XIX Survey

Graduates' Profile 2016

Survey 2017

Methodological Notes

METHODOLOGICAL NOTES

1.   Reference population

The Survey about 2016 Graduates' Profile has involved 272,225 graduates in 2016 in 71 Italian universities.

Some categories of graduates were excluded from the population analysed in the 2016 Profile since they gained their university qualification as a result of special arrangements. They amount to 1,700 graduates from 54 universities and they have some particular features:

- healthcare workers, whose professional experience was accredited by the University to the purpose of a three-year degree in the healthcare subject area or members of the Law Enforcement Agencies and Armed Forces, public officials, and other categories of students who completed one of the courses that had been specifically designed for them. What is more, often these graduates do not complete the AlmaLaurea questionnaire;
- graduates with a small number of exams passed (less than two exams in one year);
- graduates with very short academic careers, with a duration of less than a quarter of the legal duration of the course.

In the table 1 there is the list of the universities involved in 2016 Graduates' Profile Survey and the corresponding number of graduates surveyed in each university.

Table 1   Graduates surveyed in 2016 Profile for university (absolute values)

university	graduates	university	graduates
Roma La Sapienza	18,316	Ferrara	2,860
Bologna	17,175	Urbino Carlo Bo	2,503
Napoli Federico II	12,897	Brescia	2,500
Padova	12,380	Napoli Parthenope	2,200
Torino	12,219	Bari Politecnico	2,051
Milano	11,446	Sassari	1,960
Firenze	8,275	Piemonte Orientale	1,795
Palermo	7,605	Macerata	1,713
Bari	7,507	Napoli L'Orientale	1,686
Pisa	6,844	Foggia	1,571
Milano Bicocca	6,655	Insubria	1,495
Catania	6,422	Cassino e Lazio Meridionale	1,423
Torino Politecnico	6,331	Roma LUMSA	1,324
Roma Tre	6,111	Venezia IUAV	1,310
Genova	5,948	Catanzaro	1,283
Roma Tor Vergata	5,800	Tuscia	1,278
Chieti e Pescara	5,180	Milano IULM	1,110
Salerno	4,964	Enna Kore	1,093
Venezia Ca' Foscari	4,792	Molise	1,079
Campania Luigi Vanvitelli	4,751	Camerino	1,076
Perugia	4,581	Teramo	961
Parma	4,525	Reggio Calabria Mediterranea	910
Calabria	4,456	Sannio	893
Messina	4,372	Basilicata	854
Verona	4,364	LIUC Carlo Cattaneo	623
Pavia	4,347	Bolzano	519
Modena e Reggio Emilia	4,031	Roma Foro Italico	500
Cagliari	3,927	Milano Vita-Salute S. Raffaele	493
Trento	3,575	Roma Campus Bio-Medico	444
Salento	3,311	Roma UNINT	397
L'Aquila	3,206	Siena Stranieri	291
Trieste	3,155	LUM Jean Monnet	254
Udine	2,983	Perugia Stranieri	226
Marche Politecnica	2,978	Valle d'Aosta	186
Bergamo	2,944	Scienze Gastronomiche	78
Siena	2,913		

Source: AlmaLaurea, Graduates' Profile Survey.

The Report analyses degree holders of post-reform university courses (that were implemented by the Ministerial Decrees 509/99 and 270/04). They are graduates of first-level degree, of single-cycle second level degree, of second level degree and of Primary Schooling Sciences degree, but also the pre-reform degree holders (in courses started before applying DM 509/99) (Table 2).

Table 2   Graduates surveyed in 2016 Profile for kind of degree course (absolute values)

kind of degree course	number of graduates surveyed in 2016 Profile
First-level degree	156,063
Single-cycle second-level degree	34,215
Second-level degree	78,789
Primary Schooling Sciences degree	885
Pre-reform degree	2,273
TOTAL	**272,225**

Source: AlmaLaurea, Graduates' Profile Survey.

The Ministerial Decree 270/04 has redefined the classes of degree course introduced by the Ministerial Decree 509/99, showing also the corrispondence between the new classes (DM 270) and the previous ones (DM 509). The majority of 2016 graduates comes from new classes (DM 270): il 94% of first-level degree graduates, 86% of single-cycle second-level degree courses and 99% of second-level degree courses comes from 270 classes.

In the Survey on Graduates' Profile there is not a distinction between graduates from 509 classes and graduates from 270 classes.

The Report analyzes graduates in different degree subject grouping provided by the national offer of academic degree subject (Table 3). Within the medical group there are striking differences between graduates in single-cycle second-level degree courses as "Medicine and Surgery" and "Dentistry and dental prostheses" and graduates in first-level degree courses or in second-level degree courses in "Health care professions", introduced with DM 509/99. So two different groups have been created. The degree subject grouping

in defence, security and military service is not present in graphs and tables relating to degree subject grouping because of its little number of graduates.

In the analysis by degree subject grouping and kind of degree course, the second-level graduates in law (introduced by DM 509 and now from years is running to the end) and the single-cycle second-level degree graduates in humanities (first graduates are in conservation and restoration of cultural heritage, founded by DM 2nd March 2011) are excluded because of their little number of graduates and for peculiarities of these groups.

Table 3   Graduates surveyed in 2016 Profile for degree subject grouping (absolute values)

degree subject grouping	number of graduates surveyed in 2016 Profile
Agriculture, veterinary	7,383
Architecture	12,323
Chemistry, pharmacy	9,314
Defence, security, military studies	220
Economics, statistics	39,512
Physical education	6,202
Geology, biology, geography	13,875
Law	17,083
Engineering	33,412
Education	11,693
Humanities	22,832
Languages	17,590
Medicine/dentistry	8,561
Medicine/health professions	23,086
Politics, social sciences	27,298
Psychology	13,069
Mathematics, physics, natural sciences	8,772
TOTALE	**272,225**

Source: AlmaLaurea, Graduates' Profile Survey.

2. Detection methodology and response rate

The 2016 Graduate Profile is based on the combination of the following sets of data:
- administrative records of the 71 universities which became members of AlmaLaurea before 2016. The Survey is based on the administrative data transmitted from universities to AlmaLaurea before the step of data processing;
- replies to the questionnaires AlmaLaurea on the evaluation of the academic course of study: this questionnaire includes all the information about the academic experience of the graduates detected some times before degree completion.

Administrative data about graduates are transmitted from each university to AlmaLaurea throughout the calendar year according to a shared path and they are submitted to various quality checks.

Undergraduates, on the eve of degree completion, access to the compilation of the survey questionnaire through their own homepage on the website www.almalaurea.it. After that, the questionnaire are matched to the administrative records and then they are submitted to some consistency checks.

Graduates involved in the Survey are only those who have completed the academic course during the calendar year analyzed and only those who are not included in the particular categories described in the previous paragraph.

The information detected through the questionnaire are reliable if they satisfy some criteria of good filling in of the questionnaire.

Graduates whose questionnaires present the following limits were omitted from the 2016 Profile analyses:
- insufficient degree of completion: the questionnaires were empty or too few questions were answered (less than 25% of answers have been given);
- inconsistency: graduates supplied at least two contradictory answers;
- implausibility: in batteries containing multiple questions sharing the sample response format, graduates repeatedly used the same response category (e.g., "definitely yes") for each item;

– excessive haste: graduates completed the questionnaire too quickly (less than 4 seconds, on average, per question) to guarantee reliable responses.

The overall response rate, defined as the ratio between the number of graduates who has filled in the questionnaire in a good way and the number of graduates who has participated to the Survey, was 92.2% in 2016.

3. Availability of documentation about Graduates' Profile

The 2016 Graduates' Profile Report is available in digital format. It is also possible to consult data through an online query system. The documentation, microdata included, is transferred from each university present in the Survey to AlmaLaurea.

Graduates' Profile Report is divided into 10 thematic sections: Personal Details, Social Background, Secondary Education, Academic performance, Conditions of study, Work activity undertaken during academic studies, Assessment of university experience, Foreign language and IT skills, Prospects for further studies, Employment prospects.

The documentation analysed here takes into account the following groups:

– all degree holders (272,225), in terms of Personal Details, Secondary School Performances, Academic Performances at University (with the exception of previous university experiences and motivations for choosing a degree course). The sources for this information are universities' administrative records, except for information concerning place of residence and high-school leaving certificate (administrative records were integrated with data collected through AlmaLaurea questionnaires, when available), and for high-school grades (when grades were missing in the university records they were retrieved through the questionnaire);

– all degree holders who filled and returned the questionnaire (250,970, that is 92.2% of the target population), as regards the sections Social background, Study Situation, Working Activities

during University Studies, Assessment of University Experience, Foreign Languages and IT skills, Further Education Prospects, Employment Prospects and for previous university experiences and motivations for choosing a degree course (Academic Performances at University section).

The documentation, available online at the address www.almalaurea.it/universita/profilo/profilo2016/, can be analyzed selecting a cohort through the variables present in the consultation scheme.

Moreover, after having selected the cohort to be analysed, it is possible to divide it on the basis of a further variable that you can choose among a list. In this way it is possible to obtain a direct comparison.

4. Available variables for selecting the cohort

It is possible to restrict the analysis to particular cohorts on the basis of variables such as graduation year, kind of degree course, university, degree subject grouping and - if active - faculty/department/school, class of degree and degree course.

Graduation year

You can choose a single graduation year or run an historical comparison by selecting "all". The time series refers only to the degree courses/degree courses grouping that, in the last year, have produced graduates.

Kind of degree course

The choice of a given kind of degree course may determine the presence of other selection and comparison variables (e.g., the variable "class of degree" is available only for post-reform degree courses).

Faculty/Department/School

The information is available only after having selected a University. In brackets, after the name of the structure, it is specified "Fac." for Faculties, "Dept." for Departments and "Sch." for Schools.

Degree subject grouping

From the 2014 graduates, degree course grouping in geography (L-6, 30) and in geographical sciences (LM-80, 21/S) are in the disciplinary group "literary" and no longer in the "geo-biological".

Class of degree

The information is available only for post-reform graduates. The code associated by the MIUR to the class of degree is indicated between brackets (the code from M.D. 270/04 and the code from M.D. 509/99 are reported).

Degree course

This variable uses the code defined by Off.F databank on the subject grouping degree: this variable associates a univocal code to each degree course activated in a given university (i.e., the code of the database of training supply). Sometimes a degree course set up at a university could change is code, without modifying the formal name of the course; for example it could happen after changes in the training content, in the attribution to its graduating class, etc. In these cases the degree courses are treated separately, because the Off.F codes allocated to them are different or to facilitate the detection of these special cases, near the name of the course there is the academic year up to which it was active; otherwise the academic year which it has become active. In other cases it is possible to find the specification of the place of study.

Moreover, it is possible that a course has changed its name without modifying its Off.F code. Another case is when a course incorporates one or more courses with a name different from the most recent one. Next to that name is also shown that older preceded by "already".

5.   Available comparison variables

The comparison columns available are: kind of degree course, university, Faculty/Department/School, degree subject grouping, class of degree, degree course, year of enrollment to the degree course, gender, working activity carried out during academic studies.

The last three variables can be selected only as comparison variables and not as variables of selection. It is important to remember that the variable degree course for post-reform graduates identifies each degree course activated in a given university (in some cases even at a particular location): therefore it is not possible to make a comparison between universities, since every degree course on the territory is associated to a unique code.

Similarly, starting from the survey on 2012 graduates, the variable Faculty/Department/School is available only after having selected one university.

Therefore, also in this case, it is not possible to make a direct comparison between universities.

This decision is the result of the application of the law 240 in 2010, which has led to a major reorganization of university facilities.

6.   Conventions and further notes

6.1 Calculation of the indicators and no-answers

The online reports give not only the number of graduates involved in the Survey and the number of graduates who have filled in the questionnaire, but also the percentages or the averages of the main variables analyzed.

The statistics about administrative data, transmitted for 100% of graduates, refer to the total number of graduates, while the statistics about the variables of the questionnaire are calculated on the total number of graduates that has filled in the questionnaire.

To improve the comprehension and the reading of the online report, the missing values, generally less than 3%, are not displayed:

for this reason the sum of percentages, in some cases, could be less than 100.

6.2 Rounded-off numbers

Percentages have been approximated to the first decimal place: because of this rounding of the values, the sum of percentages is sometimes different from 100 (with the exception of "no-answers" and when all the answers to a question are not displayed).

6.3 Conventional signs

The hyphen "-" is used in the tables when a phenomenon has been analysed, but no cases of it have occurred. The percentage value 0.0 indicates that the phenomenon has been found and that some cases occurred, but with a percentage that is lower than 0.05.

The symbol "*" indicates that statistics have not been calculated, since they would have referred to a very small cohort (less than 5 units): in these cases the number of graduates analyzed in the Survey, the number of graduates that have filled in the questionnaire and the response rate are displayed.

The symbol "/", used only in the online form when the hystorical series is selected, indicates that the data is not available or not comparable with indicators of the last year of the Survey.

6.4 Useful information for interpreting the results

While analysing the results, it is important to keep into account the number of people in each cohort: if the number of graduates to be analysed is low, then you should read the results with all the required attention.

Moreover, you should also take into consideration that some cohorts of graduates, where the number of graduates that have filled in the questionnaire is less than 60% are marked with a specific note.

This note underlines to interpret with particular caution the part of the documentation obtained from the questionnaire.

7   Definitions used and calculated index

Age at graduation

The age at graduation is calculated on the basis of the age -which is considered as an entire number-, the date of birth and the graduation date. In percent distributions based on age at graduation, the age corresponds to the total number of years that the student turned.

Foreign citizens

The figure indicating foreign citizens does not include graduates from the Republic of San Marino.

Residence

This classification takes into account the province in which teaching activities are based, regardless of the province in which the university has its main headquarters.

Parents' educational qualification

The variable about "parents' educational qualification" considers the parent with the highest level of education and in the table is reported the distinction between the case where both parents are degree holders and the case in which only one parent is a graduated.

Social class

As for the graduates' social background, we have followed the framework proposed by A. Cobalti and A. Schizzerotto in their book (La mobilità sociale in Italia, Bologna, il Mulino, 1994). Social class is defined by the socioeconomic status of the graduate's father and mother and corresponds to the highest of the two (principle of 'dominance'). Socioeconomic status can be defined as middle class, clerical middle class, lower middle class and working class. The

middle class is dominant over the other three, the working class is at the lowest level, while clerical middle class and lower middle class are substantially balanced. If one graduate's parent belongs to the lower middle class and the other to the clerical middle class, the social class of the degree holder is that of the father (in a situation like the above described one, it would not be possible to choose between the two social classes on the basis of the principle of dominance). Socioeconomic status of each parent is a function of the most recent job position, as illustrated in the following table. Graduates whose mother (or father) is a house-keeper belong to the social class of the working parent (either father or mother).

last job position	socioeconomic status
liberal professionals*	
high level managers	MIDDLE CLASS
entrepreneurs with at least 15 employees	
employees with coordinating duties	
white collar employees	
middle managers	CLERICAL MIDDLE CLASS
teachers (excluded university teachers)	
self-employed	
assistants in family business	
members of cooperatives	LOWER MIDDLE CLASS
entrepreneurs with less than 15 employees	
manual workers, subordinates, etc.	
low-level office workers	WORKING CLASS

* Liberal professionals with a lower educational qualification than the secondary school-leaving certificate have been included in the self-employed people category.

Secondary school-leaving certificate mark

The secondary school-leaving certificate mark (whose average values are reported) is calculated only for Italian diplomas. The maximum mark is considered 100/100 even for those who earned the diploma before 1999, when the maximum mark was 60/60.

They have earned a school-leaving certificate

The categories "in the South, but they graduated in Northern-Central Italy", "in Central Italy, but they graduated in Northern or Southern Italy", "in the North, but they graduated in Southern-Central Italy" do not include those who have attended high school in a province neighbouring the one of graduation.

Previous academic study experiences

In the question about previous academic study experiences, the second level degree holders are asked about the kind of degree they had when they accessed to the second level degree course.

Very important reasons for the choice of degree course

The variable very important reasons for the choice of degree course is a summary of the replies given to the two following questions.

"Were the two following reasons important in making your decision to enroll in the course that you are completing?"

Interest in the subjects of the course (cultural reasons)

- Yes, definitely

- More yes than no

- More no than yes

- No, definitely

Interest in the job opportunities provided by the degree programme (job-oriented reasons)

- Yes, definitely

- More yes than no

- More no than yes

- No, definitely

The degree holders who chose their course being driven by both cultural and job-oriented reasons replied "Yes, definitely" to both questions. The graduates who were motivated mainly by cultural reasons replied "Yes, definitely" only to the question about their

interest in the subjects of the course. Similarly, the graduates who were motivated mainly by job-oriented reasons replied "Yes, definitely" only to the question about their Interest in the job opportunities provided by the degree programme. Finally, the type of reply "neither these nor those" includes students who replied other than "Yes, definitely" to both questions.

Enrolment age

Graduates having a regular «enrolment age» are those who accessed university at 19. E.g.: a student born in 1988 (or later), who registered in a first level degree or a single-cycle second level degree in 2007/08, has a regular enrolment age. As for second level degrees, the regular enrolment age is 22 (corresponding to study careers that have been completely regular both previously to university and during the first level degree course).

Examination marks

For the purposes of the calculation of the marks achieved by each graduates, both the mark of 30 and 30 cum laude for single examinations correspond to 30.

Degree mark

The degree mark is expressed on a scale of 110/110 also for the students of the Faculty of Engineering of Bologna who registered in their course before the university reform, although in this faculty the degree mark is expressed on a scale of 100/100. For calculating the average marks, it has been established that the mark 110/110 with honour corresponds to 113/110.

Degree completion time

For those who attended a second level degree course, we only take into consideration the conclusive two-years degree course and not of delays in previous university studies.

Duration of studies

Duration of a graduate's period of studies corresponds to the time elapsed between the 5th of November of the year of enrolment and the date of graduation. For those who attended a second level degree course, we only take into consideration the conclusive two-years degree course.

Graduation delay

Graduation delay is the 'irregular' part of the academic studies, since the student has exceeded the official time limit for studies. For those who also attend a second level degree course we only take into consideration the conclusive two-years degree course. With "graduation delay", we also take into consideration the time gap between the conclusion of the last academic year (conventionally considered as the 30th April) and the graduation date.

Graduation delay index

The graduation delay index is the ratio between graduation delay and prescribed duration of the degree course.

Carried out work activities during academic studies

"Studying workers" are those graduates who stated that they have been having a full-time and continuous job during at least half of the time of their studies, both in the periods when they attended lessons and in the periods when there weren't any lessons. "Working students" applies to all the other graduates who had work experiences during studies.

Would enrol again at university?

The possible answers to the question "If you could go back in time, would you enroll again at any university?" depend on the type of programme that has been completed.

First-level degree holders, single-cycle and pre-reform specialist degree holders:

"If you could go back in time, would you enroll again at any university?"

- Yes, in the same programme of this university

- Yes, but in another programme of this university

- Yes, in the same programme but at another university

- Yes, but in a different course of study and at another university

- No, I would not enrol again at any university.

Master's degree holders:

"If you could go back in time, would you enroll again in any second-level degree programme?"

- Yes, in the same second-level degree programme of this university

- Yes, but in another second-level degree programme of this university

- Yes, in the same second-level degree programme but at another university

- Yes, but in a different second-level degree course of study and at another university

- No, I would not enrol again in any second-level degree programme.

Foreign languages: "at least good" skills

Degree holders who have "at least good" knowledge of foreign languages "native speakers", or claim to have a "very good" or "good" level of knowledge within a range of entries including also "fairly good", "limited" and "no knowledge at all" (both in writing and speaking).

IT tools: "at least good" skills

Among degree holders who have "at least good" IT skills, many of them replied that they have a "very good" or "good" skills within a range of entries including also "fairly good", "limited" and "no skills at all". Each item about IT skills is described through some practical examples to make simple the filling out of the questionnaire. From the 2015 survey some examples were introduced where not present;

when comparing the 2015 data with the results of previous years, therefore, it is necessary to take into account these changes.

Below there are some examples for each item:

– internet surfing and communications (e-mail, blogs, forums, social networks, ...);
– word processor (Microsoft Word, Writer, StarOffice, …). Untill 2014 the example was "word processing";
– spreadsheets (Excel, etc.);
– presentation tools (PowerPoint, Keynote, Impress, ...);
– operating systems (Windows, Unix, Mac OS, Android, iOS, …). Examples introduced in 2015;
– multimedia (sound, image and video processing);
– programming languages (C++, C#, Java, Javascript, …). Examples introduced in 2015;
– data bases (Oracle, SQL server, Access, …);
– web-site creation (HTML, CSS, PHP, ASP.NET, …). Examples introduced in 2015;
– data transmission networks (network protocols, technologies, …). Examples introduced in 2015;
– CAD/CAM/CAE - assisted design.

Intending to pursue postgraduate studies with an Academic Diploma of an Higher education institution for fine arts, musical and choreographic studies

Between graduates that intend to pursue postgraduate studies with an Academic Diploma of an Higher education institution for fine arts, musical and choreographic studies (AFAM) are included graduates who wish to continue their studies with a first level, second level or third level Academic Diploma of an Higher education institution for fine arts, musical and choreographic studies.