



EMPLOYERS

THE OPINION OF EMPLOYERS REGARDING THE EDUCATION RECEIVED BY GRADUATES IN CONSTRUCTION





EMPLOYERS

THE OPINION OF EMPLOYERS REGARDING THE EDUCATION RECEIVED BY GRADUATES IN CONSTRUCTION

AQU CATALUNYA, 2021

© Agència per a la Qualitat del Sistema Universitari de Catalunya

C. d'Enric Granados, 33
08007 Barcelona

The contents of this guide are covered by a Creative Commons Attribution–Non-commercial–No Derivative Works 3.0 license. Their reproduction, distribution and public communication are permitted provided that the name of the author is stated and that they are not used for commercial purposes.

For the full license, see:

<http://creativecommons.org/licenses/by-nc-nd/3.0/es/legalcode.ca>

First Edition: March 2021



With the cooperation from the sector of

enginyerscivils.cat



Col·legi d'Enginyers Tècnics
d'Obres Públiques de Catalunya

Also with the cooperation of



TABLE OF CONTENTS

INTRODUCTION	7
INDICATORS ON THE STUDY PROGRAMMES IN CONSTRUCTION	8
■ Basic data on the study programmes	8
■ Satisfaction of graduates with the university education received	11
■ Access to the labour market for graduates	13
THE OPINION OF ORGANISATIONS REGARDING THE EDUCATION RECEIVED BY GRADUATES IN CONSTRUCTION	17
■ Characteristics of the organisations surveyed	17
■ Recruitment of individuals who recently graduated in Construction	19
■ Difficulties in recruitment	23
■ Skills of recently graduated individuals	25
■ Cooperation from employers with universities	28
■ In-company training of recently graduated individuals	29
■ Forecast	30
CONCLUSIONS	31
DATA SHEET	32
DRAFTING COMMITTEE	33
ANNEX	34

INTRODUCTION

The primary goal of Agència per a la Qualitat del Sistema Universitari (AQU Catalunya) is to **contribute to the improvement of university study programmes in the Catalan university system**. To achieve this, it is essential to benefit from evidence and data making it possible to assess the functioning of each study programme with the aim of making it easier for decisions to be made by the officials in charge of the universities and study programmes and by politicians responsible for universities.

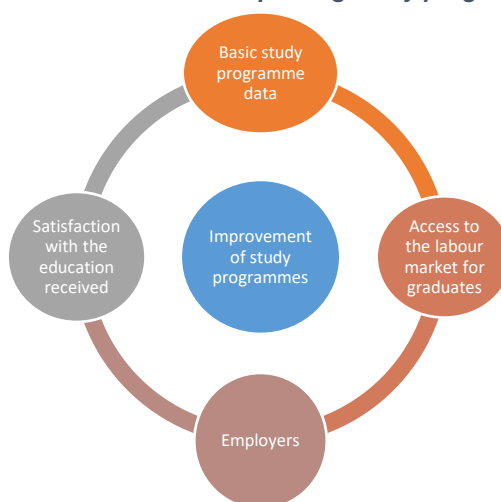
Evidence-based proposals for improving study programmes

This report sets out evidence regarding the implementation and delivery of study programmes in the field of Construction gleaned from the results of the **2018 survey on employers in this sector**. **Three groups of study programmes may be distinguished: Architecture, Building and Civil Engineering**. It is also necessary to consider that most of the **Bachelor's degrees within those groups qualify graduates in order to practice the professions regulated within these degree programmes**. The annex to this document shows the study programmes included within each group along with the regulated professions.

The survey strives to gain an acquaintance of the opinion of companies in the Construction sector regarding the education received by the recently graduated individuals they have recruited, particularly with regard to cross-disciplinary and specific skills which bear substantial margin for improvement.

In addition to these results, the report incorporates an initial section with **contextual information on the study programmes in Construction**, setting out **basic data on the study programmes** and the main results of the **surveys on the satisfaction of individuals who have recently graduated from these study programmes**, as well as the results of the survey on their access to the labour market.

Figure 1. Databases for improving study programmes



INDICATORS ON THE STUDY PROGRAMMES IN CONSTRUCTION

■ Basic data on the study programmes

The basic data on the study programmes involves administrative data taken from the UNEIX information system.

Figure 2. Indicators on the implementation and delivery of study programmes in the Architecture group (2017-2018 academic year)

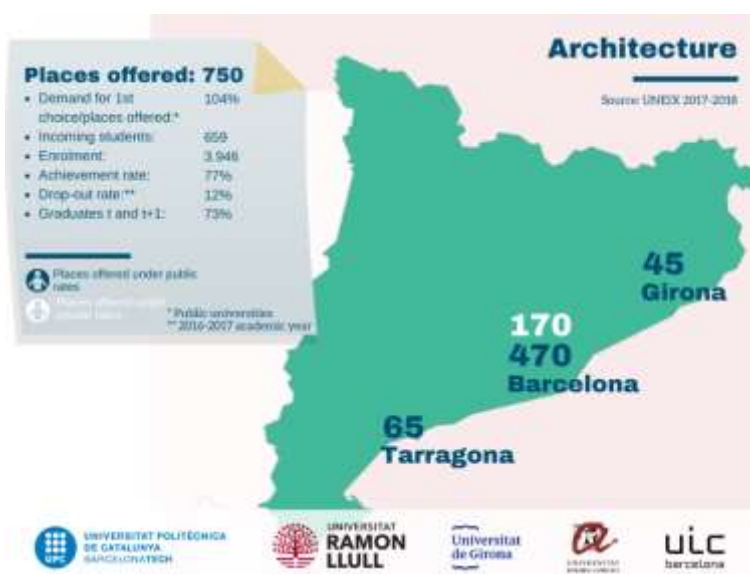


Figure 3. Indicators on the implementation and delivery of study programmes in the Building group (2017-2018 academic year)

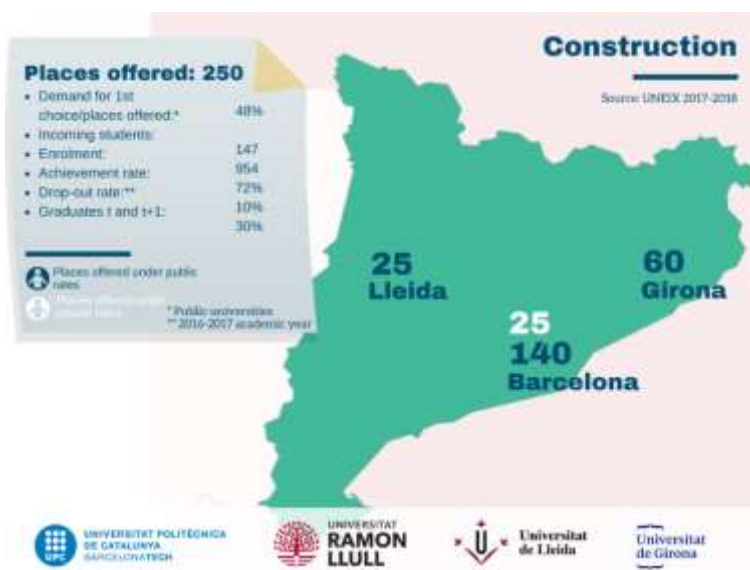
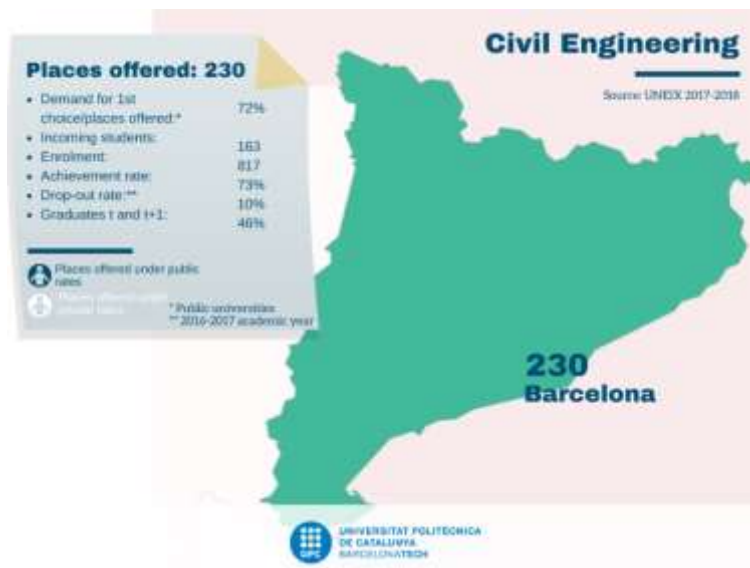


Figure 3. Indicators on the implementation and delivery of study programmes in the Civil Engineering group (2017-2018 academic year)

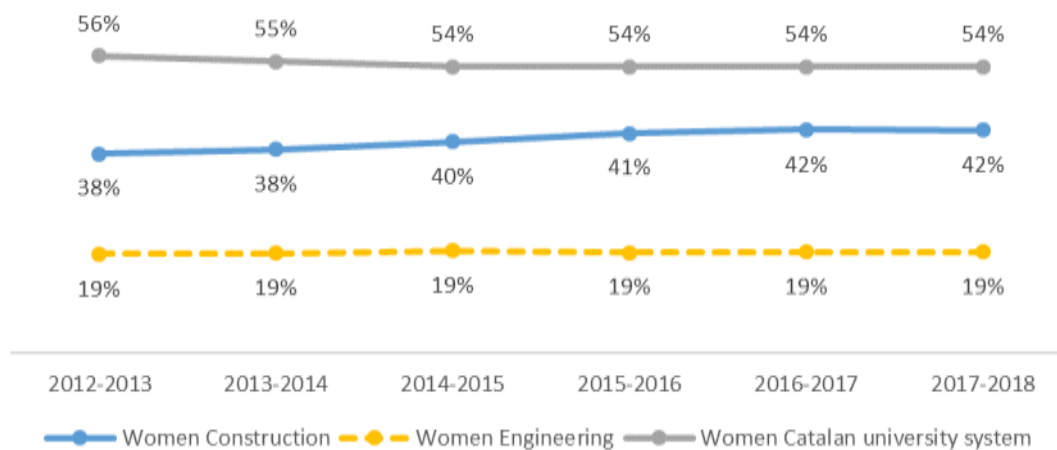


The Architecture group offers twice as many places as the other study programmes in Construction

In addition, in the case of Architecture, demand for 1st choice exceeds the places offered and the percentage of graduates qualifying in due time or due time plus one year stands at 73%.

On the other hand, in addition to experiencing a low number of places on offer, the Building and Civil Engineering groups have far lower demand for 1st choice and a far lower percentage of graduates qualifying in due time or due time plus one year than in Architecture.

Figure 5. Trend in the percentage of women enrolling on study programmes in Construction



Study programmes in Construction are female-dominated compared to the study programmes in the Engineering group

Moreover, the presence of women on the Bachelor's degrees in Construction has increased slightly over recent academic years, although it is still below the average for study programmes in the Catalan university system.

Women account for 42% of all students enrolled on the Bachelor's degrees in Construction, 8 percentage points below the average for Bachelor's degrees in the Catalan university system, although twice the percentage of women enrolled on Bachelor's degrees in Engineering as a whole.

Satisfaction of graduates with the university education received

The data regarding satisfaction with the education received stems from the **satisfaction survey** drawn up by AQU Catalunya. It sets out information on graduates' satisfaction with various characteristics of the education delivered in the university study programme they followed. It is an online survey conducted yearly on all the individuals who graduated one year earlier. The results shown are the averages for 2016, 2017 and 2018 for the respective groups and for the Catalan university system as a whole.

Figure 6. Assessment of various factors of the education delivered (from 0 to 10)

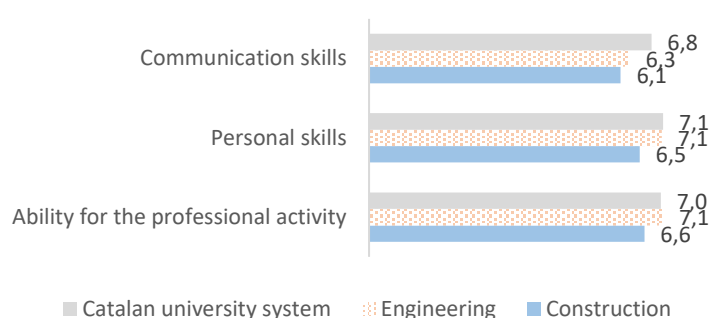


Table 1. Assessment of various factors of the education delivered according to Construction study programme group (from 0 to 10)

	Architecture	Construction	Civil Eng.
Ability for the professional activity	↑ 7,2	→ 6,2	→ 6,3
Personal skills	↑ 7,4	↓ 6,0	↓ 6,0
Communication skills	↑ 6,8	↓ 5,7	↓ 5,4

Note: the colour and direction of the arrows reflect the outcome of comparing each value and the Catalan university system average.

The satisfaction of graduates in Construction is lower than the Catalan university system average...

However, the situation changes significantly depending on the specific Construction study programme group: Architecture is given far higher ratings than the remaining study programmes in Construction for all factors reviewed, even receiving higher assessments than the average for the Catalan university system and the Engineering group. Even so, it is important to consider that Architecture is a Bachelor's degree worth 300 ECTS credits, while the remainder incorporate 240 ECTS credits.

The other Bachelor's degrees in Construction show broad room for improvement in all factors examined.

Figure 7. Usefulness of external training placements and Bachelor's degree final-year projects (from 0 to 10)

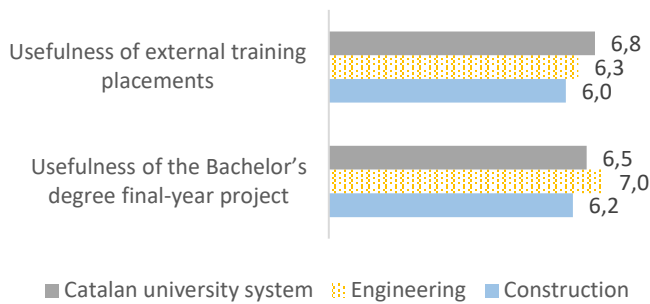


Table 2. Assessment of the usefulness of external training placements and the Bachelor's degree final-year project according to Construction study programme group

	Usefulness – final-year project	Usefulness – training placements
Architecture	5.4	7.3
Building	6.7	5.4
Civil Engineering	6.7	4.6

...and indeed their assessment of the usefulness of the Bachelor's degree final-year project and external training placements is lower

They assign an average rating of 6 for the usefulness of external training placements while the usefulness of the Bachelor's degree final-year project stands at 6.2, figures that are below the average for the Engineering group and the Catalan university system overall.

Within the study programmes in Construction, the usefulness of external training placements is noteworthy in the case of Architecture (7.3), a figure which is far above the remaining groups (which are around 5). On the other hand, the usefulness of the Bachelor's degree final-year project stands out in the case of Building and Civil Engineering, each with a rating of 6.7, far above the figure for Architecture (5.4).

Figure 8. Overall satisfaction with the study programme (from 0 to 10)



Table 3. Overall satisfaction according to Construction study programme group (from 0 to 10)

	Rating
Architecture	6.6
Building	6.1
Civil Engineering	5.9

Access to the labour market for graduates

The survey on access to the labour market is conducted every three years with the aim of finding out what the experience of graduates is when it comes to access to the labour market three years after completing their university programmes. The results shown relate to the most recent survey from 2017 and are broken down according to university and study programme. The results for the Catalan university system as a whole show the average for all degree programmes taught in Catalonia. The results are weighted by a factor that corrects possible proportional variations in the sample.

Figure 9. Employment status of graduates in 2017

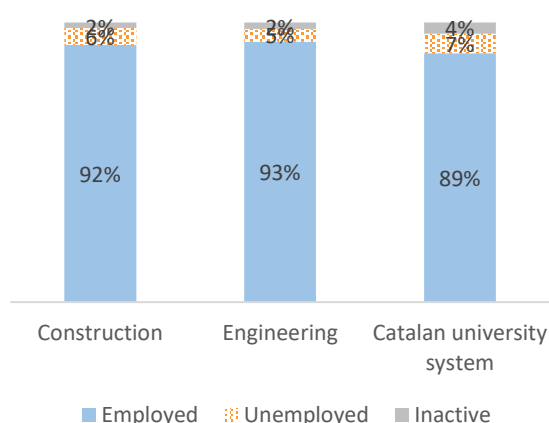


Figure 10. Percentage of graduates who do or have performed university-level functions at work in 2017

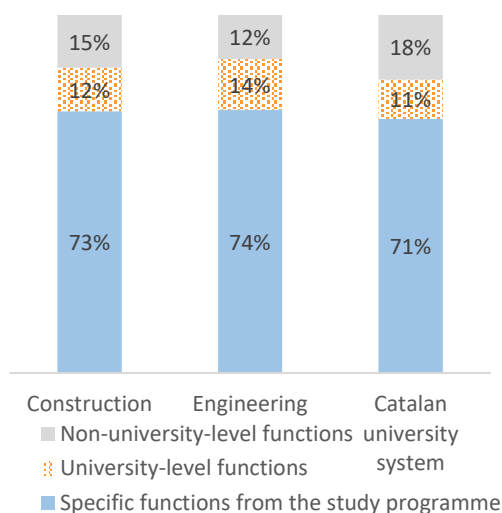


Table 4. Percentage of graduates who do or have performed university-level functions at work in 2017 according to Construction study programme group

	Specific functions	University-level functions	Non-university-level functions	Total
Architecture	83%	9%	8%	100%
Building	72%	9%	19%	100%
Civil Engineering	61%	22%	17%	100%

Almost all graduates in Construction are in work three years after completing their education, and almost 3 in every 4 perform specific functions from the study programme followed

The values are similar to the average for the Engineering group and just above the Catalan university system average.

Nevertheless, broad variations are seen in the percentage of graduates in Construction performing specific functions from the study programme: while the percentages for Architecture and Building are the same or above the average (83% and 72%, respectively), Civil Engineering exhibits a far lower percentage (61%).

Table 5. Contract type in 2017

	Construction	Engineering	Catalan university system		Architecture	Building	Civil Eng.
Permanent	41%	62%	50%		33%	41%	51%
Temporary	25%	21%	35%		17%	26%	32%
Self-employed	31%	13%	11%		47%	32%	9%
Others	4%	3%	4%		4%	1%	8%
Total	100%	100%	100%		100%	100%	100%

There are three times as many self-employed individuals among graduates in Construction than the Catalan university system average

Moreover, in the case of Architecture, self-employed people account for almost 50%.

On the other hand, the percentage of graduates in Construction with employment stability (on a permanent or open-ended contract) is below the Catalan university system average.

Figure 11. Monthly gross earnings (only those in full-time work) in 2017 (€)

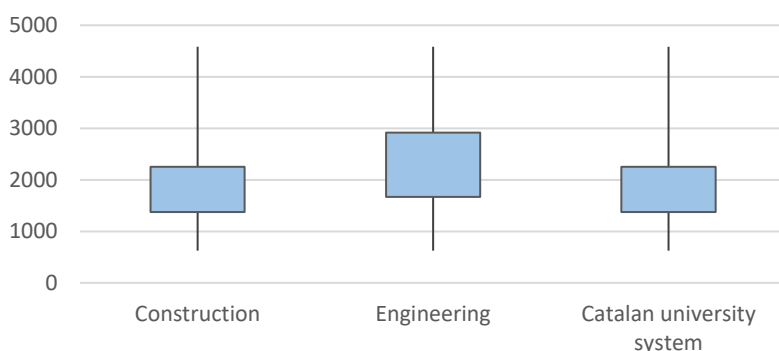
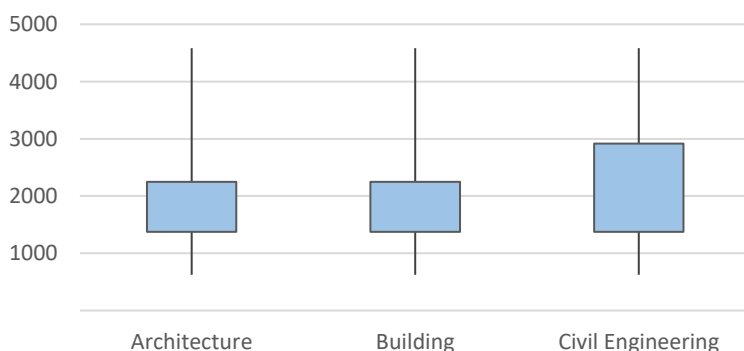


Figure 12. Gross monthly earnings (only full-time employees) in 2017 (€) according to Construction study programme group



The average salaries of graduates in Construction are on a par with the Catalan university system average, although lower than those in the Engineering group

When broken down according to the various study programmes in Construction, the salaries of graduates in Civil Engineering stand out substantially above the remainder.

Figure 13. Level of education received according to skill in 2017 (from 0 to 10)

	Construction	Engineering	Catalan university system
Theoretical training	6.4	6.7	6.8
Practical training	4.3	5.2	5.6
Oral expression	4.9	5.2	5.9
Written expression	5.1	5.3	6.3
Team work	6.7	6.8	6.8
Leadership	4.7	4.8	5
Problem solving	6.2	6.8	6.1
Decision-making	5.8	5.9	5.8
Creativity	5.7	5.2	5.2
Critical thought	6.1	6	6.5
Management	4.7	5.3	5.4
IT skills	5.1	6.1	5
Languages	2.2	3	3.7
Documentation skills	5.1	5.6	5.9

Figure 14. Level of education received according to skill and Construction study programme group in 2017 (from 0 to 10)

	Architecture	Building	Civil Eng.
Theoretical training	6.6	6.2	6.5
Practical training	5.1	3.7	4.0
Oral expression	5.1	5.2	4.2
Written expression	4.6	5.6	4.9
Team work	7.3	6.8	5.6
Leadership	5.1	4.7	4.0
Problem solving	6.3	5.6	6.9
Decision-making	6.5	5.4	5.6
Creativity	7.9	5	3.9
Critical thought	7.1	5.4	5.8
Management	4.0	5.2	4.9
IT skills	5.7	4.8	4.8
Languages	1.9	2.4	2.2
Documentation skills	4.9	5.4	5.0

Team work and theoretical training are the most highly rated skills in study programmes in Construction

When broken down according to Construction study programme group, Architecture exhibits higher skills acquisition levels than the others, particularly in terms of creativity, team work and critical thought.

When compared to Architecture and Building, Civil Engineering only stands out owing to the level of education delivered in terms of problem solving.

On the other hand, Building exhibits no particular lead in the acquisition of any skill when compared to the other two fields.

Moreover, all study programme groups lead to very poor language skills.

Figure 15. Percentage of graduates willing to take the same study programme 3 years later

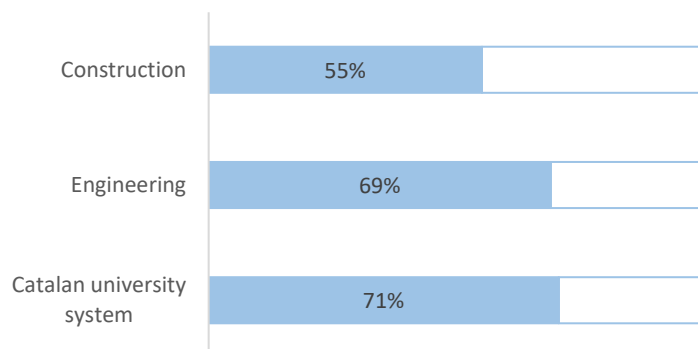


Table 6. Percentage of graduates willing to take the same study programme according to Construction study programme group

	%
Architecture	67
Building	47
Civil Engineering	52

Only 5 in every 10 individuals would take the same study programme in Construction again

The averages reported for the Engineering group and the Catalan university system overall exhibit far higher percentages (69% and 71%, respectively).

Moreover, when broken down according to Construction study programme the percentage is far higher in the case of Architecture (67%) than it is for Building (47%) or Civil Engineering (52%).

THE OPINION OF ORGANISATIONS REGARDING THE EDUCATION RECEIVED BY GRADUATES IN CONSTRUCTION

■ Characteristics of the organisations surveyed

Figure 16. Classification of organisations according to the number of workers (%)

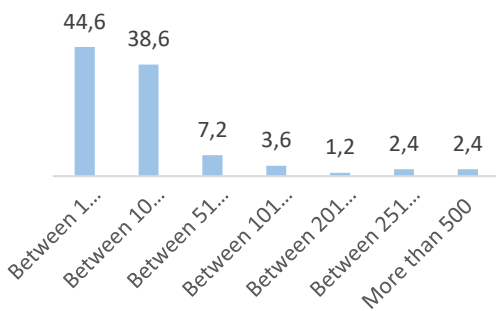
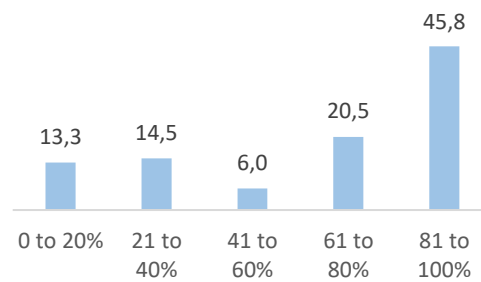


Figure 17. Classification of organisations according to the percentage of workers with a university qualification (%)



Most companies recruiting individuals who graduated in Construction are small and with qualified staff

Figure 18. Organisations that have operated in the international sphere

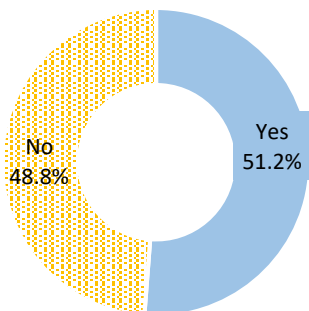
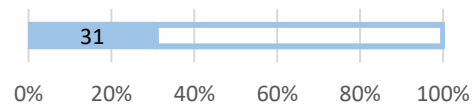


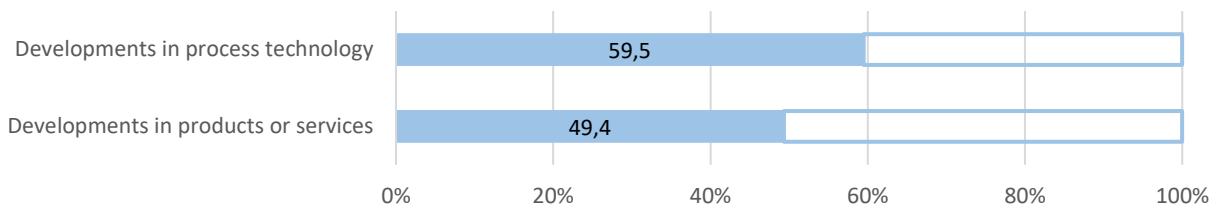
Figure 19. Percentage of sales and services in the international sphere compared to the total



Half of these organisations have ventured for internationalisation...

Around 5 in every 10 engage in relations in the international sphere and state that the international market accounts for 31% of their total sales and services on average. This proportion is lower than other similar sectors, such as production engineering.

Figure 20. Organisations that have introduced developments in process technology and/or in products or services (%)



Note: “Developments in process technology” refer to major changes in process technology: new machinery or software, new forms of management (just-in-time production, quality and/or knowledge management). Also, “developments in products or services” refer to products or services that are completely new on the market or to the company (or substantially enhanced products or services).

...and for innovation

60% state that they have incorporated major changes in their process technology, i.e., new equipment or software and/or new forms of management. Moreover, 50% have released new products or services onto the market or incorporated them into the company.

■ Recruitment of individuals who recently graduated in Construction

Table 7. Number and percentage of organisations that have recruited individuals who recently graduated according to Construction study programme group

Groups	<i>n</i>	%
Architecture	36	43.4
Building	27	32.5
Civil Engineering	20	24.1
Total	83	100

Table 8. Business activity of the employer

Sector	%
Agriculture, livestock farming, forestry and fishing	1.2
Electricity, gas and water	1.2
Construction	49.4
Transport and storage	1.2
Real estate activities	2.4
Professional, scientific and technical activities	36.1
Administrative activities and ancillary services	2.4
Public administration	1.2
Others	4.8
Total	100.0

Companies that recruit individuals who recently graduated in Construction primarily belong to the construction sector

Secondly, 36% are companies in the professional, scientific and technical activities sector (largely consultancy firms).

Figure 21. Relevance of higher education in the recruitment of individuals who recently graduated (%)

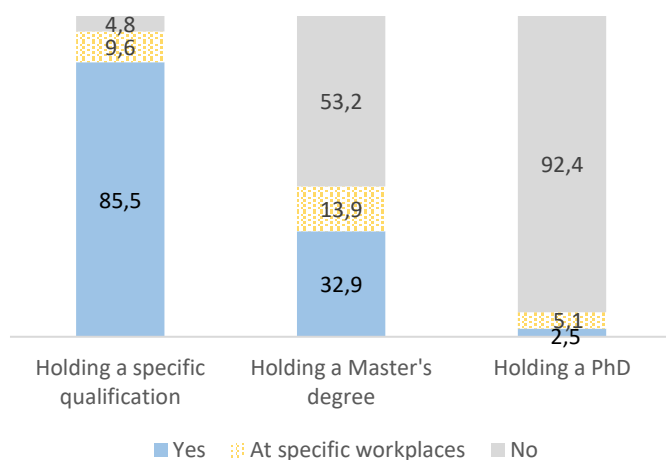
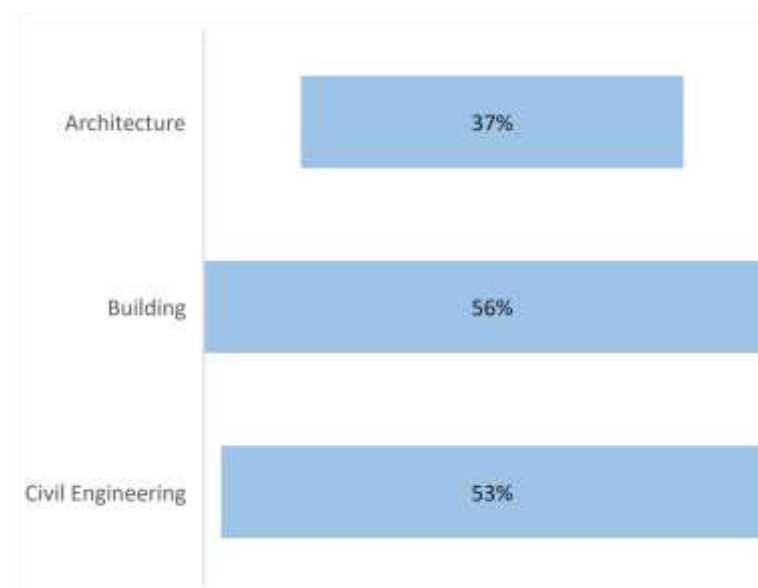


Figure 22. Relevance of the Master's degree in the recruitment of individuals who recently graduated according to Construction study programme group



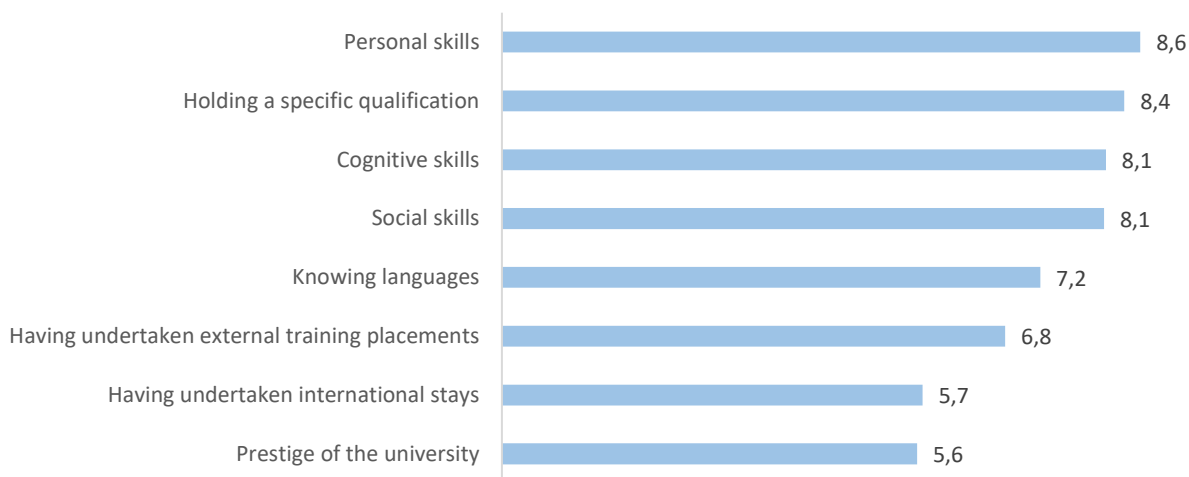
Specific Bachelor's degree education is important to most organisations

It should be borne in mind that most professions in this sector are regulated; hence, completing the specific study programme is a vital prerequisite to be able to practice the profession.

Certain Master's degrees also qualify the student to perform regulated professions, as is the case with architects, mining engineers or civil engineers, for example. Nevertheless, it is striking that only 37% of the organisations recruiting individuals who graduated in Architecture deem the Master's degree to be an advantage. They may in fact still be unaware that since the implementation of the Bologna process, the Master's degree is a requirement in order to be able to practice the profession (while this was not true of the Pre-Bologna Bachelor's degree).

Lastly, the data points to the fact that the PhD holds no relevance when it comes to recruitment in this sector.

Figure 22. Relevance of certain factors in the recruitment of individuals who recently graduated (from 0 to 10)

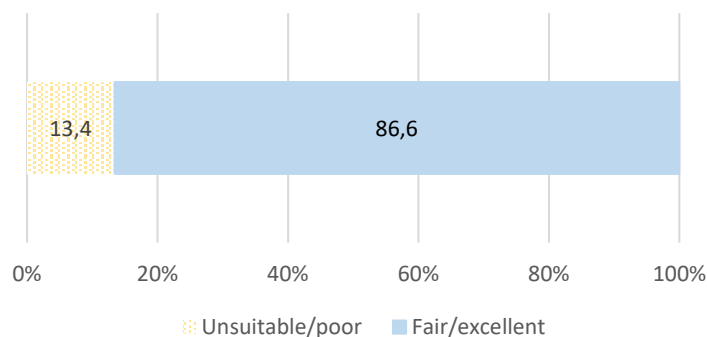


Personal, social and cognitive skills, along with holding a specific qualification, are the most highly valued factors when it comes to recruitment

These factors are the foremost aspects reported in all Construction study programme groups (the breakdown is not shown on the graph).

The remaining factors – having undertaken international stays or the prestige of the university – are less important to recruitment, although the scores are above 5 in all cases.

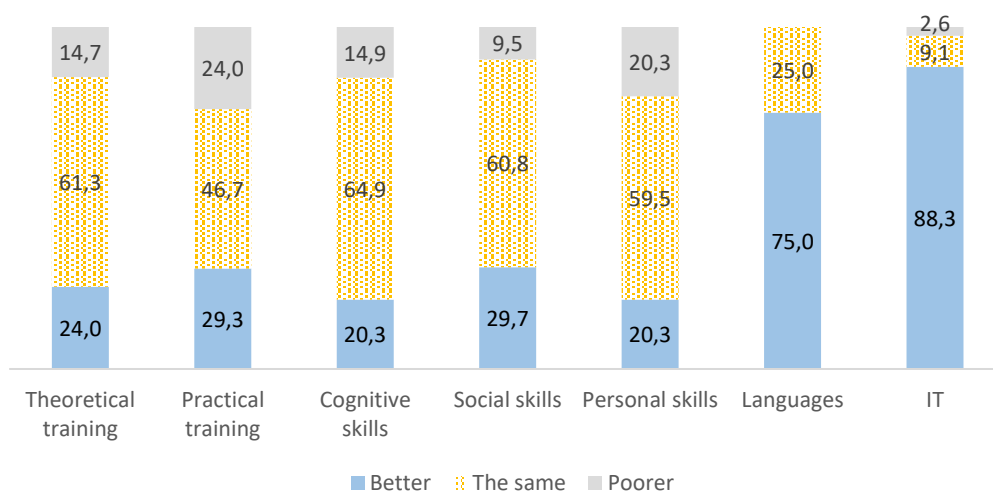
Figure 21. Suitability of individuals who recently graduated in Construction to the needs of the workplace (%)



Individuals who graduate in Construction are well suited to the workplace

87% of all companies surveyed consider that the individuals graduating in Construction are suited to the needs of the workplace. This proportion is similar to the Production Engineering sector.

Figure 25. Trend in the current education received in Construction compared to that received 5 and 10 years ago (%)



The education received in Construction shows an improvement in terms of languages and IT skills in recent years

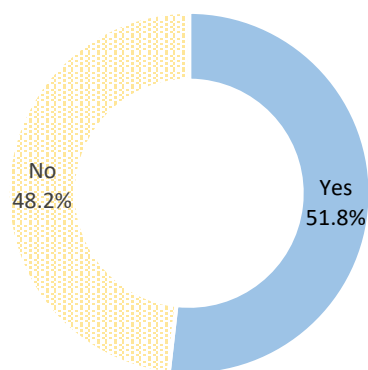
75% of companies consider that language skills have improved while 88% consider this to be true of IT skills. These are the two skills for which the greatest improvement is reported in the remaining sectors also.

Furthermore, more than half of the organisations surveyed feel that the education received by graduates in Construction in terms of theoretical and practical training and cognitive skills (problem solving, critical thought, creativity, etc.), social skills (adapting to a working group, emotional intelligence, etc.) and personal skills (responsibility, initiative, autonomy, etc.) has remained constant.

24% of the organisations surveyed report a decline in the practical training of the individuals they have recruited, and when broken down this percentage is higher in the case of Building (28%) than it is for the other groups (the breakdown is not shown on the graph).

■ Difficulties in recruitment

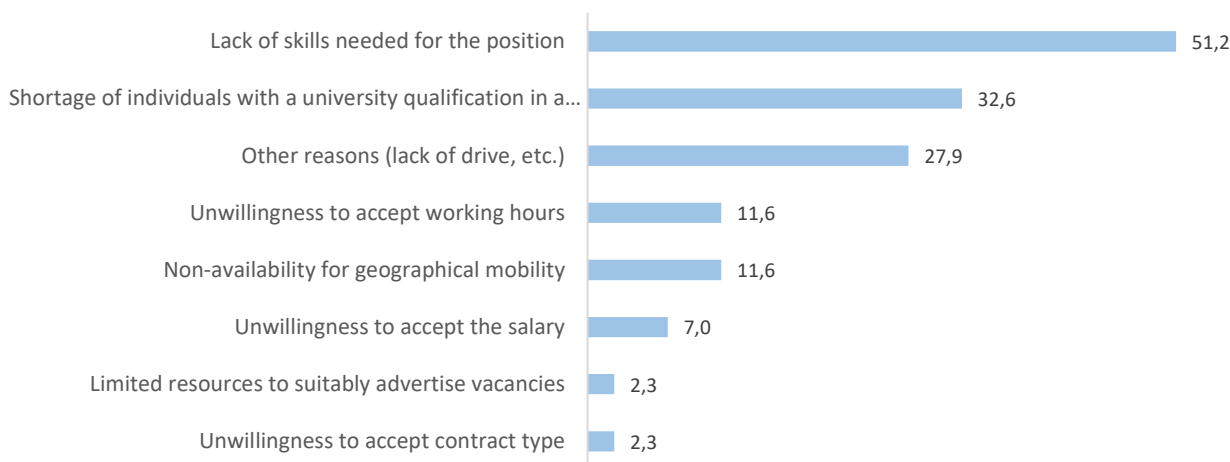
Figure 26. Organisations that encountered difficulties in recruiting staff with suitable profiles (%)



Around 5 in every 10 organisations report having encountered difficulties in recruitment

This statistic is slightly higher than the value obtained in the employers' study from 2014 for the production sector overall (42%), although it is below most of the sectors reviewed in the survey from 2018, such as Tourism (70%) and Production Engineering (67%), etc.

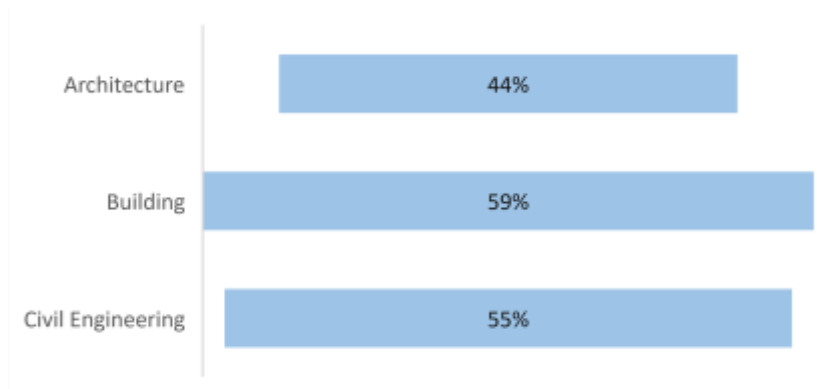
Figure 27. Reasons for difficulties in recruiting staff with suitable profiles (% of organisations)



These difficulties are due to lack of skills needed for the position and a shortage of graduates in a specific field

52% of companies that encountered difficulties in recruitment state that the candidates lacked the necessary skills for the position, as is the case with most of the remaining sectors reviewed. One distinguishing factor is that 33% of organisations report a shortage of graduates in a specific field.

Figure 28. Organisations that encountered difficulties in recruiting staff with suitable profiles depending on the field from which the graduates are recruited



Difficulties in finding suitable profiles are greater in the case of organisations recruiting individuals who graduate from study programmes in the Building group

To be precise, almost 6 in every 10 of these organisations report having encountered difficulties.

■ Skills of recently graduated individuals

Table 9. Cross-disciplinary skills that should be improved in study programmes in Construction

	Total % of organisations
Documentation	1.8
Numerical skills	1.8
Use of most common IT tools	10.7
Theoretical training	12.5
Languages	16.1
Oral expression	17.9
Leadership	21.4
Team work	21.4
Negotiation skills	25.0
Written expression	26.8
Capacity for learning and self-learning	26.8
Autonomous work	26.8
Responsibility at work	33.9
Ability to offer new ideas and solutions	53.6
Practical training	55.4
Problem solving and decision-making	64.3

Problem solving and decision-making is the key skill that needs to be improved in study programmes in Construction

Indeed, 64% of organisations assert this, while 50% call for improvements in education with regard to practical training and the ability to offer new ideas and solutions.

It should be pointed out, however, that improvements tend to be reported as necessary with regard to these cross-disciplinary skills in most study programmes in Catalonia.

Moreover, the level of competency is suitable in many areas, such as numerical skills, documentation and IT skills.

Table 10. Specific skills that should be improved in study programmes in Construction

	Percentage of companies
Performance of analyses, assessments and certifications of energy efficiency and sustainability studies on buildings	8.7
Rendering of spaces and objects	10.9
Performance of technical calculation activities, measurements, valuations, appraisals and economic feasibility studies	19.6
Drafting of occupational health and safety plans and studies	19.6
Design of a works project, considering both functional and aesthetical aspects of buildings, spaces, etc.	21.7
Knowledge and application of urban development regulations (purchase, sale, use and development of land, works project control, legal planning, health and safety, etc.)	23.9
Drafting of preliminary and final construction or refurbishment projects	39.1
Coordination of the companies involved, both during planning and execution	39.1
Competence in the use of digital information systems (such as BIM ¹ and GIS)	43.5
Ability to direct and manage teams	50.0
Ability to manage construction or refurbishment projects	52.2
Ability to oversee financial management of the works	52.2

In terms of specific skills showing room for necessary improvement, financial, project and team management all stand out

These are followed by competence in the use of digital information systems (such as BIM), coordination of the companies involved, and drafting of preliminary and final projects.

¹ Building Information Modelling (BIM) is a collaborative working methodology for the creation and management of a construction project.

Figure 29. Satisfaction of employers with the skills of individuals who recently graduated in Construction (from 0 to 10)



Marked satisfaction with the skills of individuals who recently graduated in the field of Construction

Despite there being scope for improvement in the education received, companies are generally satisfied with the skills of the individuals who recently graduated they have recruited. Their overall degree of satisfaction stands at 7.1. This value is in keeping with the overall satisfaction of employers observed in other sectors analysed. The level of satisfaction is higher in relation to graduates in Civil Engineering (7.4) and Architecture (7.2) than it is in Building (6.7).

■ Cooperation from employers with universities

Figure 30. Extent to which organisations cooperate with universities according to the type of activity (%)

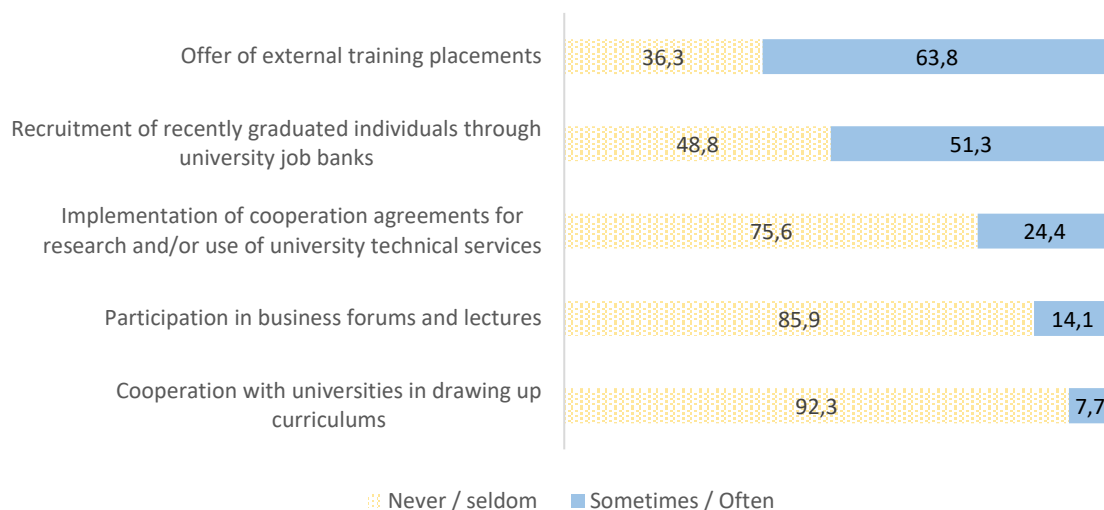


Figure 31. Areas for improvement in job banks or training placements organised by universities (% of organisations)

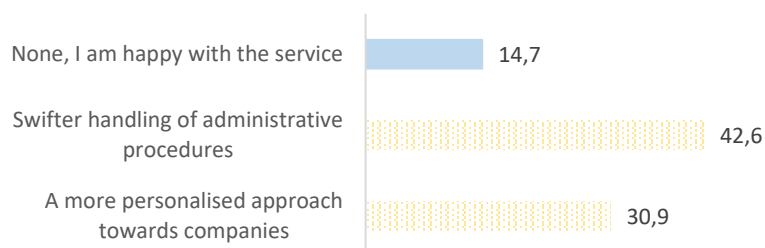


Figure 30. Satisfaction with job bank services or training placement services (on a scale of 0 to 10)



University activities in which businesses are most involved are linked to job banks and training placements

As with the other sectors reviewed in the employers' study from 2018, the activity in which companies and universities are most closely engaged relates to training placements offered to students (with 64% of companies taking part) and job banks (51%).

Room for improvement in satisfaction with the job bank and training placement services

The level of satisfaction among those who used these services stands at 6.9, lower than in other sectors examined in the employers' survey from 2018. They do believe there is scope for speeding up administrative procedures and for gaining a better acquaintance of companies' needs.

In-company training of recently graduated individuals

Figure 33. Organisations funding training for individuals who recently graduated

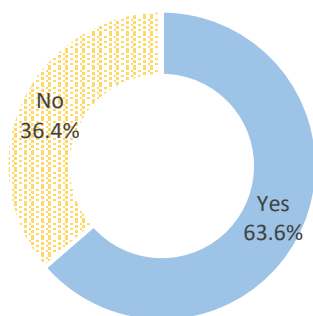


Table 11. Type of training funded by organisations

	%
On-the-job training	60.4
Training during working hours	68.8
Off-the-job training	47.9

Figure 34. Reasons for funding training (%)



More than half of companies fund training for the individuals they have recruited and who have recently graduated

Almost 7 in every 10 offer training during working hours. For most companies, the goal of this training is to improve individuals' specific knowledge of the Construction sector.

Forecast

Figure 35. Trend in qualified employment in the sector

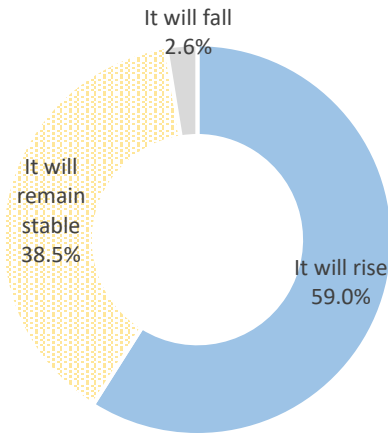


Table 12. Reasons for the increase in employment

Reasons	%
Company expansion	78.3
Organisational or technological changes	15.2
Staff rotation	8.7
Others	8.7

Note: multiple response

Figure 36. Skills that will gain importance in the field of Construction*



Figure 37. Most important areas of employment in the Construction sector*



*These are open questions. Responses with the same meaning have been grouped into categories. Categories referred to 4 times or more are shown.

Good prospects for organisations in the Construction sector: 6 in every 10 envisage growth in qualified employment

Skills relating to BIM, languages, management, flexibility, team work and social skills will gain importance in the future.

Moreover, the foremost areas of employment in the coming years will primarily be for specialist technicians.

CONCLUSIONS

- Lower levels of satisfaction with the usefulness of external training placements and the Bachelor's degree final-year project are reported in relation to graduates in Construction compared to the remaining study programmes in the Catalan university system. More specifically, the Architecture group exhibits substantial room for improvement when it comes to the usefulness of the Bachelor's degree final-year project, while the remaining Construction study programmes reveal the need for improvement with respect to the usefulness of external training placements.
- Access to the labour market is good for graduates in Construction (slightly better than the Catalan university system average) as is the percentage performing functions from their specific study programme. Nevertheless, it is necessary to take into consideration that in the case of the latter factor, the percentage is far lower among the Civil Engineering group (scarcely above 50%). Most experience employment stability or are self-employed, and they benefit from salaries on a par with the Catalan university system average.

Organisations that recruit graduates from the field of Construction have the following characteristics:

- Most companies recruiting in this sector are SMEs employing qualified staff. Almost half have ventured for internationalisation and have incorporated innovations (both in terms of technology and with regard to their products and services). Moreover, they belong to the construction and to the professional, scientific and technical activities (consultancy firms) sectors.
- When it comes to recruitment, since many of the professions are regulated, almost all organisations value the specific study programme for recruitment.
- Half of the organisations surveyed have encountered difficulties in recruiting staff with suitable profiles, mainly due to the fact that candidates lacked the necessary skills for the position and owing to a lack of graduates.

With regard to university education:

- In terms of cross-disciplinary skills, problem solving and decision-making show the greatest need for improvement, as is the case with other sectors. The need for improvement is also evident in relation to practical training and creativity.
- In terms of specific skills for the construction sector, almost half of the organisations surveyed report that they believe improvements are necessary with regard to the ability for financial, project and team management.
- Despite these areas for improvement, employers are satisfied with the skills of the recently graduated individuals they have recruited (at 7.1 out of 10).
- As with other sectors reviewed, the activity in which companies and universities are most closely engaged relates to external training placements offered to students (with 64% of the companies surveyed taking part).
- Around 6 in every 10 organisations envisage growth in qualified employment owing to company expansion.
- Skills relating to BIM, languages, management, flexibility, team work and social skills will become most important in the coming years according to what the organisations surveyed report.
- In terms of the trend in employment, increasingly important areas will be all those related to specialist technicians.

DATA SHEET

Survey for employers

Population	Organisations that may have potentially recruited individuals who recently graduated from universities in Catalonia in the past 3 years ²
Survey period	Online survey: from 26/02/2018 to 16/03/2018 Telephone survey: from 27/06/2018 to 5/07/2018
Survey type	Online and over the telephone
Average time taken	Telephone survey: 14' 59"

	Population	Sample
Organisations potentially from the Construction sector	N/A	83
Total contactable organisations	30,018	

Survey on satisfaction (2018)

Degree programme (graduates from 2016, 2017 and 2018)	Population	Sample	Response rate	Sample error
Architecture	837	252	30.1%	5.2%
Building	719	220	30.6%	5.5%
Civil Engineering	526	171	32.5%	6.3%

Survey on access to the labour market (2017)

Degree programme (graduates from 2013)	Population	Sample	Response rate	Sample error
Architecture	515	228	44.3%	4.8%
Building	613	347	56.6%	3.5%
Civil Engineering	368	200	54.3%	4.8%

² Most contacts with organisations stem from Catalan universities' job banks.

DRAFTING COMMITTEE

Editor

Sandra Nieto Viramontes

Project manager, Internationalisation and Knowledge Generation
Department

Contributors

Martí Casadesús Fa

Director

Anna Prades Nebot

Project manager, Internationalisation and Knowledge Generation
Department

ANNEX

RELATED STUDY PROGRAMMES

Group	Degree programme	Bachelor's degree	Status	Universities
Architecture	Architecture	Architecture	Currently delivered	URV, UIC
		Architecture	Being phased out / phased out	UPC, UdG, URL
		Architecture Studies	Currently delivered	UPC, UdG
		Architectural Studies	Currently delivered	URL
		Landscape Architecture	Currently delivered	UPC
Building	Architectural Technology and Building Construction	Building Engineering	Being phased out / phased out	UdG, UdL
		Building Science and Technology	Being phased out / phased out	UPC, URL, UPF
		Architectural Technology and Building Construction	Currently delivered	UPC, UdG, URL, UdL
Civil Engineering	Mining Engineering	Mining and Energy Resources Engineering	Being phased out / phased out	UPC
		Mineral Resources Engineering	Being phased out / phased out	UPC
		Mining Engineering	Currently delivered	UPC
	Public Works Engineering	Public Works Engineering	Being phased out / phased out	UPC
		Management of Smart and Sustainable Cities	Currently delivered	UAB
	Geomatics and Surveying Engineering	Geomatics and Surveying Engineering	Being phased out / phased out	UPC
	Civil Engineering	Civil Engineering	Being phased out / phased out	UPC
		Civil Engineering	Currently delivered	UPC
		Civil Engineering Technologies	Currently delivered	UPC
	Geological Engineering	Geological Engineering	Being phased out / phased out	UPC

LINK BETWEEN REGULATED PROFESSIONS AND THE BACHELOR'S DEGREES CURRENTLY DELIVERED PROVIDING THE RELEVANT QUALIFICATION

Regulated profession	Currently delivered qualifying Bachelor's degree	Universities
Architect	Architecture	URV, UIC
	Architecture Studies (+ Master's degree)	UPC, UdG
	Architectural Studies (+ Master's degree)	URL
Technical Architect	Architectural Technology and Building Construction	UPC, UdG, URL, UdL
Technical Engineer in Mines	Mining Engineering	UPC

The opinion of employers regarding the education received by graduates in Construction

Technical Engineer in Public Works	Civil Engineering	UPC
Technical Engineer in Land Surveying	Geoinformation and Geomatics Engineering (ICTs)	UPC

The opinion of employers regarding the education received by graduates in Construction

