (see *Table 4.12* for explanation).

Table 4.13 shows that administrative staff respondents identified target agreements as the IQA instrument with the highest level of involvement, feedback, use and usefulness, while certification was the IQA instrument with the lowest averages in all aspects. In the case of certification, it should be noted that not all respondents are involved in it. Although administrative staff reported their higher involvement in internal evaluation (3.1), their perceptions of the use and usefulness of this instrument were lower than those of external evaluation. Similarly, and somewhat surprisingly, administrative staff said they received more feedback from external evaluation (3.6) than from internal evaluation (3.4).

- Interview and focus group discussion data

The interview and focus group discussion data indicated that academic staff associated internal quality assurance with the constant evaluation of all processes at the university. In terms of IQA instruments, academic staff respondents reported having been highly involved in the IQA instruments related to undergraduate and graduate teaching and learning. The main instruments highlighted during the interviews and focus group discussions were module evaluation and programme self-evaluation, which is in line with the survey questionnaire findings. Some of the interviewees and focus group participants identified certain practices as IQA instruments for teaching and learning. These practices included the specific selection of external professors (part-time) for graduate courses (Faculty of Health Sciences), the establishment of curriculum committees in undergraduate and graduate studies (the three faculties), the self-assessment of competencies by the students (the three faculties), and the peer evaluation of some graduate courses (Faculty of Health Sciences).

Deans from the three faculties (Health Sciences, Engineering, and Economics and Business) also reported having received feedback regarding the IQA instruments for teaching and learning through training workshops. These workshops were focused on self-evaluation processes, the design of evaluation guidelines, and syllabus design and improvement.

Regarding the use and usefulness of the university's IQA instruments, positive perceptions were observed among academic staff who took part in the focus group discussion. Clearly,

the use of the instruments was associated with the implementation of the internal quality assurance system used by the university. There was agreement among respondents that use of the instruments was greater in undergraduate studies than in graduate studies.

A list of the internal quality assurance instruments related to undergraduate teaching and learning was presented to the students. The instruments with which they were most familiar were module evaluation and programme evaluation, with student respondents reporting that they were more familiar with the former instrument. Three groups of students (from Health Sciences, Business, and Engineering) agreed on the importance of module evaluation as a means of verifying teaching quality.

Effects on teaching and learning, employability, and management

This section focuses on the effects of the IQA system on teaching and learning, employability, and management. The analysis is based on the data generated from the academic and administrative survey questionnaires, the interviews with university leaders, and the focus group discussions with selected academic department heads and students. The findings are presented in terms of the effects on teaching and learning, employability, and management.

Survey questionnaire data (academic and administrative staff)

Table 4.14 shows academic staff perceptions as to the effects of selected IQA instruments on teaching and learning. Programme evaluation had the highest average values with respect to the overall coherence and content coverage of study programmes, with averages of 4.7 and 4.5, respectively. Although programme monitoring was reported to have a positive effect at programme level, the respondents considered that it mostly improved learning conditions. Similarly, learning conditions were considered to have been improved through student workload assessment with an average of 4.2. Module evaluation was perceived as the instrument with the highest effect on teaching performance and learning conditions, with averages of 4.2 and 4.1, respectively. Programme self-evaluation had the lowest average values in terms of most areas of teaching and learning, with the exception of improving teaching performance and learning conditions.

When it comes to IQA instruments for employability, the employer satisfaction survey was seen as having the most impact at programme level, and the least effect on instruments for teaching and learning, all of which had averages below 3.0. The employer survey was thought to have significantly improved the overall coherence and content coverage of study programmes, with averages of 4.6 and 4.5, respectively. Learning conditions and the student assessment system were said to have been significantly improved through the student competency assessment, with averages of 4.3 and 4.2, respectively. Interestingly, none of the employability-related IQA instruments had an average higher than 3.0 with respect to teaching performance, apart from the student competency assessment.

According to *Table 4.15*, the IQA instruments related to employability were perceived to have more positive effects on employability than the tools for teaching and learning, with the graduate tracer study having the highest perceived effect on employability with an average of 4.2. Employer involvement in study programme revision and jobs market analysis were also thought to have improved employability, both of them with an average of 4.1. Among the IQA tools for teaching and learning, programme evaluation had the highest average in terms of enhancing graduate employability. The tool perceived as least effective for employability was programme self-evaluation (1.6), followed by module evaluation (1.7).

Table 4.14 Effects of the instruments on teaching and learning

	Teaching and learning IQA tools						Employability IQA tools				
	Module evaluation	Programme evaluation	Teacher supervision	Programme self-evaluation	Programme monitoring	Student workload assessment	Graduate tracer studies	Employer satisfaction surveys	Employer involvement in study programme revisions	Jobs market analysis	Student competency assessment
Overall coherence of a study programme	3.1	4.5	4.6	2.0	4.0	3.8	3.9	4.6	4.1	4.2	3.8
Content coverage of courses	2.5	4.4	4.4	2.3	3.9	2.8	3.7	4.3	3.8	3.4	3.3
Content coverage of study programmes	2.5	4.7	4.5	2.1	4.0	3.2	4.1	4.5	3.9	3.6	3.4
Teaching performance	4.2	3.0	3.1	3.6	3.2	2.6	2.3	2.8	2.5	2.4	3.6
Student assessment system	3.1	2.7	2.9	1.9	3.6	3.1	2.5	2.3	2.2	2.7	4.2
Learning conditions	4.1	3.8	3.5	3.7	4.2	4.2	3.6	2.9	3.4	3.4	4.3

Note: All figures are averages (see *Table 4.12* for explanation).

Table 4.15 Effects of the instruments on graduate employability

	Teaching and learning IQA tools						Employability IQA tools				
	Module evaluation	Programme evaluation	Teacher supervision	Programme self-evaluation	Programme monitoring	Student workload assessment	Graduate tracer studies	Employer satisfaction surveys	Employer involvement in study programme revision	Jobs market analysis	Student competency assessment
Enhanced employability of graduates	1.7	3.7	3.3	1.6	3.1	2.4	4.2	3.9	4.1	4.1	3.8

Note: All figures are averages (see *Table 4.12* for explanation).

Table 4.16 illustrates the effects of IQA tools on management, which are generally seen as rather positive. Administrative staff, a majority of whom hold leadership positions, indicated that the management instruments had an overall positive effect on strategic planning. It is important to note that external evaluation had the highest effect on strategic planning, with an average of 4.43. External evaluation also improved evidence-based decision-making, as did internal evaluation, both of which had averages above 4.0. Service orientation was reported to have been significantly enhanced through certification and target agreement, with averages of 4.18 and 4.04, respectively. Administrative operation was heavily influenced by certification (4.12), while the averages of other management-related tools were all below 4.0.

Table 4.16 Effects of the instruments on management

	Internal evaluation	External evaluation	Certification	Target agreement
Strategic planning	4.22	4.43	4.06	4.15
Evidence based decision-making	4.02	4.26	N/A*	N/A*
Service orientation	3.75	3.82	4.18	4.04
Administrative operation	3.62	3.64	4.12	3.74

Note: All figures are averages (see *Table 4.12* for explanation).

*Note: the administrative staff questionnaire did not include the variable 'evidence based decision-making' for certification and target agreements, hence their being marked as N/A.

Interview and focus group discussion data

In the focus group discussions, academic staff acknowledged that the IQA instruments for teaching and learning had improved the quality of teaching. Although none of the participants referred to the IQA tools presented in the survey questionnaires, they mentioned incentives used at the university to recognize and award outstanding practice in undergraduate teaching. In terms of specific impact on teaching and learning, student focus group participants from all courses appreciated that some programmes were well linked to the labour market, preparing them for jobs in consultancies or public health organizations. They indicated the importance of increasing these types of programmes as they make it easier to identify the necessary competencies for the jobs market and, therefore, improve the employability of graduates. Nonetheless, some students indicated

during the focus group discussions the lack of feedback from existing IQA instruments regarding the teaching and learning. Some of them said that even though they were involved in the IQA instruments and received feedback, they were not sure about the transparency of the results or their impact on the teaching performance of professors. They suggested that more dialogue on topics related to teaching was necessary to maximise the benefits of IQA instruments.

In terms of the effect on the employability of graduates, the curricular harmonization project, developed in 2013 for all undergraduate programmes at the university, was identified as an effective tool for enhancing employability. The process involves receiving feedback from employers about curriculum and from alumni about their current profiles. This has resulted in reducing the number of years of study required to acquire a degree (Faculty of Engineering), the inclusion of new foreign language requirements in all undergraduate courses, and the updating of the basic competencies that students need to acquire in all areas. Participants from all three academic units appreciated the impact on employability and noted that the region was beginning to recognize the 'seal of quality' the university gave its graduates. Some participants from the Faculty of Economics and Business mentioned job fairs as an effective tool for enhancing employability.

In terms of the effects on management, the interview and focus group participants indicated that the information management system had been significantly improved through computerisation, as had the working conditions of administrative staff. Changes in organizational structure were also mentioned as another effect on management by the participants.

Conditioning factors

This section presents the internal and external factors that are seen as conditioning the effective functioning of the IQA system at the University of Talca. Internal conditioning factors were investigated by using the data generated from survey questionnaires, interviews, and focus group discussions, while external conditioning factors were explored through the qualitative interviews.

Internal factors

The internal factors presented to the respondents in the survey questionnaires were: (1) leadership support; (2) financial incentives as a top-up to salary for contributing staff; (3) support by students; (4) visibility of measures derived from internal quality assurance procedures; (5) a solid data information system; (6) transparent information on internal quality assurance procedures; (7) scientific evaluations of internal quality assurance procedures; and (8) active participation of all stakeholders in internal quality assurance procedures. After exploring academic and administrative staff perceptions through the survey questionnaires, the data were triangulated with the interview and focus group discussion data. A comparative analysis of the effects by different stakeholder group is provided in the section below.

- Survey questionnaire data (academic and administrative staff)

Table 4.17 presents academic and administrative staff perceptions as to the importance and existence of the above-mentioned factors at the university. Overall, both academic and administrative staff recognize the importance of all internal factors, though administrative staff had higher averages than academic staff. This indicates that administrative are more positively inclined towards the university's IQA system in general. Both staff groups regarded financial incentives for contributions to IQA as the least important factor, with averages lower than 4.0.

Regarding perceptions as to the presence of internal factors, both academic and administrative staff gave most of the factors averages of around 3.0. Interestingly, both

academic and administrative staff said that leadership support was the factor most present in the university's IQA system, while financial incentives were perceived by both staff groups as the least present factor, both groups according it averages lower than 3.0. As noted above, both staff groups also thought financial incentives the least important of the factors.

It is interesting to note that while student feedback, visibility of measures derived from the IQA processes, and solidity of information systems were all considered highly important they were rated less highly in terms of their presence at the university. This indicates that there should be more instruments for obtaining feedback from students. More attention should also be paid to the dissemination of information on change resulting from IQA instruments within the university community. Finally, the university should strengthen the information system to improve the management of the IQA system.

Table 4.17 Classification average of the importance and existence of internal factors

	Academic staff		Administrative staff	
	Importance	Existence	Importance	Existence
Leadership support	4.26	3.34	4.62	3.56
Financial incentives for contributions from personnel	3.80	2.87	3.92	2.93
Student feedback	4.48	3.23	4.52	3.09
Visibility of measures derived from the internal quality assurance processes	4.39	2.96	4.65	3.04
Solidity of the information systems	4.57	3.10	4.85	3.06
Transparency in internal quality assurance processes	4.72	3.26	4.79	3.29
Assessment of the internal quality assurance processes	4.66	3.28	4.83	3.30
Active participation of the interest groups in the internal quality assurance processes	4.48	3.10	4.65	3.21

Note: All figures are averages (see *Table 4.12* for explanation).

- Interview and focus group discussion data

The individual interviews and the focus group discussions identified the following factors as internal conditioning factors for the university's IQA system: (1) the importance of further supporting the development of a quality culture; (2) the need for training personnel in relation to the IQA instruments and processes; (3) a clearer definition of the instruments and processes of the IQA system; and (4) the significance of strategic management in developing the university's IQA system.

First, the university authorities agree on the importance of creating a quality culture by promoting self-evaluation at all stages of institutional processes and management. Both academic and administrative staff also consider the strategic leadership as essential to creating and strengthening the quality culture at the university. Together with leadership support, both staff groups further indicated the necessity of disseminating results from IQA instruments and processes to the university community, highlighting the role of individual actors in this process. Administrative staff specifically suggested introducing a programme in which each individual stakeholder would participate in disseminating the quality assurance system to the university community.

Second, the majority of university authorities agreed that the university had a clearly defined system for internal quality assurance, which had positive impacts on developing

and implementing IQA mechanisms and instruments in all areas, including undergraduate, graduate, and research. In addition to the formalization of the IQA system at the university through interventions such as the quality policy, academic staff in the focus group discussions further emphasized the need for a greater degree of coordination among those who generate the internal quality assurance instruments and mechanisms in the areas of teaching, research, outreach, and institutional management. Academic staff also recognized the importance of follow-up actions and feedback processes for the effective functioning of the formalized IQA system.

Third, the authorities considered training personnel to be a key factor in implementing the internal quality assurance system. They emphasized that the university had made a large investment in training the personnel who support the IQA system. This was consistent with the perspectives of both academic and administrative staff in the focus group discussions. Academic staff acknowledged that personnel needed to improve personal knowledge about quality assurance topics. Administrative staff also stated that it was necessary to develop a permanent training programme for administrative staff in the area of quality management. They also suggested that individual target agreements should specify detailed responsibilities for quality assurance.

Finally, the interviewees highlighted the fact that strategic management had helped to define goals and quantifiable indicators for internal quality assurance. This further allowed the university to evaluate accomplishments and make necessary improvements to the IQA system. In the focus group discussions with academic staff, respondents acknowledged the direct relationship between strategic planning and quality assurance. They saw that the strategic plan contained objectives in relation to: (1) accreditation (both institutional and study programmes), (2) a development plan for infrastructure and equipment, (3) the design of quality assurance mechanisms and instruments, and (4) the implementation of the Baldrige Excellence Framework for Education.

External factors

External conditioning factors were investigated through individual interviews and focus group discussions. In addition to the analysis of the interview and focus group data, a comparative analysis of the effects, organized by different stakeholder group, is provided in the section below.

- Interview and focus group discussion data

Academic staff identified the following external factors that affect the university's IQA system: institutional accreditation, a regulatory framework for quality assurance, and competitions between institutions. Some participants related the development of the IQA system at the university to the peer evaluators' final reports and the new 2014–2020 institutional improvement plan, which was the result of the recent institutional accreditation.

The national accreditation system was also seen as a highly relevant external factor improving the internal quality assurance system at the university. As soon as the regulatory framework was reformed by the public authorities, the university had to make immediate changes so as to remain aligned with national standards for accreditation. These modifications led to development of new IQA instruments for the various areas of institutional action, the creation of quality committees at the undergraduate level, and modifications to the surveys for external stakeholders, among other considerations.

Finally, focus group participants stated that competitions between institutions influenced the improvement of IQA tools and processes as well as the manner in which the topic of quality assurance was dealt with as a strategy for the universities. Participants also considered it essential to further deepen the relationship with graduates and employers. The perceptions of both groups provide orientation for defining new internal quality

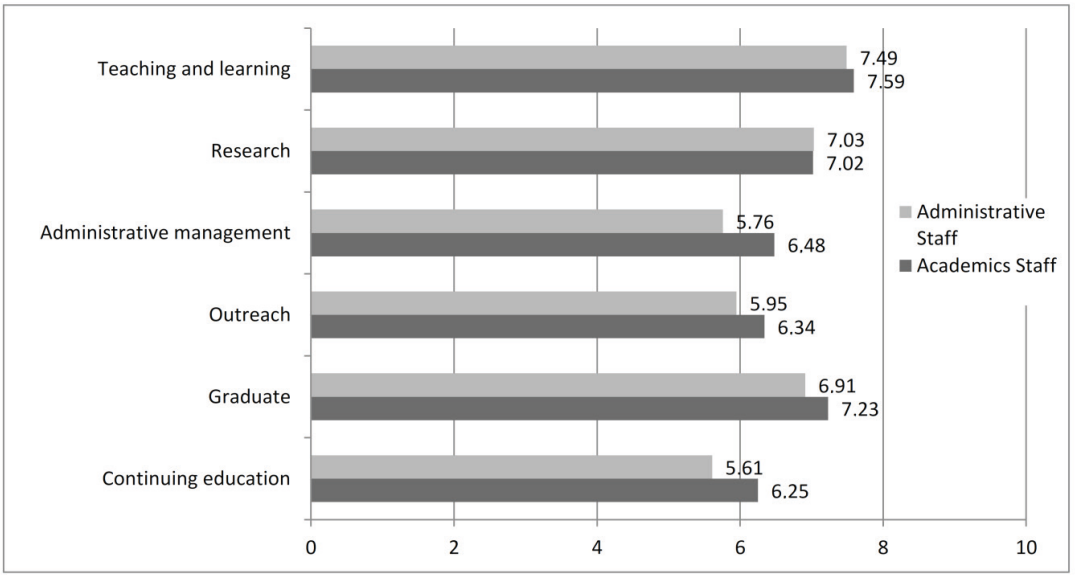
assurance instruments and mechanisms, especially those related to undergraduate and graduate education, outreach, and continuing education.

Overall effectiveness

This section describes stakeholder perceptions of the overall effectiveness of the IQA system at the University of Talca. The focus and paradigm of the IQA system is first presented, followed by perceptions of workload and benefits of the internal quality assurance system. The extent to which the IQA system is evidence-based and improves management decisions is also discussed in the section below.

Figure 4.2 shows academic and administrative perceptions of the focus of the university's IQA system, using a scale from 1–10. Overall, academic staff appreciated the level of development of the IQA system in each field more than did administrative staff, with the exception of research. Interestingly, research is the only area in which administrative staff rated the development of IQA more highly (7.03) than did academic staff (7.02). The most prominent area in terms of development was teaching and learning, followed by research, while continuing education was seen by both staff groups as the least developed area, with averages of 6.25 and 5.61, respectively.

Figure 4.2 Level of development of the IQA system at the university by field



According to *Table 4.18*, nearly 70 per cent of academic and administrative staff identified the main paradigm of the university's IQA system as improvement. The next highest rated were compliance with external standards, though they were far behind, scoring 15.1 per cent for academic staff and 11.8 per cent for administrative staff. The vast majority of academic and administrative staff thus acknowledged the IQA system as a tool to improve quality within the university.

Table 4.18 Overall paradigm of the IQA system

	Compliance with external standards	Accountability towards stakeholders	Enhance organizational learning	Improvement	Control	Other	Total*
Academic staff	15.1%	3.2%	3.2%	68.8%	7.5%	2.2%	100%
Administrative staff	11.8%	5.9%	9.8%	70.6%	2%	0%	100%

*Note: The figures were rounded off to the nearest one decimal place. This explains why some of the totals do not neatly add up to 100%. This however does not statistically affect the results.

Table 4.19 illustrates academic and administrative staff perceptions of the workload created by IQA instruments and procedures at the University of Talca. Two-thirds of both staff groups consider the workload as either high or moderate. Overall, administrative staff consider their workload to be somewhat higher than academic staff, with almost half of administrative staff viewing it as high or very high (49 per cent). Around a third of academic staff viewed their IQA workload as moderate, while only 23.5 per cent of administrative staff did. This seems to indicate that there is a somewhat higher engagement in IQA instruments and procedures among administrative staff at the university.

Table 4.19 Overall workload associated with internal quality assurance

	Very high	High	Moderate	Low	None at all	I do not know	Total
Academic staff	7.5%	31.2%	31.2%	11.8%	3.2%	15.1%	100%
Administrative staff	9.8%	39.2%	23.5%	15.7%	0%	11.8%	100%

According to *Table 4.20*, administrative staff perceive more benefits from IQA instruments and procedures than do academic staff. Nine out of 10 (90.2 per cent) administrative staff members judged the benefits of IQA as moderate to very high, compared to 84.9 per cent of academic staff. None of the academic or administrative staff chose 'none at all', suggesting the benefits of the IQA system at the university are clear. When asked about the benefits of the IQA system, more academic staff (11.8 per cent) claimed not to know about the system than did administrative staff (7.8 per cent). This further indicates that administrative staff are more prepared to acknowledge benefits from IQA instruments and processes than are academic staff.

Table 4.20 Overall benefits of IQA

	Very high	High	Moderate	Low	None at all	I do not know	Total*
Academic staff	29%	43%	12.9%	3.2%	0%	11.8%	100%
Administrative staff	39.2%	31.4%	19.6%	2%	0%	7.8%	100%

*Note: The figures were rounded off to the nearest one decimal place. This explains why some of the totals do not neatly add up to 100%. This however does not statistically affect the results.

When academic and administrative staff were asked to indicate the extent to which IQA procedures contributed to improved management decisions, the results again indicated a higher appreciation among administrative staff, with 94.2 per cent viewing its contribution as 'moderate', 'much' or 'very much' (see *Table 4.21*). As with the previous findings about workload and benefits, a higher percentage of academic staff said IQA made little or no contribution to improvements in management decisions. It is interesting to note to that more academic staff (11.8 per cent) opted for 'I do not know' than did administrative staff (3.9 per cent).

Table 4.21 Contribution of IQA to improved management decisions

	Very much	Much	Moderate	Little	Not at all	I do not know	Total*
Academic staff	26.9%	40.9%	10.8%	8.6%	1.1%	11.8%	100%
Administrative staff	45.1%	27.5%	21.6%	2%	0%	3.9%	100%

*Note: The figures were rounded off to the nearest one decimal place. This explains why some of the totals do not neatly add up to 100%. This however does not statistically affect the results.

Finally, the overall effectiveness of the IQA system was rated more highly by administrative staff than by academic staff. As *Table 4.22* indicates, 94.1 per cent of administrative staff perceived its contribution to improved effectiveness as moderate to very high compared with 81.7 per cent of academic staff. Almost half of administrative staff (45.1 per cent) considered its contribution to be 'very high', compared to a quarter (24.7 per cent) of academic staff. Very few academic or administrative staff reported that IQA's contribution to the effectiveness of the university was either little or none at all, though those who did were again more likely to be academic staff. These findings are consistent with the higher ratings given by administrative staff (the majority of whom were in leadership positions) in terms of workload, benefits, and improved management decisions arising from IQA instruments and processes.

Table 4.22 Contribution of IQA to improved effectiveness of the university

	Very high	High	Moderate	Low	None at all	I do not know	Total
Academic staff	24.7%	37.6%	19.4%	8.6%	0%	9.7%	100%
Administrative staff	45.1%	31.4%	17.6%	2%	0%	3.9%	100%

5. Summary and lessons learned

In line with national requirements for quality assurance and its own development as a comprehensive university with a regional focus, the University of Talca has, over the past 20 years, developed a comprehensive set of processes and tools for quality assurance, placing it at the forefront of university quality assurance in Chile. This set of processes and tools is now entirely mainstreamed within the existing management system at the university.

This study investigated the IQA system at the university, with a specific focus on the effects of the IQA instruments, the conditioning factors for IQA, and the overall perceptions of stakeholders of IQA at the university. This chapter summarizes the key findings of the study and outlines some policy suggestions and implications both for the university and for other Chilean HEIs.

5.1 Summary

The study indicates the varying levels of IQA awareness and involvement among stakeholders at the university, depending on their positions and level of responsibility. About two-thirds of academic and administrative staff were aware of the quality policy, which suggests that more communication on IQA is required to reach all university staff, and in particular all academics. Administrative staff, the majority of whom occupied leadership positions, were more involved in IQA and had a higher appreciation of the usefulness of the document than the former group. The interview and focus group discussions found that academic staff in leadership positions tended to have a greater awareness of the quality policy and IQA instruments than academic staff who did not hold leadership positions. Student respondents indicated a lack of awareness of the existence of the quality policy, despite their participation in various activities related to quality at the university.

In terms of stakeholder involvement in IQA instruments, academic staff were more engaged in tools related to teaching and learning than those for employability. This was explained by the fact that the employability-related tools were either not yet completely in use or not a part of their responsibility. There are specialized units and positions responsible for implementing such tools, such as programme directors and the Office of Planning. It is, however, important to note that academic staff were not involved in the discussion of the results derived from employability-related IQA tools either.

The instruments for teaching and learning with which academic staff were most involved included module evaluation and programme self-evaluation. Programme self-evaluation also had the highest average in terms of feedback, use, and usefulness. Administrative staff respondents said they were most involved in target agreements, and that they received more feedback from them than from other IQA tools for management. This group of staff also rated this instrument the highest in terms of use and usefulness. On the other hand, administrative staff gave certification the lowest averages in terms of all factors. In line with the survey questionnaire findings, the teaching and learning IQA tools were often mentioned by interviewees and focus group discussion participants, with module evaluation and programme self-evaluation mentioned frequently as the instruments in which respondents were most involved. Student respondents also underlined their familiarity with the former instrument.

Overall, IQA instruments were perceived as having a positive effect on teaching and learning, employability, and management, though their perceived effects varied according to the purpose of the instruments and the different stakeholders involved. Although programme self-evaluation had the highest involvement on the part of academic staff respondents in

the survey, it also had the lowest average effect in the field of teaching and learning. However, module evaluation was perceived by both academic staff and students as an effective instrument to improve teaching performance and learning conditions. When it comes to IQA instruments for employability, the employer satisfaction survey had most positive impact at the programme level, in spite of having limited impact on the practices of teaching and learning. In terms of enhancing graduate employability, employability-related IQA tools were reported to have more positive effects than those used for teaching and learning. Among these tools, the graduate tracer study was considered the most effective for employability, with many academic staff also reporting that employer involvement in study programme revision and jobs market analysis were effective tools for enhancing employability. Finally, while management instruments were generally viewed as having an overall positive effect on strategic planning, external evaluation was considered by administrative staff to be the IQA instrument with the greatest effect on the enhancement of strategic planning.

Turning to the conditioning factors, both academic and administrative staff agreed that leadership support was most present at the university, while financial incentives were the least present internal conditioning factor. Interestingly, neither group of staff respondents viewed financial incentives as an important factor conditioning the effective functioning of the IQA system. Student feedback, visibility of measures derived from IQA processes, and solidity of information systems were considered highly important yet were less present at the university. In the focus groups and interviews, leadership support was again highlighted as an important factor in promoting a quality culture within the university. However, participants also emphasized the role of individuals at the university in this process, suggesting that a quality culture can be achieved by both top-down and bottom-up processes. One participant suggested the introduction of a permanent training programme for personnel and other stakeholders on quality management and the inclusion of quality assurance activities in individual target agreements to improve individual accountability for IQA. Academic staff in leadership positions also recognized in the interviews that follow-up actions and feedback processes were essential for the effective functioning of the formalized IQA system. Institutional accreditation, a regulatory framework for quality assurance, and competition between institutions for status and funds were also identified by academic staff as external factors that affect the university's IQA system.

Finally, the dominant paradigm of the university's IQA system was thought by both academic and administrative staff to be improvement, followed, at quite a distance, by compliance with external standards. Both staff groups also acknowledged that teaching and learning was the most developed area in relation to the university's IQA system. In terms of workload and benefits of IQA, administrative staff indicated a higher appreciation of the benefits relating to IQA instruments and processes despite a higher workload. This further aligns with their positive evaluation of IQA system in terms of improved management decisions and the overall effectiveness of the university.

5.2 Lessons learned

The findings of the study highlight some of the innovative features of the IQA system at the University of Talca.

Mainstreaming IQA mechanisms for university management processes

First of all, the IQA mechanisms and instruments are entirely mainstreamed into university management processes. The organizational structure of the university has been transformed in the last two decades, creating new administrative structures that are responsible for improving and assuring university quality standards. These structures are present at all levels of the university to support IQA processes and tools, including in academic and

administrative units, departments, collegial bodies, and committees, supporting the work of individuals responsible for quality assurance. The activities of each structure are governed by the university's strategic plan, which is translated into institutional strategic goals and then into unit and individual target agreements. The application of these individual target agreements is monitored by university management. This suggests the close integration of the IQA system with the management system at the university.

Involving academic staff through professional development opportunities

The second innovative feature is the existence of a culture of self-evaluation and continuous improvement, particularly in the area of teaching and learning. This is demonstrated by the provision of training workshops on quality assurance activities, organized by the university for academic staff. These workshops are organized on the aspects related to self-evaluation processes, the design of evaluation guidelines, and syllabus design and improvement. Such institutional efforts have resulted in a relatively high level of awareness of and involvement in the quality assurance processes among academic staff. It has also contributed to curricular innovations, as well as the achievement of nationally and internationally comparable and recognized standards of quality. It is therefore evident that the effects of the university's IQA system on teaching and learning largely rely on stakeholders' active involvement in IQA instruments and processes.

Better involving stakeholders in IQA instruments and processes

Despite these innovative elements of the university's IQA system, there remain areas which could be improved for the effective functioning of the system, and lessons which can be applied to HEIs in similar institutional contexts. First, the quality culture could be further strengthened through the equal participation of all stakeholders in IQA instruments and processes. The study identified the various understandings of the IQA system among administrative staff, academic staff, and students. For instance, in terms of knowledge of the degree of development of quality assurance, administrative staff considered it to be lower in almost all areas, though they had a higher awareness and a greater sense of the usefulness of quality policy than did academic staff. Even among academic staff, different perceptions of the IQA system existed according to whether academic staff held a leadership position or not. Students mentioned that they were excluded from the process of developing the quality policy and from receiving relevant feedback from IQA instruments. In order to make the quality culture a lived reality for all stakeholders, various feedback loops should be introduced, together with the articulation and integration of some IQA mechanisms.

Organizing a quality dialogue on evidence generated from employability related tools

IQA instruments and processes for graduate employability were not used by the majority of the academic staff. The survey questionnaire findings suggest that the involvement of academic staff in IQA instruments related to graduate employability was significantly less than their involvement in IQA instruments in the teaching and learning domain. In addition, none of the academic respondents in the interview and focus group discussions mentioned the IQA tools for employability. This lower perception among stakeholders is explained by the fact that some of these instruments are not being implemented yet or are not yet a part of individual academic staff responsibility. As most of the existing employability IQA tools were reported to have greater effects on improving the employability of graduates, more involvement on the part of academic staff should be promoted through leadership support, which is considered by both academic and administrative staff as the most important internal conditioning factor for success of the university's IQA system. Specified responsibility for employability-related IQA tools in individual academic staff target agreements could be one of the initiatives developed by university management to address the issue.

Bibliography

Atria, F. 2014. *Derechos sociales y educación: Un nuevo paradigma de lo público* (*Social rights and education: A new public paradigm*). Santiago de Chile: LOM Editores.

CASEN (La Encuesta de Caracterización Socioeconómica Nacional [Socio Economic Characteristics Survey]). 2011. *Encuesta nacional de caracterización socioeconómica 2011*. Ministerio de Desarrollo Social. http://observatorio.ministeriodesarrollosocial.gob.cl/

CNA (Comisión Nacional de Acreditación [National Accreditation Commission]). 2010. *Guía para la evaluación externa: Acreditación Institucional Universidades e Institutos Profesionales* (*External evaluation guide: Institutional accreditation for universities and professional institutes*). Santiago de Chile: CNA.

–––. 2015. *Cuenta Pública 2014* (Account 2014). Santiago de Chile: CNA.

CNAP (Comisión Nacional de Acreditación [National Undergraduate Accreditation Commission]). 2007. *El modelo Chileno de acreditación de la educación superior (1999–2007)* (*The Chilean model of accreditation of higher education [1999–2007]*). Santiago de Chile: CNAP, Ministerio de Educación (Ministry of Education).

Decreto con fuerza de ley N° 4. 1981. *Fija normas sobre financiamiento de las universidades*. Diario Oficial de la República de Chile.

Donoso, S. 2008. *Políticas e instrumentos de financiación de estudios universitarios: Encrucijadas para el diseño de sistemas de financiamiento sustentables* (*Policies and funding instruments of university studies: Crossroads to design sustainable financing systems*). Ensaio, Set 2008, vol. 16, no. 60, p. 359–392.

––– 2013. *El Derecho a Educación en Chile: Nueva ciudadanía tras el ocaso neoliberal* (*The right to education in Chile: New citizenship through the neoliberal sunset*). Santiago de Chile: Bravo y Allende Editores.

Donoso, S.; Cancino, V. 2007. *Caracterización socioeconómica de los estudiantes de educación superior* (*Socio-economic characterization of students for higher education*). Instituto de investigación y Desarrollo Educacional (Institute of Research and Educational Development), University of Talca, Chile.

Friedman, M. 1955. 1980 '¿Qué falla en nuestras escuelas?' ('What's wrong with our schools?') In: M. Friedman and R. Friedman, *Libertad de Elegir*. Madrid: Grijalbo.

González, P. 2003. 'Estructura Institucional, recursos y gestión en el sistema escolar chileno' ('Institutional structure, resources, and management in the Chilean school system'). In: Cox, Cristián (Ed.), Políticas educacionales en el cambio de siglo (Educational policy in the new century). La reforma del sistema escolar en Chile (The reform of the school system in Chile). Santiago de Chile: Editorial Universitaria.

INE (Instituto Nacional de Estadísticas). 2012. *Nueva Encuesta Suplementaria de Ingresos 2012* (Supplementary survey of incomes). Instituto Nacional de Estadísticas. Chile.

Ipsos Chile Operaciones. 2010. *Estudio exploratorio sobre efectos de la acreditación institucional en la calidad de la educación superior en Chile* (*Exploratory study on effects of institutional accreditation on the quality of higher education in Chile*). Santiago de Chile.

Latorre, C. L.; González, L. E.; Espinoza, Ó. 2009. *Equidad en educación superior*: *Análisis de la políticas públicas de la concertación* (*Equity in higher education: Analysis of public policy coordination*). Catalonia, Santiago: Fundación Equitas (Equitas Foundation).

Lemaitre, M. J.; Maturana, M.; Zenteno, E.; Alvarado, A. 2012. 'Cambios en la gestión institucional en universidades, a partir de la implementación del sistema nacional de aseguramiento de la calidad: la experiencia chilena' ('Changes in institutional management in universities, from the implementation of the national system of quality assurance: The Chilean experience'). *Calidad en la Educación* (Quality in Education), N° 36 (Julio), 21–52.

OECD (Organisation for Economic Co-operation and Development). 2009. *La educación superior en Chile* (*Higher education in Chile*). Revisión de Políticas Nacionales de Educación (Reviews of national policies for education). OECD. Edición en español responsabilidad del Ministerio de Educación de Chile (Spanish edition responsibility of the Ministry of Education of Chile).

———. 2013. *El aseguramiento de la calidad en la Educación Superior en Chile 2013*. Revisión de Políticas Nacionales de Educación. Paris: OECD.

Rodríguez-Gómez, R. 2004. 'Acreditación ¿Ave fénix de la educación superior?' ('Accreditation: The phoenix of higher education?') In: I. Ordorika (Ed.), *La academia en jaque: Perspectivas políticas sobre la evaluación de la educación superior en México* (*Policy perspectives on the assessment of higher education in Mexico*) (pp.175–222). México City: UNAM y Miguel Ángel Porrúa.

SIES (Sistema de Información de Educación Superior). 2014. *Panorama de la educación superior en Chile, 2014* (*Panorama of higher education in Chile 2014*). SIES. División de Educación Superior (Higher Education Division), Ministerio de Educación (Ministry of Education). Chile.

University of Talca. 2011. *Plan estratégico 2015* (*Strategic plan 2015*).

———. 2014. *Informe de evaluacion interna* (*Internal evaluation report*). Proceso de Acreditación Institucional 2014 (Institutional Accreditation Process 2014).

IIEP publications and documents

More than 1,500 titles on all aspects of educational planning have been published by the International Institute for Educational Planning. A comprehensive catalogue is available in the following subject categories:

Educational planning and global issues
General studies – global/developmental issues

Administration and management of education
Decentralization – participation – distance education – school mapping – teachers

Economics of education
Costs and financing – employment – international cooperation

Quality of education
Evaluation – innovation – supervision

Different levels of formal education
Primary to higher education

Alternative strategies for education
Lifelong education – non-formal education – disadvantaged groups – gender education

Copies of the Catalogue may be obtained on request from:
IIEP, Publications and Communications Unit
info@iiep.unesco.org
Titles of new publications and abstracts may be consulted online:
www.iiep.unesco.org

The International Institute for Educational Planning

The International Institute for Educational Planning (IIEP) is an international centre for advanced training and research in the field of educational planning. It was established by UNESCO in 1963 and is financed by UNESCO and by voluntary contributions from Member States. In recent years the following Member States have provided voluntary contributions to the Institute: Argentina, France, Norway, Sweden, and Switzerland.

The Institute's aim is to contribute to the development of education throughout the world, by expanding both knowledge and the supply of competent professionals in the field of educational planning. In this endeavour the Institute co-operates with training and research organizations in Member States. The IIEP Governing Board, which approves the Institute's programme and budget, consists of a maximum of eight elected members and four members designated by the United Nations Organization and certain of its specialized agencies and institutes.

Inquiries about the Institute should be addressed to:
The Office of the Director, International Institute for Educational Planning,
7–9 rue Eugène Delacroix, 75116 Paris, France

The case study

The University of Talca (UT) is a public university in Chile that is predominantly focused on the development needs of its region. Internal quality assurance (IQA) has been part of the development strategy of the university, which has operated a comprehensive IQA system since 2009. An important feature of this system is that it is entirely mainstreamed with the different components of the university management system (strategic management, the operationalization of strategic goals through the development of plans and programmes, target agreements, and management control).

Conducted within the framework of an international research project implemented by the UNESCO International Institute for Educational Planning (IIEP), this case study focuses on how UT, as a public university, successfully mainstreamed IQA with management processes, and how this affected quality and employability at the university.

The authors

Pablo Villalobos is a Pro-rector of UT, and an academic staff member of the university's Department of Agricultural Economics. He has also worked as the Director of the Office of Institutional Planning and Analysis. His principal research areas are quality assurance in higher education institutions, strategic management and organizational leadership, and university management. He holds a PhD in Agricultural Economics from the Georg-August University of Göttingen (Germany).

Álvaro Rojas is a Rector of UT. He holds a PhD in Agricultural Science, and did post-doctoral work in Sociology and Rural Development at the Technische Universität München (Germany). His principal research areas are QA in higher education institutions, rural development, and agricultural economics.

Francisco Honorato works in the Department of Quality Management and the Office of Transparent Government at UT. He holds a bachelor's degree in Management Science and Information Technology from the university. His principal research areas include QA management systems, information systems management, innovative management models, and university management.

Sebastián Donoso is Director of the Institute for Educational Research and Development at UT. He is also an Associate Researcher at the Center for Advanced Research in Education Research Partnership Program of the National Science Council of Chile (CONICYT). His doctorate degree is in the field of education. His principal research areas are educational policies and equity in education and institutions, financing, and development of public education.

United Nations
Educational, Scientific and
Cultural Organization

International Institute
for Educational Planning