

2017 ACCESS TO THE LABOUR MARKET FOR GRADUATES FROM CATALAN UNIVERSITIES





Agència per a la Qualitat del Sistema Universitari de **Catalunya**

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Agència per a la Qualitat del Sistema Universitari de **Catalunya**

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INTRODUCTION

The aim of this study on access to the labour market is to provide a host of information and data on the quality of access to the labour market experienced by Catalan university graduates. The goal is to encourage reflection and improvements to the degree programmes run by Catalan universities.

This ambitious project – in its 6th edition in 2017 – has been conducted thanks to the engagement of the social councils of Catalan public universities, private universities and attached centres, as they envision this instrument to be a distinguishing trait that fosters continual improvement in universities, aligning them closer with society's demands.

The survey asks questions on factors linked to employment (employment/unemployment, time taken to find the first job, pathways to work, field of work, employment sectors, etc.); quality of employment (if employment is found in the field studied, functions performed, contractual stability, yearly earnings, job satisfaction, etc.); and satisfaction in relation to the study programme followed (skills acquired, usefulness in the job, willingness to take the same programme again, mobility, etc.).

Over all six editions of the study more than 100,000 records have been produced meaning that **Catalonia has one of the largest, most comprehensive and representative databases in Europe**. In this edition, more than 50% of the target population have been surveyed (qualified Bachelor's degree graduates from the 2012-13 academic year, with the exception of graduates of medicine who are from 2009-10; qualified Master's degree graduates and PhD graduates from the 2011-12 and 2012-13 academic years).

If we sum up the content of this report, we may draw the following primary conclusions:

- The employment rate shows a recovery, as indeed does the suitability rate (i.e., the number of individuals in work performing university-level functions), due to the economic upturn.
- The employment conditions of university graduates have stagnated (type of working day, contractual stability, etc.), with the exception of remuneration which has increased and job satisfaction among qualified graduates who perform university-level functions.
- The speed with which graduates find work has improved. The main pathways to work include contacts and the Internet.
- Working abroad is still by no means a widespread option, accounting for only 3.6% of graduates.
- Skills training has generally improved since 2005.
- The Bologna Bachelor's degrees have brought about enhanced skills acquisition, particularly in relation to languages even though this particular skill is still a "pending subject".
- There has been an increase in the time spent in education by means of postgraduate programmes, Master's degrees, PhDs or other choices.

This report is supplemented with invaluable information obtained from the UNEIX Catalan university information system, coordinated by the Secretariat for Universities and Research of the Autonomous Government of Catalonia, and with data from the National Statistics Institute in order to include points of reference in the results obtained.

I invite you to carefully study the results that can be found on the WINDDAT (<u>http://winddat.aqu.cat/</u>) and EUCdades (<u>http://estudis.aqu.cat/dades</u>) platforms.

Your interest is greatly appreciated.

Martí Casadesús Fa, AQU Catalunya director

POPULATION DATA

Trend in the graduate population in Catalonia

Figure 1. Trend in the graduate population (former study plans and EHEA plans)

Note: UNEIX – the source of this data – has been compiling information from private universities and distance universities since the 2011-12 academic year.



The number of graduates has risen in recent years

- **3** in every 4 follow a study programme at a public university.
- Over a period of 4 academic years the timeframe for the implementation of the Bologna study plans the number of graduates has increased from 30,604 to a total of 33,936. To be precise, this increase has taken place within public universities.

The graduate population, fields and system

Figure 2. The graduate population according to educational field and gender (2015-16 academic year, only EHEA Bachelor's degrees of all universities)



Figure 3. Difference between Bachelor's degrees and doctoral programmes in terms of the percentages following the various educational fields (2015-16 academic year, only EHEA Bachelor's degrees of all universities)



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Almost half of graduates qualify in the social sciences

- The proportions of graduates in the fields of humanities and experimental sciences are each below 10% (9 and 7%) of the total.
- 60% of the graduate population are women. Women form a majority in all fields with the exception of engineering where they account for 26%.
- The percentages following the various educational fields change greatly for doctoral programmes: social sciences no longer constitute the most popular field, while humanities and experimental sciences (the most scholarly fields) hold a higher share of the total at doctoral level.

Figure 4. Educational fields according to type of university (2015-16 academic year, only EHEA Bachelor's degrees of all universities)



Private universities are more widely represented in professionallyoriented fields such as health and social sciences

Figure 5. Foreign graduate population according to country (2015-16 academic year)



4.4% of the graduate population are foreign nationals

Of the total number of foreign graduates, 21% are from France, 9% from Andorra and 8% from Italy. The remaining 62% are distributed among more than 80 countries.

THE SURVEY ON THE ACTIVE POPULATION IN SPAIN (APS)¹

Access to the labour market according to education level

Figure 6. Percentage of the population who are employed, unemployed or inactive² according to education level (people aged 25-44 years – APS, 1st quarter 2017)



The higher the education level, the better the access to the labour market

- Pursuing a higher (vocational or university) education clearly enhances employability and saves individuals from unemployment.
- Spain is one of the OECD countries where this distinction is far greater. According to the OECD, the difference in the levels of unemployment among people who pursue the highest education level and those who only follow the lowest in Spain is 28 pp, while the average difference for all OECD countries is of an average 7 pp (OECD, 2016).

¹ Source: National Statistics Institute

² Each indicator is calculated with regard to the overall population in each education level.

Trend in the employment rate



Figure 7. Trend in the employment rate according to education level (people aged 25-44 years – APS, 1st quarter 2017)

The employment rate shows a recovery for all education levels compared to 2014

- The employment rate for individuals with a higher education shows a 5 pp increase over the past three years and now stands at 82%.
- The difference in the employment rate according to education levels which rose during the recession, reaching 36 pp in 2014 – shows a slight fall with the figure standing at 33 pp in 2017.
- Therefore, the current economic upturn has favoured access to the labour market for the population with the differences between the various education levels falling.
- Even so, the circumstances are far from reaching pre-recession levels when the difference in the employment rate between those who only had a primary education and those with a higher education qualification was 23 pp.

THE SURVEY ON ACCESS TO THE LABOUR MARKET 3 YEARS AFTER GRADUATION³

Employment

Table 1. Employment situation according to educational field in 2017 (public and private university system)

	Employed	Unemployed	Inactive
Humanities	82.6%	11.2%	6.2%
Social sciences	89.7%	6.1%	4.2%
Experimental sciences	84.7%	9.3%	6%
Health sciences	89.5%	6.1%	4.4%
Engineering	93.2%	4.6%	2.2%
Total	89.3%	6.6%	4.2%

Figure 8. Trend in employment situation (public system)³



Almost 9 in every 10 are in work

- Employment has witnessed almost a 5 pp increase in 3 years. Unemployment has dropped by the same percentage.
- The rise is higher for engineering (6 pp) and humanities (8 pp).
- The explanation for this lies particularly in the employment recovery seen in the sub-fields of philosophy and history (by 15 pp), and architecture (by 14 pp), which showed unemployment percentages in 2014 that were well above the average (26% and 17%, respectively).

³ Private universities were incorporated into the study on access to the labour market in 2011. As a result, all figures and tables showing trends with an edition prior to 2011 will only be showing information on the public university system. On the other hand, all figures and tables from 2017 and those showing the trend between 2011 and 2017 will include data on the public and private university system.

	2008	2011	2014	2017	Var. 2017-08	Var. 2017-14
Humanities	88.4%	81.0%	73.1%	81.5%	-6.9	+8.4
Social sciences	93.5%	89.5%	85.2%	89.5%	-4.0	+4.3
Experimental sciences	90.5%	86.3%	78.9%	84.2%	-6.3	+5.3
Health sciences	95.1%	90.4%	85.0%	88.3%	-6.8	+3.3
Engineering	95.3%	88.0%	86.6%	93.1%	-2.2	+6.5
Total	93.3%	88.2%	83.9%	88.7%	-4.6	+4.8

Table 2. Change in the working population between 2008 and 2017 according to educational field





Improved employment in virtually all sub-fields since 2014

- 10 of the 17 sub-fields show an improvement in the employment rate compared to 2011.
- However, 7 sub-fields are still below 2011 levels; for example, sub-fields more closely linked to the public sector such as education, as well as others such as law, labour and politics, biological and earth sciences, psychology and therapy, and arts and design.

Unemployment

Figure 10. Importance of the reasons why graduates do not find work (on a scale of 0 to 10)



Figure 11. Time taken to find work



Long-term unemployment down since the highs seen in 2014

- 7 in every 10 graduates who are unemployed have been looking for work for less than six months. 1 in every 10 have been looking for more than two years.
- For 7% of graduates who are unemployed, the main reasons for not finding work include seeking a fulfilling job, lack of experience and low salaries.

Are graduates employed in the public or private sector?

Figure 12. Trend in employment according to sector



Table 3. The 8 sub-fields with the largest variation in the population employed in the public sector between 2014 and 2017

	2014		2017		
	n	%	n	%	pp difference
Education	747	37.9%	841	53.2%	+15.3
Agriculture, forestry and fishing	44	17.3%	54	26.0%	+8.7
Nursing and health sciences	412	31.2%	446	37.3%	+6.1
Languages and literature	98	21.9%	163	27.7%	+5.8
Experimental sciences and mathematics	112	32.9%	99	29.0%	-3.9
Arts and design	27	11.7%	35	6.9%	-4.8
Law, labour and politics	428	26.6%	332	20.3%	-6.3
Communication and documentation	145	16.7%	88	10.1%	-6.6

Employment in the public sector witnesses stagnation

- 8 in every 10 work in the private sector.
- The level of public employment at present (25%) is far from pre-recession levels (33%).
- Public sector employment in 2017 ranges from 35% in the health field to 11% in engineering.
- An increase has been seen between 2014 and 2017 in key sectors: education (+15 pp) and nursing and health (+6.1 pp). However, other sectors show a fall: communication and law, labour and politics.

	2014		2017		
	n	%	n	%	pp difference
Industry	1,924	12.3%	2,301	15.0%	+2.7
Information and communication	303	1.9%	508	3.3%	+1.4
Consumer services	2,396	15.3%	2,534	16.5%	+1.2
Construction	541	3.5%	676	4.4%	+0.9
Financial institutions, insurance, real estate	676	4.3%	795	5.2%	+0.9
Raw material and energy production	408	2.6%	427	2.8%	+0.2
Communication technologies	694	4.4%	659	4.3%	-0.1
Public administration	724	4.6%	541	3.5%	-1.1
Education, culture and research	3,339	21.4%	3,008	19.6%	-1.8
Social care and health	2,515	16.1%	2,187	14.2%	-1.9
Business services	2,090	13.4%	1,735	11.3%	-2.1

Table 4. Trend in the branch of employment between 2014 and 2017

What type of job are they doing?

Figure 13. Level of skills linked to employment according to the National Employment Classification (CNO-11)⁴



8 in every 10 are in employment involving a high skills level

A recovery is seen in the construction sector, although the proportion of those employed in the public administration, health and education sectors is falling.

⁴ Employment groups 1-3 in the CNO-11 are in the employment category involving a high skills level; the groups within categories 4 and 8 call for a medium skills level; and, lastly, group 9 comprises the employment category requiring a low skills level.

Suitability

2

Figure 14. Suitability of functions at work in 2017

7 **AND** in every 10 perform functions linked to the degree programme

in every 10 perform university-level functions

in every 10 perform non-university functions

8 in every 10 perform university-level functions

- 7 of these perform functions specifically linked to the degree programme. The greatest proportion of specifically-linked functions is performed in the health field (81%) while the lowest is in the field of humanities (50%).
- Humanities constitutes the field where graduates perform non-university functions to the greatest extent (33%).



Figure 15. Suitability of functions at work according to educational field in 2017

Non-university functions









The total number of those graduates in work who perform university-level functions shows a recovery

- After an upward trend since 2001, the results for 2014 showed a reduction of 7 pp in the proportion of those graduates in work performing university-level functions.
- The data from 2017 shows a 4 pp improvement, albeit still short of the peak reached in 2008.

⁵ Methodological note: in order to enable the comparison, the 2017 variable has been standardised according to the 2014 model.

EMPLOYMENT CONDITIONS

Job stability

Table 5. Contract type according to educational field in 2017

	Open-ended	Temporary	Self-employed	Scholarship	No contract
Humanities	38.8%	39.6%	15.2%	3.7%	2.6%
Social sciences	54.0%	34.5%	8.8%	2.1%	0.6%
Experimental sciences	38.4%	44.7%	3.6%	11.8%	1.6%
Health sciences	36.6%	46.2%	13.3%	3.0%	1.0%
Engineering	61.8%	21.4%	13.9%	2.3%	0.6%
Total	49.9%	35.2%	10.9%	3.1%	0.9%

Figure 18. Trend in the number of open-ended and temporary contracts and self-employed

Half of all recently-qualified graduates secure an open-ended contract 3 years after finishing their study programme

- Open-ended contracts are more common in the field of engineering and social sciences (62% and 54%, respectively) than in the fields of humanities, experimental sciences and health sciences (39%, 38% and 37%, respectively).
- The percentage of open-ended contracts has fallen by 18% since 2008 (a fall of 11 pp).
- 11% of recently-qualified graduates are self-employed, with the field of humanities particularly standing out in this regard at 15% (most in the field of translation, although in publishing also, etc.).
- Experimental sciences account for the largest proportion of scholarship holders (11.8%).



Full- or part-time contract





Figure 20. Percentage in part-time employment according to the number of hours by educational fields



Figure 21. Trend in the percentage in full-time employment



3 in every 4 are in full-time work, although there is substantial variation between fields

- Part-time recruitment varies from 8% in engineering to 37% and 40% in health and humanities, respectively.
- Of those in part-time work, 37% are on contracts of between 25 and 34 hours, almost half on contracts of between 11 and 24 hours and the remainder (15%) on contracts of less than 10 hours per week.

Continuing stagnation in full-time recruitment

Following the fall seen throughout the financial crisis (14 pp between 2008 and 2014), full-time recruitment shows a slight recovery of 2 pp in 2017.

Earnings

Figure 22. Trend in earnings of those graduates in full-time work



Figure 23. Earnings of those graduates in full-time work according to educational fields in 2017



8 in every 10 have salaries of 2,000 euros or more

There has been a 5 pp increase in those graduates in work earning a salary of more than 24,000 euros/year since 2014, while the percentages of those in work on salaries of up to 15,000 euros/year and up to 24,000 euros/year have fallen (by 2-3 pp).

The highest salaries are in engineering

66% of graduates in the engineering field are on salaries of more than 24,000 euros/year, while the proportion on such salaries is no more than 38% in the other educational fields (for humanities it stands at 19%).

Job satisfaction

Figure 24. Job satisfaction in 2017 (on a scale of 0 to 10)



Figure 25. Increase in job satisfaction when performing university-level functions compared to those who do not in 2017 (on a scale of 0 to 10)

Satisfaction with usefulness of knowledge

Satisfaction with potential for promotion

Satisfaction with job content

Satisfaction with the job in general

Satisfaction with remuneration level



Graduates are largely satisfied with their job...

- General job satisfaction stands at 7.8 and what is noteworthy is the high degree of satisfaction with job content (8.1).
- There are no major differences in general job satisfaction between academic fields (ranging from 7.4 for humanities graduates to 8.0 for health).
- Job satisfaction is slightly up on 2014 levels.

...particularly those who perform university-level functions

The satisfaction level is higher when the job is aligned with graduates' education (when performing university-level functions). Access to the labour market for graduates from Catalan universities

Occupational quality index (OQI)⁶



Figure 26. OQI according to educational fields in 2017

Table 6. Minimum and maximum OQI according toeducational fields in 2017

Improvement in occupational quality

- The overall OQI score in 2017 comes to 60.2, although the field-specific values vary between 47.8 for humanities and 67.5 for engineering.
- Occupational quality has improved slightly in all academic fields compared to 2014.
- There is widespread diversity in the OQI between the degree programmes in each educational field.

	Minimum OQI		Maximum OQI		Difference
Humanities	History	39.4	Arts and design	58.6	19.2
Social sciences	Sociology, geography	46.7	Business administration	69.1	22.6
Experim. sciences	Earth sciences	46.8	Chemistry	63.6	16.8
Health sciences	Psychology	50.4	Medicine and dentistry	72.4	22.0
Engineering	Forestry	49.7	Ind. eng. and organisation	73.2	23.5





⁶ The occupational quality index is formed by several indicators: contract type, job satisfaction, remuneration and suitability. The value range is from 0 to 100 and the higher the rating the better the occupational quality experienced. For further details, refer to Corominas *et al.* (2012).

THE JOB SEEKING PROCESS

Time taken to access the labour market

Figure 28. Time taken to find the first job in 2017



2 nin every 10, between 3 months and 1 year

1 n in every 10, more than 1 year

Trend in combining study and work

Figure 29. Trend in the student profile when it comes to combining study and work



Only 1 in every 10 graduates take more than a year to find work

Combining study and work is less frequent

- During the recession, the proportion of students combining study and work rose sharply to nigh on 70%.
- This combination has fallen to pre-recession levels in 2017 (around 60%), although unrelated jobs account for a larger proportion.
- The reduction of this combination is particularly prominent among the youngest group (<25 years), more so than among the eldest group (>30 years).⁷
- Working in a related job enhances the likelihood of performing specific functions in the future twofold compared to those graduates who do not combine study and work.⁷

⁷ Methodological note: the control variables are gender, field, age, qualification and university.

Pathway to work





Contacts and the Internet are still the primary methods for finding work

- These two methods account for 60% of all cases in 2017, a higher proportion than in previous years. Indeed, the contacts method has marked its all-time highest figure.
- Use of the Internet as a method for finding work has risen from accounting for 1% of cases to 19% over the 16-year period covered. The trend for the use of newspaper advertisements is virtually the reverse.
- In 2017, the importance of university careers services reached its lowest point in the period. Less than 1 in every 10 graduates use this method to find work.

MOBILITY

Where are recently-qualified graduates working?



Figure 31. Job location of those in work in 2017

Table 7. Trend in the percentages of graduates working abroad according to educational fields

	2011	2014	2017
Humanities	5.2%	5.1%	4.8%
Social sciences	2.1%	2.0%	2.5%
Experimental sciences	2.0%	4.0%	5.2%
Health sciences	1.9%	2.4%	3.4%
Engineering	3.2%	4.7%	5.0%
Total	2.6%	3.0%	3.6%

Figure 32. Destination continent of those who leave to go abroad in 2017



Working abroad is a minority option

- 3.6% of graduates are working abroad. Despite being a low percentage, the figure has risen slightly since 2011 (by 1 pp).
- Europe is the primary destination for work (80.8% of those who emigrate are working in Europe), followed by America (with 10.7%).
- There are no major differences between the educational fields: the proportion of emigration between fields varies from 2.5% for social sciences to 5% for engineering.

SATISFACTION WITH THE STUDY PROGRAMME

Would they take the same study programme again?

Figure 33. Willingness to take the same study programme again according to educational fields in 2017



Table 8. Trend in willingness to take the same study programme again according to educational fields

	2011	2014	2017	Variation 2017-11
Humanities	73.6%	72.2%	68.2%	-5.5 pp
Social sciences	72.8%	68.6%	68.8%	-3.9 pp
Experimental sciences	72.9%	69.2%	69.6%	-3.3 pp
Health sciences	81.7%	82.3%	80.0%	-1.7 pp
Engineering	68.7%	69.4%	69.6%	0.8 pp

Almost 3 in every 4 would take the same study programme again

- 80% of health graduates would take the same study programme again, while willingness to do so in other fields is around 10 pp lower.
- Since 2011, the proportion of graduates who would be willing to take the same programme again has fallen in all fields with the exception of engineering.

Major variations in willingness to take the same study programme again within each field

It is shown, for instance, that willingness to take the same study programme again within the field of engineering varies between 47% for building and 79% in the industrial engineering and organisation sub-field. The greatest difference occurs in social sciences where only 48% of tourism graduates would take the same study programme again while 86% of teaching graduates would do so.

Figure 34. Willingness to take the same study programme again according to educational fields in 2017 (highest and lowest figures within each educational area)



QUALITY OF EDUCATION

Level of education and its usefulness in work

Figure 35. Assessment of the level of education provided in the study programme (for all graduates) and its usefulness in work (only for those performing university-level functions) in 2017 (on a scale of 0 to 10)



Scope for improvement from the standpoint of an education shortfall

Figure 36. Education shortfall: difference between the assessment of the level of education provided in the study programme and its usefulness in work (only for graduates performing university-level functions)

Team work, problem-solving skills, critical thought and decision-making are the most useful skills in the work place

- University prepares graduates well for the labour market: most skills that are deemed as highly useful are also considered as being taught to a very effective level.
- The higher education system needs to focus more on languages, as this skill has been given the lowest rating overall; it has also been considered the lowest rated skill in terms of usefulness in work.
- Practical and theoretical skills are also among the lowest assessments, although this may be explained by the fact that access to the labour market is often general rather than specific.

Access to the labour market for graduates from Catalan universities



The greatest difference between the level of education provided and the level needed for work is still in languages

- IT, decision-making, leadership and management are also cross-disciplinary skills that show shortcomings when it comes to the labour market.
- Nevertheless, for the remaining skills the assessment of scope for improvement is always below 1 point and, in the case of theoretical skills, the study programmes are assessed as preparing students more than sufficiently.

Has university education improved?

Table 9. Trend in the assessment of the level of education provided in cross-disciplinary skills

	2005	2008	2011	2014	2017	2017-2005
Theoretical skills	6.6	6.3	6.8	6.8	6.7	0.1
Practical skills	4.5	4.9	5.1	5.1	5.3	0.9
Oral expression	4.3	5.1	5.2	5.4	5.6	1.3
Written expression	5.3	5.8	5.8	6.1	6.2	0.8
Team work	5.8	5.9	6.2	6.7	6.6	0.8
Leadership	3.6	4.1	4.1	4.5	4.6	1.0
Problem-solving	5.4	5.5	5.7	6.0	5.9	0.5
Decision-making	4.8	5.1	5.2	5.6	5.6	0.8
Creativity	4.7	4.7	4.8	5.1	4.9	0.2
Critical thought	5.7	5.9	6.2	6.3	6.4	0.7
Management	4.5	4.6	5.2	5.6	5.2	0.7
IT	3.8	4.5	4.5	4.9	4.7	0.9
Languages	2.2	2.8	2.2	2.8	3.4	1.1
Documentation skills	5.6	5.6	5.7	6.0	5.8	0.1

The level of education at university shows an improvement for cross-disciplinary skills

- When observing from 2011 onwards or from 2005 onwards, the trend shows an improvement for cross-disciplinary skills.
- Those skills with the greatest improvement include oral expression, languages and leadership.
- The highest rated area for the university is formed by theoretical skills (or skills in the specific field) with a rating always above 6; the trend shows very little change (+0.1): most recently it again received the best assessment (6.7 out of 10).
- The following two areas also show a trend of very little change: documentation skills and creativity.

	Humanities	Social sciences	Experimental sciences	Health sciences	Technical field
Theoretical skills	0.13	-0.01	0.41	0.37	0.06
Practical skills	0.78	0.87	1.02	1.20	0.45
Oral expression	1.27	1.06	2.12	1.60	1.17
Written expression	0.39	0.59	1.58	1.10	0.65
Team work	0.94	0.71	0.77	0.95	0.70
Leadership	0.96	0.83	1.25	1.21	1.08
Problem-solving	0.58	0.45	0.71	0.80	0.70
Decision-making	0.87	0.58	1.03	0.88	0.93
Creativity	0.65	0.20	0.26	0.40	0.07
Critical thought	0.53	0.43	0.93	1.02	0.62
Management	0.70	0.49	0.76	1.08	0.82
IT	1.27	0.60	1.08	1.84	1.13
Languages	0.69	1.10	1.74	1.44	0.90
Documentation skills	-0.07	-0.07	0.78	0.69	-0.03

Table 10. Improvement in the level of education provided according to educational field between 2005 and2017

Experimental sciences and health are the fields where the greatest improvement in education has been perceived

- Practical skills, oral and written expression, leadership, IT and languages show an improvement of more than 1 point (on a scale of 0 to 10) in the fields of experimental sciences and health.
- The greatest and most widespread improvements across all fields have been seen in the following skills: oral expression, IT and languages.

Do Bachelor's degrees offer better education than the former degree programmes...?⁸

Figure 37. Impact of Bachelor's degrees compared to former degree programmes in terms of skills acquisition

	Bachelor's vs.three- year degrees	Bachelor's vs. four-year degrees	Bachelor's vs. engineering degrees	Bachelor's vs. technical engineering degrees
Theoretical skills				
Practical skills	0,34	0,15	0,31	0,39
Oral expression	0,21	0,34	0,29	
Written expression		0,17	0,20	
Team work	0,30	0,32	0,22	0,35
Leadership		0,22	0,39	0,38
Management		0,19	0,25	
Problem-solving		0,18		
Decision-making		0,14		0,18
Creativity	0,28	0,17		
Critical thought		0,11		
IT		0,18		
Languages	0,35	0,37	0,40	0,60
Documentation skills		0,16		

Figure 38. Impact of Bachelor's degrees compared to former degrees in terms of skills acquisition in specific programmes

	BUSINESS ADMINISTRATION AND MANAGEMENT	PSYCHOLOGY	COMPUTER ENGINEERING	TECHNICAL ENGINEERING IN COMPUTER SYSTEMS	TOURISM	LABOUR RELATIONS	BIOLOGY	ARCHITECTURAL TECHNOLOGY
Theoretical skills				0,52		0,32		
Practical skills		0,30		0,73				
Oral expression	0,247	0,59					0,68	
Written expression		0,30					0,42	
Team work	0,28			0,69			0,82	
Leadership		0,31		0,61			0,67	
Management							0,56	
Problem-solving			0,42	1,00			0,66	
Decision-making				[-0,52			-0,45
Creativity					0,54			
Critical thought		0,44					0,55	
IT		0,65					0,37	
Languages		0,40					0,63	0,82
Documentation skills		0,26						

⁸ Only statistically significant effects are shown (of more than 10%). Degrees are chosen that have graduates obtaining both Bachelor's and the former equivalent qualification in 2017. The linear regression models include control variables linked to gender, age, final grade, degree programme and university. The values show the impact of the Bachelor's degree in terms of acquiring a specific skill compared to the former programme.

Bachelor's degrees are assessed as offering enhanced skills acquisition, particularly in terms of language level

- Bachelor's degrees endow graduates with enhanced skills acquisition compared to the former degrees when taking into account control variables such as gender, age, final grade, degree programme and university.
- Nevertheless, differences are seen when looking at specific degree programmes. For instance, there are no major differences in the business administration and management, computer engineering and labour Bachelor's degrees (where one or two skills show enhancement) and the respective former degrees. In the case of psychology or biology, there has been a clear improvement in the Bachelor's degrees compared to the former degrees.

In what about other indicators linked to access to the labour market?⁹

Figure 39. Impact of Bachelor's degrees on the likelihood of being in work, performing university-level functions and willingness to take the same degree programme again compared to the former degrees (probability model results)

Are there differences between the Bachelor's and the former degree in terms of...

SUITABILITY?

EMPLOYMENT?

-There are no major differences in

the likelihood of being in work

between Bachelor's and the former

degrees.

-There is a GREATER likelihood of performing university-level functions with the Bachelor's degree compared to the four-year degree (6 pp) and the technical engineering degree (9 pp).

WILLINGNESS TO TAKE THE SAME PROGRAMME AGAIN?

-There is a GREATER likelihood of willing to take the same programme again with the Bachelor's degree than with threeyear degrees (13 pp) and four-year degrees (4 pp).

-However, the likelihood is lower compared to engineering degrees (7 pp).

⁹ Only statistically significant effects are shown (of more than 10%). Degrees are chosen that have graduates obtaining both Bachelor's and the former equivalent qualification in 2017. The probability models include control variables linked to gender, age, final grade, degree programme and university. The values show the percentage point impact of the Bachelor's degree in terms of the likelihood of being in work (or performing university-level functions, or willingness to follow the same study programme again) compared to the former equivalent qualification.

Figure 40. Impact of Bachelor's degrees on the likelihood of being in work, performing university-level functions and willingness to take the same degree programme again for specific degree qualifications* (probability model results)

Are there differences between the Bachelor's and the former degree in terms of							
EMPLOYMENT? -There are no major differences in the likelihood of being in work between Bachelor's and the former degrees.	SUITABILITY? -There is a GREATER likelihood of performing university-level functions with the Bachelor's degree compared to the former degree programmes of computer engineering (10 pp), technical engineering in computer systems (12 pp), tourism (17 pp) and architectural technology (21 pp). -No major differences are observed for the other degree programmes.	WILLINGNESS TO TAKE THE SAME PROGRAMME AGAIN? -There is a GREATER likelihood of taking the same programme again with the Bachelor's degree in labour (22 pp). - No major differences are observed for the other degree programmes.					

* The degree programmes of business administration and management, psychology, computer engineering, tourism, labour, biology and architectural technology are analysed.

Bachelor's degrees are assessed as offering enhanced suitability of functions in the job in certain cases

- Graduates are more likely to take the same programme again with Bachelor's degrees than with three-year and four-year degrees, although they are less likely in the case of engineering degrees.
- On the other hand, there is no difference in the likelihood of graduates being in work between the Bachelor's degrees and the former equivalent degree programmes.
- Certain major differences are observed when analysing specific degree programmes: suitability is enhanced with the Bachelor's degree in engineering and technical engineering in computer systems, tourism and architectural technology, and willingness to take the same programme again is only greater with the degree in labour. There are no differences in psychology and biology, although in these cases the Bachelor's degree does provide enhanced skills acquisition.
FURTHER STUDIES

Do graduates go on to take further studies?

Figure 41. Trend in taking further studies according to type





The number of years spent in education is increasing

- More than half of graduates take on further programmes at a higher university level.
- 25% choose to cease studying, a proportion that has remained largely unchanged over the period reviewed. In the case of engineering degrees, this percentage stands at 37%.



CHARACTERISATION OF ACADEMIC SUB-FIELDS

Comparison of access to the labour market according to sub-fields

Table 11. Comparison of the breakdown according to sub-fields in 2017¹⁰

	% in work	% performing university-level functions	% working full-time	% on a permanent contract	% with earnings above €2,000/month	Occupational quality index	% of qualified graduates who would take the same programme again
101 Philosophy and history							0
102 Languages and literature	0						
103 Arts and design	0						
201 Economics, business and tourism							
202 Law, labour relations and politics				<u> </u>			
203 Communication and documentation							
204 Education							
205 Social intervention							
301 Biological and earth sciences							
302 Experimental sciences and mathematics							
401 Nursing and health							
402 Psychology and therapy							
403 Medicine and biomedical sciences			0	•			
501 Architecture, construction and civil engineering				•			•
502 Industrial technologies							
503 ICTs							<u> </u>
504 Agriculture, forestry and fishing	0	<u> </u>	0	0	0	0	<u> </u>

Occupational quality index (OQI)¹¹

- Industrial engineering and ICTs, as well as economics and business, are the sub-fields in which the best outcomes have been obtained.
- Humanities and biological sciences are the worst performing sub-fields in terms of labour market outcomes.

¹⁰ The indicator represents the result of hypothesis testing for the difference of population means between two groups (the specific sub-field vs. the remainder). We consider equality of population means as our main contrast or null hypothesis. The t-test is performed with a confidence interval of 95%. Absences of difference are shown in yellow, higher scores for the sub-field in green and lower scores for the sub-field in red.

¹¹ The occupational quality index (OQI) is formed by several indicators: contract type, job satisfaction, remuneration and suitability. The value range is from 0 to 100 and the higher the rating the better the occupational quality experienced. For further details, refer to Corominas *et al.* (2012). This data relates to the OQI calculation version from 2017, which best aligns suitability with the index.

Table 12. Organisation of sub-fields according to average OQI for 2017

	x oqi
50206 Industrial eng. and organisation	73.2
40301 Medicine and dentistry	72.4
50302 IT	72.0
50202 Aeronautical engineering	71.0
50301 Telecommunications	69.6
20102 Business administration	69.1
40103 Healthcare staff	68.5
50205 Chemical and materials engineering	67.7
50104 Civil engineering	67.6
50204 Mechanical eng. and ind. design	67.3
50201 Naval engineering	67.1
50203 Electronic and automation eng.	66.6
20101 Economics	66.2
20201 Law	64.8
50101 Architecture	64.6
30201 Chemistry	63.6
40302 Pharm., vet., biomedicine	63.3
50401 Agriculture and food production	63.0
30202 Physics and mathematics	62.4
40102 Nursing	59.9
50102 Building	59.8
10302 Arts and design	58.6
50103 Construction engineering	58.5
20301 Communication	58.1
20202 Labour	57.7
40202 Therapy and rehabilitation	56.3
20302 Documentation	56.1
20501 Social education and work	55.6
20103 Tourism	55.4
30101 Biological sciences	53.7
40101 Sport, nutrition and physiotherapy	53.6
20401 Teaching	53.5
20402 Pedagogy and psychopedagogy	53.0
20203 Politics	51.9
10203 Foreign philologies	51.7
40201 Psychology	50.4

Access to the labour market for graduates from Catalan universities

50402 Forestry	49.7
10201 Linguistics, and classical and comparative studies	49.5
10202 Catalan and Spanish philology	47.2
30102 Earth sciences	46.8
20204 Sociology, geography	46.7
10102 Philosophy and humanities	43.1
10301 Fine arts	40.4
10101 History	39.4

- The sub-fields with the highest OQI are: industrial engineering and organisation, medicine and dentistry, and computer engineering.
- Philosophy and humanities, fine arts, and history, on the other hand, are at the opposite end of the spectrum.

Willingness to take the same degree programme again

Table 13. Organisation of sub-fields according to the proportion willing to follow the same programme again for 2017

	Yes
40301 Medicine and dentistry	90.70%
40102 Nursing	87.40%
20401 Teaching	85.70%
40202 Therapy and rehabilitation	82.40%
30202 Physics and mathematics	79.10%
50206 Industrial engineering and organisation	79.00%
50302 IT	76.80%
50401 Agriculture and food production	76.40%
20201 Law	76.20%
30201 Chemistry	75.70%
10201 Linguistics, and classical and comparative studies	75.60%
10202 Catalan and Spanish philology	75.20%
10102 Philosophy and humanities	75.00%
40103 Healthcare staff	75.00%
40101 Sport, nutrition and physiotherapy	74.70%
50204 Mechanical engineering and industrial design	73.90%
40201 Psychology	73.80%
50205 Chemical and materials engineering	73.80%
50301 Telecommunications	73.30%
40302 Pharm., vet., biomedicine	73.20%
10302 Arts and design	72.90%
10101 History	72.20%
20501 Social education and work	71.20%
20102 Business administration	71.00%
20302 Documentation	70.00%
50203 Electronic and automation engineering	70.00%
20204 Sociology, geography	69.90%
50202 Aeronautical engineering	69.40%
30101 Biological sciences	68.80%
50101 Architecture	67.50%
20101 Economics	67.30%
50201 Naval engineering	66.20%
50402 Forestry	62.50%
10203 Foreign philologies	59.50%
20301 Communication	58.80%
20402 Pedagogy and psychopedagogy	57.10%
10301 Fine arts	57.00%

Access to the labour market for graduates from Catalan universities

30102 Earth sciences	56.00%
20203 Politics	55.60%
50103 Construction engineering	53.80%
20202 Labour	51.40%
50104 Civil engineering	50.60%
20103 Tourism	47.80%
50102 Building	47.30%

- Medicine and dentistry, nursing, and teaching are the three sub-fields with the highest proportion of graduates that would take the same programme again if they had to.
- However, civil engineering, tourism and building are the sub-fields with the lowest score in this regard; indeed, half of all graduates in these fields would not take the study programme again.

GENDER-BASED COMPARISON OF ACCESS TO THE LABOUR MARKET

Table 14. Comparison of the breakdown of each sub-field according to graduate gender¹²

	% in work	% performing university- level functions	% working full-time	% on a permanent contract	% with earnings above €2,000/month	Occupational quality index	% of qualified graduates who would take the same programme again
101 Philosophy and history	W			W			М
102 Languages and literature			М	W			
103 Arts and design					М		
201 Economics, business and tourism			М		М	М	
202 Law, labour and politics		W	М		М		W
203 Communication and documentation			W	W		W	W
204 Education				М	М		W
205 Social intervention							W
301 Biological and earth sciences		W	М				
302 Experimental sciences and maths	М		М				
401 Nursing and health		W	W	М			W
402 Psychology and therapy			М		М		W
403 Medicine and biomedical sciences					М		
501 Architecture, constr. and civil eng.			М		М	М	
502 Industrial technologies			М		М		
503 ICTs			М		М	М	
504 Agriculture, forestry and fishing	М					W	
N: women M: men							

W: women. M: men.

- Only 36% of contrasts are significant, i.e., they show gender-based differences in access to the labour market. For the remaining 64%, no major differences between men and women have been observed for the variables analysed.
- Of the above contrasts, 60% show that men score a better indicator for access to the labour market than women.
- In terms of income, men score better indicators than women in all significant contrasts.

¹² The indicator represents the result of hypothesis testing for the difference of population means between two groups (women vs. men for each sub-field). We consider equality of population means as our main contrast or null hypothesis. The t-test is performed with a confidence interval of 95%.

DISTANCE UNIVERSITY

What are the characteristics of graduates?

Table 15. Characteristics of students from distance universities

Age at time of survey	40 years
Entrance qualification	
Already in possession of a higher qualification (three-year or four-year degree)	56.0%
Incomplete university studies	13.0%
Upper secondary education, specific vocational training, former univ. orientation course	26.2%
Entrance exam for over 25s	4.8%
Employment history	
Full-time student	3.6%
Working in a related job	58.2%
Working in an unrelated job	38.2%

Characteristics of employment

Figure 43. Percentages of those graduates in work, on open-ended contracts and working as full-time employees with salaries of 2,000 euros or more in 2017



Graduates qualifying from distance universities differ: 1 in every 2 already had a prior university education

- The average age at the time of responding to the survey was 40 years.
- Almost all students from distance universities worked while following their programmes (58% of them in a job related to the programme).

Higher levels of employment, stability and bigger salaries than those qualifying from traditional universities

Graduates qualifying in health sciences score worse indicators for stability and earnings than graduates in other areas. However, it should be noted that in distance universities this area solely comprises psychology programmes.

Suitability of the study programme for work

Figure 44. Requirement and functions at work in 2017



The qualification from the distance university has been a requirement for the job in the case of 17% of those graduates in work, who, moreover, perform functions linked to their study programme

Would they take the same degree programme again?

Figure 45. Willingness to take the same programme again according to educational fields in 2017



8 in every 10 would take their programme again

The educational field with the largest percentage of graduates who would take the programme again is humanities at 90%.

Level of education and its usefulness in work



Figure 46. Assessment of the level of education provided in cross-disciplinary skills (for all graduates) and its usefulness in work (only for graduates performing university-level functions) on a scale of 0 to 10

Distance university prepares students effectively

- The best assessed skills in terms of the education provided are: theoretical skills, use and application of ICTs, written expression, critical thought and IT.
- As with traditional universities, languages still constitute a skill with scope for improvement.
- The most useful skills largely match those with the highest rating. These are: use and application of ICTs, written expression and IT. The usefulness of problem-solving capacity also stands out.
- The greatest shortcomings in terms of the education provided are found in the following skills: oral expression, leadership, decision-making, team work and languages.

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DATA SHEET

Survey for qualified graduates¹³

Population	Individuals who graduated in the 2012-13 academic year (2009-10 in the case of medicine) securing Bachelor's degrees and former qualifications
Survey period	From 16/01/2017 to 25/04/2017
Average time taken	If employed: 12 min 18 sec

			Response	
PUBLIC UNIVERSITIES	Population	Sample	rate	Sample error
University of Barcelona	7,724	4,018	52.0%	1.09%
Autonomous University of Barcelona	4,998	2,852	56.6%	1.23%
Technical University of Catalonia	3,262	1,744	53.5%	1.63%
Pompeu Fabra University	1,763	821	46.5%	2.55%
University of Girona	1,870	924	47.4%	2.34%
University of Lleida	1,285	796	61.9%	2.19%
Rovira i Virgili University	2,181	1,012	46.4%	2.30%
Total	23,083	12,167	52.4%	0.62%
PRIVATE UNIVERSITIES				
University of Vic - Central University of Catalonia	943	506	53.7%	3.03%
Ramon Llull University	2,497	1,263	50.6%	1.98%
International University of Catalonia	660	222	33.6%	5.47%
Abat Oliba CEU University	207	91	44.0%	7.87%
Total	4,307	2,082	48.3%	1.58%
Attached centres (affiliated with public and private universities)	2,872	1,314	47.5%	2.03%
STUDY TOTAL	30,262	15,563	51.4%	0.56%

¹³ The data set out in this report is weighted according to stratified sampling by degree programme and sample unit.



Survey for qualified graduates from distance university¹⁴

Population	Individuals who graduated in the 2012-13 academic year securing Bachelor's degrees and former qualifications
Survey period	From 07/02/2017 to 25/04/2017
Average time taken	If employed: 14 min 47 sec

			Response	
DISTANCE UNIVERSITY	Population	Sample	rate	Sample error
Open University of Catalonia	3,568	1,895	53.1%	1.57%

¹⁴ The data set out in this report is weighted according to stratified sampling by degree programme.

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