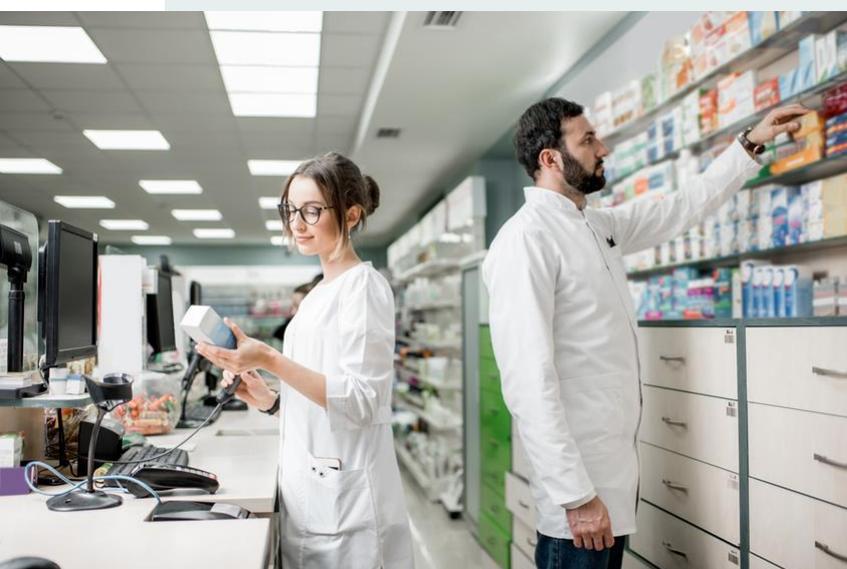




Agència
per a la Qualitat
del Sistema Universitari
de **Catalunya**

EMPLOYERS

IMPROVEMENT OF THE EDUCATION RECEIVED BY GRADUATES OF PHARMACY: THE OPINION OF PHARMACIES





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AQU CATALUNYA, 2019

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Universitari de Catalunya

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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 functioning of the **study programme in Pharmacy** gleaned from the results of the **2018 survey on employers in this sector**. The survey strives to gain an acquaintance of the opinion of Pharmacies 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, among other issues.

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

Figure 1. Databases for improving study programmes

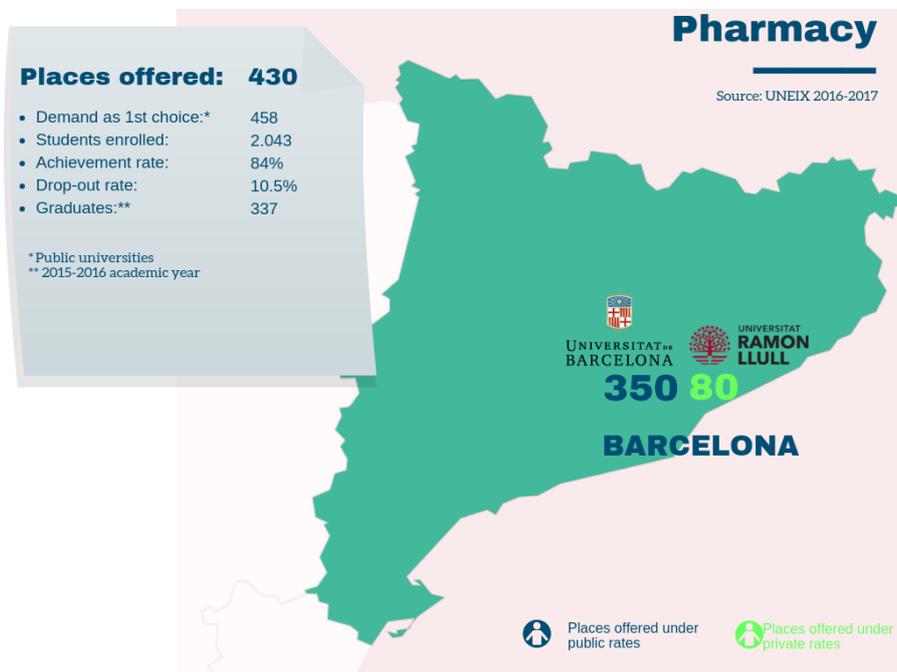


INDICATORS ON THE STUDY PROGRAMME IN PHARMACY

■ Data on the functioning of the study programme

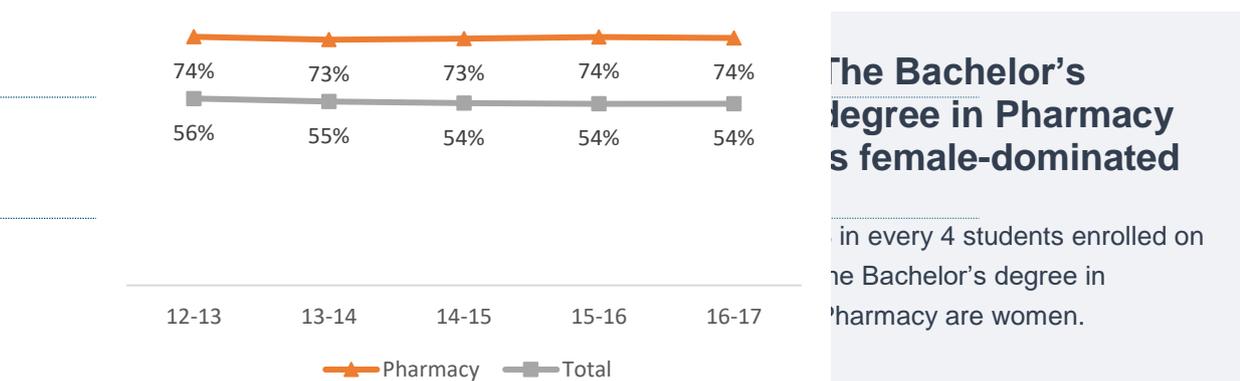
Data on the functioning of the study programme involves administrative data taken from the UNEIX information system.

Figure 2. Indicators on the functioning of the degree programme in Pharmacy. 2016-2017 academic year



Note: the achievement rate refers to the number of credits passed in a subject or series of subjects in relation to the credits of all students enrolled. The drop-out rate is the result of dividing the number of students in a cohort who have definitively left their study programme (i.e., not enrolling for any subject for two academic years) by the total number of students in that specific cohort.

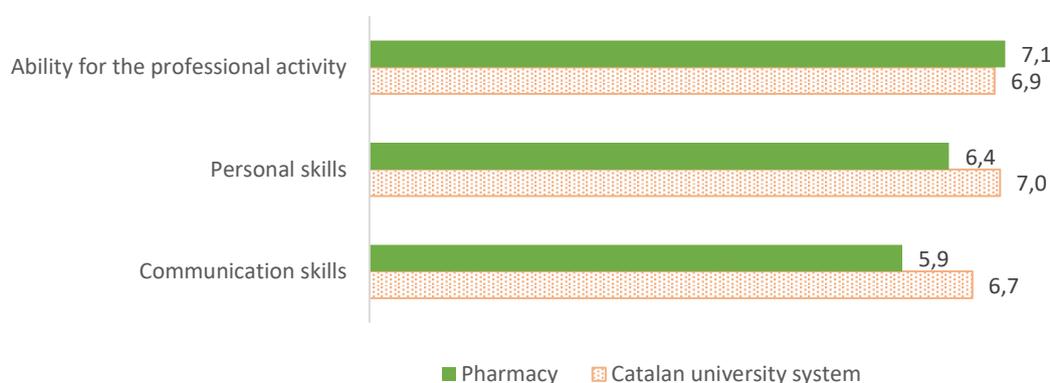
Figure 3. Trend in the percentage of women enrolling on the Bachelor's degree in Pharmacy (%)



■ Satisfaction with the education received in Pharmacy

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 2015, 2016 and 2017 in the respective sub-fields and for the Catalan university system as a whole.

Figure 4. The extent to which the study programme has improved in terms of the following factors (from 0 to 10)

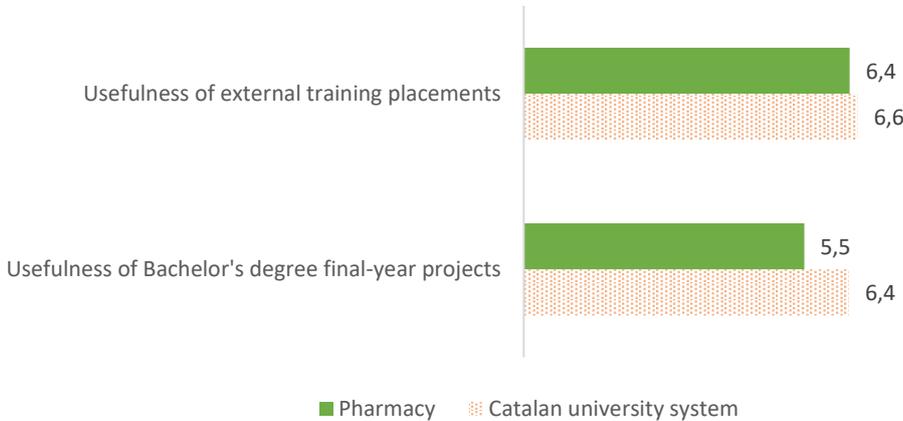


The education received in Pharmacy has enhanced graduates' ability for the professional activity

The rating given by graduates to the education received in terms of the improvement it has entailed in their ability for the professional activity stands at 7.1, only 0.2 percentage points above the average for all degree programmes in the Catalan university system.

The improvement in personal skills is given a rating of 6.4, while the improvement in communication skills stands at 5.9. Both of these figures are below the Catalan university system average.

Figure 5. Usefulness of external training placements and Bachelor's degree final-year projects (from 0 to 10)



External training placements have been somewhat useful when it comes to applying the knowledge acquired during the study programme

6.4 is the valuation given to the usefulness of external training placements, slightly below the Catalan university system average (at 6.6), while the usefulness of the Bachelor's degree final-year project stands at 5.5 (almost one percentage point below the Catalan system average).

Figure 6. Overall satisfaction with the study programme (from 0 to 10)



Overall, graduates are satisfied with the study programme in Pharmacy, despite there being scope for improvement

Overall satisfaction with the study programme is 7.6, slightly above the Catalan university system average.

■ Access to the labour market for graduates of Pharmacy

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.¹

The results for the Health Sciences group show the average for the degree programmes in this field: Sports, Nutrition and Physiotherapy, Nursing, Optics and Optometry, Podiatry, Psychology, Occupational Therapy, Speech Therapy, Medicine, Dentistry, Pharmacy, Biomedical Sciences, Genetics and Veterinary Medicine. The results for the Catalan university system show the average for all degree programmes taught in Catalonia.

Figure 7. Employment status of graduates (%)

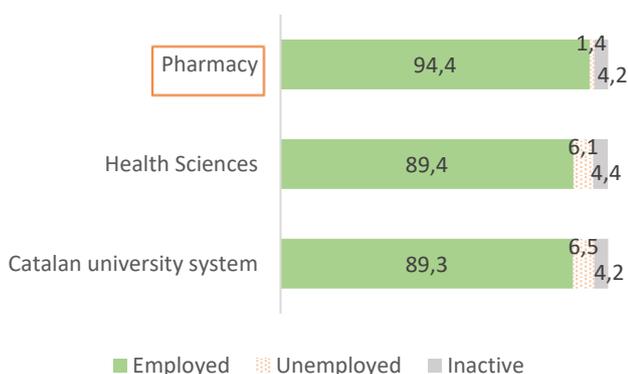


Figure 8. Functions performed at work (%)

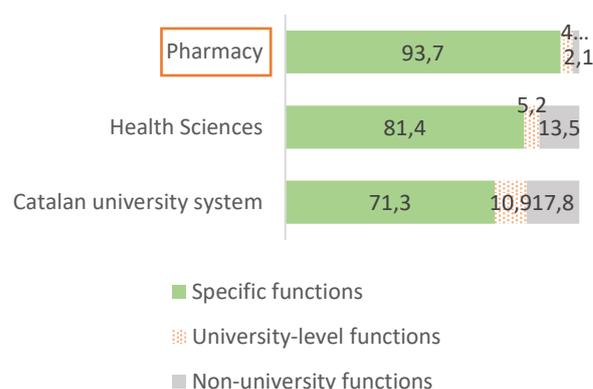


Figure 9. Contract type (%)

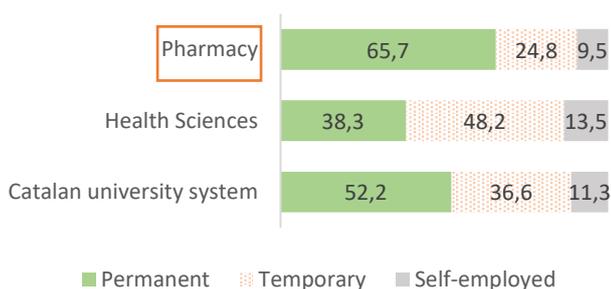
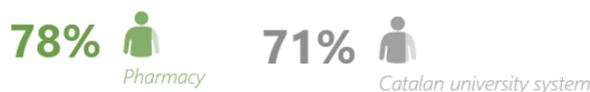


Figure 10. Full-time contract (%)



Figure 11. Graduates who would take the same study programme again (%)



Graduates of Pharmacy enjoy positive, high quality access to the labour market. 78% would take their Pharmacy study programme again.

¹ The results are weighted by a factor that corrects possible proportional variations in the sample.

THE OPINION OF PHARMACIES REGARDING GRADUATES OF PHARMACY

The main career opportunities for pharmacists are with pharmacies, the pharmaceutical industry and hospital specialties (hospital pharmacy, clinical biochemistry, clinical parasitology and microbiology, clinical analyses, immunology and radiopharmacy). Nevertheless, it should be pointed out that the specific professional skills for the different employment opportunities vary, particularly for those who are employed in pharmacies.

As more than half of graduates in Pharmacy are employed by pharmacies (according to data on access to the labour market from 2017), this study will focus on gathering the opinions of pharmacies regarding the skills of the recently graduated individuals they have recruited.

56% of the pharmacies surveyed have recruited recently graduated individuals or graduates with some prior experience in the past 3 years

Most pharmacies that had not recruited individuals in this period did not have any vacancies.

■ Recruitment of individuals who recently graduated in Pharmacy

Table 1. Pharmacies that have recruited recently graduated individuals or those with some prior experience in the past 3 years

	Sample	%
Have recruited recently graduated individuals or graduates with some prior experience	95	55.9
Have not recruited individuals	75	44.1
Total	170	100.0

170 pharmacies in Catalonia have been surveyed

Table 2. Reasons for not having recruited recently graduated individuals or graduates with some prior experience in the past 3 years

	% of pharmacies
Lack of vacancies	68.0
Have recruited graduates with extensive experience	8.0
Other reasons (financially unviable, no applications submitted, lack of availability for the hours and for travel)	25.3

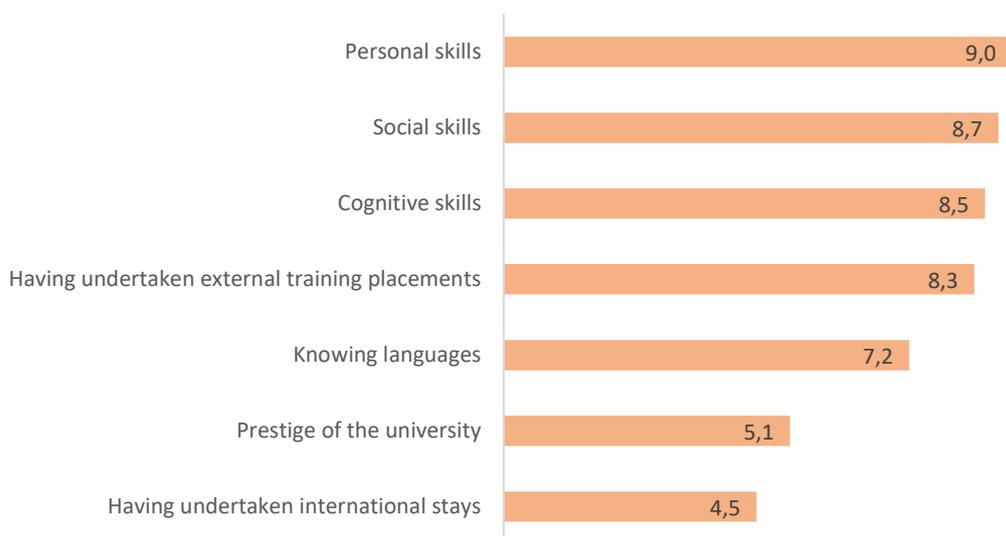
Note: multiple response

Table 3. Importance of holding a Master's degree or PhD when recruiting recently graduated individuals or graduates with some prior experience (%)

	Master's degree	PhD
Yes	6.4	0.0
At certain workplaces	5.3	1.1
No	88.3	98.9
	100%	100%

Holding a Master's degree or a PhD is not relevant for working in pharmacies

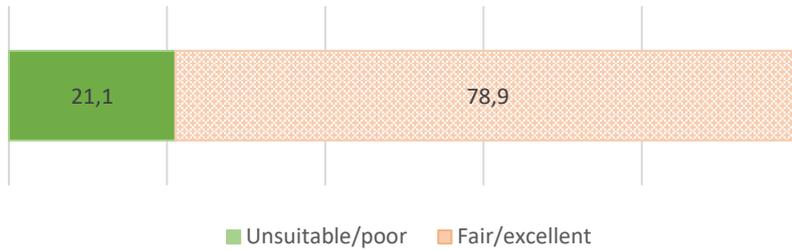
Figure 12. Relevance of the following factors when recruiting recently graduated individuals or graduates with some prior experience (from 0 to 10)



Personal, social and cognitive skills are the most highly valued factors when it comes to recruiting individuals who recently graduated in Pharmacy

These skills are rated between 8.5 and 9. Having undertaken an external training placement during the study programme is rated at 8.3 and knowledge of languages at 7.2. Whether or not an individual undertook international stays is not a decisive factor in their recruitment.

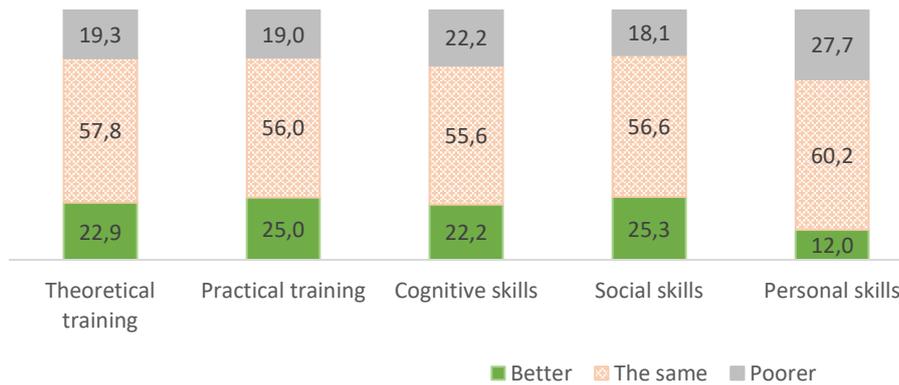
Figure 13. Suitability of individuals who graduated in Pharmacy to the needs of the workplace where they have been recruited (%)



Individuals who graduate in Pharmacy are suited to the workplace

78.9% of pharmacies consider that the individuals graduating in Pharmacy they have recruited in recent years are suited to the needs of the workplace.

Figure 14. Trend in the current education received compared to that received 5 and 10 years ago (%)



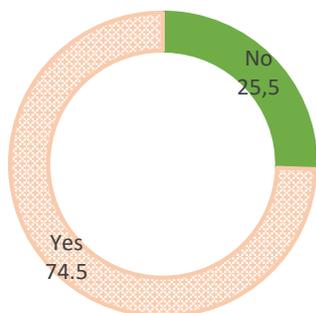
3 in every 4 pharmacies consider that the education received in the study programme in terms of languages and IT has improved compared to 5 and 10 years ago

Furthermore, more than half of the pharmacies surveyed feel that the education received by pharmacists in recent years 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.

It is also noteworthy that 1 in every 4 pharmacies consider that the personal skills of individuals who have recently graduated in Pharmacy have fallen in recent years.

■ Difficulties in recruitment

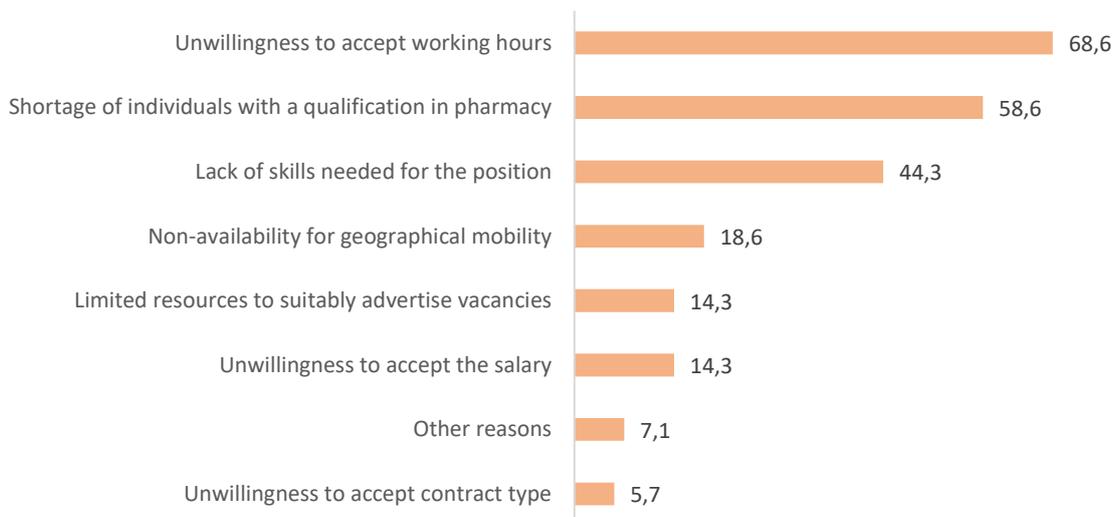
Figure 15. Pharmacies that encountered difficulties in recruiting staff with suitable profiles (%)



3 in every 4 pharmacies have encountered difficulties in recruitment

The community pharmacy sector has far higher percentages when it comes to difficulties in recruitment compared to the production sector average in Catalonia. Indeed, the employers' study from 2014 for the production sector overall showed that 42% of employers encountered difficulties in recruitment.

Figure 16. Reasons for difficulties in recruiting staff with suitable profiles (% of pharmacies)



The difficulties in recruitment are due to the relaxation of trading hours for pharmacies

69% of pharmacies experienced issues due to candidates being unwilling to accept the type of working hours offered. Also, 59% state that there is a shortfall in the number of university graduates in Pharmacy while 44% consider that the candidates lacked the necessary skills for the position.

■ Skills

Table 4. Cross-disciplinary skills that should be improved in the study programme in Pharmacy (% of pharmacies)

	% of pharmacies
Written expression	6.3
Documentation	8.4
Oral expression	11.6
Use of most common IT tools	11.6
Numerical skills	12.6
Capacity for learning and self-learning	14.7
Languages	14.7
Theoretical training	15.8
Team work	18.9
Leadership	18.9
Negotiation skills	18.9
Responsibility at work	40.0
Ability to offer new ideas and solutions	43.2
Problem solving and decision-making	52.6
Autonomous work	52.6
Practical training	57.9

Practical training is the main skill that needs to be improved in study programmes in Pharmacy

58% of pharmacies consider the main area for improvement in the study programme in Pharmacy to be practical training. This is followed by 53% which state that autonomous work and problem solving and decision-making are skills that need to be improved in the education received by pharmacists.

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.

On the other hand, pharmacies also report that the teaching methodology is suitable for most skills, such as written and oral expression, documentation, IT, languages and theoretical training, among other examples.

Table 5. Specific skills that should be improved in the study programme in Pharmacy (% of pharmacies)

	% of pharm.
Ability to acquire, safeguard and conserve healthcare products and medications	5.3
Management of expiry dates and waste disposal of healthcare products and medications	9.5
Control of products and materials, billing and documentation at the establishment	18.9
Ability to supply and dispense medications and other healthcare products	35.8
Ability to prepare magistral and officinal formulae	40.0
Knowledge of the legislation governing the prescription, distribution and dispensing of medications	40.0
Ability to engage in health promotion and disease prevention activities	64.2
Ability to provide therapeutic advice in drug therapy and diet therapy	75.8

Figure 17. Satisfaction with the skills of individuals who recently graduated in the field of Pharmacy (from 0 to 10)

6,7 ★★★★★☆☆

More than half of pharmacies consider that specific skills for improvement include the ability to provide therapeutic advice and the ability to promote health and prevent diseases

Specifically, 76% of pharmacies consider that a specific skill which needs improving is the ability to provide therapeutic advice in drug therapy and diet therapy, while 64% believe there is substantial room for improvement in the ability to engage in health promotion and disease prevention activities.

On the other hand, the needs of pharmacies are entirely met when it comes to the ability to acquire, safeguard and conserve healthcare products and medications, and the management of expiry dates and waste disposal of healthcare products and medications.

Pharmacies are relatively satisfied with the skills of graduates

Despite there being scope for improvement in the education received, pharmacies are satisfied with the skills of graduates. Their degree of satisfaction stands at 6.7, which is in keeping with the overall satisfaction of employers with the skills of the recently graduated individuals they have recruited as observed in the 2014 employers' survey (at 7 out of 10).

■ Cooperation with universities

Figure 18. Extent to which pharmacies cooperate with universities according to the type of activity (%)

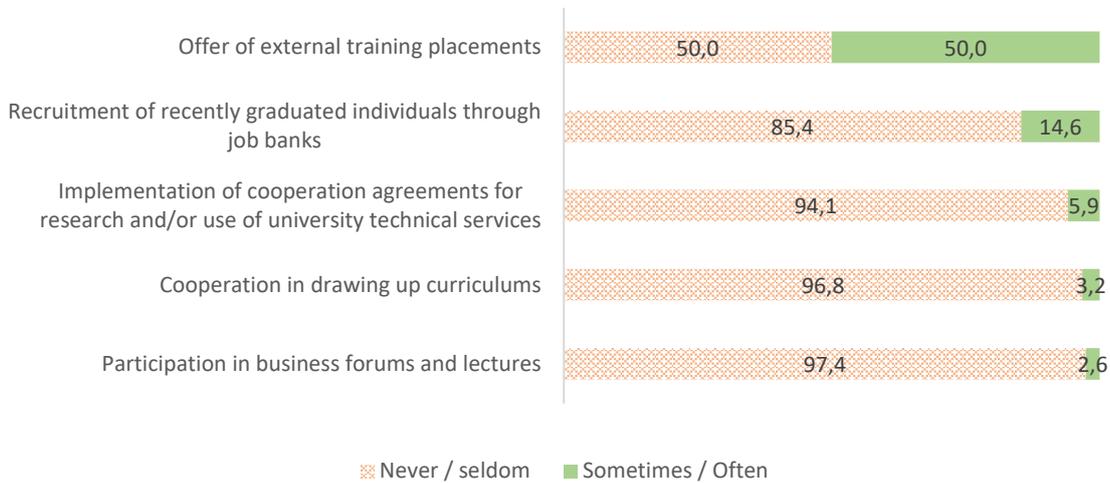


Figure 19. Areas for improvement in job banks or training placements organised by universities (% of companies)

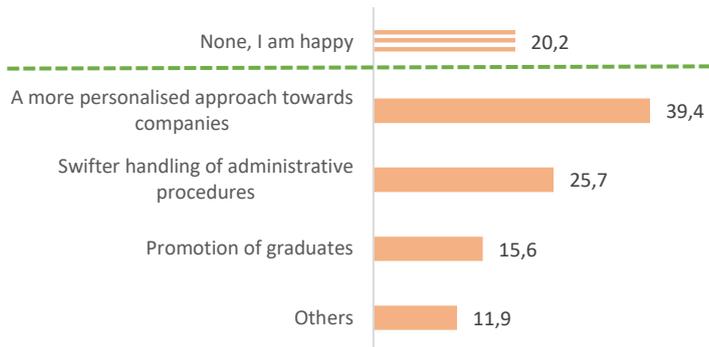


Figure 20. Satisfaction with job bank services or training placement services (on a scale of 0 to 10)



The main area in which pharmacies cooperate with universities relates to the offer of training placements

The activity in which companies and universities are most closely engaged relates to training placements during programmes: 50% have cooperated with universities on this activity. Moreover, only 15% have recruited individuals through the university job bank service.

Low satisfaction with the job bank and training placement service

The level of satisfaction among those who used these services stands at 5.8 and they believe there is scope for speeding up administrative procedures and for gaining a better acquaintance of pharmacies' needs (a more personalised approach).

In-company training of recently graduated individuals

Figure 21. Pharmacies funding training for graduates (%)

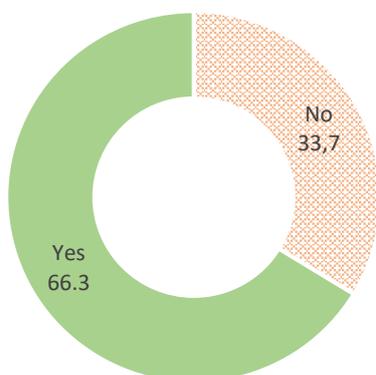


Table 6. Type of training funded by pharmacies (%)

	On-the-job training	Off-the-job training
During and outside of working hours	38%	25%
Only during working hours	35%	50%
Only outside of working hours	20%	25%
Unspecified	8%	0%
Total	71.4%	28.6%

Figure 22. Reasons for funding training of graduates (%)



66% of pharmacies fund training for the recently graduated individuals they have recruited

71% of this training is on-the-job and, by and large, during working hours. Nevertheless, the remaining pharmacies that do not offer on-the-job training do fund some kind of training during and outside of working hours.

For most pharmacies, the goal of this training is to improve individuals' specific knowledge of the sector, along with their basic and theoretical knowledge relating to the pharmacy sector.

■ Innovation in pharmacies

Figure 23. Pharmacies that have a website for selling products and/or medications (%)

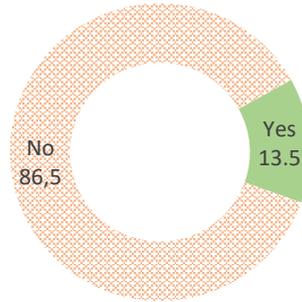
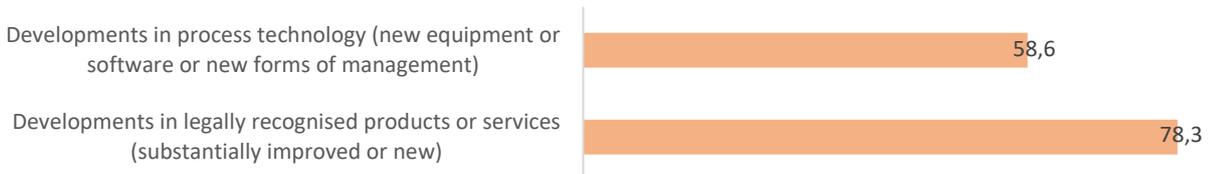


Figure 24. Pharmacies that have introduced innovations (%)



A significant number of pharmacies engage in innovation

More than half of the pharmacies surveyed have incorporated innovations in process technology, for instance in new equipment or software, or new forms of management, while 78% have incorporated developments in legally recognised products or services.

13.5% offer online sales, although on average these sales account for an extremely low percentage of all sales (around 2% of total sales).

Forecast

Figure 25. Trend in employment in the sector (%)

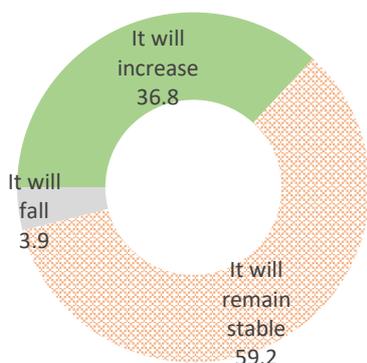


Figure 26. Skills that will gain importance in the field of pharmacy*



Figure 27. Most important specialisation in the field of pharmacy*



Table 7. Reasons for the increase in employment (%)

Reasons	%
Increased business	63.6
Organisational or technological changes	32.7
Staff rotation	30.9
Others	7.3

Note: multiple response

Excellent prospects for pharmacies

1 in every 3 pharmacies believe employment will increase largely owing to increased business (as a result of the evident ageing of the population).

The most sought-after skills relate to pharmaceutical care and new technologies (online sales, social networks, etc.).

Quality pharmaceutical care is becoming ever more important along with natural therapies and nutrition, while demand for magistral formulae and children's products is in decline.

Figure 28. Less important specialisation in the field of pharmacy*



* These are open questions. Responses with the same meaning have been grouped into categories. Figures 26 and 27 show categories referred to more than 3 times. Figure 28 shows categories referred to more than twice.

CONCLUSIONS

- Every year more than 300 pharmacists graduate in Catalonia (at present they all graduate from the University of Barcelona). Most of those who enrol for Pharmacy studies are women.
- Graduates of Pharmacy are rather satisfied with the Bachelor's degree programme followed (rated at 7.6). In addition, they believe that the education received has enhanced their capacity for the professional activity (at 7.1).
- Access to the labour market among graduates of Pharmacy three years after completing the Bachelor's degree programme is excellent. 94% are in work and, of these, 82% perform functions specific to the study programme. 64% are on a permanent contract and 85% are in full-time work. These indicators are above the average for the remaining study programmes in the field of health and the average for the study programmes in the Catalan university system.

Pharmacies consider that...

- The recently graduated individuals they have recruited over the past three years meet the needs of the workplace.
- Personal, social and cognitive skills are the foremost factors in recruiting candidates, along with whether or not they have undertaken external training placements. Holding a Master's degree or PhD adds no weight in this respect.
- 75% of pharmacies have encountered difficulties in recruiting staff with suitable profiles, essentially on account of the difficulty in accepting the working hours offered and due to candidates lacking the skills needed for the position.
- Cross-disciplinary skills which show scope for improvement in the education received in the field of Pharmacy are practical training, autonomous work and problem solving (as is the case with other study programmes).
- In terms of specific skills for working at pharmacies, more than half of employers believe there is room for improvement when it comes to the ability to provide advice, health promotion and disease prevention.
- Cooperation with universities is low (pharmacies only cooperate in order to offer students external training placements). Satisfaction with the training placement service stands at 5.8.
- 66% of pharmacies fund training which, fundamentally, is on-the-job training given during working hours.
- Skills that will become more important in the future are related to pharmaceutical care and new technologies (online sales, social networks, etc.).

DATA SHEET

Survey for pharmacies

Population	All pharmacies in Catalonia
Survey period	From 5/03/2018 to 23/03/2018
Survey type	Online
Average time taken	If they recruited individuals: 11'59"

	Population	Sample	Response rate	Sample error
Pharmacies	3,200	170	5.3%	7.5%

Survey on satisfaction (2017)

	Population	Sample	Response rate	Sample error
Graduates in Pharmacy in 2015-2016-2017	965	191	19.8%	6%

Survey on access to the labour market (2017)

	Population	Sample	Response rate	Sample error
Graduates in Pharmacy in 2013	272	140	51.5%	6%

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