

The mismatch between the skills taught in Marketing and Communication programs at universities and the skills requested by the job market

Chiara Mauri^a, Greta Siracusa^a, Martina Cocco^a

^aLIUC – Business University, School of Economics and Management

cmauri@liuc.it

gsiracusa@liuc.it

ma24.coco@stud.liuc.it

Abstract

Purpose - The study aims to identify and quantify the mismatch between marketing and communication skills taught in university curricula at the graduate level and those demanded by the job market. By analysing and comparing the skills listed in the syllabi of the single course included in all the master in marketing (classes of degree LM 59 and LM 77) and/or communication and the skills listed in the job requirements on LinkedIn posts, the research seeks to provide insights for improving educational programs to better align them with industry needs.

Design/methodology/approach - The study compares the skills taught in marketing courses at 39 Italian universities with those required in internship posts using text analysis and interviews, identifying mismatches through statistical analysis. The skills have been classified, counted and analysed comparing all the syllabi of 476 courses offered in marketing graduate curricula with the job posts for marketing interns on LinkedIn. The dataset includes 44 programs, 476 courses and 1.799 observations

Findings - The study reveals a mismatch related to analytical skills and digital and technical skills: the first are over-taught while the second are under-taught.

Practical implications - To better align with industry needs, universities should improve the synergy between theoretical and applied courses, integrate practical applications and digital tools into their curricula, and focus more on developing digital and technical competencies. This alignment can enhance graduates' employability by addressing the gaps between academic training and market demands.

Originality/value - This study offers a novel approach by systematically comparing the skills taught in marketing and communication in university programs with those demanded in job postings. This methodology provides robust, data-driven insights into the marketing skill gap, contributing to both academic literature and practical educational reforms.

Keywords – Marketing skill mismatch, marketing graduates, marketing curricula, master in marketing, master in communication.

THE SKILL MISMATCH

In a historical moment such as this, marked by a series of events that have altered the course of history, the way people work and live has changed. Society globally is experiencing unprecedented progress (WEF 2023), which has led to a reduction in the time it takes for the doubling of knowledge: in 1900, knowledge took a century to double, while in the new millennium the time required has been reduced to just 13 months. IBM has projected that by 2025, thanks to the internet of things, knowledge will double every 12 hours (Chamberlain 2020). This data highlights the power of knowledge, which is capable of altering the structure of the markets and the society in which we live. How does individuals position themselves in this climate of change? New professions emerge, specialization deepens, and new areas of knowledge arise. The problem is that this change is not accompanied by a parallel development of the workforce on the supply side (Smith, 2018), because workers find themselves in a situation where updated and continuous learning is necessary to remain competitive in the job market.

A study conducted by the Boston Consulting Group (BCG) in 2020 defines this phenomenon as “Skill Mismatch” (SM): a discrepancy between the demand side and the supply side of the labor market generated by the shortage, gap, and obsolescence of skills and human capital formation. This means that if companies are looking for people with certain skills, universities are forming a lower number of graduates than needed, graduates with skills different from those sought on the labor market or whose skills become rapidly obsolete. The result is that companies and individuals face more and more difficulties to find a meeting point that allows the labor market to function properly.

The skill mismatch involves 1.3 billion people worldwide, affects two out of five employees worldwide and one out of two employers in OECD countries and has been predicted to grow (BCG, 2020) (International Labour Organization, 2014). From the 1970s, when the United States experienced an oversupply of qualified and educated workers for the first time, the phenomenon has been studied by researchers worldwide with a focus on every sector of the economy, seeking to understand its origin, consequences, and ways to remedy it (ILO, 2014).

Since the continuous flow of knowledge goes at a higher speed than that of courses or tools to stay updated, workers’ skills easily become obsolete. Adding to this situation is the progressive aging of the global population: the average age of the European population is over 40 years, the birth rate is decreasing, life expectancy extends beyond 80 years, and only 15% of the European population is under 14 years of age (ISTAT, 2021). This has a cascading effect on the skills possessed by European citizens: the older the population, the more skills are subject to becoming obsolete.

Skill mismatch stems from situations in which individuals are overeducated/overqualified, meaning that they possess an excessive level of education or skills for the role they occupy, or undereducated/underqualified, meaning that they have deficiencies in their education or skills compared to the role they hold in the company (Cedefop, 2010). Regarding skills and education, it is possible to distinguish the phenomenon into vertical and horizontal skill mismatch. The former refers to individuals who are overeducated for a job that requires a lower level of education than they actually possess, or viceversa. The horizontal component does not refer to the level of education or skills, but rather to the discipline, type of knowledge, or sector (ILO, 2014). In all cases, the resulting misalignment of skills incurs costs for individuals, businesses, and society as a whole.

The incidence of over-educated/over-qualified individuals on the overall phenomenon is relatively lower compared to that of under-educated/under-qualified individuals; furthermore, with technological and knowledge progress, the demand for highly skilled workers is expected to increase over time, thus reducing the impact of this component on the overall mismatch. On the other side, over-educated workers more often experience low job satisfaction, making them more likely to voluntarily leave their jobs compared to under-educated individuals. The latter tend to earn more in positions for which they are not qualified, thus being less likely to leave their jobs voluntarily (Cedefop 2010).

Some characteristics of individuals can contribute to skill misalignment. Research has been conducted on groups at higher risk of discrimination, including young workers, women, elderly workers, ethnic minorities, and people with disabilities. Young workers are prone to skill mismatch as they enter the labor market without prior work experience, while elderly workers are more susceptible to skill obsolescence. Gender-related studies have not shown significant differences in skill mismatch between men and women, but rather highlight the greater experience required for women to attain similar positions as men. Ethnic minorities show higher levels of over-education compared to the white majority, with the Afro-Asian community being prevalent.

Economic fluctuations influence skill imbalances, because they impact the level and type of skills required by the labor demand and the rewards associated with the matching of these skills in the workplace. During an economic recession, the demand for skills may decrease, leading to a downsizing of job opportunities and a decrease in the benefits derived from the use of specific skills. However, during an economic recovery, there may be an increase in the demand for skills and the benefits associated with using these skills in the workplace. Additionally, the labor market’s response can influence the duration and intensity of an economic cycle. For example, the labor market’s ability to preserve existing skills and provide training opportunities for the development of new skills can significantly impact how quickly an economy recovers from a recession and begins to thrive again. When the labor market facilitates the adjustment of workers’ skills to meet the new demands of the market, it can accelerate economic growth, whereas a labor market unable to manage skill adjustments may delay economic recovery and prolong periods of difficulty.

BCG (2020) has identified various challenges that the economic system, particularly the labor market and the university system, must address due to skill mismatch. One of the most significant, which is also related to the phenomenon of knowledge doubling, is that university systems are not sufficiently prepared in training for jobs that have yet to emerge.

The challenge that the whole world is facing today is to insert the right skills into companies that allow and encourage growth and innovation, to address unemployment, and to ensure that all the potential labor force is fully utilized. The World Economic Forum emphasizes the need for investments in training and skills development at both the individual and corporate levels for workforce transformation and updating employee skills, and adds that collaboration between educational institutions, governments, and companies is crucial to address the challenges of skill mismatch and ensuring economic growth (WEF, 2023).

THE MARKETING SKILL MISMATCH

The phenomenon of skill mismatch impacts the economy as a whole, but particularly the components involved in digital transformation, which is now a well-developed phenomenon impacting both lifestyles and work practices. One of the areas of the economy most affected is Marketing, which has undergone significant changes over the past 20 years due to digital transformation (Leeffland et al., 2014). The new technologies of the 21st century have not only changed the application of Marketing but also its role within organizations, leading to the emergence of new professional roles and skills (Harrigan and Hulbert, 2011). With its definition of marketing approved in 2013, the American Marketing Association aims to emphasize the new nature of marketing, which focuses on creating value for stakeholders. Digital transformation with Internet-based technology has played a central role, providing marketing actors with cutting-edge tools to engage with society, listen to, and understand stakeholders, thereby facilitating better decision-making in terms of product/service offerings and communication. In 2017, 25% of the positions requested in Marketing were related to global and digital marketing, encompassing roles such as marketing analytics, social media, online content marketing, mobile marketing, with a 145% increase in demand for these positions compared to 2011 (Mauri et al., 2017). However, Leeflang et al. (2014) noted the existence of a “talent gap” in digital marketing to be filled, and that this was one of the biggest improvement opportunities. Companies needed analytically trained people to analyze customer data, create digital advertisements, develop websites and perform statistical analyses, but in 2018 the forecast was still a 50–60% gap relative to supply.

In this context, the evolution of Integrated Marketing Communication (IMC) education has also been highlighted, where curricula are increasingly integrating digital technologies and analytics to bridge the gap between theoretical knowledge and industry practice (Kerr and Kelly, 2017). The need for an updated IMC curriculum that reflects the realities of digital disruption aligns with the ongoing transformation in marketing roles and the skills required in the marketplace. Skill mismatch is a phenomenon that affects various levels within companies, from junior to senior roles, but it can be addressed and resolved at its core by providing adequate preparation to enter the workforce. With the advent of new technologies and the consequent paradigm shift in marketing, universities have much to learn from the workforce. University courses aimed at training marketing professionals may not accurately reflect real-world marketing practices, resulting in students lacking the appropriate skills for the job market. Harrigan and Hulbert’s 2011 research, which aimed at understanding the gap between the demands of the marketing labor market and academic curricula in the same discipline, led to the development of the “New Marketing DNA” model. They suggested to abandon the “Old Marketing DNA” focused on the firm and the well-known Analysis-Planning-Implementation-Control (APIC) paradigm, and to move towards the new marketing DNA logic, configured around customer-centricity, value-driven strategic marketing, customer relationship management and customer experience management. In the new DNA model, the marketer is a practitioner with critical and analytical thinking skills, capable of finding, analyzing, interpreting, and utilizing data to improve customer relationships.

Recent data on the global job market from 2020 to the present confirm the increasing importance of digital, technological and analytical skills for job searches. In the reports compiled by LinkedIn, the top positions are taken by skills such as data and business analytics, CRM, software development, cloud computing, UX design, video production, and more recently artificial intelligence (LinkedIn, 2019, 2022, 2023). At the core of these skills there is the well-known paradigm of customer centricity: even though it has been discussed for decades (Drucker 1954^[1]), many firms are still struggling to align themselves to the customer centric view (Shah et al. 2006). Confirming the importance of the technical hard skills, an estimate by the U.S. Bureau of Labor Statistics on wages reveals that individuals equipped with technical skills earn higher salaries than those for whom such skills are not required (Hubspot, 2023).

The skillset that marketing students should develop to enhance their employability in the marketing field goes however well beyond analytical, digital and technical skills (Pefanis Schlee and Harich 2010). The integrated model of employability skills in the marketing field proposed by Di Gregorio et al. (2019) identifies five employability skill categories that marketing graduates should develop during their studies to be hired: basic soft skills, analytical skills, digital and technical skills, core marketing skills, and customer insight skills. Basic soft skills are considered as the most important by marketing practitioners in each of the five countries of the research: Italy, France, Germany, Spain and United Kingdom. Once equipped with the required skills, marketing graduates should be more likely to have access to a broad portfolio of marketing job opportunities.

Given all these considerations, the goal of this paper is to shed light on the existence of a marketing skill mismatch between supply and demand, that is, on the alignment between the marketing curricula of university graduates and the competences and capabilities requested by companies who are going to hire them. More specifically, the paper tries to

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answer the following research questions: Do the marketing curricula offered by universities provide the marketing skillset that the job market is asking for? Is there a marketing skill mismatch? How large is it? Is it focused on specific skills?

STUDY FIELD AND METHODOLOGY

The research is organized in three segments: study of the skills taught in the courses included in university students’ curricula, analysis of skills listed in the job posts for internships in the marketing function, comparison between the skills taught at the university and those requested by the job market.

Supply side – Skills taught in marketing courses at universities

- 1. Selection of the study field in terms of
 - a. Country
 - b. Universities
 - c. Marketing and Communication curricula
- 2. Identification of the single courses offered in the marketing and communication curricula
- 3. Analysis of the syllabus of each single course and classification of the competences and capabilities taught in the course
- 4. Qualitative interview of 6 marketing graduates during their internship on how they felt adequately equipped to manage daily work. All graduates are between the ages of 23 and 25 and are in the process of completing their internships, the first step in entering the job market for the first time.

Demand side – Skills required by companies when they offer internships to marketing graduates

- 5. Selection of a sample of internship opportunities for marketing graduates
- 6. Analysis of the text of the job posts and classification of the competences and capabilities required
- 7. Qualitative interview of 6 marketing directors on how they felt the marketing intern is adequately equipped in terms of skills. Twenty-three questions were posed to the six managers, investigating the required competencies and their weight, interns’ shortcomings, and the role of universities. Three subjects are women and the other three men.

Supply vs Demand

- 8. Comparison of the competences and capabilities offered and asked.

To understand the phenomenon of marketing skill mismatch, we analyze and compare the two components of supply and demand: on the supply side we look at the programs^[2] offered by the Italian universities; on the demand side we consider companies seeking internships in marketing and communication. For the first, we focused on the graduate level and identified the universities that offer a Master of Science in marketing and/or communication. We started from the universities listed in the 2023 Censis rank (Censis, 2023), which includes 69 names. We checked the websites to identify degrees in marketing and/or communication for the academic year 2023-24: only 39 offer degrees in marketing and/or communication, for a total of 52 programs. Table I shows the universities, the title of the program, the master’s class of degree [classe di laurea] and the typology of the university (size and public vs private), while table II summarizes the distribution of the same programs according to their class of degree. We focus the following analysis on the first two classes of degree of table II (LM-59 and LM-77), because the others are very broad in terms of topics, contents and disciplines; furthermore, their number is very small.

The majority of the selected 39 universities offer only one course in marketing and/or communication, with only Mega or Large universities offering at least two courses in their course portfolio. Universities such as La Sapienza, Cattolica del Sacro Cuore, University of Turin, and University of Modena and Reggio Emilia are the only ones offering three courses in the fields of marketing and communication. Out of all the collected courses, sixteen are taught in English. Summing up, the dataset of university courses includes 44 programs, of which 21 in marketing and 23 in communication^[3].

The count of the number of courses is not easy and requires specific criteria to be fixed in advance.

Table I. *Universities and master’s class in marketing and/or communication*

UNIVERSITY	MARKETING AND COMMUNICATION COURSES	CLASS OF DEGREE
PUBLIC UNIVERSITY		
VERY LARGE PUBLIC UNIVERSITY		
BOLOGNA		
PADOVA	Strategie di comunicazione	LM-92

LA SAPIENZA DI ROMA	Organizzazione e marketing per la comunicazione d'impresa	LM-59
LA SAPIENZA DI ROMA	Psicologia della comunicazione e del marketing	LM-51
LA SAPIENZA DI ROMA	Economia e comunicazione per il management e l'innovazione	LM-77
PISA	Marketing e ricerche di mercato	LM-77
FIRENZE	Pratiche, linguaggi e cultura della comunicazione	LM-92
MILANO STATALE	Comunicazione pubblica e d'impresa - marketing management	LM-59
MILANO STATALE	Comunicazione pubblica e d'impresa - corporate communication	LM-59
MILANO STATALE	Comunicazione pubblica e d'impresa - data analytics for politics, society and complex organizations	LM-59
MILANO STATALE	Comunicazione pubblica e d'impresa - digital communication and public opinion	LM-59
PALERMO		
TORINO	Direzione d'impresa, marketing e strategia - Marketing Management	LM-77
TORINO	Comunicazione, ICT, media	LM-59
TORINO	Comunicazione pubblica e politica	LM-59
BARI ALDO MORO	Gestione strategica e marketing digitale	LM-77
NAPOLI FEDERICO II		
LARGE PUBLIC UNIVERSITY		
PAVIA	Comunicazione digitale	LM-59
PERUGIA	Comunicazione pubblica, digitale e d'impresa	LM-59
CA' FOSCARI	Innovation and Marketing	LM-77
CA' FOSCARI	Marketing e Comunicazione	LM-77
MILANO BICOCCA	Marketing e mercati globali	LM-77
CAGLIARI	Innovazione sociale e Comunicazione	LM-59
CALABRIA	Comunicazione e tecnologie dell'informazione	LM-92
PARMA	Trade e consumer marketing	LM-77
GENOVA		
MODENA E REGGIO EMILIA	Languages for Communication in International Enterprises and Organizations	LM-38
MODENA E REGGIO EMILIA	Management e comunicazione d'impresa	LM-77
MODENA E REGGIO EMILIA	Pubblicità, comunicazione digitale e creatività d'impresa	LM-59
ROMA TOR VERGATA		
SALERNO		
VERONA	Marketing e comunicazione d'impresa	LM-77
FERRARA		
BERGAMO	International management e marketing	LM-77
CHIETI/PESCARA D'ANNUNZIO	Digital Marketing	LM-77
ROMA TRE	Economia e management - curriculum marketing	LM-77
CATANIA	Direzione aziendale - curriculum marketing	LM-77
MESSINA		
MEDIUM PUBLIC UNIVERSITY		
SIENA	Strategie e tecniche della comunicazione	LM-92
SASSARI		
TRENTO		
TRIESTE		
UDINE	Comunicazione integrata per le imprese e le organizzazioni	LM-59
UDINE	International marketing, management and organization	LM-77
MARCHE		
BRESCIA	Marketing per il Made in Italy	LM-77
SALERNO	Corporate communication e media	LM-59

URBINO CARLO BO	Marketing e Comunicazione per le aziende	LM-77
URBINO CARLO BO	Comunicazione e Pubblicità per le Organizzazioni	LM-59
INSUBRIA	Scienze e Tecniche della Comunicazione	LM-92
FOGGIA	Innovazione digitale e comunicazione	LM-91
PIEMONTE ORIENTALE		
L'AQUILA		
CATANZARO		
NAPOLI L'ORIENTALE		
NAPOLI PARTHENOPE	Marketing e Management Internazionale	LM-77
SMALL PUBLIC UNIVERSITY		
CAMERINO		
MACERATA	Management e marketing internazionale	LM-77
REGGIO CALABRIA		
CASSINO		
TUSCIA	Marketing e Qualità	LM-77
BASILICATA		
TERAMO	Comunicazione per la gestione delle organizzazioni	LM-59
SANNIO		
MOLISE		
PRIVATE UNIVERSITY		
LARGE PRIVATE UNIVERSITY		
BOCCONI	Marketing Management	LM-77
CATTOLICA DEL SACRO CUORE	Comunicazione per l'impresa, i media e le organizzazioni complesse	LM-59
CATTOLICA DEL SACRO CUORE	Communication for Business, Media and Culture	LM-59
CATTOLICA DEL SACRO CUORE	Food Marketing e strategie commerciali	LM-77
MEDIUM PRIVATE UNIVERSITY		
ROMA LUISS	Marketing	LM-77
MILANO IULM	Marketing, consumi e comunicazione	LM-59
MILANO IULM	Strategic Communication	LM-59
ROMA LUMSA	Marketing & digital communication	LM-59
NAPOLI BENINCASA	Business and Public Communication	LM-59
SMALL PRIVATE UNIVERSITY		
BOLZANO		
ROMA EUROPEA		
LIUC - UNIVERSITA' CATTANEO	Economia e Management - Curriculum Marketing	LM-77
ROMA - LINK CAMPUS	Tecnologie e Linguaggi della comunicazione	LM-59
MILANO SAN RAFFAELE		
ROMA UNINT		
LUM G. DEGENNARO		
AOSTA		
ENNA - KORE		
ROMA BIOMEDICO		

Table II. *Distribution of the master in marketing and/or communication (programs) per master's class*

MASTER'S DEGREE CLASS	N.	%
LM-77 Scienze Economico-Aziendali	21	40%
LM-59 Scienze della Comunicazione Pubblica, d'Impresa e Pubblicità	23	44%

LM-92 Teorie della Comunicazione	5	10%
Others (LM-38, Lingue Moderne per la Comunicazione; LM-51, Psicologia; LM-91, Tecniche e Metodi per la Società dell'Informazione)	3	6%
Total	52	100%

Each program awards 120 ECTS, which are distributed in four main segments: mandatory courses, elective courses, internship and/or other activities, and thesis. Electives award 11 ECTS on average; the thesis awards 15 ECT on average, and the internship plus other activities can either substitute courses or be mandatory. Marketing can be learnt in mandatory and elective courses; however, since the portfolio of elective courses offered goes well beyond marketing, we must create a dataset with a comparable number of ECTS for each program. We opted for an upper limit of 85-90 ECTS, because it allows to include 100 percent of the mandatory courses; in this way, elective courses are excluded as are excluded the ECTS awarded through internships, other activities (such as laboratories), foreign languages, and the thesis. In the list of mandatory courses, some universities allow some degrees of freedom, giving students the possibility to choose one among two-three-four courses equal in terms of number of ECTS and similar in terms of content and skills. We named this situation “bounded choice”, and we selected randomly one of these to reach 90 ECTS. The total count of courses is 476.

The final dataset includes:

- 39 universities
- 2 classes of degree: LM-59 and LM-77
- 44 programs
- 85-90 ECTS for each program
- 476 courses
- 1.799 observations.

To identify the skills that students learn in marketing curricula, we applied a dictionary-based approach, a user-friendly method for text analysis. This approach relies on a pre-existing list - i.e., a dictionary - of words, phrases, or symbols that are counted in a piece of text (Berger et al., 2022).

We analyzed the syllabus of each of the 476 courses; the complete text appearing in the syllabus of the course was copied in an Excel file; the single words in the text were firstly referred to the detailed lists of skills and competences developed by Di Gregorio et al. (2019, table 2, p.255), and then attributed to the five employability skills that are the pillars of the marketing skillset: basic and soft skills, digital and technical skills, core marketing skills, analytical skills and customer insights skills (table III). Table IV provides an example of such classification.

For each category of skills, we counted the number of times it appeared in each syllabus of each course; the total count is 1.799 observations. Word frequency is widely used as an indicator of a word's importance in a corpus and has been widely applied in literature to build vocabulary, identify the key themes of a discourse and improve the understanding (Berger et al., 2022).

In relation to the skills requested by the companies, we collected all the internships posted on LinkedIn from January to June 2023 whose title included the keyword “marketing” and/or “communication” and “laurea magistrale” as a requisite to apply. The dataset includes 204 internship offers. Each offer is described in terms of name of the company, industry, city, job position, educational qualifications required for the position, skills required, with additional notes for other issues when necessary. We selected only posts offering internships because they are more directly linked to university education: it is presumed that only skills developed during university courses are required for these positions. We analyzed the text of the internship post applying the same dictionary-based method and counted the number of times that each category of skills was mentioned in the posts (table V). The total count is 1.182 observations.

To normalize data, we calculated the ratio between the number of times a skill category was mentioned in the syllabus and the total number of skills provided by the course. Some courses were in fact very rich and detailed in terms of skills described, while others - equal in terms of title and ECTS - were very poor. For example, the course shown in table IV on consumer behavior lists five skills: one is analytical, three are soft and one is core marketing; the final data are 1/5 for analytical skills, 3/5 for soft skills and 1/5 for core marketing skills. The same normalization was applied for the job posts. The idea behind this solution is that the higher the number of times a skill category is mentioned, the higher is its importance both in the students' marketing curriculum and as a requirement to be hired.

In both cases, three independent judges completed the two classifications; since the skills were generally clearly defined and given that Di Gregorio et al. (2019) provides a rather detailed classification of the skills into the five categories (see table 2, p. 255; refer also the following table 3), the agreement between the three judges was almost 100 percent. The internship offers were expressed with a simple and standardized language, and this made rather easy to classify the requested skills.

Looking at the selected courses and the topics they cover, it was decided to proceed with the division of the research into two sections: Marketing (LM-77) and Communication (LM-59). The aim of this division is to understand the competencies most imparted to Marketing graduates and those for Communication graduates.

Table III. *Classification of skills of a course offered in a Master of Science degree*

Commentato [GS3]: 448 corsi (LM77+LM59) presi una sola volta. Es. se un corso, con lo stesso nome, è presente in più di una università è stato conteggiato come 1.

476 corsi totali.

Commentato [GS4]: 1799 (892 MKT + 906 COM) totale delle skills conteggiate per la LM-77 e LM-59.

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Basic soft skills	Core marketing skills
Initiative Teamwork Interpersonal skills Motivation Flexibility Oral communication and presentation	Planning, organization and time management Content creation across channels Creative thinking Precision and attention to details Sales knowledge and management Ability to manage multiple marketing tasks
Digital and technical skills	Analytical skills
Knowledge of social media Knowledge of mobile Knowledge of e-commerce Knowledge of analytical and real-time practices Knowledge of Internet and software technologies SEO and SEM	Data-driven/Data-oriented Conceptual and analytical skills Statistical knowledge Problem solving Critical thinking Ability to synthesize information into meaningful and actionable reports
Customer insights skills	
Knowledge of company and of its customers Knowledge of research methods Knowledge of customer touchpoints and journey CRM and relational skills	

Source: Di Gregorio et al. (2019), p.255

Table IV. *Classification of the skills listed in the syllabus of a course*

University	Title of the Master of Science	Title of the course	Words in the program (course syllabus)	Skills
XXX	Gestione strategica e marketing	Comportamento del consumatore	Critical thinking	Analytical skills
			Flexibility	Basic soft skills
			Ability to manage multiple marketing tasks	Core marketing skills
			Oral communication and presentation skills	Basic soft skills
			Initiative	Basic soft skills

Table V. *Classification of skills of an internship offer on LinkedIn*

Company	Industry	City	Title of role	Qualification	Words in post	Skills
XXX	Beverage	Milan	Trade Marketing Intern	Master of science	Flexibility	Basic soft skills
					Teamwork	Basic soft skills
					Knowledge of English	
					Oral communication and presentation skills	Basic soft skills
					Knowledge of Internet & software	Digital and technical skills
					Good conceptual and analytical skills	Analytical skills

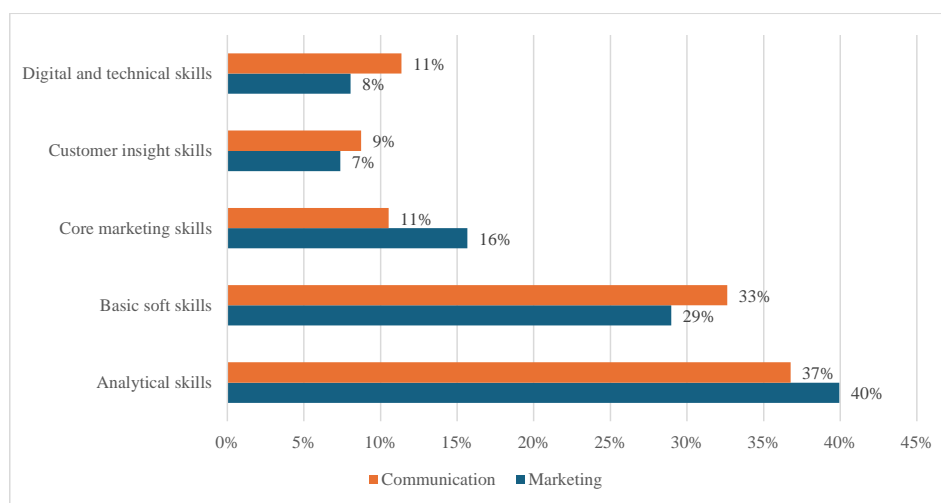
An independent samples T-test was applied to compare the frequency distributions of the categories of skills of the two datasets. In case their means are statistically different, there is a marketing skill mismatch, and we can measure its size. Finally, to collect further insights and complement secondary data, we interviewed in person 6 marketing graduates who were working as interns in the marketing function with no more than one year of work experience and 6 marketing directors. For the interns, the interviews were focused on the skills they felt they had acquired, while for the marketing directors the interviews were centered on the skills that they were looking for and on the role of the universities in higher education.

RESULTS AND DISCUSSION

The master's degree title is mentioned in approximately 90% of the 204 job posts taken from LinkedIn as a pre-requisite to apply, which supports our choice of focusing on the graduate level of the university marketing courses. We start from the skills offered by the university courses, then move to the skills required by companies and conclude with their comparison. We analyze separately marketing (LM-77) and communication (LM-59), but with a constant eye to portrait an integrated perspective.

Using frequency as an indicator of the importance of the category of skills, the skills with the highest frequency in university courses are analytical skills and basic soft skills, in both marketing and/or communication programs (figure 1). The standard deviation of these two categories is rather low compared to the other three categories, which means that their average frequencies are representative of the marketing and/or communication curricula.

Figure 1. *Frequency distribution of skills offered in the marketing and/or communication programs at graduate level (Master of Science degree)*



Analytical skills include six sub-categories: conceptual and analytical skills, data-driven/data-oriented skills, statistical knowledge, problem solving, critical thinking, ability to synthesize information into meaningful and actionable reports. Of these, of highest priority are the conceptual and analytical skills and critical thinking, that count 40% and 33% respectively of the total frequency. Conceptual and analytical skills are mentioned in many mandatory courses of disciplines different from marketing, such as micro- and macro-economics and industrial economics, which may explain the pairing of the two adjectives "conceptual" and "analytical": they are not related to data and numbers, but rather to the ability to frame a topic from a theoretical perspective and to analyze a specific situation applying theoretical lenses. Critical thinking is then intended as complementary and is present in courses more related to practice than to theory: students learn concepts and theories, and then apply them in more specific courses such as international marketing, internet marketing, and similar. This is in line with the suggestion of Tregear, Dobson, Brennan and Kuznesof in an old study (2010) of a need for a balanced approach that could accommodate both theoretical knowledge and practical skills: marketing education programs had to provide students with a holistic view that included critical reflection on both marketing theory and practical applications, fostering a diverse and adaptable skill set.

The basic soft skills are dominated by oral communication and presentation (42%), followed by teamworking (21%) and flexibility (21%). Students learn these skills in two ways. First, in courses of various disciplines, and particularly in marketing courses, through the discussion of business cases, the development of field projects, the participation to challenges, which educate them to work in teams to solve real problems, to write reports and to present them in public. Second, even if much more rarely, attending courses specifically dedicated to soft skill. Some universities have recently introduced courses on self-awareness, problem solving, critical thinking, either mandatory or electives; others assist students in their first approach to the job market with courses and/or seminars on creating a CV and LinkedIn profile and on how to effectively handle a job interview.

One may expect that core marketing skills make the largest share of the skillset that students can learn in a marketing program, instead they rank third, and also in the communication programs they rank third at the same level of digital and technical skills. The set of sub-skills of this segment is dominated by sales knowledge and management (58% of the total frequency), followed by planning, organization and time management (21%), while the others have a very low frequency.

This evidence, paired with the high importance of conceptual and analytical competences and of soft skills, can be interpreted referring to marketing as a discipline and to its long-discussed roots as a social science (see for example Peter and Olson 1983, Morgan 1996).

Digital and technical skills and customer insight skills weigh 8% and 7% of the total frequency counts. The first are dominated by the knowledge of Internet and software (49%) and by knowledge of social media (24%); the second by the knowledge of the customer journey and touchpoints (45%) and by the knowledge of research methods (41%). The two categories of skills are very much related, because in the integrated model of employability skills proposed by Di Gregorio et al. (2019) the customer is surrounded by the touchpoint through which he/she connects with the company or the brand. Customer management has not been a recurring chapter of marketing textbooks until the advent of the customer centricity paradigm and its evolution in the various segments of customer relationship management, customer experience, customer journey, customer equity, which are the focus of the new marketing DNA. Customer management is not part of sales management courses, still very rare in Italian universities: in 2017 Mauri et al. noted that even if sales management represented one of the key business functions in order to acquire new customers and develop the business, universities did not address this area and lagged behind in developing sales skills and capabilities. The situation does not seem to have changed, as is confirmed by Cardinali et al. (2024).

Instead of showing the results related to the analysis of the job posts for marketing interns, we now proceed directly with the comparison of supply and demand to discover the existence of a marketing and communication skill mismatch. We support and integrate the comparison referring to the 6+6 in-depth interviews of marketing interns and marketing directors, whose observations and opinions offer interesting insights on the situation and on possible avenues of improvement.

Figures 2 and 3 show the results referred to the two classes of degree: marketing (LM-77) and communication (LM-59). The first includes 21 programs, the second 23, for a total of 44 programs. In each figure, the left histograms (CDL) are taken from university courses (supply), the right histograms are taken from job posts (demand). Data related to the two corresponding t-tests are included in the following tables VI and VII. Given that the two charts are rather similar, we focus the discussion on the marketing skill mismatch, and add some details for the communication mismatch.

Figure 2. *Marketing skill mismatch (LM-77) (error bars: 95% confidence interval)*

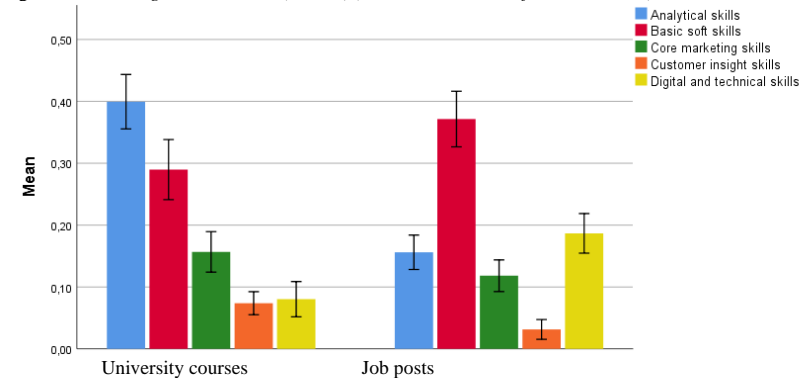


Figure 3. *Communication skill mismatch (LM-59) (error bars: 95% confidence interval)*

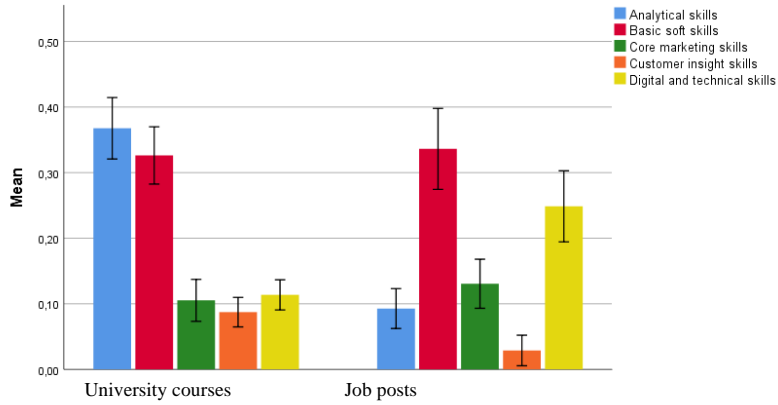


Table VI. *Marketing skill mismatch: independent samples test (LM-77)*

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Analytical skills	Equal variances assumed	5,571	,020	7,805	112	,000	,2432902281	,0311723836	,1815261458	,3050543103
	Equal variances not assumed			9,609	39,830	,000	,2432902281	,0253181120	,1921135943	,2944668618
Basic soft skills	Equal variances assumed	6,956	,010	-1,668	112	,098	-,081701491	,0489772675	-,178743669	,0153406859
	Equal variances not assumed			-2,518	63,318	,014	-,081701491	,0324502602	-,146541792	-,016861191
Core marketing skills	Equal variances assumed	14,626	,000	1,366	112	,175	,0384868393	,0281727026	-,017333759	,0943074381
	Equal variances not assumed			1,896	51,006	,064	,0384868393	,0202996969	-,002266380	,0792400587
Customer insight skills	Equal variances assumed	1,852	,176	2,421	112	,017	,0423947163	,0175084807	,0077039062	,0770855265
	Equal variances not assumed			3,526	57,501	,001	,0423947163	,0120222161	,0183251853	,0664642474
Digital and technical skills	Equal variances assumed	6,656	,011	-3,072	112	,003	-,106368670	,0346271427	-,174977914	-,037759425
	Equal variances not assumed			-5,034	80,474	,000	-,106368670	,0211301767	-,148415264	-,064322076

Table VII. *Communication skill mismatch: independent samples test (LM-59)*

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Analytical skills	Equal variances assumed	,736	,394	10,035	74	,000	,2748882928	,0273920628	,2203084162	,3294681695
	Equal variances not assumed			10,113	42,649	,000	,2748882928	,0271816946	,2200581502	,3297184354
Basic soft skills	Equal variances assumed	12,625	,001	-,204	74	,839	-,009971676	,0488779285	-,107363074	,0874197227
	Equal variances not assumed			-,267	73,837	,790	-,009971676	,0372945702	-,084285460	,0643421088
Core marketing skills	Equal variances assumed	4,854	,031	-,838	74	,405	-,025284889	,0301677714	-,085395486	,0348257074
	Equal variances not assumed			-1,045	70,101	,300	-,025284889	,0241996126	-,073548268	,0229784897
Customer insight skills	Equal variances assumed	,207	,651	3,061	74	,003	,0584019820	,0190808026	,0203826530	,0964213111
	Equal variances not assumed			3,672	65,142	,000	,0584019820	,0159067823	,0266352569	,0901687072
Digital and technical skills	Equal variances assumed	17,055	,000	-3,232	74	,002	-,134932005	,0417518476	-,218124378	-,051739633
	Equal variances not assumed			-4,625	66,557	,000	-,134932005	,0291740070	-,193170686	-,076693324

We summarize the main results, and then focus the discussion on the two key points emerging from the analysis, that concern two categories of skills: analytical skills and digital and technical skills. The results can be summarized as follows (Table VIII and IX):

Table VIII. *Marketing skill mismatch: results*

MARKETING		
	Supply side (University)	Demand side (Industry)
Basic soft skills	31%	41%
Analytical skills	39%	19%
Core Marketing skills	16%	15%
Digital and technical skills	8%	21%
Customer Insight skills	7%	4%

Table IX. *Communication skill mismatch: results*

COMMUNICATION		
	Supply side (University)	Demand side (Industry)
Basic soft skills	33%	48%
Analytical skills	36%	11%
Core Marketing skills	12%	20%
Digital and technical skills	11%	19%
Customer Insight skills	9%	2%

- Analytical skills are the skills with the highest average frequency in university courses. They appear 39% of the times in the courses included in the master in marketing programs, and 19% of the times in the job posts, with a significant difference of 24.3% ($t_{112} = 7.805$, $p < .000$).
- Basic soft skills are ranked second in terms of average frequency in university courses (31%) and first in job posts (41%), with a significant negative difference of 8.2% ($t_{63,318} = -2.518$, $p < .014$).
- Core marketing skills are ranked third, with an average frequency of 16% in marketing courses and 15% in job posts, with a difference of 3.4% which is not significant.
- Customer insight skills are mentioned on average 7% of the times in university courses and 4% in job posts, with a significant difference of 4.2% ($t_{171} = 2.421$, $p < .017$).
- Digital and technical skills appear on average in 8% of the university course, 21% in job posts, with a significant difference of 10.6% ($t_{80,474} = -5.034$, $p < .000$).

See table X for a quick overview of the marketing skill mismatch.

Table X. *Marketing skill mismatch*

Overtaught		Undertaught	
++	+	-	--
Analytical skills	Customer insight skills [Core marketing skills]*	Basic soft skills	Digital and technical skills

*Non-significant

The conclusion is that there is a marketing skill mismatch in the master in marketing (class of degree LM-77) that consists in the over-abundance of analytical skills and in the deficiency of digital and technical skills. A smaller mismatch concerns the customer insight skills (overtaught), and basic soft skills (undertaught). The master in communication shows an even more extreme situation: analytical skills are 27.5% higher and digital and technical skills are 13.5% lower than what is requested by the job market. Not surprisingly, core marketing skills are a little below market request for the master in communication.

We now go in more depth, focusing on analytical skills and on digital and technical skills, integrating the results of the above analysis with the insights emerging from the semi-structured interviews with marketing graduates and marketing directors. These insights add further light on the complexity of the situation.

ANALYTICAL SKILLS

Table XI lists the sub-categories of analytical skills with their frequency in the two datasets: university courses and job posts.

Table XI. *Distribution of the frequency of analytical skills – Total and sub-categories*

Analytical skills		University courses	Job posts	Δ
Total		37.2%	16%	21.2%

Commentato [GS6]: Valori modificati

Sub-categories	Good conceptual and analytical skills	41%	15.3%	55%	8.8%	+6.5%
	Problem solving	9%	3.4%	25%	4%	-0.6%
	Data-driven, data-oriented	1%	0.6%	9%	1.4%	-0.8%
	Critical thinking	36%	13.2%	8%	1.3%	+11.9%
	Ability to synthesize information into meaningful and actionable reports	4%	1.4%	1.6%	0.3%	+1.1%
	Statistical knowledge	9%	3.3%	1%	0.2%	+3.1%
		100%	37.2%	100%	16%	
Size of dataset: n. of units		476		204		
n. of observations related to single skills		1.799		1.182		

Multiplying the overall frequency (first row) with the frequencies of the six sub-categories, we determine the frequency of that specific skill on the total dataset (fourth and sixth columns). There are three skills that are “over-taught”: good conceptual and analytical skills, critical thinking and statistical knowledge, and none that is undertaught. We could conclude that marketing graduates are over-educated/over-qualified in relation with these three skills, but results from the semi-structured interviews with marketing interns reveal that they think that their analytical skills are inadequate, while feel well equipped with core marketing knowledge and with basic soft skills. The possible explanations of this contradiction are that: a) the mix of analytical skills taught by universities is different from the mix requested by the job market, and/or b) the university on the one side and the companies on the other have a different interpretation of “analytical”.

“Good conceptual and analytical skills” are the most important sub-category of analytical skills; they are the most taught and the most requested by the job market: how can be that marketing graduates do not feel confident with these skills and perceive a skill mismatch? This is a kind of horizontal skill mismatch at the micro level (Brunello and Wruuck 2019), that occurs when marketing graduates have learnt a skill different from what is requested for their job as marketing interns (McGuinness, Pouliakas and Redmond 2018).

Our interpretation of this evidence can be synthesized as follows: conceptual and analytical skills are taught in theoretical courses that, while included in marketing curricula, remain somehow separate and are not properly translated into effective marketing knowledge. Conceptual and analytical skills recur more frequently in courses such as micro- and macro-economics, industrial economics, and also economic history: these courses are almost always present in marketing curricula but are typical of disciplines different from marketing and perhaps their theories and concepts are not adequately integrated in the core marketing courses. In fact, when they discuss conceptual and analytical skills, marketing directors refer directly to the capability to analyze, use, and interpret data adopting proper frameworks to support marketing decisions:

“What matters is the propensity to data analysis using an adequate framework, it is a mindset; tools come after and can be easily learnt” [comment of a marketing director].

Concepts such as demand curve, price elasticity, marginal utility, game theory, barriers to entry, market concentration, market signals and many others are typically not learnt in marketing courses: they could be very helpful as frameworks to support marketing decisions but remain isolated and are not effectively related to what is learnt in marketing courses. Critical thinking skills can be discussed with similar arguments: they are listed more frequently in courses related to micro- and macro-economics and much more rarely in the courses typical of the marketing discipline; on the other side, the marketing directors do not pretend this skill from a young marketing graduate and observe that this skill can be learnt through the experience on the job.

In relation to the knowledge of statistics, what is of interest for the marketing directors is data understanding to develop useful key performance indicators:

“We look at the capability to understand data not so much in terms of statistical techniques that often are given too much weight in university courses. What is of interest for us is the awareness of the utility of data: how they can be used to develop sound KPIs for professional use” [comment of a marketing director].

Young marketing graduates perceive that they have acquired an adequate knowledge of problem solving and ability to synthesize information into meaningful and actionable reports thanks to business projects developed in teams, which greatly improve their capability to manage challenging situations. On the other side, marketing directors agree that the interns they have hired have acquired good problem-solving competences. The tendency to configure students’ learning

experiences (“experiential learning”) with real case situations (Awdziej 2017, Kolb and Kolb 2017) enhances problem solving skills, whose frequency of appearance in the syllabi does not give full account of their real importance in the student journey. It would be interesting to investigate in depth not only the skills mentioned in the syllabi, as we have done, but also the teaching methods and the exam modes to understand in more depth all the facets of the students’ complete learning experience.

DIGITAL AND TECHNICAL SKILLS

Consistent with recent literature, labor market demands are concentrated on roles requiring digital skills, as evident from the titles of positions such as Digital Specialist, e-Commerce Analyst, CRM and Engagement Analyst, which are highly prevalent in the job openings on LinkedIn. Digital and technical skills (table XII) are ranked second in terms of frequency in job posts (close to 20%), and fourth in university courses with a frequency of 8%. The misalignment is therefore substantial, and is higher for the master in communication. Considering the frequency distribution of the six sub-categories of skills included in the related skillset, we observe that the mismatch is concentrated in the knowledge of Internet and related software: digital and technical skills are not adequately represented in the master in marketing courses, and even less in the master in communication; among them, knowledge of Internet and related software is a competence that should be greatly improved in marketing and communication curricula.

Table XII. *Distribution of the frequency of digital and technical skills – Total and sub-categories*

Digital and technical skills		University courses		Job posts		Δ
Total		9.4%		19%		9.6%
Sub-categories	Knowledge of social media	28%	2.7%	9%	1.7%	+1%
	Knowledge of mobile	2%	0.2%	0%	0%	+0.2%
	Knowledge of e-commerce	6%	0.6%	7%	1.3%	-0.7%
	Knowledge of analytics and real time practices	16%	1.6%	7%	1.3%	+0.3%
	Knowledge of Internet and related software	42%	4%	71%	13.5%	-9.5%
	SEO & SEM	5%	0.4%	6%	1.1%	-0.7%
		100%	9.4%	100%	19%	
Size of dataset:						
n. of units		476		204		
n. of observations related to single skills		1.799		1.182		

Digital and technical skills are frequent in courses dedicated to the digital world, such as Digital Marketing, Social Media Marketing, Digital Communication, in which students learn to apply dedicated tools to develop communication campaigns often in the form of real business projects. Also in this case, the insights emerging from the interviews with young marketing graduates reveal that students perceive they have acquired a weak knowledge of social media, well below their job requirements:

“The topics covered in the majority of the courses on digital marketing have a more theoretical than practical imprint, therefore I don’t feel I am ready to apply these tools on the field. We have seen Google Analytics, but without any practical application” [comment of an intern working in the marketing function of a large firm].

Young marketing graduates think that they have little knowledge of Search Engine Optimization and Search Engine Marketing, which have too little space in the courses and with too simple applications.

“We have seen the world of Internet and social media from outside, without putting our hands in the mix” [comment of an intern working in the trade marketing function of a large firm].

“We had a course on CRM, but we saw the software only on the slides, and we never put in practice the notions related to the customer journey and the touchpoints” [comment of an intern working in the marketing function of a medium firm].

On the other side, the marketing directors give high importance to the knowledge of SEO and SEM, and this importance is continually increasing driven by the need to optimize the online presence of the brands and the companies. Moreover, the larger the size of the company, the higher appears the need for smart and precise SEO and SEM, a skill that is requested also to entry-level marketing graduates.

“Marketing graduates are not aware of what is behind a marketing campaign, that goes well beyond simple content: there are the analytics, numeric goals and their measurements” [comment of a marketing director].

When they discuss about the software they have learnt and used, interns talk about Canva, Excel, and also databases such as Statista and Euromonitor: none of them is properly dedicated to the digital domain.

The result of this situation is that young marketing and communication graduates do not feel ready for the social media domain and prefer to apply for interns in the classical marketing and communication function, trying at the same time to build some experience of the management of digital tools on the job.

On the other side, digital and technical skills are high in demand, especially in roles interfacing with consumers through digital channels. Digital and technical skills are particularly sought after not only for roles related to the digital realm such as Social Media Management Intern, Campaign Management Intern, Content Management Intern, and Digital Marketing Intern, but also for more generic roles such as Marketing Intern and Account and Trade Intern. When the job post is strongly focused on the knowledge of techniques, the position is even named “marketing technician”. Candidates are expected to have a deep understanding of social media platforms and the ability to derive data on their effectiveness and efficiency for further improvements in communication. The same applies to the competency related to e-commerce, required for emerging roles such as E-commerce Intern and Omnichannel/Web Intern.

Analysis of job descriptions also highlights the importance of knowledge of internet and software, a skill that encompasses familiarity with and utilization of Microsoft Office, particularly Excel and Power Point, for roles associated with the web and e-commerce. Regarding analytics skills, companies seek candidates with knowledge of key performance indicators (KPIs) and metrics to measure marketing performance and the effectiveness of marketing initiatives, emphasizing the need for analytical competencies.

The interviews with the marketing directors add further light on the companies’ needs in terms of competences. Despite the high frequency with which Microsoft Office and specifically Excel are mentioned in the job posts, the marketing directors declare that it is much more important to have acquired an attitude to data analysis rather than knowledge of Microsoft tools and then not knowing how to apply them to specific situations, because:

“these [the techniques] are things that one learns on the job, but the propensity to data analysis and understanding should be already be there” [comment of a marketing director].

We conclude the analysis of the marketing and/or communication skill mismatch with some brief comments on the two skills that show a little mismatch: basic soft skills and customer insight skills. Basic soft skills are the top priority for the job market: in the job posts, they are mentioned 37% of the times, against 29% and 33% of the times in the courses of the masters in marketing and in communication respectively. Among these skills, three dominate both in university courses and in the job posts: initiative, teamwork and oral communication and presentation skills. Companies expect that marketing graduates have spirit of initiative, autonomy, resourcefulness; that they have effective written and oral communication skills, that they are able to present their work integrating with their colleagues and creating a peaceful atmosphere at work. The interviews with marketing interns and with marketing directors confirm the high importance of soft skills:

“The intern must be flexible, willing to learn and to get involved, and must be able to manage interpersonal relationships. We don’t pretend stress resilience from a marketing graduate, because it is not fair to expose a young intern to a stressful environment” [comment of a marketing director].

“We have learnt soft skills thanks to many business projects we have been involved, and also in specific courses dedicated to soft skills, such as self-awareness, teamwork, public speaking” [comment of an intern working in the marketing and communication function of a small firm].

The customer insight skills have little weight in both university courses and job posts and are rather aligned, however the interviews with marketing directors offer interesting insights related to two sub-categories of these skills: knowledge of the company and its customers and CRM and relational skills.

While the knowledge of the company does never appear in the job posts, the marketing directors observe that it is taken for granted and also that it is used as a criterium to evaluate candidates for the job.

“Candidates must demonstrate a good knowledge of the company for which they are applying, at least of consumer target, communication mode, initiatives developed in the most recent years. They don’t need to know its economics, but at least its organization” [comment of a marketing director of a large firm].

CONCLUSIONS, IMPLICATIONS AND AVENUES FOR FUTURE RESEARCH

The comparison between the skills taught in the courses included in the curricula of the master in marketing and/or communication in Italian universities and the skills sought after by the companies when they hire an intern shows that there is a marketing skill mismatch. This misalignment is more horizontal than vertical, in the sense that is more related to the kind of skillset than to over or under-qualification of graduates and is concentrated in two categories of skills: analytical and digital and technical. Considering the frequency with which a specific skill is mentioned in the curriculum of a course as an indicator of the importance of that skill, our first conclusion is that analytical skills are overtaught, while digital and technical skills are undertaught. Going in more depth in the sub-categories of skills, the misalignment found in the analytical skills is concentrated in the “good conceptual and analytical skills” and it is due to at least two reasons. First, to the fact that these skills are mentioned with high frequency in theoretical courses included in disciplines different from marketing, such as micro- and macro-economics: if on the one side many economic concepts and framework are of great value for the marketing discipline, they are poorly integrated in the classic marketing courses, hence remain isolated. This is the reason why marketing directors complain that young marketing graduates are weak in applying proper theories and frameworks to data analysis. The implication of this result is straightforward: usually, in Italian universities each program is assigned to a coordinator, almost always a member of the top faculty. The coordinator should structure the master in marketing and/or communication to maximize the integration between courses that share at least the boundaries and often the concepts, such as for example micro-economics and pricing policy, commercial law and marketing law, finance and new product development, macro-economics and international marketing, just to name a few. Possible solutions are the analysis of all the syllabi of the courses to identify common concepts and theories (how many courses teach something related to stakeholders, consumers, customers, foreign markets?) and to avoid duplications, and also the organization of periodic meetings with all the faculty involved in the courses to collect data on specific contents, teaching methods, exam modes.

The second reason is the different interpretation of the adjective “analytical” between the universities and the companies, which is related to the previous discussion: in a world with great abundance of data, big data, qualitative and quantitative data, what is in great need is the capability to select the right data to support marketing decisions, and only good theories can be an effective support. Young marketing graduates may know the statistical tools, but they are weak in framing the situation from a theoretical perspective before applying the tool. The same interns declare their weakness in data analysis. The implication for universities’ marketing curricula is that all the courses in statistics, data analysis, analytics, market research and similar should always dedicate adequate space to real marketing decisions such as determining a communication budget, analyzing the effectiveness of a marketing action, choosing the target segment for a new product. The misalignment found in the digital and technical skills is instead due to the paucity of practical applications: students may know what are SEO and SEM, Google Ads and Google Analytics, bounce rate and engagement rate, but they do not feel ready to make this knowledge actionable. How can the numbers reported in the related reports be used to understand, review, support marketing actions? The solution in this case cannot be limited to adding real case applications or exercises to the courses on these topics; real case applications can be very effective in translating a theory into a practice, but the world of social media is so dynamic, that the same practice can be the source of new learning. What is required in the courses is a reflection on what has been done, the results of the initiatives, and the reasons why those actions have produced that output. This is particularly urgent, considering that the research done by Mauri et al. (2017) identified the professions related to digital marketing as the jobs with the highest increase: while the role of Brand/Product manager ranked first, digital and online marketing professions emerged as the most promising, with 27% of the sample recognizing Digital Marketing Manager as the key job of the future, followed by Social Media Manager (11%), and Big Data Analyst (8%) The article of Mauri et al. (2017) concluded that universities had to update their degree courses to align with the digital world rethinking course content, workshops, books, and activities, and redesigning teaching methods and supporting activities. The call is still up to date.

We opened the article observing that by 2025, thanks to the internet of things, knowledge will double every 12 hours (Chamberlain 2020); it may be an extreme view, but in the digital world the change is a rule, a way of doing. University courses should therefore be framed as a continuous learning experience (Gentry 1983) of the kind “hands-on, minds-on” (Young 2002): studying, applying, reflecting, reviewing (Boyd and Fales 1983).

In this perspective, the “Piano Nazionale di Ripresa e Resilienza” (PNRR) launched to recover from the pandemic can be a great engine to enhance the university orientation system towards the digital world, revise degree classes to favor multidisciplinary pathways, and address skills gaps.

We notice more than once that learning experiences at universities have been enriched with active learning through business cases, business projects, assignments. These modes contribute significantly to the development of basic soft skills and problem solving skills: the syllabi of the courses used as a source to analyze the skills taught may not give full account of the skills that students learn thanks to the teaching methods. In this perspective, our analysis could greatly be complemented by the count not only of the methods that professors put into practice in a single course, but also by the exam modes. Very often part or the full exam is substituted by a project, a group assignment, a challenge, which add high value to the learning experience and can even be one of the main reasons for being hired by a company (Finch, Nadeau and O’Reilly 2012).

Our sample of job posts for marketing and/or communication interns was too small to segment the 204 companies in terms of size or industry. We noticed however that the importance of specific skills varied according to the size of the firm and to its industry. For instance, large organizations give high priorities to problem solving skills, critical thinking, data-driven approach, while smaller firms prefer the knowledge of statistical tool and do not consider critical thinking as

a skill that young graduates should possess. The different priorities can be due to the resources and to their organizational structure: the more abundant the resources and the more articulated the organizational structure, the more precise is the request for very specific skills. This is an area for future research, which requires a larger sample and possibly a multi-year sample which can also be analyzed longitudinally to track the evolution of the skills of the same or similar roles.

While we write this article, the Italian government has released a bill to review the university programs to align their content to the classes of degree. The bill is also related to the PNRR and is oriented to reduce the rigid borders between disciplines that limit the creation of multidisciplinary curricula. Students can therefore personalize their study plan choosing activities different from what is normally scheduled in the standard plan, as long as these activities are coherent with the discipline of the field of study. Depending on the choice freedom in terms of number of ECTS, students can choose more courses dedicated to the marketing discipline and less courses dedicated to other disciplines (it could happen also the opposite). Our choice of 85-90 ECTS to build a marketing curriculum has been constrained by the mandatory courses, some of which are different from marketing and are oriented to different skills. This is a weakness of our method that may have determined some bias in the results, because it probably underestimates the weight of elective courses. As long as these courses are oriented to a mix of skills different from fundamental courses, the results of our analysis could change.

In case students are given more freedom and can personalize their study plan, the next study should analyze the study plans of a large enough sample of students and compare the skillset requested by the job market and the one sought after by the students.

A final avenue for future research can be the development of a larger international study that verifies the existence of a marketing skill mismatch in different countries, in different disciplines, and/or in different typologies of universities. The increase in the average age, the low birth rate, the longer careers and the postponement of the age of retirement are all conditions that make obsolete the accumulated skills and that may require initiatives of re-skilling or up-skilling. This need has favored the birth and growth of digital universities, which have gained a market share above 10% in the last ten years^[4] attracting older students. Students younger than 23 years in 2022 were 66.4% in classic universities and 23.9% in telematic universities, while the analogous percentages for students older than 30 years were 45.6% and 8.5% (Mediobanca 2024). To the extent to which older students are at same time workers looking for a conversion or an upgrading of their competences, the skillset targeted to this segment may be configured differently, and may even be conceived to reduce the marketing skillset.

ENDNOTES

[1] Seventy years ago, Peter Drucker in his book *The Practice of Management* write that “it is the customer who determines what a business is, what it produces, and whether it will prosper”.

[2] To avoid ambiguity, we categorize the title of the master in marketing and/or communication as “program” and the single exams as courses.

[3] Our sample is smaller than Mauri et al. (2017), which referred to the academic year 2015/16. That older sample included all the Master of Science degrees offered by universities which had “marketing” and/or “communication” and or “sales” in their title. The total was 18 for the first segment, 84 for the second segment, and 3 for the last one, with some duplications due to the co-occurrence of two words in the same title.

[4] All the 11 telematic university in Italy were born in the years 2003-2006. In 2022 their shares are: 2.9% of the courses, 7.5% of new enrolments and 11.5% of the total number of university students (Mediobanca 2024).

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