

The Italian degree in optics and optometry and the job market from the AlmaLaurea surveys

M. P. BUSSA(*), E. BOTTA, M. GRECO, M. SERIO, A. BELLATORRE, G. CIVIERO,
C. COLANDREA, S. DI BENEDETTO, M. FRISANI and D. MUSOLINO

Physics Dept., University of Turin - Turin, Italy

received 6 May 2025

Summary. — Since 1998 the AlmaLaurea inter-university consortium has published the results of a survey on the post-graduation employment status of respondents, conducted one, three, and five years after graduation. This study will evaluate how Optics and Optometry graduates apply the competencies they acquired at university. It will also assess vocational training and degree effectiveness in professional settings, using an integrated analysis of graduates' profiles from the present survey along with those from previous ones. Subsequent data analysis confirmed that, although with some variations according to gender and geographical area, Optics and Optometry graduates were quickly integrated into the working world and highly valued the preparation provided by the University.

1. – Introduction

The Bachelor's degree in Optics and Optometry was established at the University of Milano Bicocca in 2001, with the first graduates completing the program in 2004. Subsequent academic years witnessed the initiation of this degree programme by several other universities, including Padova (2004), Lecce (2004), Firenze (2005), Roma Tre (2002), Turin (2006), Naples (2009), Palermo (2020) and Perugia (2021). These courses include basic scientific subjects as well as specialised courses in optics —such as geometric optics, visual optics and ophthalmic optics— and optometry, covering refraction, binocular vision, contact lens fitting and low vision. To date, approximately 2500 graduates have completed the programme.

Several career prospects are available . The most common path is employment in optical centres —either as independent practitioners or as part of large retail chains— after gaining professional certification as optician. There are also alternative opportunities in the industry, for example with companies that specialise in ophthalmic lenses, contact lenses or optical instruments. Graduates may also pursue independent practice, research or commercial roles. The purpose of this paper is to analyse the professional status of

(*) E-mail: mariapia.bussa@unito.it

Optics and Optometry graduates one year after completing their studies, focusing on the skills acquired during the program.

2. – AlmaLaurea Interuniversity Consortium

The AlmaLaurea Consortium was established in 1994 with the objective of evaluating the academic performance of graduates and their employment prospects. To date, it represents 82 universities, encompassing approximately 90 per cent of Italian graduates. The Consortium is constituted as a non-profit organisation, the funding is provided by the Ministry of University and Research, in addition to contributions from the universities themselves. It undertakes research activities, and since 2015 its Statistics Office has been a member of SiStaN (the National Statistical System). Since 2005, AlmaLaurea plays a role as a labor market intermediary.

Since 1999, the Consortium has been conducting two annual surveys on graduates' profiles and occupational status at one, three and five years after graduation, providing detailed data down to the individual course of study. These surveys provide reliable evidence to help with planning, monitoring, and evaluating university decisions. They give statistical information to help higher education institutions to submit indicators for evaluating graduate employment, as mandated by law.

Graduates are given the option of consenting to the entry of their Curriculum Vitae into a database overseen by the Consortium. Furthermore, the consortium supports member universities in their job placement activities through a web-based brokerage platform, which enables companies to access graduate CVs.

The data presented in the following are taken from the XXVI Graduate Profile Survey (2023 [1]) and previous surveys since 2014 (XVII survey), the year from which data on the university of Milan Bicocca, previously not part of the AlmaLaurea consortium, began to be available. The analysis therefore refers to a ten years period of available data for degree courses in Optics and Optometry (hereafter referred to as LTOO) of seven Universities (Torino-TO, Milano Bicocca-MIB, Padova-PD, Firenze-FI, Roma Tre-RO3, Napoli-NA and Lecce-LE). The report includes national average values and their temporal trends, together with punctual comparisons between the most recent survey (2023) and the 2016 one, selected as the most statistically representative of the socio-economic situation in the period before the employment rate recovered.

The data are compared with the outcome from Bachelor degrees in healthcare (hereafter LTSan). Bachelor's degrees in optometry in European and non European countries are offered in both health and technical-scientific fields, as done in Italy. As the measurement of vision is conducted directly on human subjects, in Italy this practice is perceived as a healthcare profession and this suggests a comparison with the indicators of health degrees that share with LTOO the aim of introducing graduates into job market immediately after graduation. AlmaLaurea observes that most graduates in the year 2022 (68%) continue their studies, with a 13% increase with respect to the 2014, year corresponding the lowest rate of continuation of studies since 2008. It follows that to monitor the employment outcomes of first level graduates the analysis should be limited to those who did not enroll in another degree course ((31.0% among 2022 graduates within one year).

The survey is conducted using CAWI and CATI (Computer-Assisted Web/Telephone Interviewing) methodologies. The minimum threshold for data processing is set at five respondents [2]. To mitigate the impact of variations in sample size across Italian locations, the national average for the LTOO degree is calculated as the mean of the individual location means.

3. – Survey data

The sample of LTOO graduates surveyed in the decade 2014–2023 ranged from 127 to 240 per year (fig. 1). The response rate to the survey decreases from 80% to 70% over the observed period. This is due to the General Data Protection Regulation in force since 2018 that has produced an increasing number of graduates who have denied the consent to be contacted for statistical survey purposes. The 2023 sample includes 127 subjects mainly female graduates ranging from 54% to 86% depending on the university considered, with 72% national average.

The unemployment rate is calculated by AlmaLaurea with reference to the labour force, *i.e.*, those who have entered the job market either because they are employed or because they are actively looking for a job, in agreement with the Statistics National Institute (ISTAT) definition. The unemployment rate for LTOO is nil one year after graduation for six out of the seven universities [1], to be compared to the 9,4% of the first level graduates not enrolled in another degree course as from fig. 5.6 of the XXVI survey report [1]. The same comparison in the 2014 survey gives a 7% unemployment rate for LTOO graduates and 26% for the first level graduates directly entered in the job market. Figure 2 compares the employment status one year after LTOO graduation for the 2023 and 2016 surveys with the national outcome of LTSan. It should be noted that the category “not working and not looking” encompasses individuals engaged in post-graduate training. The data reveal comparable trends across healthcare degree programs. Despite geographical location-based disparities in the 2016 survey, the number of graduates seeking employment was higher. This is consistent with the prevailing economic crisis, while the proportion of people not working or seeking employment was negligible. Data for 2023 reveal a decline in the proportion of working graduates by an average of 4% in most locations, accompanied by a similar decline in the number of those actively seeking employment. In contrast, the proportion of unemployed graduates has increased, although it remains considerably below the 53% national average LT.

This increase can be partially explained by fig. 3, which shows the post-graduate condition for the same years. The graduates not engaged in remunerative activity and not seeking employment because in training or enrolled in university courses are represented in green and correspond to a 24%. The detailed data of the survey show that this corresponds to enrolment on master’s and bachelor’s degree courses.

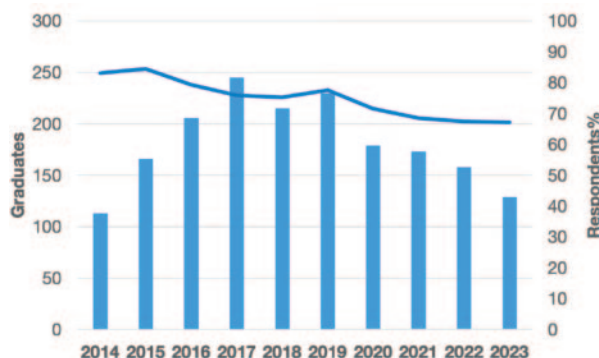


Fig. 1. – Graduates in Optics and Optometry and percentage of survey responses.

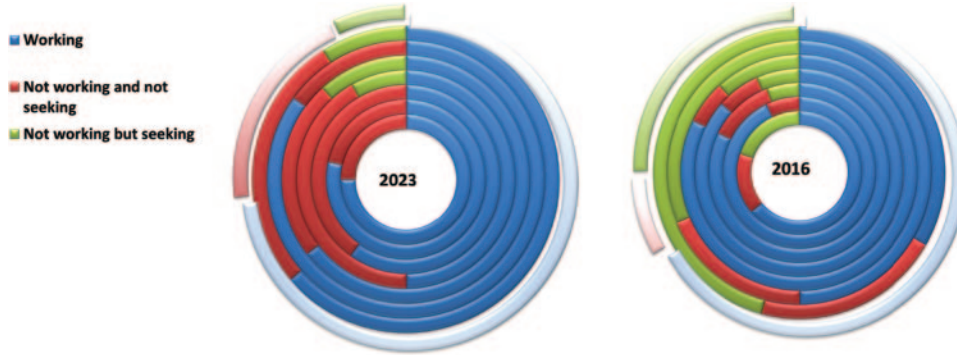


Fig. 2. – 2023 and 2016 graduate employment status. Outer circle, light color: LTSan, inner circles: LTOOs (from center to periphery: TO/MIB/PD/FI/RO3/NA/LE).

Two further salient aspects of employment status pertain to the nature of work activity and the mean monthly income. Figure 4 shows the employment status of LTOO graduates in 2023, highlighting the predominance of open-ended contracts (self-employed and permanent) and training contracts in Northern Italy, in contrast to the higher incidence of fixed-term contracts in Central and Southern Italy. As a consequence a geographic dependence of the salaries can be expected [3]. Regarding the net monthly income, the mean figure across the various locations is €1212 for 37 hours on average per week.

Figure 5 compares the data of 2023 and 2016, divided by gender, for LTOO graduates from all the universities. A substantial increase by approximately 15% in the average monthly salary is observed. In addition, it is remarkable that the gender disparity has decreased from 19.5% in 2016 to 0.5% in 2023, a decline that is particularly significant when the substantial proportion of female graduates (mean around 72%) is considered.

Figure 6 left panel compares the trend in net monthly salary over the period 2014–2023 for LTOO, LTSan, LT-LM graduates and the national average for LTOO. The average salary of LTOO graduates over the years is higher than the LT mean, where two-thirds of enrolled in master’s degrees are included. The LT-LM graduates belong to the fields of health care (28%), industry, trade and services (12%), and information technology (6%). Healthcare and ICT are on average better paid. Geographical location also impacts the national average salary, with LT-LM respondents working in the north (59%), in the

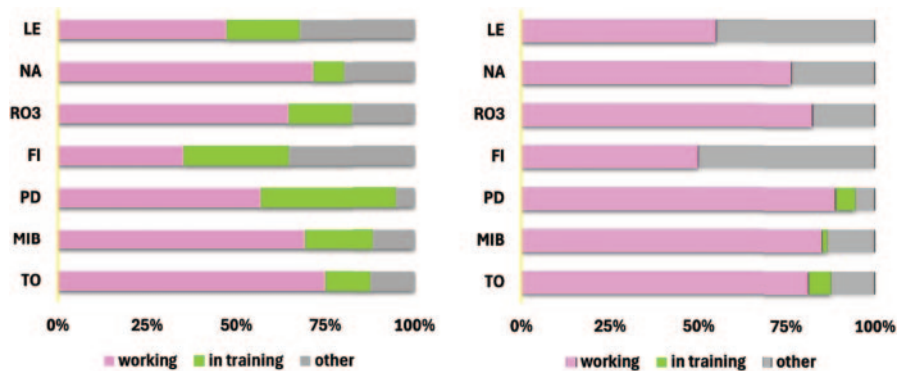


Fig. 3. – Postgraduate status for the universities in the years 2023 (left) and 2016 (right).

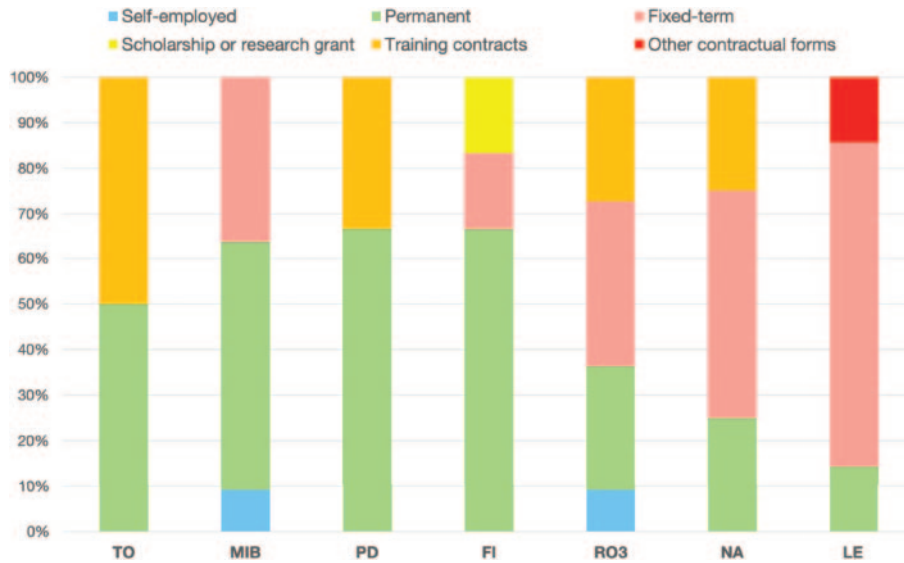


Fig. 4. – Type of work activity for the different locations (year 2023).

centre (20%), in the south (21%), while for LTOO the percentages are 40%, 22%, 38%.

Figure 6 right panel, shows the degree of job satisfaction experienced by LTOO graduates that ranges from 7.6 to 8.2 on a scale of 1 to 10, indicating a high level of satisfaction. The trend observed in the last few years is increasing and close to the 8.1 score reported on average by LTSan since the 2020 review.

The last items of the survey concern the utilisation of the skills acquired through university education, the adequacy of vocational training and the effectiveness of the degree in the work performed. A great use of acquired skills was reported by more than 80% of the respondents, like in LTSan and greater than the one reported by LT-LM. Similar result was obtained for the adequacy of vocational training (see fig. 7, left). The average for LTSan and LT-LM is also shown for comparison. Degree effectiveness is how many skills acquired are used, and how necessary the degree is for employment. The mean across the six locations with the highest effectiveness is 90%, comparable with LTSan and much higher than LT-LM (see fig. 7, right).

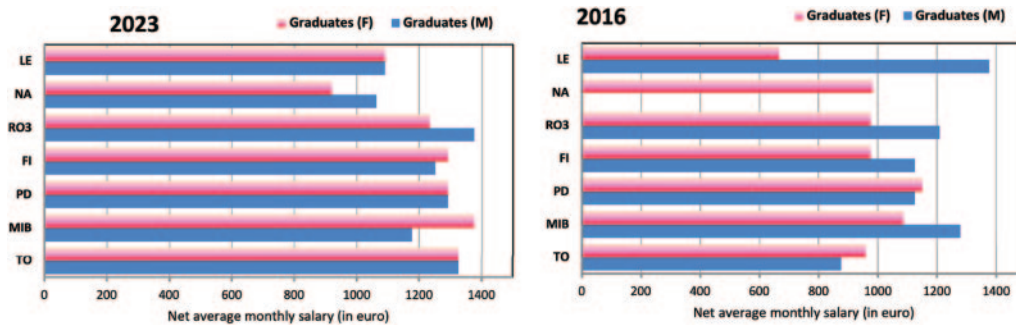


Fig. 5. – Average net monthly salary for the samples of graduates LTOO surveyed.

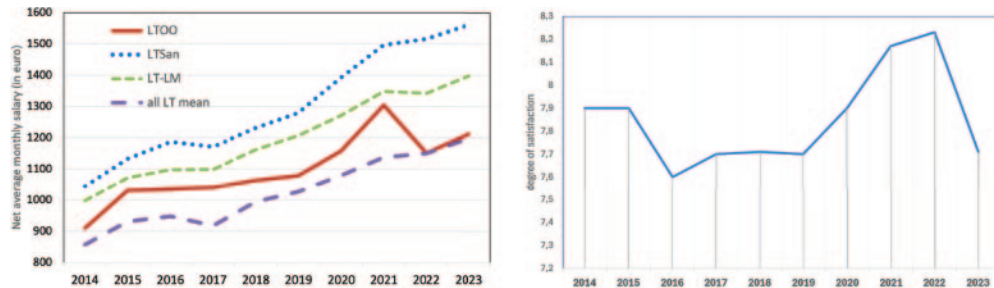


Fig. 6. – 2014–2023 trends. Left: net monthly salary. Right: job satisfaction of LTOO graduates, scale 1–10 (1: “not at all”, 10: “very much”).

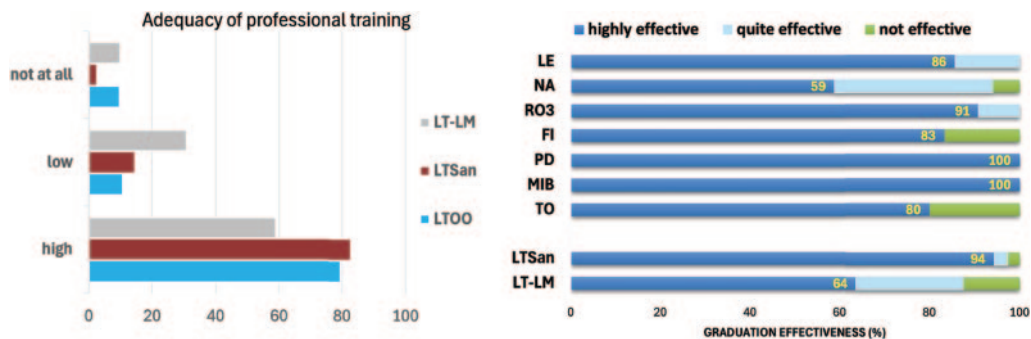


Fig. 7. – 2023 LTOO sample compared to LTSan and LT-LM Left: training adequacy. Right: graduation effectiveness.

4. – Discussion and conclusions

This analysis based on AlmaLaurea surveys on the profile of graduates has enabled the verification of the achievement of the professional degree’s objectives. One year after graduation, 46% of graduates have a stable job, recovering from the negative data of the pre-pandemic period. The unemployment rate is zero and the employment rate is decreasing correspondingly due to a greater diffusion of post-graduate training. This evidence is compatible with the improved economic conditions compared to a decade ago. More than 80% of graduates consider their professional training to be very adequate for the tasks performed and the use of the skills acquired with university training is high.

In a scenario of increasing salaries, narrowing of gender disparities have been observed across many regions. The increasing investment in postgraduate training observed could support the activation of a master’s degrees in vision sciences that would represent a valuable opportunity in the future for advanced training and the exploration of emerging research domains.

REFERENCES

- [1] <https://www.almalaurea.it/en/our-data/almalaurea-surveys/graduates-profile>.
- [2] <https://www.almalaurea.it/en/indagini-almalaurea/our-survey-methodology>.
- [3] <https://2024.congresso.sif.it/talk/637>.