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AL **ALMALAUREA**

22nd Report
2019 Graduates' Profile

2020 Summary Report

Summary of the 22ⁿᵈ Survey on the 2019 Graduates' Profile (2020 AlmaLaurea Report)

The Graduates' Profile takes into consideration 290,224 graduates over the 2019 calendar year in the Italian Universities.[1] The 75 Universities involved in the survey, where about 90% of graduates in Italy earned their degrees, are pretty much evenly distributed throughout the country: 28 in the North, 21 in the Centre, 26 in the South and on the Islands.[2] Six of these Universities (Bologna, Sapienza University of Rome, Turin, Padua, Naples Federico II and Milan Statale) had more than 10,000 graduates in 2019.

The population of graduates breaks down as follows: 166,265 are first-level graduates (representing 57.3% of total graduates in 2019), 36,210 are single-cycle second-level graduates (12.5%), 86,301 are two-year masters (29.7%), 1,233 are from other pre-reform courses of study[3] (now accounting for only 0.4% of the total), 215 are from the pre-Bologna Process reform course of study in Primary Education Sciences[4] (0.1%). The five largest fields of study (economics and statistics; engineering; politics and social sciences; humanities and health professions) together account for over 50% of total graduates. Most fields of study include courses of study with a "3+2" structure, while seven of them also have single-cycle second-level graduates. The questionnaire was completed by 268,461 graduates, representing 92.5% of the total population surveyed.

The study presented here has been structured by degree type, each of which is characterised by a different composition by field of study.

Single-cycle second-level and first-level courses of study are the only ones that can be reached with a high school/secondary school diploma. First-level courses of study are distributed across 16 fields of study, with greater concentration in economics and statistics (15.1%), engineering (13.1%), politics and social sciences (12.2%) and health professions (11.3%). The single-cycle second-level courses of study, lasting at least five years, are concentrated in a few fields: law (34.4%), medicine and dentistry (30.6%), pharmacy (13.2%), Primary Education Sciences (10.6%), architecture (8.5%), veterinary (2.6%) and humanities (0.2%, corresponding to the course of study in Conservation and Restoration of Cultural Heritage).

The two-year master's degrees are open to graduates who have already earned at least one first-level degree. The two-year masters can be splitted into 16 fields of study, concentrated mainly in four fields: engineering (18.8%), economics and statistics (18.3%), humanities (10.6%), politics and social sciences (10.5%). Due to the small number of graduates and to the particular features of these populations the graduates of the pre-reform courses of study and the defence, security and military

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[1] The complete documentation is available at www.almalaurea.it/en/universita/indagini/laureati/profilo.

[2] After some initial experiments, since 2015 AlmaLaurea carries out an annual survey on the Profile and Occupational condition of PhD and Academic Masters graduates. The results of the most recent surveys can be found, in Italian, at www.almalaurea.it/universita/indagini.

[3] Pre-reform courses of study are those started prior to the reform of the Italian Ministerial Decree no. 509/1999 (Bologna Process), and are gradually expiring.

[4] With the Italian Ministerial Decree no. 249/2010, the new single-cycle second-level course of study in Primary Education Sciences (LM 85-bis) was established, which in effect replaces the previous four-year course of study, the only one not reformed by the Italian Ministerial Decree no. 509/1999 (Bologna process). The first activations started from the 2011-2012 academic year. The 2016 Profile includes the first graduates of the LM 85-bis class.

studies field of study will be excluded in the analysis presented below. Moreover, due to their small sizes and the peculiarity of their populations, the overall analysis for field of study and degree type does not take into account the two-year master's degree in law (degree established by the Italian Ministerial Decree no. 509/1999 and in the process of being eliminated) and the single-cycle second-level graduates in humanities (the first graduates of the Conservation and Restoration of Cultural Heritage degree established by the Italian Ministerial Decree dated 2 March 2011).

1. Gender and social background

Women, who for some time now account for more than half of graduates in Italy, represent 58.7% of the total in 2019: a share that tended to remain stable over the last ten years. Women reach 65.4% of the total in the single-cycle second-level courses of study, 9.1 percentage points more than in the two-year master's degrees (56.2%), and 6.9 percentage points more than first-level graduates (58.4%).

There is a strong differentiation in the gender composition of the various fields of study. In the first-level courses of study, women constitute the vast majority in education (93.8%), foreign languages (84.2%), psychology (79.9%) and health professions (71.0%). Conversely, they are a minority in engineering (26.4%), math, physics and natural sciences (26.7%) and physical education (34.0%). This distribution is also confirmed for the two-year master's degrees. In single-cycle second-level courses of study, women clearly prevail in all fields of study: from 95.4% in the education to 54.7% in medicine and dentistry.

With regard to social mobility, graduates from families with a privileged socio-cultural background are over-represented. Of all men in Italy aged between 45 and 64,[5] 13.9% hold a university degree. This percentage reaches 21.2% among the graduates' fathers. The comparison between the Italian female population and the graduates' mothers leads to similar evidence (respectively 15.7% and 20.8%). Jointly considering the levels of education of both fathers and mothers analysed by AlmaLaurea, 30.4% have at least one parent with a university degree (26.1% in 2009). Distinguishing by degree type the following results apply: 27.2% of the first-level graduates; 31.2% of two-year masters; 43.4% single-cycle second-level graduates (Figure 1).

Figure 1 - 2019 graduates: at least one parent with a university by degree type (percentage values)
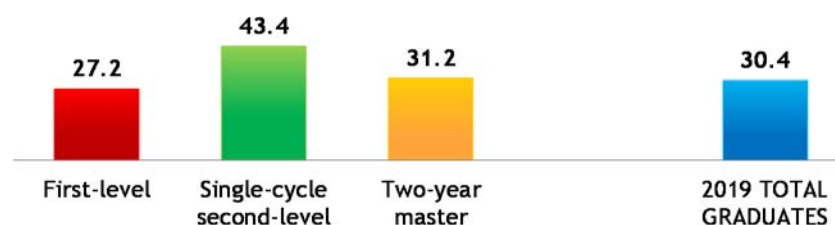
Source: AlmaLaurea, Graduates' Profile Survey.

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[5] Elaboration of Istat data. This age range is assumed appropriate for parents of graduates surveyed by AlmaLaurea.

Among those with at least one parent with a university degree, 20.2% complete their studies in the same field of studies as one of the parents, but this proportion rises to 34.2% among single-cycle second-level graduates, i.e. the degrees who most frequently lead to self-employment. Indeed, more than 40% of graduates in medicine and dentistry has a parent with a degree in the same field of studies.

Graduates with less-favoured social background, whose parents perform blue collar occupations, in 2019 are 21.8% (23.5% among first-level graduates, 20.9% among two-year masters, only 15.4% among single-cycle second-level ones). Conversely, graduates of high class (whose parents are entrepreneurs, self-employed and executives) account for 22.4% (20.4% among first-level graduates, 22.2% among two-year masters, and 32.7% among single-cycle second-level graduates). Despite their summary nature, these data highlight the weight of social background on the choices and possibilities of successfully completing a university education. Enrolment in single-cycle second-level course of study inevitably requires a longer term investment than first-level degrees, an investment that will often continue with further specialisation courses of study. It is also for this reason that single-cycle second-level graduates are largely drawn from a population of socially favoured groups, particularly those in the medical course of study.

The social background of two-year masters tends to be higher than that of first-level graduates. This is due to the fact that in the transition between the two levels of study there is a further socio-economic selection: in summary, most frequently those who continue their education are graduates who have families that are culturally favoured and better equipped to support their children's studies.

2. Geographic origin and educational background

2.1. Geographic origin

In 2019, nearly half of the graduates (45.6%) earned their degree in the same province in which they received their high school/secondary school diploma. The phenomenon, involving 48.6% of first-level graduates and 46.4% of single-cycle second-level graduates, drops slightly for two-year masters (39.2%). The choice to study "close to home" is explained, among other things, by the widespread dissemination of university education,[6] but also by the need of the most disadvantaged families to contain the costs of education. However, mobility is constantly increasing and the geographic area where the high school/secondary school diploma was earned has a relevant influence on this phenomenon. In fact, migrations for the purpose of studying show a very clear trend, almost always from the South to the Centre-North: 26.5% of graduates who earned their diploma in the South chose a university with a different geographic area compared to 12.6% of those who earned their diploma in the Centre and 3.0% of those who got their diploma in the North.

To examine the attractiveness of the Italian university system, it is interesting to consider the citizenship of its graduates: 10,743 citizens of other countries graduated from AlmaLaurea Universities in 2019. Foreigners account for 3.7% of the total number of graduates, and this number is growing: according to AlmaLaurea data they accounted for 2.7% in 2009.[7] However, it should be noted that these

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[6] This even though almost all Italian provinces are home to one or more courses of study.

[7] Even though the composition of AlmaLaurea's graduates in 2009 was different from the current class, both in terms of number of universities and of degree type, specific insights confirmed the substantial constancy over time of the comparisons.

are increasingly young people coming from immigrant families residing in Italy. Indeed, 42.0% of the non-Italian citizens graduated from high school/secondary school in our country, while in 2011 this figure was 28.2%. So much so that if we consider the share of foreign citizens with a diploma abroad the value stands at 2.1%, a percentage that has been stable in recent years. The value rises to 4.3% among two-year masters and it stands at 1.5% among single-cycle second-level graduates, 1.2% among first-level graduates (Figure 2).

Figure 2 - 2019 graduates: foreign citizens with high school/secondary school diploma abroad by degree type (percentage values)
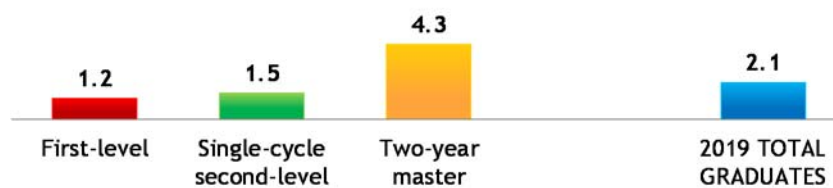
Source: AlmaLaurea, Graduates' Profile Survey.

While more than half of all foreign nationals, including those who graduated high school/secondary schools in Italy, come from Europe (in particular from Romania and Albania, 11.4% and 10.8% respectively), the share of those who come from Europe (36.6%) drops in the group of foreign graduates who earned their high school/secondary school diploma abroad, the most represented country being China, with 13.0%. Foreign graduates who got their high school/secondary school diploma abroad tend to focus on specific fields of study, such as architecture (4.0%) and engineering (3.2%). Conversely, in three fields of study (education, law and physical education) foreign graduates with a high school/secondary school diploma earned abroad account for less than 1.0%.

2.2. Educational background

With regard to the educational background of 2019 graduates, there is a prevalence of high school (liceo) diplomas (76.5%), in particular of the scientific high school diploma (earned by 42.7% of graduates) and classical (15.3%). The technical diploma follows with 18.9% of graduates. There were very few professional diplomas (2.1%).

The share of graduates with a high school diploma has increased considerably over the last ten years, rising from 67.9% in 2009 to 76.5% in 2019 (+8.6 percentage points), particularly at the expense of graduates with a technical diploma, which fell from 26.8% to 18.9%. These results were certainly influenced by the high school/secondary school reform that came into force in the 2010/2011 school year (which increased enrolment in high school courses) and the trend of university enrolments. Until the 2013/2014 academic year there was a more evident decrease among students with a technical secondary school diploma.

Focusing on graduates with high school diplomas, there are modest differences between first-level and two-year masters, while single-cycle second-level graduates are very distinct (Figure 3). Indeed, in that degree type 90.1% have a high school education, mostly with scientific (49.4%) and classical (28.7%) specialisations, compared to 73.8% for first-level graduates (40.1% and 12.2% coming from scientific and classical high schools, respectively) and 76.2% of the two-year masters (45.3% from scientific high school and 15.5% from classical high school).

Figure 3 - 2019 graduates: high school diploma (classical, scientific, linguistic, human sciences, artistic and musical and choreographic) by degree type (percentage values)
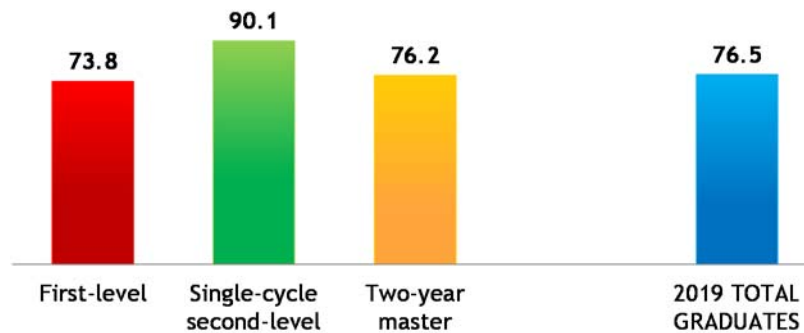
Source: AlmaLaurea, Graduates' Profile Survey.

There is a relevant link between the high school/secondary school diploma earned and the field of university studies. While, overall, 40.1% of first-level graduates come from scientific high schools, these are the majority of graduates in engineering (67.5%) and math, physics and natural sciences (60.0%), geology, biology and geography (59.3%) and chemistry and pharmacy (56.9%). Conversely, graduates with a scientific high school diploma are less present among graduates of education (14.4%), foreign languages (17.6%), law (21.0%) and politics and social sciences (23.1%). Among the first-level graduates, those who have completed the classical high school (12.8% overall) are most present in humanities (33.3%) and psychology (20.9%), while they represent a much smaller share of those who earn a first-level degree in physical education (5.8%), math, physics and natural sciences (6.4%) and engineering (6.8%).

The scholastic differentiation of the courses of study is confirmed by the fact that even first-level graduates with a technical or professional diploma (24.8% overall) vary appreciably from course to course: the presence is relatively strong in the fields of study of law (44.4%), economics and statistics (39.2%) and agriculture (37.9%), weaker in psychology (10.6%), humanities (11.3%) and geology, biology and geography (14.5%).

As noted, among the single-cycle second-level graduates, 49.4% of the graduates come from scientific high schools. This share rises above 60% among graduates in medicine and dentistry, veterinary, architecture. 28.7% of the single-cycle second-level graduates come from classical high schools. This percentage rises to 40.8% among the graduates of law, while it stops at 14.6% among the graduates of the architecture courses of study and 15.1% among those studying education. Compared to the average of single-cycle second-level graduates, the proportion of graduates with a technical or professional diploma is higher among the graduates in architecture, law and education (12.3%, 11.3% and 10.9% respectively). This percentage is almost negligible among graduates in medicine and

dentistry (2.2%). Overall, disciplinary preferences linked to educational background show a certain level of stability over time.

While on the whole two-year masters have a scholastic history that is quite similar to that of first-level graduates, i.e. a diploma from high school (76.2%) or technical secondary school (17.6%), with similar differentiations by field of study, it should be noted that these are students who have tended to have higher diploma mark. The average diploma mark for two-year masters is 82.3 out of 100, compared to 80.5 for first-level graduates. This result, verified in all fields of study, confirms that the most prepared students tend to continue their studies after the first-level degree.

The high school/secondary school diploma mark earned by 2019 first-level graduates are appreciably lower than the average among graduates of physical education (73.8), education (75.9), law (76.6) and politics and social sciences (77.3), contrasting with the higher values for graduates of engineering (85.7) and math, physics and natural sciences (85.4), both with a high presence of scientific high school graduates.

The high school diploma mark are even higher among single-cycle second-level graduates, who on average earn 84.3 out of 100. The reasons for these particularly brilliant results are in part attributed to selection for access to the course of study with limited admission that are more frequent in single-cycle second-level courses of study than in others.

3. Experiences during university studies

Experiences gained during university studies focus on studies abroad, curricular internships and work during studies.

3.1. Study abroad experiences

Study abroad experiences involve a total of 12.5% of 2019 graduates, a figure that is substantially stable compared to 2009, when 12.2% of graduates took part. This result is due to an increase of 2.5% in the number of participants in EU programmes and a simultaneous drop in the number of students who studied abroad on their own initiative. First-level graduates tend to be less involved in such experience (9.4%) than two-year masters (17.0%) and single-cycle second-level graduates (17.2%).

More specifically, 8.9% of those studying abroad were involved in programmes recognized by the European Union (Erasmus in first place), 2.3% with other study experiences recognised by the course of study (Overseas, thesis abroad, etc.) and for the remaining 1.3% via personal initiative.

Combining the EU programmes and other initiatives recognised by the course of study abroad experiences, 11.2% of all graduates have had this type of experience (Figure 4). Among 2019 first-level graduates this percentage was 8.1%, with a particularly marked peak for graduates in foreign languages (28.8%) and higher-than-average values for graduates in politics and social sciences (11.2%) and economics and statistics (10.4%).

Among the single-cycle second-level graduates, the programmes abroad recognised by the course of study are relatively widespread and affect 15.6% of graduates. There is a particularly high level of studying abroad in architecture (24.8%), medicine and dentistry (18.1%) and veterinary (17.5%).

Two-year masters who have taken the opportunity to study abroad through initiatives recognised by their course of study are 15.7%. These were joined by other graduates who participated in study

abroad programmes during the first-level course of study, for a total of 20.8% over the 3+2 years. This latter value exceeds the target of 20% set for 2020 at a European level. Study abroad experiences during the two-year master's degree converged not only on foreign languages (29.7%), but also on engineering (21.8%) and architecture (19.3%).

Figure 4 - 2019 graduates: study abroad recognised by the course of study by degree type (percentage values)
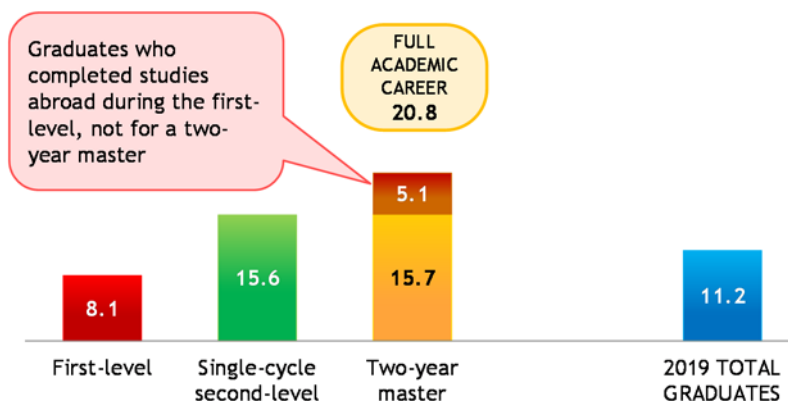
Source: AlmaLaurea, Graduates' Profile Survey.

It was also found that, all things being equal, those who study abroad in programmes that are recognised by their course of study are more likely to be employed one year after earning their degree than those who have never spent time abroad (+12.9%).

Among the graduates who have studied abroad in programmes recognised by their course of study, 81.3% took at least one exam that was validated when they returned to Italy. 26.9% of those who have completed a period of study abroad have also prepared a relevant part of their theses (a share that rises to 45.5% among the two-year masters). These are experiences, aside from rounding out their personal background, allow them to acquire greater language skills. In fact, 88.5% of graduates who have had a recognised study abroad experience declare that they know at least one foreign language written at a level equal to or higher than B2, while this share is 54.0% among those who have not had this experience.
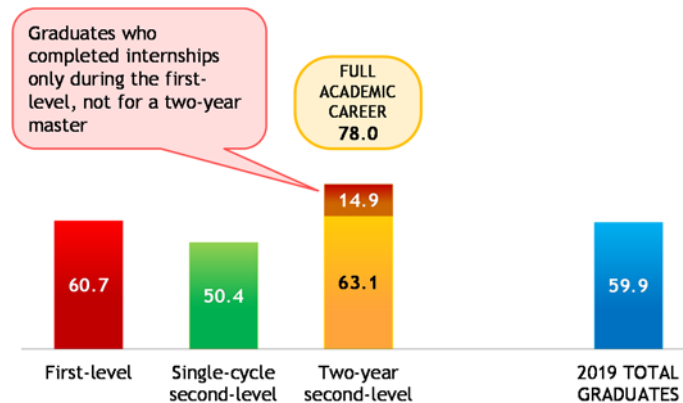
3.2. Curricular internships

Curricular internships carried out and recognised by the course of study represent for Italian universities one of the strategic goals in the understanding and collaboration between universities and the business world. That these experiences represent for students a winning card to play on the job market has been reported for years by AlmaLaurea: all else being equal, in fact, the internship is associated with a greater probability of 9.5% of finding employment within one year after the end of the course of study.

In recent years, there has been an increase in the number of curricular internships, which in 2019 involved 59.9% of graduates (54.5% in 2009). The high number of internships is matched by a high level of satisfaction of the interns. Indeed, 68.9% of graduates expressed a decidedly positive opinion about their experience.

More specifically, the internships recognised by the course of study involved 60.7% of first-level graduates, 40.8% outside the university. Internships were completed by more than 80% of first-level graduates in the fields of study education (95.6%), health professions (88.7%), agriculture (84.9%) and physical education (82.8%), while only a minority of graduates of the engineering (30.0%) and humanities (44.0%) fields of study worked as interns. Among first-level graduates, however, internships were more common (71.3%) among those who did not intend to pursue further studies with a two-year master's degree (Figure 5).

Figure 5 - 2019 graduates: internships recognised by the course of study degree type (percentage values)

Source: AlmaLaurea, Graduates' Profile Survey.

A majority of two-year masters (63.1%) also participated in curricular internships during the two-year course of study. Moreover, 14.9% of the two-year masters have participated in an internship but during their first-level course of study, which brings the total percentage of two-year masters with internship experiences in their academic career to 78.0%. The graduates in physical education, education, health professions as well as geology, biology and geography ones continue to be most involved in these activities, all with percentages above 80%.

With regard to single-cycle second-level courses of study, 50.4% of graduates participated in curricular internships, though the numbers differed greatly according to field of study: 92.1% of, pharmacy graduates participated, compared to 19.8% of those from the law field of study.

3.3. Work during studies

Over the last 10 years there has been a decrease in the share of graduates with work experience during studies (from 74.5% in 2009 to 65.2% in 2019), probably due both to the economic downturn and the gradual shrinking of adult enrolment at the university. More specifically, in 2019, 6.2% of graduates were studying workers, i.e. they graduated after working steadily throughout their university studies.[8] Working students, i.e. are all the other graduates who have worked during their university studies, accounted for 59.0%. In contrast, the incidence of graduates achieving the degree without any type of work experience due to the global crisis has increased over the past 10 years and in 2019 it reached 34.7% (+10.3 percentage points compared to 2009 graduates). It will be interesting to monitor this trend, also in light of the current emergency situation brought on by the Covid-19 epidemic, which could hinder work experiences among university students.

66.0% of first-level graduates performed some kind of work while studying. 5.5% were studying workers. Graduates who have had work experience are particularly numerous in physical education (81.4%), education (78.7%), law (77.1%), and politics and social sciences (75.3%), while contact with the labour market is relatively weak for math, physics and natural sciences graduates as well as, health professions, engineering ones and geology, biology and geography ones (percentages that range from 55.6% to 57.4%). In these last fields of study there is only a small number of studying workers (2-4%), though there were more cases among graduates of law (17.8%), education (13.0%), politics and social sciences (9.9%) and physical education (9.6%).

As we saw previously, single-cycle second-level courses of study welcome more young people with socially favoured family background. Despite this, more than half of all single-cycle second-level graduates (56.5%) worked, ranging from 39.0% of medicine and dentistry graduates to 74.8% of education graduates. It is true however that only 3.4% of single-cycle second-level graduates were for all intents and purposes studying workers.

66.9% of two-year masters were engaged in work experience during their two-year master studies. The presence of studying workers is far from negligible (8.2%), particularly among graduates of health professions (42.3%) and education (22.6%) fields of study.

4. Study conditions

4.1. Class attendance

69.7% of 2019 graduates regularly attended classes for at least three quarters of the planned lessons: 69.6% for first-level graduates, 59.3% for single-cycle second-level graduates and 75.2% for two-year masters (Figure 6). Past data show how class attendance has been slowly but progressively increasing in recent years: in 2009, 66.2% of all graduates regularly attended their classes.

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[8] Studying workers are those who stated that they had continuous full-time work for at least half the duration of their studies both during the university classes and during breaks.

Figure 6 - 2019 graduates: regular attendance of at least 75% of classes by degree type (percentage values)
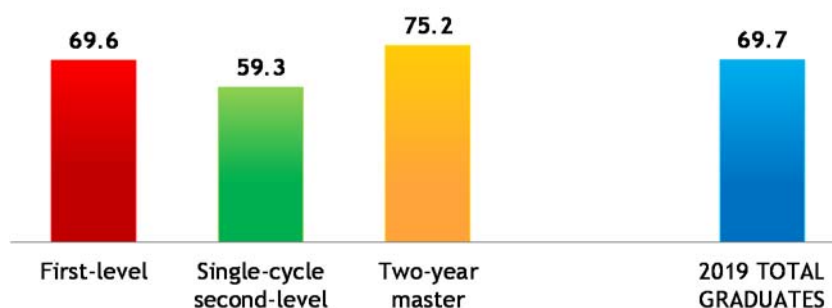
Source: AlmaLaurea, Graduates' Profile Survey.

As already mentioned, 69.6% of first-level graduates stated that they regularly attended classes. Here also there are relevant differences among fields of study. Class attendance was high for graduates in health professions (95.6%), architecture (86.7%), engineering (79.7%) and chemistry and pharmacy (78.4%). Conversely, classroom attendance was relatively limited among graduates of education (46.6%), law (47.0%) and psychology (52.7%).

Overall, 59.3% of single-cycle second-level graduates reported having attended classes regularly. This result, however, is determined in particular by the fact that law graduates, which account for 37.0% of the total number of single-cycle second-level graduates, attend relatively few classes (only 35.7% participate regularly), while in the other field of study the participation range from 54.6% for education to 88.0% for architecture.

The two-year masters were particularly diligent in their attendance (75.2%). But the level of attendance varies greatly depending on field of study, from the minimum of education (41.0%) to the maximum of architecture (90.3%), engineering (85.1%), chemistry and pharmacy (84.9%) and math, physics and natural sciences (84.9%).

4.2. Student support services

Among 2019 graduates, the services offered by the organisation for the Right to Study and used at least once in addition to scholarships (24.4%) were book loans (37.2%), canteens/foodservice (36.5%), transport subsidies (19.4%), aid for international mobility (16.8%), vouchers for the purchase of books and computer equipment (9.8% and 9.4% respectively), healthcare (9.2%), part-time work (9.0%), rent subsidies (7.9%), housing (4.8%) and services for students with disabilities (4.6%).

In general, graduates are satisfied with the student support services provided by the institution, with 91.8% points declaring satisfaction with book loans and 82.7% for quality of housing. There are, however, some critical areas related to vouchers for the purchase of books, rental subsidies and coupons for computer equipment, for which more than 45.0% of the users declared themselves to be dissatisfied.

As enshrined in the Italian Constitution (art. 34, paragraphs 3 and 4), scholarships are the main tool for providing financial support to students who are "deserving and deprived of means". Scholarship coverage is not uniform across the country because it also depends on individual regional policies: in

the South, for example, the percentage of scholarships among those eligible is lower than the national average.

In this regard, and in order to prevent a possible decline in enrolments following the Covid-19 epidemic, in Italian Decree-Law no. 34/2020 the government has allocated €40 million to support regional measures on the right to study. Scholarships are less frequent among single-cycle second-level graduates (19.5%) due to their more favoured socio-economic background. It should be remembered that the use of scholarships is differentiated by field of study and more widespread precisely where the presence of students from less favoured socio-economic families is highest: foreign languages (30.6%), education (29.9%), health professions (27.2%), psychology (26.9%) and politics and social sciences (26.9%). It is important to point out that compared to non-scholarship holders, graduates with scholarships attend classes more assiduously, have better university careers in terms of degree completion time and graduation mark and have taken greater advantage of study opportunities abroad and/or internships during studies.

Food services were more frequently used by first-level graduates (39.0%), while book lending is more used by single-cycle second-level graduates (44.4%). In other aspects, however, there are no relevant differences in the degree type both for the use of support services and the level of satisfaction declared by those who have used them.

5. Success in university studies

In this report success in studies is analysed as the product of a combination of several factors, such as the enrolment age, the course of study length and the actual amount of time taken by the student to earn a degree, age at graduation and graduation mark.

5.1. Degree completion time

There is substantial consistency in enrolment after high school/secondary school, which means that registration is completed immediately after the high school/secondary school diploma or equivalent. In fact, 84.6% of the first-level graduates registered with at most a one-year delay beyond the "canonical" age, defined by AlmaLaurea as 19 years old. Even more regular are single-cycle second-level graduates, where 88.6% were registered at most within one year of delay beyond the canonical age.

Specific reflections regard two-year masters who have already completed a previous university degree. For these, the number meeting the supposed age of enrolment, set by AlmaLaurea at 22 years of age, is not particularly high (59.2%), mainly due to delays accumulated during the first-level degree.

The graduation age for 2019 graduates is 25.8 years, with obvious differences depending on the degree type: 24.6 years for first-level graduates, 27.1 for single-cycle second-level graduates and 27.3 years for two-year masters. As also underlined in the previous editions of the Graduates' Profile Report, the age at graduation has fallen to an appreciable extent with respect to the pre-reform situation and has continued to decline in recent years: the average age was 27.1 years in 2009.

The average age at graduation among first-level graduates ranges between 24.0 years for four fields of study (economics and statistics; engineering; geology, biology and geography; foreign languages) and 28.1 years for law. The average age at graduation for single-cycle second-level

graduates ranges from 26.9 years for graduates in law as well as in medicine and dentistry to 28.0 years for veterinary. The average age of two-year masters is 27.3 years, as noted: 30.7 years for health professions, 28.7 for education and, conversely, 26.1 years for the chemistry and pharmacy, and 26.5 years for economics and statistics fields of study, followed by 26.8 years for engineering, agriculture as well as math, physics and natural sciences fields of study. However, this is an "adjusted" age, also conditioned by the relevant presence of graduates who have started their two-year master at a later age than usual, as mentioned above.

The degree completion time, which measures the ability to complete the course of study in the time set by the regulations, has markedly improved in recent years. While in 2009, 39.2% of graduates completed their studies within prescribed degree completion time, in 2019 the percentage reached 55.7% (Figure 7). Conversely, while 10 years ago those completing studies with four or more years beyond the standard timetable were 15.8%, today that figure has been almost halved (8.1%).

Figure 7 - 2019 graduates: completion of the course of study within the prescribed degree completion time by degree type (percentage values)
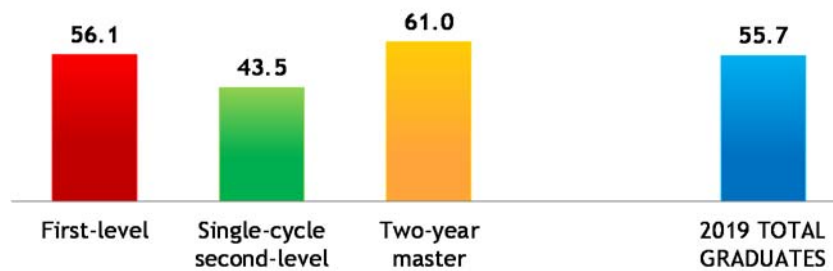
Source: AlmaLaurea, Graduates' Profile Survey.

The degree completion time appears consolidated and continues to apply to a high share of first-level graduates (56.1%). 70.6% of graduates of health professions complete their studies in the standard three years. At the other extreme, only 37.4% of law graduates finish within prescribed degree completion time, with 23.9% of them finishing at least 4 years beyond prescribed degree completion time.

For single-cycle second-level graduates 43.5% of graduates complete their coursework within prescribed degree completion time, while 21.1% graduated a year beyond prescribed degree completion time. In this case, too, different situations can be observed within the individual fields of study. While it is true that 74.3% of students in education graduate within prescribed degree completion time, the same is true for 56.2% of medicine and dentistry students. On the contrary, only 18.9% of architecture students and 27.0% of veterinary field of study students graduate according to the standard timetable.

Compared to first-level graduates, degree completion time is lower for two-year masters, where 61.0% of graduates finished within prescribed degree completion time, with peaks above 75% for graduates from the physical education field of study (81.2%) and the health professions (76.3%). On the other hand, graduates in architecture (44.5%), engineering (48.3%) and humanities (48.6%) are less

constant. As mentioned previously, graduates of two-year master's degree appear a selected group in terms of social background and with better performance than those of first-level classmates.

At the conclusion of their studies the graduates are asked to prepare a thesis (or final test) that will affect the final graduation mark. For 2019 graduates, the preparation of the thesis required an average of 4.7 months with predictable differences linked to degree type, ranging from an average of 3.3 months for first-level graduates (for which the final test may possibly consist in materials or a report linked to an internship) up to 6.2 months for two-year masters and 7.3 months for single-cycle second-level graduates.

A linear regression model has been applied to analyse the multiple factors affecting graduation times.[9] The delay index, which is the ratio between the delay in graduation and the normal duration of the course of study (both expressed in years), was chosen as a dependent variable. This index measures the delay regardless of the duration of the course of study. It is equal to zero for those who finish within prescribed degree completion time and increases in proportion to the delay.

The analysis took into account the following factors: high school/secondary school diploma mark, field of study, geographic area of the university and class attendance.

The most relevant factor (Table 1) in determining the delay in graduation is lesson attendance: the model shows that compared to those who claim to have attended more than 75% of classes, those who claim to have attended less than 25% take 48.5% more time to graduate. For example, while a first-level graduate who attends more than 75% of classes takes 3 years to graduate, those who attend less than 25% take about 4.5 years. There are marked differences in the various fields of study: all else being equal, it is estimated that a graduate of engineering employs 38.6% more time than a graduate of physical education. There are also relevant differences with regard to the geographic area of the university: compared to those who graduate in the North, those who earn their degree in the Centre take 12.5% longer and those who graduate in the South or the Islands 19.8% longer (hereinafter the term "South" will be understood to also include the Islands). Finally, high school/secondary school diploma mark remains a significant indicator of the speed of completion. Compared to those who earned the highest mark in high school/secondary school, those who earn their diploma with mark of 60 out of 100 employ 32.5% more time. Gender and the socio-cultural and economic background have not been included in the model because of their modest significance: most likely the effect of these factors is absorbed in part by school performance (high school/secondary school mark) and in part by the choice of the field of study.

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[9] The analysis of the effects on degree completion time was carried out with a multivariate approach using a linear regression model. The model does not consider pre-reform graduates, the pre-reform course of study in Primary Education Sciences and the defence, security and military field of study. Factors related to citizenship (Italian/non-Italian) and geographic area of the school were also considered, but found not to be significant. Gender, parents' education, social class, parents' citizenship, type of high school/secondary school diploma, degree type, geographic mobility for study, late enrolment, previous university experiences, cultural and professional reasons for enrolling at the university, size of the university, distance between accommodation and the place of study, the rental of lodgings during studies, the use of a scholarship, study abroad experiences and participation in internships recognised by the course of study, work during studies and adequacy of the study load with respect to the duration of the course of study were excluded from the model, given their small contribution of the information.

Table 1 - 2019 graduates: linear regression model for the assessment of the delay index

	b	S.E.
High school/secondary school diploma mark (average, out of 100)	-0.008	0.000
Field of study (Physical education=0)		
Agriculture and veterinary	0.218	0.010
Architecture	0.339	0.009
Chemistry and pharmacy	0.276	0.010
Economics and statistics	0.152	0.008
Geology, biology and geography	0.236	0.009
Law	0.179	0.009
Engineering	0.386	0.008
Education***	0.002	0.009
Humanities	0.287	0.008
Foreign languages	0.214	0.008
Medicine and dentistry	0.051	0.009
Health professions	0.102	0.008
Politics and social science	0.141	0.008
Psychology	0.078	0.009
Math, physics and natural sciences	0.326	0.009
Geographic area of the University (North=0)		
Centre	0.125	0.003
South and Islands	0.198	0.003
Attended classes on a regular basis (more than 75% of prescribed classes=0)		
less than 25%	0.485	0.006
25% to 50%	0.310	0.005
50% to 75%	0.151	0.003
Constant	0.203	0.007

Note: R-squared = 0.101 (adapted R-squared = 0.101), N = 260,657
*** Not significant.
If nothing is indicated, the parameters are significant at 1% (p<0.01).
Source: AlmaLaurea, Graduates' Profile Survey.

5.2. Graduation mark

The average graduation mark remains substantially unchanged in recent years (103.1 out of 110 in 2019, the same value observed in 2009), with evident variations depending on the degree type: 100.1 for first-level graduates, 105.3 for single-cycle second-level graduates and 107.9 for two-year masters (Figure 8).

Figure 8 - 2019 graduates: graduation mark by degree type (average, out of 110)
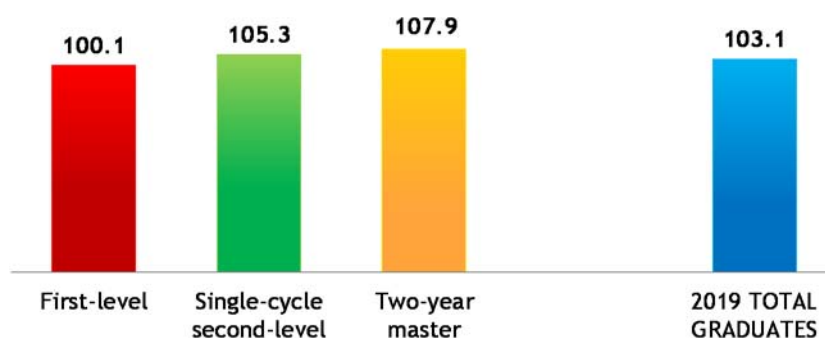
Note: for calculating averages, the mark of 110 cum laude was converted to 113.
Source: AlmaLaurea, Graduates' Profile Survey.

As noted, while the average mark for first-level courses of study is equal to 100.1, there are relevant differences among fields of study, with graduation mark ranging from 105.2 for the health professions and 104.2 for humanities to 95.8 for law, 96.0 for economics and statistics and 96.9 for engineering. The average graduation mark for single-cycle second-level graduates is 105.3 out of 110, with variations ranging from 100.6 among the graduates of chemistry and pharmacy and 102.0 in law to 110.2 in medicine and dentistry. Among the two-year masters there was a very high average graduation mark (107.9), also due to an incremental effect with respect to the results achieved at the end of the first-level course of study: the average increase in the graduation mark at the end of the second-level course of study compared to the first-level course of study was 7.7 points out of 110. The two-year master's fields of study having relatively lower average graduation mark are engineering (106.7) and economics and statistics (106.8).

A linear regression model[10] was used to analyse the determinants of graduation mark (Table 2). The analysis took into account the following factors: type of high school/secondary school diploma, high school/secondary school diploma mark, degree type, field of study, study abroad recognised by the course of study, class attendance and adequacy of the workload in relation to the duration of the course of study[11]. The model confirms the presence of relevant differences by degree type. All else being equal, compared to a first-level graduate it is estimated that a single-cycle second-level graduate will earn graduation mark that is almost 3 points higher while a two-year master will earn a mark that is 8 points higher. There are also considerable differences among fields of study: considering the extremes, graduates in health professions complete their studies with a mark that is almost 9 points higher than graduates in engineering. High school/secondary school diploma mark is also an important predictor of university performance: compared to a high school/secondary school graduate who has earned minimum mark, those who earn 100 out of 100 have university graduation mark that is almost

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[10] The analysis of the effects on graduation mark was carried out with a multivariate approach using linear regression models. The model does not consider pre-reform graduates, the pre-reform course of study in Primary Education Sciences and the defence, security and military field of study. Gender, parents' education, social class, citizenship (Italian/non-Italian), parents' citizenship, geographic mobility for study, geographic area of the school, geographic area and size of the university, late enrolment, previous university experiences, cultural and professional reasons for enrolling at the university, distance between lodging and the place of study, the rental of lodging during studies, the use of a scholarship and participation in internships recognised by the course of study, work during studies were excluded from the model given their modest contribution of the information.

[11] This latter factor was taken into consideration while being aware of the limits linked to possible endogenous causes.

11 points higher. This, of course, all else being equal, including the type of diploma received. In this regard, compared to a student with a professional secondary school diploma, all else being equal, a university graduate with a high school diploma earns 4 points more while a graduate with a technical diploma earns 2 points more.

Table 2 - 2019 graduates: linear regression model for the assessment of graduation mark

	b	S.E.
Diploma (professional=0)		
high school	4.229	0.090
technical	2.062	0.093
High school/secondary school diploma mark (average, out of 100)	0.267	0.001
Degree type (First-level=0)		
Single-cycle second-level	2.952	0.069
Two-year master	7.674	0.030
Field of study (Engineering=0)		
Agriculture and veterinary	4.981	0.082
Architecture	6.056	0.079
Chemistry and pharmacy	2.375	0.086
Economics and statistics	1.317	0.050
Physical education	5.671	0.086
Geology, biology and geography	3.976	0.065
Law	2.996	0.090
Education	6.287	0.072
Humanities	6.852	0.058
Foreign languages	3.949	0.061
Medicine and dentistry	8.324	0.101
Health professions	8.712	0.060
Politics and social science	4.373	0.055
Psychology	3.916	0.070
Math, physics and natural sciences	2.914	0.075
Attended classes on a regular basis (less than 25% of prescribed classes=0)		
25% to 50%	0.485	0.078
50% to 75%	1.003	0.068
more than 75%	3.192	0.064
Study abroad during the course of study (not done=0)		
done	2.294	0.040
Workload proportional to the duration of the course of study (definitely no=0)		
more no than yes	0.329	0.089
more yes than no	1.492	0.084
definitely yes	2.484	0.084
Constant	82.748	0.141

Note: R-squared = 0.438 (adapted R-squared = 0.438), N = 259,342
All parameters are significant at 1% (p<0.01).
Source: AlmaLaurea, Graduates' Profile Survey.

Other factors that are significant, but less relevant, are the attendance of classes (more than 3 points higher for those who attended more than 75% of classes compared to those who attended less than 25%), the adequacy of the workload in relation to the duration of the course of study (more than 2 points higher for those who consider it decidedly adequate compared to those who consider it decidedly inadequate) and study abroad during the course of study (more than 2 points higher than those who did not study abroad). Here again, as with the model on degree completion time, gender and socio-cultural and economic background have not been included in the model because of their modest contribution of the information: most likely the effect of these factors is absorbed in part by high school/secondary school diploma mark and in part by the choice of the field of study.

The variability in graduation mark among degree types and, for the same field, different geographic areas is also the result of numerous institutional contingent factors: standards exam mark, criteria for awarding the final mark and laude, assessment standards and complexity of reports, etc. This high variability raises questions about whether the graduation mark is still a reliable criterion for use in the recruitment of human resources. A more accurate assessment of the graduation mark cannot ignore these elements.

6. Satisfaction with the university experience

Graduates involved in the 2019 AlmaLaurea survey have reported a high level of satisfaction with various aspects of their university experience, regardless of the degree type. With reference to 2019, 25.3% of graduates declared being very satisfied with the teaching staff and another 62.5% fairly satisfied (in the questionnaire this would correspond to the answer "more yes than no"), for a total of 87.8%. With regard to the classrooms attended by 98.9% of graduates, 26.2% considered them to be "always or almost always adequate" and another 49.2% judged them to be "often adequate". Library services (for example, lending/consultation and opening hours), used by 85.9% of graduates, received a very positive assessment from 41.5% of users and were considered fairly adequate by another 50.9%. Computer workstations used by 72.1% of graduates were judged to be sufficient in number by 53.6% of users. 78.9% took advantage of spaces dedicated to individual study and over half (56.4%) considered them "present and adequate". They were more critical however of equipment for educational activities like labs and practical activities: of those who used them (81.0%), only 25.2% considered them to be "always or almost always adequate"; adding the 46.0% of those who judge them "often adequate," the overall satisfaction rises to 71.2%.

The organisation of exams (including calendars, schedules, information, and reservations) was considered "always or almost always" adequate for 35.9%, plus another 47.0% for whom "more than half of the exams" were deemed adequate, thus bringing the level of satisfaction to 82.9%. For the overall university experience, 41.0% of graduates declared themselves fully satisfied and another 49.1% quite satisfied, for an overall incidence of 90.1%. In 2009 the value was 86.6% (Figure 9).

Figure 9 - 2019 graduates: overall satisfaction of the course of study by degree type (percentage values)
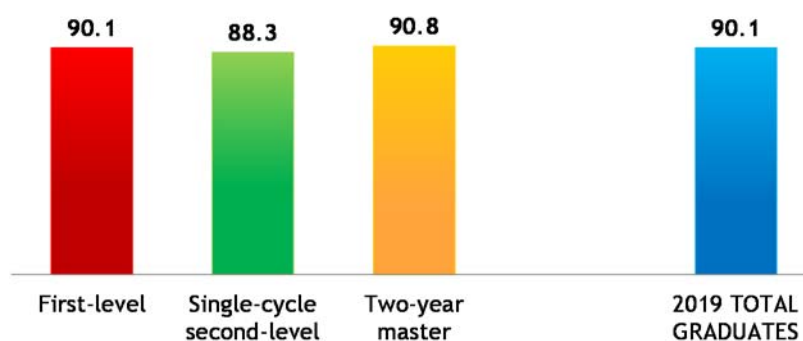
Note: the percentage of satisfaction includes the sum of the "yes definitely" answer and "more yes than no".
Source: AlmaLaurea, Graduates' Profile Survey.

Breaking down the data by degree type, satisfaction with the university experience is high and consolidated over time among first-level graduates: 39.1% of them are decidedly satisfied with the course of study just completed and 51.0% declare themselves fairly satisfied, for a total of 90.1%. The most satisfied are the first-level graduates of education (94.0%), geology, biology and geography (93.0%), math, physics and natural sciences (91.7%) and psychology (91.6%). In contrast, the most critical are the graduates in foreign languages (85.4%), architecture (86.5%) and physical education (86.8%). 22.8% of first-level graduates were definitely satisfied with their relationships with professors and a further 65.1% declared to be pretty satisfied, for a total satisfaction of 87.9%, with the highest

results in education (92.0%), chemistry and pharmacy (91.0%), agriculture (90.4%), geology, biology and geography (90.3) and humanities (90.3%). Satisfaction was lower for graduates in architecture (82.8%) and engineering (83.9%).

Among single-cycle second-level graduates, 38.0% were decidedly satisfied with their university experience and 50.3% were fairly satisfied, for an overall satisfaction of 88.3%. Particularly satisfied were the graduates in education (93.8%) followed by those in chemistry and pharmacy (91.5%); the veterinary (85.2%) and architecture graduates (85.3%) were more critical.

46.1% of two-year masters were definitely satisfied with the course of study, while another 44.7% were fairly satisfied. The overall level of satisfaction for the most recent university experience, equal to 90.8%, is higher than what was found for other degree types. The most satisfied are the graduates in chemistry and pharmacy (93.6%), engineering (92.7%), math, physics and natural sciences (92.6%), humanities (92.5%), economics and statistics (92.0%), psychology (91.8) and geology, biology and geography (91.8%). The most critical are the graduates of the health professions (78.8%).

The perception of the university experience is also assessed with the question "If you could go back in time, would you enrol in the same field of study/university again?" A fully positive response, i.e. those who confirm their choice both in terms of field of study and university, was offered by 71.6% of the entire population (Figure 10), a share that has grown compared to 2009 (68.4%). Another 9.1% of graduates confirm the university but would change field of study, 11.3% would enrol in the same field of study but in another university, 5.6% would change both field of study and university and only 2.2% would not enrol at the university again (for the two-year masters reference is made only to the final two-year period).

Figure 10 - 2019 graduates: would enrol again in the same course of study and at the same university by degree (percentage values)
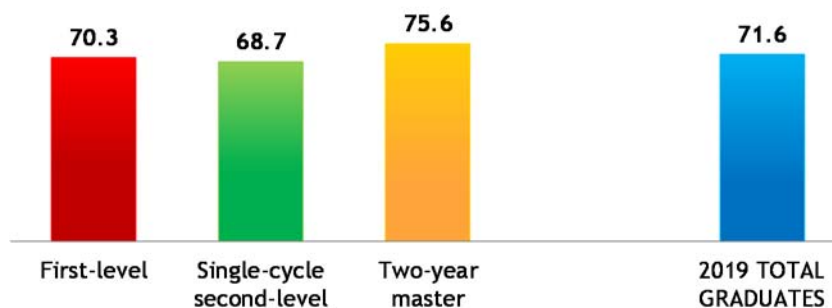
Source: AlmaLaurea, Graduates' Profile Survey.

Among first-level graduates, 70.3% would fully confirm the choice made at the time of enrolment (same field of study at the same university). Another 10.5% would remain at the same university but would choose another field of study; 11.1% percent of graduates would choose the opposite: the same field of study, but in another university. 5.9% would change both field of study and university and only 1.7% would not register at all. Confirmation of both field of study and university was declared by 79.5% of first-level graduates in math, physics and natural sciences, 75.3% in psychology and 75.0% in education. On the other hand, the percentages of those who would fully confirm the path just taken

are lower among the graduates in foreign languages (57.8%) and architecture (65.0%), stating more often that they would change course of study, university or both.

68.7% of the graduated single-cycle second-level graduates declared that if they could go back in time they would repeat their choice of field of study and university (from 56.1% of the graduates in architecture to 83.6% of graduates in education). 16.6% would accomplish the same field of study but in a different university: the difference compared to first-level graduates is partly attributed to the fact that some single-cycle second-level courses of study are linked to passing an admission test and often it is necessary to enrol where one is admitted.

The overall positive judgements of the two-year masters are also confirmed in the high propensity to confirm the choice of course of study and university (for the two-year master's courses of study reference is made only to the most recent two years) indicated by 75.6% of graduates. Here also there are different situations among different fields of study, passing from 65.7% for architecture masters to 81.6% of the chemistry and pharmacy masters.

In general, all of the satisfaction indicators referring to specific aspects of the course of study are higher among two-year masters.

7. Post-graduate study and work prospects

Among 2019 graduates, 65.8% plan to continue their education after graduation (Figure 11), a share that has increased slightly over time (it was 64.4% in 2009). As can be expected, this trend is particularly pronounced among the first-level graduates (81.3%), who plan in large part to continue with a two-year master's degree (64.9%), and among the single-cycle second-level graduates (62.6%), for whom specialisation schools (30.5%), internships (9.4%) and university master's degrees (8.9%) are the most common prospects. Although the two-year masters are relatively less likely to continue their studies (36.2%), some of them intend to continue with a PhD: 14.0%.

Figure 11 - 2019 graduates: intention of continuing studies by degree type (percentage values)
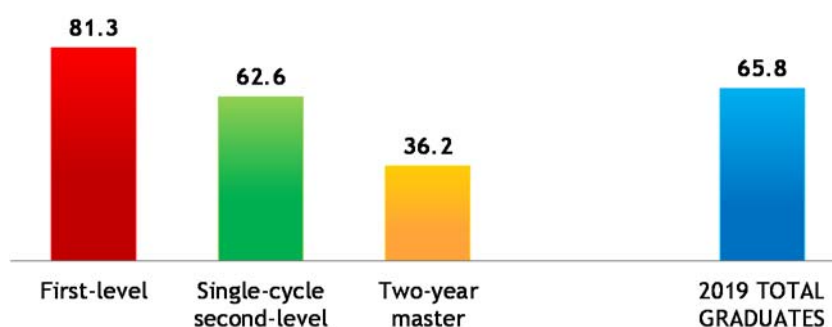
Source: AlmaLaurea, Graduates' Profile Survey.

Among first-level graduates, the intention to continue their studies is particularly widespread among recent graduates of psychology (95.6%), geology, biology and geography (92.8%) and engineering (90.7%). On the other hand, graduates in law (58.6%), education (65.6%) and health professions (68.2%) are less convinced that they want to continue their education.

Not all first-level graduates who wish to continue their studies are considering the "+2", although the two-year master's degree is the most common objective, as specified by 64.9% of graduates. The students most like to make this choice are graduates in psychology (89.1%), engineering (87.3%) and geology, biology and geography (86.2%). 8.1% of new graduates intend to enrol in an academic master's degree, a title that attracts mostly graduates of the health professions (30.4%) and, albeit to a lesser extent, those of politics and social sciences (11.4%).

As noted above, 62.6% of single-cycle second-level graduates plan to continue their studies. The intention to earn further qualifications varies appreciably by field of study: it is very common for graduates in medicine and dentistry (89.6%, with 80.6% oriented towards postgraduate specialisations), less so among graduates in architecture (35.7%, of which 12.6% oriented towards an academic master and 7.6% towards a PhD), education (36.2%, of which 8.6% oriented towards a specialisation school and 8.1% towards an academic master's degree) and chemistry and pharmacy (44.6%, with 16.0% oriented towards an academic master's degree, 9.6% towards a PhD and 7.3% towards a specialisation school). Among law graduates who plan to continue their studies, in 60.2% of cases there is a relatively high share of those intending to engage in practical training (23.6%).

As noted above, the two-year masters those who intend to continue their studies represent 36.2% of the population and are mainly planning on getting a PhD (14.0%) or an academic master's degree (9.0%). Those most likely to continue their studies are two-year masters in psychology (75.9%), health professions (58.4%), geology, biology and geography (55.0%), humanities (48.8%) and math, physics and natural sciences (47.8%). Graduates in engineering (20.2%) and economics and statistics (20.6%) are less likely to continue their studies.

With regard to the prospects of work, the consolidated South/North migration for studying and working that has persisted in our country for some time now has expanded to include movement towards foreign countries, an objective of interest for a growing number of young graduates, not only for study but also for work.

47.3% of graduates have stated that they are willing to work abroad (compared to 41.5% in 2009): 48.8% for first-level graduates, 43.3% for single-cycle second-level graduates and 46.1% for two-year masters (Figure 12).

Figure 12 - 2019 graduates: definitely willing to work abroad by degree type (percentage values)
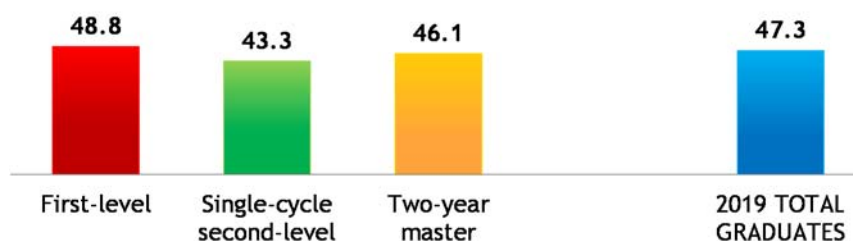
Source: AlmaLaurea, Graduates' Profile Survey.

31.8% are even ready to move to another continent. Despite the common opinion that graduates are unwilling to move for work, there is even a widespread willingness to travel frequently (28.1%), and also to change residence completely (48.1%). Only 3.1% are not willing to travel.

While increasing-protection and full-time contracts are the forms of employment most sought by graduates (86.4% and 84.2% respectively are "decidedly" willing to accept them), there is also a broad willingness to accept part-time jobs (36.0%) and fixed-term employment contracts (33.8%). Among the aspects considered relevant in the job search, for some time now what matters most is the acquisition of professional skills, indicated by 79.2% of graduates. Also very relevant (percentages above 60%) are the demand for job stability and security (70.1%), career prospects (67.7%), earning opportunities (63.9%) and the possibility of making the best use of the skills acquired during studies (62.6%). Graduates attribute different importance to the aspects mentioned depending on degree type. In particular, single-cycle second-level graduates, in addition to the aspects mentioned above, attribute greater importance to consistency with studies (66.4%) and independence or autonomy (63.7%).

The complete documentation is available at: www.almalaurea.it/en/universita/indagini/laureati/profilo.

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