ISCTE ⊛ Business School
Instituto Universitário de Lisboa

DIGITAL STRATEGY IN MASTER PROGRAMS IN MANAGEMENT IN PORTUGAL

Teresa Baeta da Silva

Dissertation submitted as partial requirement for the conferral of

Master in International Management

Supervisor:

Prof. Álvaro Augusto da Rosa, Prof. Auxiliar, ISCTE Business School, Departamento de Métodos Quantitativos

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ABSTRACT

The Portuguese Higher Education portfolio has expanded over the years and is characterized by a range of universities. Not only with the transformation that the industry suffered through the Bologna Process, but also with the mobility between the members of the EU, the number of graduates with master's degree has grown as well.

Many universities have started showing signs of adaption of digital marketing to promote the programs towards its audience. It sounds pertinent to develop this study to analyze the implications of the adoption of digital infrastructure for the attraction and retention of its primary stakeholders and, this thesis consists in analyzing that. Many higher education programs worldwide have been using digital marketing in its activities, so analyzing the opportunity in the Portuguese market can come as a benefit for Portugal.

After a precise definition of a set of concepts regarding strategy, marketing, digital and higher education market, an online questionnaire took place, and the results show students are digitally present. However. this does not happen for institutions, and there is a gap that needs to be tackled. After analyzing them in the following section, discussion on the analysis and recommendation for higher education programs such as management in Portugal follows.

RESUMO

Esta tese debruça-se em analisar os possíveis efeitos de uma abordagem digital de marketing para as universidades portuguesas do ensino superior, nomeadamente no mestrado de Gestão. Por sua vez, é possível criar uma relação mais harmoniosa com o alvo, conquistando um leque maior com futuros estudantes.

Nos últimos anos, foi registado um crescimento da adoção da tecnologia e da sua respetiva prática para promover os programas de instrução. No entanto, as universidades, apesar de adotarem conceitos de marketing e beneficiarem de vantagens, necessitam de adaptar-se às mudanças potenciadas pela revolução digital. Este tópico desenvolvido na tese surgiu com a noção do crescimento da competitividade do mercado no ensino superior, tanto no publico como no privado. Os números registados cresceram com a entrada de Portugal na União Europeia e pela alteração da educação no país com a Declaração de Bolonha. Consecutivamente, aumentou o número de estudantes com o título de mestre em área abordada.

Nesta investigação, realizou-se um inquérito com o intuitivo de conhecer quais são os fatores e critérios mais relevantes na escolha de um programa de mestrado em Gestão. Com base no questionário online, foi possível indagar possíveis oportunidades a aproveitar pelas instituições do ensino, como forma de melhorar e inovar o programa de ensino, tendo em conta outros valores.

Palavra-Chave: Gestão; Marketing no Ensino superior; Mestrado de Gestão; Plano de marketing no Ensino Superior em Portugal; Digitalização nas Universidades e Instituições; Redes sociais; Globalização; Internet; Avaliação da qualidade do ensino superior; Digital; Gestão de TIC;

Classificação JEL: M100, M150, M160, M310, M390

DEDICATION AND ACKNOWLEDGEMENTS

I sent an e-mail to professor Álvaro Rosa when I decided to enter this journey leading to my completed thesis. I expressed my interest in some topics and his reply, to my surprise, was a positive one and somewhat challenging to me since the early start. Although there has been innumerable delays and setbacks, this journey was covered with a rollercoaster of emotions such as enthusiasm to frustration and despair to excitement, enjoyment, joy, and achievement.

This thesis represents a reflection of hard work over the years rather than a conquest. It symbolizes all the learning I gained through my academic years and my passion for knowledge that I kept seeking during this journey. Hopefully, this driving force will nurture the achievement of future victories along the way.

My most profound gratitude goes to all characters and individuals part of my life as they were the main contributors to my success in academics and continuously developing oneself in personal life. To professor Álvaro Rosa, the mastermind, support, pillar, and keystone for the result of this final project. To my mom and dad, who always demonstrated support in my life choices and decisions that I took. To my one and only sister, for the precious help and never-ending support. To my close and special friend, José Côrte, who was always by my side, and the perfect role model during this journey - a massive thank you ('between us'). To Rita, a very special thank you for all the patient and exceptional support and strength given. To my childhood friends, Pucci Pucci friends and recent friends, whose positive energy and attitudes always took my thoughts away from work.

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LIST OF ABBREVIATIONS/GLOSSARY

4G   **Fourth Generation**

AACSB   **Association to Advance Collegiate Schools of Business Accreditation**

B2B   **Business-To-Business**

BSc   **Bachelor of Science**

BTS   **Behind-the-Scenes**

CCES   **Conselho Coordenador do Ensino Superior**

CMS   **Content Management System**

CNE   **Conselho Nacional de Educação**

CSR   **Corporate Social Responsibility**

CTR   **Click Through Rate**

DA   **Digital Analytics**

DGES   **Direção-Geral do Ensino Superior**

e-CRM   **Electronic Customer Relationship Management Systems**

eWOM   **Electronic Word-of-Mouth**

EU   **European Union**

FAQ   **Frequently Asked Question**

FCG   **Fundação Calouste Gulbekien**

GDP   **Growth Domestic Product**

HR   **Human Resource**

HTML   **HyperText Markup Language**

IT   **Information Technology**

MMS   **Multimedia Messaging Service**

MSc   **Master of Science**

PC   **Personal Computer**

PEST   **Political, Economic, Social and Technological factors framework**

PFI   **Pay for Inclusion**

PPC   **Pay-Per-Clicks or Paid Search**

PR   **Public Relation**

SEM   **Search Engine Marketing**

SEO   **Search Engine Optimization**

SERP   **Search Engine Results Page**

SMART   **Goal setting acronym for Specific, Measurable, Achievable, Relevant and Time bound**

SME   **Small Medium Enterprise**

SMS   **Short Message Service**

SWOT   **Strength, Weaknesses, Opportunities and Threats framework**

WOM   **Word-of-Mouth**

1. INTRODUCTION

"Strategy without tactics is the slowest route to victory. Tactics without strategy is the noise before defeat" – *Sun Tzu in The Art of War* (Dixon, 2012)

This thesis is elaborated from a marketing point of view because Masters Programs in Management are positioned, promoted and exhibited to potential students and has an important role in the academic industry. Thus, it is crucial to be well planned, and executed to generate profits. Therefore, it is vital to consider proper marketing research due to the limited budget needed for such marketing activities, and that way directing efforts to target the considered segments and methods to do so. Additionally, through research, marketers obtain information from the clients - about their attitudes towards the programs, and can help in discovering ways to approach and connect with and motivate students to continue their studies.

It is a unique market with its own characteristics that make it a challenging assessment. The purpose of this study is to identify the existence of whether there is an evolution from a set of tactical actions on a board level in Portuguese universities towards the development and incorporation of a digital strategy element, as regards to their Master Programs in Management.

The practical implications that this study would like to achieve are a better understanding of underlying drivers such as the digital disruptions and what influence students in their decision-making in choosing a Master Programs in Management in Portugal. Relevant key emerging from the academic environment, as well as the investment in digital planning, might give an in-depth consideration of what digital marketing capabilities could bring to Portuguese Master Programs in Management, what are they looking for; what to take into consideration and if it is eventually embedded within a strategic marketing planning.

By studying these variables, this research intends to have new insights whether there exists a correlation between a flexible response to acquire, convert and retain students, delivering an agile response in changing customer behaviors and optimizing key channels and contents digitally from the top to bottom management and between those organizations that do not have rooted digital into the board.

Institutions are switching and becoming more present online, through a computer (PC)-based social media websites to mobile social media platforms, mainly mobile applications (Wu, 2016), being the latest one, one of the newest efficient channels with a more prominent and substantial potential market. Not only the young adults (Dovaliene, Piligrimiene, & Masiulyte, 2016; Moreno-Munoz, Bellido-Outeirino, & Gomez-Nieto, 2016), but generation Z, mostly common referred as the Net generation (Yadav, Joshi, & Rahman, 2015) are representing the near future and are the future customers of a smartphone.

This represents a massive opportunity for the companies to catch up and create value by creating and developing more interactive mobile devices platforms and digital tools (Moreno-Munoz et al., 2016; Wu, 2016), and therefore a need to keep up with the digital paradigm. Most researches include companies and institutions mainly who use services such as Google analytics, paid advertising, and so forth, to check in which stage of digital planning is incorporated or improved in this sample of marketers.

Businesses that are considered mature are focusing on integrating digital technologies. As examples, these tools used in the service of transforming how businesses work are such as social, mobile, analytics ad cloud instruments (Kane, Palmer, Phillips, Kiron, & Buckley, 2015). The less-matured institutions are characterized by focusing on solving discrete business problems, but using only proper digital tools and technologies (Kane et al., 2015). Defining a clear digital strategy supports the ability to reimagine digitally, change and invent the business.

This research is going to be conducted around the area of International Management and after this introduction, the second chapter will follow a literature review on strategy, on marketing, on digitalization, and on the higher education market. This will include the definition of concepts, pros and cons and its impact and importance. After the revision regarding marketing higher education and the impacts advantages and disadvantages of a digital strategy, the third chapter is about the application of the effects of digital strategy on the Portuguese higher education. A background, PEST, and SWOT analysis were conducted to analyze the market. The fourth chapter consists of the conduction of the field work: surveys based on criteria from the literature review were taken into consideration for data collection. The following chapter refers to the information analysis and the results breakdown,

followed by recommendations. The last chapter of this thesis mentions the limitations of this study and suggestions for future research.

2. LITERATURE REVIEW

2.1. BACKGROUND: A DIGITAL WORLD

There is no doubt that technological progress is the driving force of our society nowadays and its principles and improved methods are the pillars for modern culture, shaping communication, interactions, economies and working environments (FMEAE, 2016). Several dynamics that are shaping at a fast pace the business environment and digitalization are behind one of these forces that are altering the nature of competition (Willmott, 2014). Not only have the IT solutions costs decreasing, but they are also becoming more accessible to all. This new sense of digital disruption has brought a mixture of fear and thrill to organizations that might view it as a threat, but also to some as an opportunity (Dawson, Hirt, & Scanlan, 2016).

The leading industries affected by these digital technologies are found in the service industry, with enormous productivity improvements and new processes, markets and products throughout the recent years (e.g., music and entertainment industries, financial services such as banking; and tourism (FMEAE, 2016)).

Arising from digitalization, the source of concern due to the processes and interfaces comes from not knowing when, what, and who may come back with an effective attack. There are new digital technologies that are disrupting existing business models (Dawson et al., 2016), therefore the state of alert. On the other side of the coin, catching the wave of opportunities that emerge are leading companies to rethink their business models and seek new technologies. Digitalization is now seen as a source of transformation and disruption, creating new markets, with deeper or softer shifts and changes (Dawson et al., 2016).

Companies are making the most out of the opportunities coming from digitalization. They are opening doors to disrupt competitors, and it is not only newcomers that are taking advantage of this feature - strategy is no longer so asymmetrical in the digital age (Dawson et al., 2016).

Digitalization has created a new path to converge the business market (Altice, 2017). In this new era where digital transformation is the characterized feature, businesses are looking more and more for high-end services (being only enough the

service provided that meets company's needs). In Portugal, 93% of the population is covered by 4G in 2017, and there are 7.7 million mobile customers out of the 10.3 million population (Altice, 2017). This demonstrates the way technology is transforming and shaping the world. It has put more power in the users' hands who have now overcome the asymmetrical information available in the previous markets and has redefined the customer-organization relationship (Mackay, 2017).

On one note, along with opportunities also come risks and digital disrupted the market in ways that it reduced (if not eliminated) jobs and industries. It also put some pressure on privacy and challenged other ethical and serious questions (Mackay, 2017).

The control of the customer's relationship is shifting and is now directly in the hands of the customers and for this study, in the students and parents' hands. When, where, what and how (which devices) are now defined by them, so they are the ones starting the relationships. They have the power and full control now, and mobile is forcing that. Relevance can be delivered into students' lives at the right moment, at the right time and through the channel they most value. It is creating value. Basically, it is achieving the status of 1-to-1 marketing: the right and personalized message to the right person at the right time (Kim, Kim, & Wachter, 2013). Only by understanding this context and applying it to the academic industry, it will be able to accomplish the stated purpose of this research.

Digital revolution has raised the number of smartphones and applications (Moreno-Munoz et al., 2016) and also increased drastically the time spent on mobile that switched from a pc-based platform (Kim et al., 2013). Although the literature does not have profound data regarding the determinants of customer engagement in mobile applications, the impacts of mobile growth figures have shown changes and alterations on consumer's behaviors and also students' studying options (Dovaliene et al., 2016).

With digital technologies, it is nowadays a typical tool for the advertising channel, supported by the consumer learning theory which states that consumers tend to make the decisions on the brand choice and make the transactions happen only after they are aware and informed of the products and services they are buying. This type of cross-channel advertising tool for the branded apps has shown a positive firm performance which increases not only customer's loyalty but the different platform's

synergies. Given some advantages found within the digital dimension, mainly accessibility, portability and constant connection, the opportunity to be closer to customer's private life will be optimized once strategically created value (Wang, Kim, & Malthouse, 2016). This may only exist if customer's satisfaction and stickiness happen, avoiding poorly design apps which in turn disengage customers and therefore hurt sales. Mobile engagement has had a significant role interconnecting customers and brands. Not only the brand relationship is strengthened, but also the customer's perceptions and evaluation of the same brand was positive (Wu, 2016).

According to Moreno-Muniz et al., (2016), many digital technologies and tools were introduced recently, along with others that will appear. The developing trend of mobile social networks are still noticed as essential and showing tremendous advantages, but the unknown of the future and its implications may be a drop-off. This sphere is changing at a fast pace, and at different levels of social media usage.

Since customers are expecting to be able to do everything from their devices, the business impact is vast. As well, once they can provide the push the notification and serve as a brand engagement tool and vehicle (Moreno-Munoz et al., 2016). The most significant problem to appears is when an app launched did not manage to create value for its users, and its adverse effects spreads: a negative effect that impacts the brand relationship and decreases sales. If firms know how to engage with its customers, then they have found its competitive advantage and key to success (Kim et al., 2013; Dovaliene et al., 2016).

At the moment, there is a lack of a conceptual understanding about the impacts, advantages, and disadvantage of a digital strategy in organizations, let alone in Portugal, and for the future, and general lack of research on the topic as well. Terms such as digital strategy, IT strategy and digital marketing strategy are confusedly mixed and blurred with no clear distinction between them.

2.2. INTRODUCTION TO STRATEGY

Strategy itself is already a hard concept to understand, so a precise definition will help define the scope of what will be discussed throughout this study (Bradford, 2016). Strategy is defined as a formulation of actionable and flexible stages in sight of a more substantial objective. By this, it is meant a plan of action designed to

achieve a long-term aim. It is set to run in the long run, optimizing the usage of still available resources, with a transversal decision that is not easily modified and changed.

Strategy consists of the main direction set, business approaches and competitive moves that are taken on into account to boost and improve performance so that they compete successfully and to gain a sustainable competitive advantage. With strategy, it provides direction and guidance concerning what the organization should and should not do (Porter M. E., 1996). A successful strategy is likely to have a unique element that creates the competitive advantage to achieve a unique position in the market (Porter M. E., 1996).

Organizations are often faced with common three questions: "What is the present situation?"; "Where does the organization go from here?" and "How do get there?". The first question mentions the context which the organization operates by evaluating the industries conditions, its financial performances, resources, strengths, weaknesses, and changes that might affect the organization in the business landscape. The second interrogation refers the vision of the organization's future direction. Finally, the third query is regarding the process of implementing the strategy into action and managing the organization in the intended direction. The decisions are based on considered choices. This one is considered the most challenging element of strategy for managers to control (Gavetti & Rivkin, 2005). Although strategic choices are rarely easy involving difficult decisions, it should not be an excuse for some unsuccessful actions (Markides, 2004; Collis & Rukstad, 2008).

There are three types of strategic planning processes. These are corporate level, business level and product level. The first one (higher level) govern the lower ones, and the main requirements, are planning, implementation and control (Kotler, 2002:33). The starting points are creating the organization's mission; analyzing its external and internal environment (tool such as SWOT is very often use); setting objectives that are SMART; developing a business strategy (e.g., cost leadership, differentiation, focus and so forth); preparing programs and implementing them; and gathering feedback and exercising control. The final step is to review also the process and confirm that it follows its plan.

Creating and crafting a strategy in an organization is a rough and cautious task (Thompson, et al., 2013). The process consists of five stages which are the following:

    i.   Develop the strategic vision, mission and set of values:

        a.   The Vision should describe the management's aspirations for the future and its long-term direction;

        b.   The Mission is about creating real business for customer and should convey the organization's identity by describing who they are and what they do (business portfolio);

        c.   Set of value should represent the organization's ideals such as community, sustainability, initiatives or innovation, and so forth.

    ii.   Set objectives

        a.   Set the organization's performance targets and set key strategic priorities;

        b.   Objectives should be SMART;

    iii.   Craft a strategy to achieve the aims;

    iv.   Put the strategy into action efficiently and effectively;

    v.   Evaluating and monitoring the previous steps and adjust for new ideas and opportunities if necessary (Thompson, et al., 2013).

Porter's Generic Strategy framework (Porter M. E., 1985) describes how organizations pursue competitive advantage across the market scope and Bowman & Faulkner (1997) suggests a Strategic Clock approach (Johnson, Scholes, & Whittington, 2008:225). Looking at the latest, there are extended strategic positions than Porter's generic strategies of how companies compete in the marketplace (Thompson, et al., 2013). Other approaches can be Ansoff's Matrix and Mintzberg's generic strategies (Mintzberg, 1988; Kotha & Vadlamani, 1995). Ansoff's matrix suggests different strategies based on the existence or new of the products and markets (FME, 2013). This way, opportunities and levels of risks associated with each strategy are considered (Thompson, et al., 2013). The danger that lies with this choice of some common and medium risk strategies lies on the focus of organizations on one type of customers, so it is necessary to scan the environment actively (through analysis such as SWOT, PEST, and so forth). Looking for potential problems and action to respond to them is crucial in order to maintain a growth strategy. Figure 1 will summarize main authors and their views on strategy.

Figure 1 Main Views on Strategy

Porter (1979)	Wheelen & Hunger (1995)	Mintzberg (1981)	Barney (2008)	Johnson et al. (2008)	Grant (2010)
•"The combination of the international strategy ends sought by the organization and the means to achieve them"	•"A set of actions and decisions that determine long-term organizational performance"	•"A series of actions that with time turn into a consistent pattern of behavior, regardless of specific intentions"	•"Path for competitive advantage"	•"Strategy is the direction and scope of an organization over the long term, which achieves advantage in a changing environment through its confirguration of resources and competences"	•"Means by which individuals or organizations achieve their objectives"

2.3. STRATEGY VS TACTICAL DECISIONS

As per Bradford (2016), the execution is the main base and should be prioritized since the strategy is adaptable to the changing environment. However, when chosen a strategy for the company, if the business mind is set to do all it takes to reduce the odds of failure, then the organization is half-way there to turn it into a successful one. It is necessary, nevertheless, a clear distinction between a strategy, as Michael Porter defines. and tactical decisions, which is often confused.

Strategy is the overall campaign plan. In this case, it may involve complex operational patterns, activities and decision making that govern tactical execution. Tactical decisions are the actual means to gain an objective. Tactical decisions are characterized as:

    i.   Decisions that help reach long-term objectives;

    ii.   In aid to achieve goals that are SMART and maximize profits (notion of competitive advantage[1] based on the efficiency and effectiveness of the business compared to others);

    iii.   Part of a plan, with vision and mission;

    iv.   Strategy is then the plan and direction for a long-term sustainable competitive advantage;

Consider planning distinct as doing: formulating a long-term plan is different from solving day-to-day problems and issues that arise (Harrison & Hoek, 2008). The

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[1] Broad definition as 'what makes your business better or different' than others; only if outperform in profits to competitors, per Michael Porter

tactical decisions are likely to be complex in nature (Johnson et al., 2008). Since these decisions require an integrated approach, and by this, it is meant that both, inside and outside of an organization, can affect operational decisions, done at uncertain situations and it involve some considerable changes (Johnson et al., 2008). It leads to tackling changes in the business environment, building capabilities such as resources and competencies and meets value and expectations of stakeholders. Anyhow, most importantly, it gives the organization the advantages over competitors (competitive advantage). Competitive Advantage refers to the favorable position that an organization possesses over their competitors due to the implementing of the following strategy (Harrison & Hoek, 2008).

Tactical decisions are also concerned with the scope of the activities regarding the organization. It refers to the importance given to one area of activity over the other, or to a portfolio of areas and vital to keep organization's boundaries, product, and service range and geographical coverage (Johnson et al., 2008).

There are two models to obtain competitive advantage, and those are:

i. MODEL 1: INTERNALLY
    a) Common concepts and tools used are Resource-Based View Model and Porter's Value Chain;
    b) The aim is to determine strengths and weaknesses and create Competitive advantage.

ii. MODEL 2: EXTERNALLY
    a) Concepts and tools used are Porter's five forces and PEST analysis;
    b) Aim: determine opportunities and threats dynamics and draw plan over that.

A strategy is only as strong as their weakest link (Bradford, 2016), being that the different levels, activities and processes and flexibility to adapt to market changes, as well as the difficulty for competitors to copy and imitate. Operational efficiency is essential, but it is not the main point since it is not enough to be a strategy, or at least an effective and sustainable one (Bradford, 2016). Strategies should not be turned into an optimization problem and it should be open to possible scenarios, therefore the focus is on the integration of activities. Table 1 summarized the main differences.

Table 1 Main Difference between Strategy vs Tactics

STRATEGY	*TACTICS*
i. **Plan, position, ploy** [2] **and perspective in the long-run;**	i. Affect Operational decisions linked to Strategy;
ii. **Ubiquitous;**	ii. Long-term direction of an organization but decision made in situations of uncertainty;
iii. **A construction;**	iii. Scope of an organization;
iv. **General Plan of attack to gain competitive advantage;**	iv. Gain advantage over competitors;
v. **Direction and destination;**	v. Address changes in business environment;
vi. **Set of decisions made;**	vi. Build on resources and competences;
vii. **Getting it right and doing it right;**	vii. Values of stakeholders and involves considerable change;
viii. **Goals that are simple, consistent and long-term;**	
ix. **Profound understanding of the competitive environment;**	
x. **Objective appraisal of resources;**	
xi. **Effective implementation**	

Source: Adopted from Johnson et al. (2008)

2.4. DIGITAL STRATEGY

IT alone cannot be a source of sustainable and long-term competitive advantage since it is becoming more and more standard, cheaper, available to all and outsourceable. It is even essential to operational aspects, but it is not a strategy any longer as it has a very narrow view. Although Information and Communications Technologies (ICT) changes internal and external sources of advantage (strengths, opportunities), able to change market boundaries and market attractiveness, it is not enough to be kept as competitive advantage and considered a long-term strategy. ICT refers to information and communication technologies that affect databases,

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[2] As in tactic, maneuver

communications, research, analysis and planning, customers relationship management and self-service technologies (Kotler, 2002).

Previously, due to the initial investment in some digital technologies that were applied to existing products or processes, it could be considered the initial face of a digital strategy, much like IT strategy. Basically, it included a process of selecting which technologies to invest in and where to allocate the investment done (Bonchek, 2017).

Nowadays it is not enough to go mobile, add analytics, and so forth, and so the "what's next?" questions start to appear. Moreover, digital strategy is not IT strategy as it requires a different approach. As seen, IT strategy only changed the form of interaction but little did it do to change the function. Due to the change in the market, it makes sense to transform areas of the business such as marketing, HR department, finance areas and many others with digital. This new step towards a great roadmap is raising the point of having digital on the executive agenda (Bonchek, 2017). Digital is going beyond, and it is no longer only technology, but also about organizational change, in need of strategic leadership from the top to be optimized (Howe, n.d.).

Digital, as seen previously, is not just a set of technologies but also the abilities, transformations and disruptions it creates and the ability to raise human performance with the application of information and technology (Bonchek, 2017). Since strategy is all about setting the direction, with which resources and making commitments, if it was combined with digital, the necessity to shift thinking will be a must regarding how the business should approach the market – execution, strategy, and innovation will be hand in hand (Andrews, 2013).

Digital strategy will fill the gap between the Business strategy, focused on maximizing profits, and between IT which leverages its source of competitive advantage and is a decision tool for the implementation of business strategy. Digital strategy is core to the business strategy and will overlap between IT and digital technologies – it is an enabler that should be in the center of the strategy to be implemented and taken into consideration when defining the plan (Mortimer, Conyard, Bidder, Hartveld, & Estrella, n.d.). It is a new way to deliberately challenge and disrupt conventional practice, effecting radical change (Cumming, 2016).

2.5. MARKETING DIGITAL STRATEGY

The idea that ***marketing*** is only about advertising and promoting products and services is so broad and insufficient – it is only the tip of the iceberg (Kotler & Armstrong, 2012). Since marketing is not a science, it is not possible to find a single universal definition. Therefore, following will be some ideas and discussion about the concept. Kotler & Keller (2012) hold the view that marketing is a societal process (page 5). In this approach, individuals and organizations acquire and fulfill their needs and wants, through exchanging products and services that have value for each party. On the other side, marketing is a set of managerial activities that are the bridge between the individuals and organizations to satisfy each other's needs in a dynamic environment. This is done through the creation, distribution, pricing and the promotion of the products and services (Dibb, Simkin, Pride, & Ferrell, 2016). Since marketing focuses on the needs and wants of customers, marketing can be defined as a societal and managerial approach to facilitate the exchange between customers' needs and wants for product and service value to the organization (Armstrong & Kotler, 2015).

Organizations, that are not profit oriented such as churches, temples, and non-for-profits institutions take advantage of the concept, concluding that marketing is not only for commercial use, but rather a "no customer, no business" approach. So, it is identifying, anticipating and satisfying customers' need at a value and profit (Gbadamosi, Bathgate, & Nwankwo, 2013). All in all, all definitions follow the following conditions for exchange to happen: a) two parties; b) each part much have something of value for the other party; c) each party communicate their value proposition to the other; d) all are voluntary participants.

The marketing concept has evolved throughout time, from a production era towards a relationship marketing era (Gbadamosi et al., 2013). Please find figure 2 below to demonstrate the several phases of the marketing concept.

Figure 2 Evolution of the Marketing Concept

PRODUCTION ERA	PRODUCT CONCEPT ERA	SALES ERA	MARKETING ERA	RELATIONSHIP MARKETING ERA
Value: Product availability and affordability	**Value**: Product quality	**Value**: Sales estimulation	**Value:** Customer Satisfaction and Long-term relationship	**Value:** Societal marketing concept for sustainability

Source: Adopted from Dibb et al. (2016) and Gbadamosi et al. (2013)

The relationship marketing relationship era can now be expanded into more concepts since it was based on target marketing and market segmentation:

i.   *1-to-1 relationship marketing concept*: Value proposition - information technology to target down individually and personalized based on previous data;

ii. *Viral marketing:* Value proposition – in a networked economy, where customers recommend and share experience and information;

iii. *Societal marketing:* Value proposition – companies are aware of societal and environmental issues and promote and represent ideals. This is the latest concept.

*The*re are three ways to approach the marketing field differently. To begin with, marketing can be contemplated as an organizational process. This comprises all corporate activities concerning customers' need and profitably satisfying them (Ambler, 2000); Secondly, it can be conceptualized as a function where activities are executed by marketing departments; Last but not least, marketing is conceptualized as a budgetary division (Ambler & Roberts, 2008). This last one is mainly due to the noticeable of spending activities such as advertising and promotion (Järvinen, 2016). It is worth noting that the focus is no longer on a functional approach, comparatively to the organizational one since not the whole business is accountable for the investment in marketing. It is more a matter of measuring and designing processes, with the collaboration of other functions (Järvinen, 2016; Ambler & Roberts, 2008).

It is no surprise then the term ***marketing strategy*** started to appear and is now in use. Kotler et al. (2012) define it as being the "marketing logic by which the business unit expects to achieve its marketing objectives". According to Dibb et al. (2016), it

differs only that it adds the specific markets that the marketing activities will target in an advantageous order and competitive way (Dibb et al., 2016). The notion is that, by choosing the market targets, the organization can position itself with its differentiating value proposition.

Although the number of academic literature studies is rising as regards to the term ***digital marketing***, still scarce researches have described it and characterized it explicitly (Royle & Laing, 2014). Most definitions of digital marketing include vague descriptions and meanings in terms of certain marketing technologies and therefore tactics existing in the marketing landscape (Wymbs, 2011), varying their point of view slightly (Järvinen, 2016).

According to Järvinen (2016), the Digital Marketing Institute conceptualizes digital marketing as a process that, by the usage of digital technologies, integrates, targets and measures communication. The use of these digital technologies highlights measurable communications that in turn possess the ability to acquire and retain customer and create more extended customer relationships. Interesting fact about digital technologies is that, not only are they useful as platforms and channels to deliver digital activities, but also applied to measure and target those activities (Deighton & Kornfeld, 2007).

Besides, digital marketing is not a recent concept. Similarly, ***direct marketing*** is a previous comparable concept and about the same idea (Wymbs, 2011). This early concept emerged to fill in the gap between and move towards a more targeted and measurable communication on consumers. Direct mail was born this way - an efficient use of databases to target individuals based on their specific characteristics and measure and track their behaviors (Järvinen, 2016). Altogether, digital mail, predominant digitalization of databases and digital marketing could be considered the first forms of digital marketing (Wymbs, 2011; Järvinen, 2016).

Chronologically, the term direct marketing was substituted later to ***interactive marketing*** around the 90s in the academic literature. This was a sign that marketing was becoming a topic that needed discussion (Deighton & Kornfeld, 2007). This new concept, asymmetrically as the one-directional channel approach of direct marketing, is a two-directional communication (Järvinen, 2016; Deighton & Kornfeld, 2007). Although databases used strategically were the core part, it opened doors to new channels - ***multi-channel marketing***. Not far along, with the empowerment of

Internet, marketing was taken into account in digital media, expanding that way the notion of ***interactive marketing*** (Malthouse & Hofacker, 2010). It will not take too much before interactive marketing is exchanged to recognize digital marketing.

As of now, admitting elements such as databases and encouraging conversation with customers (direct and interactive marketing), digital marketing does not remain here. The term ***digital marketing*** is replacing the idea of interactive marketing by, not only initiating conversations but also by boosting participation and feeding the emergence of the term of many-to-many channels of communications. It is putting the power in consumers' hand to take control over the conversation (e.g., through social media), to research online before the purchasing decision and to initiate contact before companies (Järvinen, 2016).

Recognizing that ***internet marketing, online marketing, electronic marketing***, and ***e-marketing*** are often used interchangeably with digital marketing, the last concept refering to more than one technology (e.g. Internet): it could be mobile applications, databases, SMSs, MMSs, databases, and technologies with no Internet connection, and much more (Järvinen, 2016). In spite of the similarly in their definitions, ***internet marketing*** or ***online marketing*** are conceptualized as the use of Internet-based tools towards acquiring its marketing objectives; whilst ***electronic marketing*** or ***e-marketing*** refers to the usage of more external media for the management of digital customer data and electronic customer relationship management systems (Chaffey & Smith, 2008:19; Boldosova, 2012). Another distinction that should be made clear is that e-marketing is associated with electronic communications, while digital marketing also encompasses the "planning, implementation and measurement of marketing via technology" (Chaffey & Smith, 2013; Järvinen, 2016).

The communication and interaction between a business and its customers, through information technology and digital channels are considered digital marketing communication. This concept enables interactivity and relationship between customers and peers creating online communities and electronic WOM (eWOM) (Kotler, 2002).

All in all, the benefits and value of online marketing are only seen as far as budget and costs, time, structure, skills and resources are not limited (Gilmore, Carson, & Grant, 2001). As for digital marketing, marketing digital based tools are

giving the companies the ability to reach more markets at a minimum expense and costs (Boldosova, 2012).

The interest from the online interaction is increasing due to the vital role of digital media in every day-to-day activity (Carlén & Lindkvist, 2013). This "eco-system" of the online activity is where marketing can be optimized by the interrelation of each digital media channels (Carlén & Lindkvist, 2013; Lesidrenska & Dicke, 2012).

Consumers, more than ever, are being empowered by new information technology (hereby after IT). Per Pires, Stanton, and Rota (2016), this has rearranged the market power, from the marketers or organizations to the hands of the customers (Pires, Stanton, & Rita, 2006; Carlén & Lindkvist, 2013). The striking expansion and development of social media (also known as interactive digital media) acknowledged the vital role of the relation and interaction between customers and businesses (Hanna, Rohm , & Crittenden, 2011). It is, therefore, an instrument used to encourage customer engagement and boost customer relationship (Carlén & Lindkvist, 2013).

2.5.1. Challenges of Digital Media

However, it is becoming increasingly challenging for businesses to efficiently find an online marketing strategy that is valuable and the best fit in an ocean of innumerous individual digital marketing tools (Carlén & Lindkvist, 2013; Kietzmann, Hermkens, McCarthy, & Silvestre, 2011). The choice of a digital marketing tool is a balance between not being too time-consuming, being relatively cheap and having an effective implementation, by Kietmann et al. (2011).

As reported by Hanna et al. (2011), the range of studies and research on online marketing is extensive, highlighting individual online channels - essentially these being social media, word-of-mouth (hereby WOM), e-mail marketing and websites (Carlén & Lindkvist, 2013).

Nonetheless, in agreement with Järvinen (2016), a lack in research exists about the opportunities and challenges on how these newly introduced digital tools, such as digital analytics (hereby DA), will have on marketing, and about the challenges performance measurement. DA data can optimize digital marketing performance and organizations are applying DA as a measuring tool in businessess'

process, which in turn can improve company's results if the data is properly processed into meaningful insights and applied (LaValle, Lesser, Shockley, Hopkins, & Kruschwitz, 2011) – value creation by putting it into action (Järvinen, 2016). Basically, DA is enabling the automization of alike data collection (Pauwels, et al., 2009). Findings on digital analytics encourage the evolution towards a "*data-driven marketing*" – a market where decision-making is formulated on treated data and information, comparatively to experience, hunches and intuition (Järvinen, 2016).

Previously, top management would relay on financial outcomes of marketing to measure the efficiency and the results of the investment in the field (Verhoef , Kannan, & Inman, 2015) – Monetary outcomes is no longer a leverage, but a compulsion, prerequisite and necessity in the present as it tries to strengthen an already weaken standing and stature of marketing due to the lack of accountabilty. It struggles to demonstrate marketing's contribution in benefiting the organization (Homburg, Vomberg, & Enke, 2015). By accomplishing the ability to track customer behavior (Hennig-Thurau, et al., 2010), digital analytics tools such as web and mobile analytics have leveled up the measurement game (Järvinen, 2016).

Additionally, the rapid pace of digitalization is revolutionizing the marketing environment (Järvinen, 2016), with now a high addiction to the usage of digital media, unattraction and ineffectiveness of traditional marketing activities (Webster & Ksiazek, 2012) and a fragmented media landscape (Valos, Ewing, & Powell, 2010). The pressure to design innovative ways to influence customer behavior is rising (Järvinen, 2016; Court, Elzinga, Mulder, & Vetvik, 2009).

Due to the enlargement of digital media, its tools has ramified challenges regarding effort and budget allocation and optimization (Järvinen, 2016).

Moreover, consumers' purchasing journeys are reshaping and are becoming more complex, along with markets using different marketing tactics (Lilien, 2016). Consumers research online solutions, rank options and benchmark prices before purchasing products and services (Järvinen, 2016; Adamson, Dixon, & Toman, 2012) since it is more efficient (Gillin & Schwartzman, 2011). Besides, more and more consumers are seeking recommendations and experiential advice from their peers (Gillin & Schwartzman, 2011).

2.5.2. Digital Marketing Tools

Several online marketing frameworks exist in the academic literature. Among them, Armstrong & Kotler (2015) who hold the view that there are four ways for online marketing; according to Boldosova (2012), Neuman in 2007 with six steps to choose and Chaffey & Smith (2013), with six categories to apply, as shown below in Table 2.

Table 2 Online Marketing Tool/Channel Frameworks

ARMSTRONG & KOTLER (2015)	*NEUMAN (2007)*	*CHAFFEY & SMITH (2013)*
Four steps:	Six ways:	Six categories:
1. **Set up online social networks;**	1. **Be present in the list of Search Engines,**	1. **Online PR**
2. **Create website;**	2. **Send e-mail**	2. **Search Engine Marketing**
3. **Place ads and/or promotions online;**	3. **Adversiting online**	3. **Interactive ads**
4. **Use e-mail**	4. **Set up affiliate program**	4. **Opt-in E-mail**
	5. **Viral marketing**	5. **Viral Marketing**
	6. **Use blogs**	6. **Online Partnership**

Source: Adapted from Boldosova (2012)

Chaffey & Smith (2013) are of the opinion that in each category, if applied, most non-profit organizations, could benefit from it. For this thesis, the focus will be on the Search Engine Marketing's category. These channels are as followed below shown in Figure 3 (Boldosova, 2012):

Figure 3 Digital Online Marketing Communication Channels

• Social Media Blogs, Feeds and Communities; • Media Alerting Services; • Brand Protection; • Portal Representation	• Search Engine Optimization (SEO); • Paid Search or Pay-per-click (PPC); • Paid for inclusion feeds	• Site-specific media buys; • Sponsorship; • Behavioral targeting • Ad network; • Contra deals
Online PR	Search Engine Marketing (SEM)	Interactive Ads
• House List e-mails: • Co-branded; • Ads in third party e-newsletters; • Cold (rented list	• Pass-along e-mails; • Buzz marketing; • Generating media mentions	• Affiliate marketing; • Sponsorship • Co-Branding; • Link-building; • Widget Marketing
Opt-In e-mail	Viral Marketing	Online Partnership

Source: Adopted from Boldosova (2012) and Chaffey & Smith (2013).

SEARCH ENGINE MARKETING (SEM)

Companies should create a website for their first step which will be representing the companies online (Boldosova, 2012). It will be the first things customer see and judge by the business's online presence. Therefore, it is necessary that the information is attractive, but also accurate and the correct representation of the business. It also needs to be user and mobile-friendly (Jackson & Kallsen, 2017).

The proper usage of the Search Engines can provide ways to discern and make the organization's website visible in an electronic landscape full of them (Chaffey & Smith, 2013). To improve such techniques, below are some procedures that could be taken into consideration. Examples of Search Engines are Google, Bing, AOL, Yahoo, and others where websites are at display in a ranking and deliver targeted traffic. This is crucial since higher-ranking websites have a higher probability of increasing online traffic (Hauschild, 2016). The notion behind Search Engines is to deliver a higher quality service by displaying more accurate good and quick results to users. Search Engine Marketing tools and techniques are as follows:

i. *Search Engine Optimization*

SEO is considered the most effective tool of SEM, due to the fact that without search engine systems it would be hard to find anything on the Internet without knowing the IPs and links a priori (Cavez, 2014). According to Kotler et al. (2012), SEO is the approach to optimize the volume of traffic and quality of the website in the search engines. As for Chaffey, Ellis-Chadwick, Johnston, & Mayer (2006), it is the process to improve an organization's position and website's ranking in the search-engine natural (or organic) results. These are listings due to selected keywords, or key phrases.

The organic ranking, also known as an unpaid ranking of websites can be altered by several factors. These can be quality, social reputation, site architecture, freshness, and many others (Hauschild, 2016). To make users return, websites are obliged to conform to some requirements in order to rank higher in the search engine placements. This process is what is denominated by Search Engine Optimization (SEO). Since it is an increasingly competitive environment, improving can be beneficial. By strategically optimizing a website (contents, links, coding structure, keywords, HTML, and so forth) and by building up techniques and influencing them, the organization might have the power to boost its placement on search engines, raise its popularity and increase its user traffic (Fishkin, 2017; Hauschild, 2016).

To have a good and high-ranking website is a dynamic and ongoing task. Not only do the search engines use different codes equations and algorithms to determine the results that will be displayed in the listing, but different keywords are also a determinant factor and vary along time (Cavez, 2014).

ii. *Paid Search or Paid Per Click (PPC)*

In comparison with SEO that acts on organic search, search engine marketing can promote websites using paid advertisements models like Pay Per Click (PPC) (Hauschild, 2016). PPC is an advertising model where an ad is positioned on a search engine, not paying for the ad display, but rather when a user clicks on it (Järvinen, 2016). Organizations bid for keywords and the highest amount of money offered will have its ad displayed on the top when that keyword is registered.

PPC is different from SEO since it does not improve its rankings by just managing keywords, but instead paying for each visitor. This way, organizations can control the number of users that visited the website and automatically link it to the ad (Boldosova, 2012).

According to Cavez (2014), there are some techniques and tools to consider: a) have the organization's link in others' link that might be of interest, and forums and blogs; b) use smart keywords to correctly target your customer (this can be achieved with tools such as Google Keyword Tool); and c) have a digital strategy, aligned with the SEO's one (social media, blogs, and so forth). Not only the highest bid is likely to get that ad appearing in the search engine results page (SERP), but Google also takes into consideration the quality score (how relevant is the ad to the searcher, checks your Click-through rates (CTR) and previous clicks).

iii.   *Paid for Inclusion Feeds*

Paid Inclusion feeds are a type search engines marketing model where the organization pays a search engine company to guarantee that their website will appear in the search results database, normally as an annual fee (Boldosova, 2012). Notably, Google is the only search engine as an exception to this model. Pay for Inclusion (PFI) regards to paying the annual fee and having the website in the SERP (search engine results page)'s database. It is the closest approach to optimize the contents of pages into natural search engine results (Boldosova, 2012) since the "spider" to analyze the index paid pages will run faster and improve rankings. The biggest drawback is the cost (annual fee plus the cost of paid inclusion per website). Nevertheless, the investment for this model has shown some return (Boldosova, 2012).

iv.   *Content Marketing*

Sometimes, SMEs do not possess the budget or the human resources, and that is where Content Management System (CMS) comes into picture (Cavez, 2014). This program is user-friendly and easy to use and obtain.

According to Hauschild (2016), Content Marketing consists of generating accurate, consistent, attractive, relevant and valuable content that will ultimately attract and retain customers and lead to a profitable customer behavior. The concept differs from the traditional marketing considering that the content is created and distributed with the aim to influence consumer actions. It is an ongoing activity that needs focus and time to deliver consistent information, to educate consumers and to communicate with customers. It is also considered a non-interruption marketing strategy that in return expects to gain the customers' loyalty towards the organization. This model embraces social media as their main vehicle and can have different forms such as text, videos, articles, blogs, photos, emails, news, and many others. The loyalty can be tracked and measured through likes, shares, comments, subscriptions, and many other instruments available (Boldosova, 2012).

The strongest point of content marketing has to be that customers assume information differently and on their own pace, which is now possible to meet more specific needs and accurately target customers with the most appropriate format.

2.5.3. Implication of Marketing Digital Strategy in Business

At the moment, a search for "digital marketing" in Google provides 2,520,000 results, as opposed to 22,7000 in 2016 (Järvinen, 2016). A search on Google Scholar for the concept "digital strategy" returns 3 450 000, approximately. Its benefits have been taking into consideration and the center for research due to its features of the world's least expensive, most measurable and most efficient marketing tool (Järvinen, 2016). Both buyers and sellers, benefit from the 24h real access, online and at reasonable costs (Boldosova, 2012).

For the buyer, Internet has allowed customers to compare products and services, at any given moment and at any given time. Information that is more accurate and has better quality can be found online, which occasionally lacked at the front store such as Frequently Asked Questions (FAQ), blogs, comments and recommendations (Armstrong & Kotler, 2015). However, the idea of an extensive and broader customer database, and acquiring knowledge about customers' needs and wants in the seller's hands is attractive. Not only the lower cost benefits assist, offering organization more time to focus on interacting with customers, but it can

empower SMEs to compete with a limited marketing budget and encourage new entrants to possess new data as much as the already competitors in the market (Boldosova, 2012).

Digital Marketing allowed, in a shorter, adequate and effective amount of time and costs, to target a broader range of customers and measure a new niche in the competitive environment. Investment is now invested in online advertising, instead of printing material, and costs associated with more traditional marketing and less effective results (Järvinen, 2016).

In the business landscape, a more interactive dynamic is installed between buyers and sellers with new opportunities. These uncomplicated and simplified business relationships (Boldosova, 2012) have saved a lot of time, and consequently more money ("Time is money"). Feedbacks from online sources such as recommendations, comments, blogs, forums where buyers receive quicker answers and sellers can work efficiently, organize their time for other tasks (Boldosova, 2012).

Notwithstanding, digital marketing in business has its limitations, challenges and its handicaps. Data privacy is the most common challenge in the online environment. A lack of face-to-face interaction is not the biggest online deficiency. Due to its characteristics, online returns are a reality and a nightmare. Since customers might give negative feedbacks for products and services they cannot see, touch and smell and increase shipping costs, organizations struggle to find other solutions (Carlén & Lindkvist, 2013; Boldosova, 2012). Also, not only are users and organizations vulnerable to hacks attacks and fraud, security issues are a barrier to flow business. In this competitive market, to maintain a long-term customer relationship, it is necessary to put efforts into accurate online information, otherwise it could damage and mislead customers, hardly gaining their loyalty once their trust are broken (Boldosova, 2012; Järvinen, 2016).

The online marketplace and organizations are now so depended on technological innovations, which facilitated business, but also created a huge risk if the system crashed, code or computed reports an error, data is manipulated and unethically used (Chaffey & Smith, 2008; Boldosova, 2012). A simple mistake in this competitive online scenery that was not immediately controlled could spread quickly and easily due to social media and so fast causing the company a hard time to recover.

3. BRINGING DIGITAL STRATEGY TO THE UNIVERSITY'S WORLD

3.1. HIGHER EDUCATION AND THE DIGITAL ERA

Education has always been an experience or process affecting mind, character or physical ability of an individual. Also, it is the development of reasoning, judgment, and accumulated knowledge, values, and skills that society transmits to an individual by institutions. Balwa (2009) defines education as a service "*providing an intangible benefit (increment in knowledge, aptitude, professional expertise, skill) produced with the help of a set of tangibles (infrastructure) and intangible (faculty expertise and learning) aids.*" These institutions have specialized in some fields, and in recent years fields such as Computer Science, Innovation and Management have been heavily invested. The market has increased its competition due to this (Balwa, 2009).

The education provided by institutions and universities, which awards students with an academic degree, is the so-called higher education (Ahmad, Bashar, & Chandra, 2013). The higher education system is an intangible activity and a service marketing challenging sector. Standardization is difficult due to its intangible nature. Education presents some characteristics as a service which cannot be compared, such as i) it cannot be patented; ii) it does not have Inventories since production and consumption are simultaneous activities; iii) it may have only one physical evidence (service exchange transactions), but the actual benefit is purely intangible by nature; iv) it has an inescapabilty feature (provider and service are impossible to separate); v) it is limited in scale of operations and customer limitation; v) it lacks ownership for the customer, and vi) it has the feature of being a specialization but heterogeneity.

In the meantime, Education is considered now a contemporary market (Štimac & Šimić, 2012) due to the numerous and dynamic changes occurred over the time. All institutions, especially nonprofit ones and the ones in public sectors, are focusing more on scientific research. As regards to the education area, in the 21st century, the boundaries of knowledge have been broadened, the knowledge life cycle shortens and new knowledge emerged. Moreover, all of it at a breakneck pace. Learning is not now only a life-long process but opened the door for an increasing competition

between higher education service providers (Štimac & Šimić, 2012). In order to expand its activities or increase quality, universities have shift to operate in a business manner (Avram & Avram, 2011; Santos, 2014).

Higher education is now changing and transferring its image as a cost to highly profitable investment in Europe. Governments are investing in higher education as a result of the link between economic growth and technological development. In Europe, higher education is characterized by the Bologna process, counting with 46 countries to tackle down, what according to Štimac & Šimić (2012) believe to be the "*insufficient flexibility, non-transparent education system which impedes international mobility of students and experts and inadequate reactions to market changes*" (page 24).

In the last decades, the education has been applying marketing principles and business (Newman & Jahdi, 2009; Santos, 2014). Even though to some extent in some places in the world. It started in the USA, around the 19th century, when they "marketized" higher education and are dominating the worldwide marketplace.

Later, the recognition to create value and meet society's and labor workforce's needs, the universities were pushed to deliver knowledge and to empower the process and ability to think (Naidoo, Shankar, & Veer, 2011; Jurše, 2010). The academic knowledge was substituted by a practical and business-like knowledge (Jurše, 2010). This has led to some criticism since, instead of new knowledge being chased, it is only meeting corporate objectives. Please check Table 3 on the for and againsts business orientation in higher education. However, the traditional structure is to remain with minors and essential adaptations to the new realities, rather than radically changing the foundation of the higher education institutions (Maassen & Stensaker, 2011). In keeping with Newman & Jahdi (2009), the marketization of higher education differs from traditional to modern institutions. The main key ideas for traditional institutions are: i) education is a process; ii) academic freedom; iii) thoughtfulness and truth; iv) professional paradigm. The modern universities are characterized by the following notions: i) education as a product; ii) accountability; iii) utility and performance; iv) managerial paradigm.

Table 3 Pros and Cons for Business in Higher Education

FOR	*AGAINST*
Adaptation to changing environment and increased tough competition (Ramachandran, 2010; Durvasula, Lysonski, & Madhavi, 2011);	Ethical concerns and questionable practices due to profit orientation (Jurše, 2010);
Research positive impact on innovation, staff, and quality (Durvasula et al., 2011)	Student consumerism; bad student assessment and objective judgement and rick of no critical thinking (Naidoo et al., 2011; Khalifa, 2010);
Better transparency due to customer sovereignty and autonomy (Naidoo et al., 2011);	Blurred distinction between product/service and customer (students, parents, etc) (Khalifa, 2010; Newman & Jahdi, 2009; Ramachandran, 2010);
Emphasis on learning and teaching rather than focus on scientific research (Naidoo et al., 2011)	"Instrumentalization" of education – a mean to a job and passive knowledge consumer instead of proactive students and enjoy learning (Naidoo et al., 2011; Khalifa, 2010; Natale & Doran, 2012);
Nature of education – social in order to develop citizen and society driven (Khalifa, 2010)	Nature of education – economic to satisfy needs of students that pay and is competition driven (Khalifa, 2010; Ramachandran, 2010)

Source: Adapted from Santos (2014) and Khalifa (2010)

Although topic to discussion, the old academic and social values, and the new corporate standards and economic demands are enabling a shift from the traditional normative posture and individual expert academic (Santos, 2014; Jurše, 2010). The new utilitarian orientation and transdisciplinary move emphasis more applicability.

In accordance with Jurše (2010), with higher education service providers, it is necessary a business model that balances the academic processes with business efficiency. This way, market responsiveness is taken into consideration, and social responsibility is sustained in this competitive environment.

Nowadays, the higher education's main challenges revolve around the fall in quality - inadequate information and fragmentation of knowledge; inadequate teaching process evaluation system; inadequate quality control models; commercialization of scientific research and projects, and many others (Štimac & Šimić, 2012). The need for marketing's concept in the higher education institution landscape, where the institutions are transforming into a market-driven establishment, leaving behind the faculty-centered form, is becoming paramount. It might not be that a written marketing plan does not exist, but the whole practice of operation's silos controls the information, and it keeps it from being shared (Hawkins & Frohoff, 2010). Other challenges for marketing higher education consists in applying some concerns and taking it into account when elaborating a digital marketing strategy. See Table 4 for the main ideas from Hawkins & Frohoff, (2010):

Table 4 Problems inherent in marketing higher education (services)

CHALLENGES AND PROBLEMS	*CONCERNS FOR HIGHER EDUCATION SERVICE PROVIDERS*
Third-Party Accountability	Responsibility towards students and parents, alumni, employers, donors and other stakeholders.
Client Uncertainty	The business office and academic department must maintain contact with students to reinforce the audience that the chosen decision was a wise and valid one. This happens since it is a huge investment about where to attend the program and offset any doubts, fears or changing the mind for this one-time purchase.
Experience is Essential	The institution's "brand" is based on the quality. It must find a balance between the faculty's vast teaching experience and real-world experience (especially for business-related subjects).
Differentially Limitation	Universities must find their unique attributes, although it is hard between similar institutions in the same category, with similar offering programs.
Quality Control Maintenance	Inconsistency occurs with differences between person to person, and in the academic world, quality at the university

	is hard to control due to staff, competences and skills of the faculty and students. The alumni play an important role and key indicator of reputation.
Faculty and Staff Time Allocation to Marketing	The institutions are resistant to roles that are outside of their area of responsibility, but they can benefit from a cultural shift. By extending the expectations made explicit in the job descriptions, it can involve staff and faculty into marketing efforts.
From Reactive to Proactive	Institutions should reorient their marketing efforts from "this is who we are, and what we offer" towards Promoting it.
Views on Advertising	Views on advertising are conflicting. On the traditional side, it "cheapens" the institution's image and those resources should be allocated to the academic programs. On the other side, view advertising as an effective tool to educate about the institution's benefits to potential stakeholders.
Limited Marketing Knowledge Base	Higher education service providers do not have a solid base of any knowledge about marketing of service and marketing principles. Grasping the basic might help achieve the levels of quality and service required to market effectively the institution. Training the staff and faculty for those who have not had any exposure to these concept, could be an option.

Source: Adapted from Hawkins & Frohoff (2010)

Some academic areas, such as the business office, information technology, as well as the student housing, have been showing signs of massive adoption of some marketing practices, though non-profit higher education institutions are slow to adopt these (Ahmad et al., 2013). To gain competitive advantage, these marketing concepts and theories are being gradually applied in the higher education area, since they have been effective in business (Ahmad et al., 2013). Marketing educational services have

its own particularities. As shown in Figure 4, the seven Ps are the marketing mix used for services and some marketing tools used by these educational institutions.

Figure 4 7Ps Marketing Mix and Marketing Tools By Educational Institutions
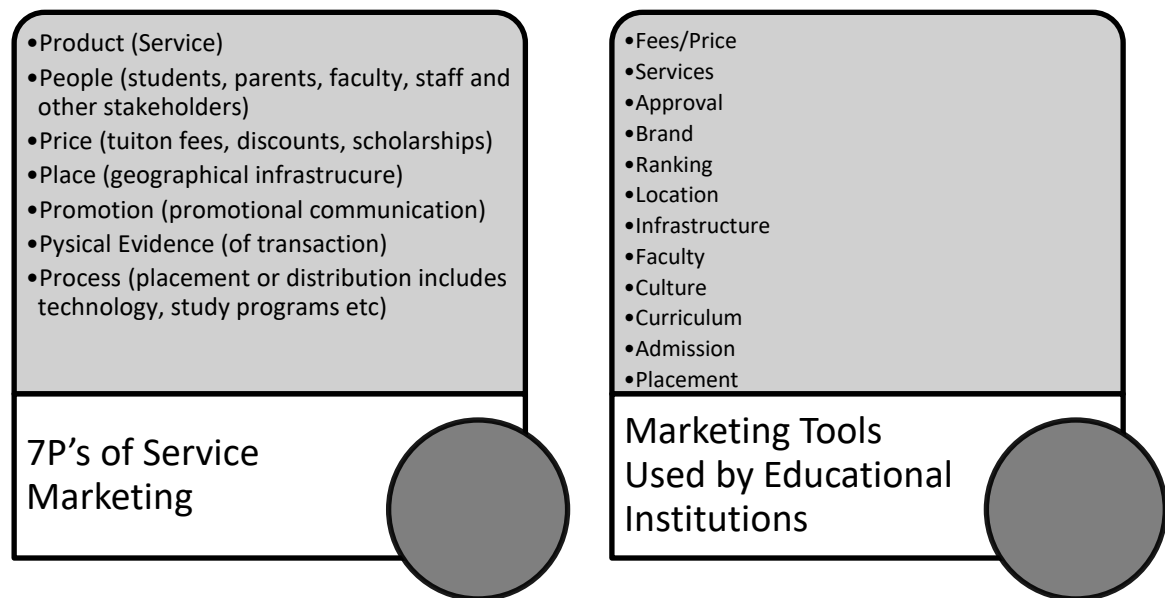
Source: Adapted from Ahmad et al. (2013) and Diaconu & Pandelică (2011)

Identifying the different needs of all stakeholders that take part in the modern university environment delivers an excellent experience. Stakeholders can be categorized into two: internal and external stakeholders. The first group includes academics, students, staff, faculty, and researchers. The second one are the private sector organizations, the government, local public services and previous students, called alumni (Conley, 2016). To further economic activity locally, the main digital stakeholder participants and communities are i) alumni; ii) government funding entities, authority bodies, and other public-sector partners; iii) national, regional and local research bodies (funding) and businesses and organizations (skilled labor force).

Digital technology plays a key role in satisfying these needs and meeting stakeholders' expectations (Conley, 2016). Its advantages go from best fit between on-site communities and building campus environment; best support for faculties and virtual communities for external stakeholders; the positive impact on students and control and measurement of satisfaction and outcomes; and many others.

Although there is a significant investment in the build-new refurnished buildings and initial settings, most universities and higher education service providers recognize the delivery of the best student experience and enhance brand (Conley, 2016).

As of the competition in the market and available opportunities of higher education service providers, students and parents search for an institution that will deliver value added with a better service, a good quality program and value for its money (Štimac & Šimić, 2012).

Seeking for business efficiency can be achieved with the support of technology platforms, IT infrastructure, and real-time communication – what are denominated by digital institutions. Taking into consideration the efficiency and cost savings, it can be reached through the reduction of departmental budgets. While is it believed that IT budget only constitutes four percent of the overall institutions budget (Conley, 2016) and it is considered a cost center, it can improve, reduce the cost and drive efficiency in the remaining organization, gaining the title of value center. New ways of working styles can appear due to the support of end-to-end IT infrastructures such as mobile services and network security thus impacting academics, students, faculty, staff and the infrastructure, buildings and physical support to adapt (Conley, 2016). In the end, all energy and resources would be fully optimized with the use of technology. This could monitor and control all the usage and costs; implement energy-saving benefits and manage the energy and resources (Conley, 2016). The whole operation costs and capital in IT could be reduced with the adaption of new funding models and new infrastructures such as cloud and shared services (Conley, 2016). The re-usage of the already existing IT structure can tackle the fear of investment, reducing costs, technical complexity and risks. Higher education cannot afford to ignore changes how society dealt with knowledge – how it generated, managed and disseminated it (Bento & Sousa, 2012).

According to Balwa (2009), the following criteria are the main ones that students (and parents) look for when they apply for a higher education institution, irrespectively of the order:

    i.   Reputation of the Institution;

    ii.   Number of applicants keen to enroll in the course;

   iii.   Faculty expertise;

    iv.   Width of specialization offered;

    v.   Infrastructural facilities;

    vi.   Past success rate of placement;

   vii.   Fees;

  viii.   Location and accessibility;

    ix.   Discounts such as scholarships;

    x.   Students perceived value: price/quality relationship.

Digital technologies in higher education can be the newest Internet-based technologies. These are video and collaboration (enabling online and distance learning); social media; mobility; data analytics and embedded sensor devices to enhance learning and developed teaching methods (Conley, 2016). The idea behind it is that people can benefit from the digital technology and eventually transform businesses. In order to create a more innovative environment and create a superior experience for students, faculty, and stuff internet-based technologies appear for that purpose. It not only enriches infrastructure and services, but it also solves some problems with the IT infrastructure and collaboration with services (Conley, 2016). The notion of "digitally disrupt or to be disrupted" has it best fit in this ever-competitive education situation.

The main handicaps in educational institutions are the limitation of budgets and to target, each year, a new set of students and parents (audience). With the increase of digital marketing channels, the competitiveness and complexity, the hurdles are somehow tackled, and it became imperative to marketing educational institutions effectively (Something Big, 2015).

Nowadays, students and parents expect online application process, a smooth and online candidate recruitment and online entry forms. Additionally, it is fundamental the presence of universities on social media. And all of this, all year-round (Something Big, 2015). To set a good and successful education sector marketing strategy, there are some ideas to bear in mind. Since students are expecting an effective social media presence, it is crucial that it is across key channels and by making the most out of the social media channels chosen. These can be Facebook, Twitter, Instagram, Youtube, and so forth. It is also needed that the website tops high the result page when students and parents research suitable education programs. Since Google is currently the most popular search engine, the most effective way to drive traffic to the university's website is through Google AdWords (Something Big, 2015).

Last but not least, print is still used and not dead in the education world. Prospectuses can also feature the university's social and digital communication, promoting the institution's story and build reputation. Testimonials and latest awards are indispensable to build credibility (Something Big, 2015).

3.2. PORTUGAL DIGITAL EDUCATION

In Portugal, there are too many institutions, and therefore too many courses. Nevertheless, the country needs this institutional capacity (Blättler, Rapp, Solà, Davies, & Teixeira, 2013), if it wants to achieve its goals of 40% graduation rate by 2020.

The Portuguese higher education portfolio expanded in the final years of Salazar regimes and around those thirty years later, many public universities were created with the purpose of sending qualified and skilled workers to the African colonies (Blättler et al., 2013). After the Carnation revolution in 1974, many institutions, public and privates, were created additionally to cater the return of expatriates. Not long after, the Bologna Process took place, and its reforms shaped the higher education environment, dividing Bachelor's and Masters' qualifications and programs (Blättler et al., 2013).

Portugal's higher education system is characterized by diversification: institutional focus ranges from local to international competitions and ranges from small institutions co-existing with big service providers. The last decade was characterized by an increase of number of graduates with master's degree – due to the increase of public institutions and the adoption of the Bologna Process (Cardoso, et al., 2014). This demonstrates the importance of the second cycle in the schooling process – maybe to improve employability or to avoid unemployment (Cardoso, et al., 2014).

There are 42 bachelor's management programs in Portugal in 2017. These include all private and public higher education service providers. The distinction is made of 34 Portuguese management programs, one English-management program, three at-night management programs and four after-work schedule management programs (DGES, 2017). As regards to the master's programs, conform DGES (2017), a search for a master program in the "Social science, business and law" area

returned 526 programs for 121 institutions. In line with Masterstudies (2017), 20 results show up for Masters in Management in Portugal as for the date of search. In accordance with Expresso (2013) and Carregueiro (2017), four Portuguese higher education service providers are in one of the most important international rankings from Financial Times. These are: ISCTE Business School (ISCTE IBS), Porto Business School, Nova School of Business & Economics (NOVA SBE) and Católica Lisbon School of Business and Economics.

Below follows a list of how the Portuguese universities, name their Master Programs in Management, according to Masterstudies (2017) with no particular order:

i. Master in Management Studies by University of Minho – School of Economics and Management;

ii. Master's Degree In Management Of Social Economy Organizations by Instituto Politécnico De Santarém;

iii. Master in International Management by ISCTE Business School – Instituto Universitário De Lisboa;

iv. Masters in Management by Nova School of Business and Economics;

v. Master in Management of Services and Technology by ISCTE Business School – Instituto Universitário De Lisboa;

vi. Master in Management by ISCTE Business School – Instituto Universitário de Lisboa;

vii. Masters in International Management by Nova School Of Business And Economics;

viii. CEMS Master's in International Management (CEMS MIM) by CEMS – The global Alliance in Management Education;

ix. Masters in Management by Católica Porto Business School;

x. Master's Degree In Management And Business Strategy by Universidade Europeia;

xi. Master's Degree in Management by Universidade Europeia;

xii. Master's Degree In Management by Universidade De Évora;

xiii. Master In Traffic, Mobility And Road Safety by IMF Business School Portugal;

xiv. MPhil in Management by Oporto Global University - Universidade Portucalense;

xv.   Master in Management by Polytechnic Institute of Bragança;

xvi.   Master in Management by University of Porto School Of Economics And Management;

xvii.   Master in Management by University of Algarve;

xviii.   Management Advisory by Instituto Superior De Contabilidade E Administração Do Porto

xix.   Management of Organizations by Instituto Superior De Contabilidade e Administração Do Porto;

xx.   QTEM - Quantitative Techniques for Economics and Management by University of Porto School Of Economics And Management;

Reputation for Master Programs in Management (combined collective perceptions that the Portuguese society has of a particular institution) is one of the deciding element factor for the institutions' sustainability (Diaconu & Pandelică, 2011). Its attractiveness of the faculty to students and researchers are directly affected by the reputation and its positive image (ISCTE-IUL, 2014). Since a good reputation is tied to the idea of career opportunities and the economic qualifications by the employer, reputation is not only linked to the distinction of its courses and programs, but also by the availability, convenience, and quality of its own services. An example of this could be its geographical location (ISCTE-IUL, 2014). The social side of the reputation concept is also increasing (such as citizenship, CSR, and sustainability) and has been proven to have a positive impact on students' perceptions.

International credentials and accreditations are relevant since it focus on the ranking relevant to the university's profile, both nationally and internationally, for the Portuguese higher education market (ISCTE-IUL, 2014).

As seen previously, at the time of the university and program's decision, and in order to serve the audience's (students and parents) interest, the main factors taken into account in the Portuguese markets are, benchmarking ISCTE's point of view: overall attractiveness of the institutions; cost of living; tuition fees and reputation of the university (ISCTE-IUL, 2014).

Business schools are dependent on students demands and the industry, and therefore its dependence on financing (David, David, & David, 2011). Portuguese Master Programs in Management's sources of funding are typically through boosting internationalization of its activities; acquiring more private and research EU funds;

expansion of the participating entities' activities; and encouraging and increasing patronage at the individual level (stressing alumni); and the national and international business level.

One of the Portuguese Master Programs in Management deficiency lies in the information available, communication and participation (Diaconu & Pandelică, 2011). With this, it is meant that the complexity and dynamism of many universities' operations in Portugal require being urgently addressed since one of its critical problems is regarding availability and accessibility of information. A strong, reliable, and effective time and resource investment could improve this area. Considering that external communication in media has a substantial impact on reputation, a more permanent, improved present might contribute to a firmer University brand image. A vigorous coordinated communication channels can capture and retain a wider audience, from secondary education students to parents.

E-learning is a new online tool to reach, not only national, but international students, and emphasizing the importance of the students' participation in many academic bodies to take an active part and role in the development of an effective path for the universities and educational institutions.

Portugal higher education's market, as many around the world, have long recognized the ability and disruptive characteristic of technology in learning and teaching (Conley, 2016). An effort towards students' admissions process, retention rate, assessment control, delivering that way, better outcomes. Higher education universities have unified communications, and videos with social media students and academics in order to access academic resources. Not only conferencing with businesses and external stakeholders to participate in this new learning environment.

The higher education service providers market in Portugal are not mainly private sector providers, with the public ones having a strong, healthy and positive reputation in terms of program quality, as compared to its competitors (Štimac & Šimić, 2012). This can be explained due to the development of the country - more weight is put onto education since it plays an integral part on Portugal's economy and social development - higher levels of development leads to higher expectations on education service quality (Štimac & Šimić, 2012). The pressure and emphasis on the universities' performance rise as its important role in the economic progress by different stakeholders. The students are the major stakeholder, and the institution

needs are the focus for all its efforts in that direction. Some curriculum programs are changing to tackle the labor's market needs and changing guidelines and principles. It comes in no surprise that these are adjusted to conform with international standards and requirements – international certifications and accreditations are the tools that assure audience of the institution's quality and compliance with the law (Štimac & Šimić, 2012).

Portugal is facing a growing and fierce competition on higher education European market (Štimac & Šimić, 2012). Due to the economic crisis that hit the country recently, the government finances were hit, creating an increasing negative percentage of the unemployment rate. This has led to a gap and difference between what the market is offering and the labor market needs and requires. Some Master Programs in Management and universities have a relatively strong and stable link with the labor market, so this could be an opportunity to explore and expand. In line with Cavico & Mujtaba (2010), an economic state with unemployment and increasing layoffs lead to a reduction of business student enrolments. Moreover, the raised entry criteria and low graduation rate (Blättler et al., 2013). However, the students will need to be attracted by flexibility and with value for the organizations in the market. This is where retention and ensuring it becomes vital (Cavico & Mujtaba, 2010).

Master Programs in Management accredited schools and even institutions with AACSB are criticized by Webster & Hammond (2011) for not practicing what they teach. Additionally, after the 2008 crises, ethics and global perspectives were integrated into management education (Cavico & Mujtaba, 2010).

The range of stakeholders, in accordance with Blättler et al. (2013), found in the Portuguese higher education's landscape are representatives of government and parliments; agencies that ensure quality and fund research; trade and students unions; representative institutions of international relations and research communities; Fundação Calouste Gulbenkien (FCG), Conselho National de Educaçao (CNE), and public and private bodies and businesses.

Undertaking a superficial PEST analysis, Portugal higher education's system has some legal and Political interest in taking into consideration regarding the increasing European integration due to globalization and belonging to EU increases this process, with programs such as Erasmus. Not only has the financial health of the higher education in Portugal and budget decreased with the recent crisis and troika

reform (€78 billion rescue package) in the country, there has been no state's intervention on education, although there have been some improvements on records (Blättler et al., 2013). This has impacted the affordability of Master Programs in Management likewise. CCES represented all stakeholders and was the body that acted as a bridge between the government and institutions. Protected by legislation, CCES was inactive for several years, started taking a meeting in 2016, where they are set to formulate a higher education strategy (DNoticias, 2016). Some laws and regulations were Bologna-related, indicating a not so inactive government attitude towards higher education.

Concerning Economic factors, due to the easy mobility of students, and reduced transportation costs, it benefits the higher education environment. Not only is globalization a vital part of the integration of the economy, but it also has intensified national and international competition. Portuguese higher education institutions' have been keeping up and have been the hub and home for knowledge workers in the labor force, although there are the options for going abroad due to the economic environment and high unemployment rate. Since the bloom given of graduates in the 80s and 90s, leading to a surplus of graduates entering the labor market (Cardoso, et al., 2014). Employers value market experience and graduates with working experience are preferred to its colleagues that do not have it when applying for a job position. There is a perception that the savvy, skills and knowledge acquired are not the ones needed for the market and are not well prepared for the professional life (Cardoso, et al., 2014).

As for the Social and cultural aspects, the population is showing a small decrease over time. Nevertheless, decreasing birth rates and aging of the population have becoming a concern in the developed countries (Blättler et al., 2013). The Portuguese country is facing problems imposed by demographics and its decline, as well as by the migration of population. This is happening more with the migration from the island to the mainland coast and from the interior to the capitals. As the country is not ready yet for cultural and economic regeneration, the higher education is therefore also not optimally structured. This happens since regional imbalances are aggravated by the location chosen for the universities and higher education service providers, rather than redressing this problem, concentrating educational opportunity in the coastal cities (Blättler et al., 2013). As previously mentioned, the rising number

of migration has lead on the other way as well for a more diverse communication. This has shown a globalization of knowledge as well inside the higher education system in Portugal.

Technological factors in Portugal has demonstrated a speedy technological development in the education system. ICT in this country has been keeping up and applying it in the higher education landscape. It can be seen through online applications and available information on the website for the institutions. Some recruitment process can already be done by distance and with tools such as E-Learning. Innovation, and research are one of the business drivers and Portugal is the home for one of the biggest events in the area, with the last Web Summit happening in Lisbon and other Summits (Santos, 2014). Portugal's innovation performances rank this country within the EU27 as a "moderate innovator" member (Bento & Sousa, 2012). In Portugal, not only has the computer and Internet usage increased, it has increased in almost all areas of education – 100% in higher education, with a secondary education behind it by 90% (Bento & Sousa, 2012). Additionally, the penetration rates of households who possess Internet access have shown the results of the efforts to increase this number. In 2009, in densely populated areas, the penetration varied from 25% to 55% (Bento & Sousa, 2012).

In 2013, some recommendations were suggested by Blättler et al. (2013), taking into account the current financial difficulties. Due to Portugal's commitment towards the Bologna Process and EU, the investment should be as followed:

i)   2% of GDP for spending on higher education;

ii)   3% of GDP for spending on research;

iii)   40% of Higher education participation and graduation rate by 2020 (age range of 30-34);

iv)   15% of adult participation by 2020 (age range of 25-64);

v)   20% of transitional mobility of higher education students and academics.

Higher education service providers' networks in Portugal and training programs lack high quality in some areas, whereas there are not problematic teaching, learning, and sustainable issues in other areas. Therefore, it is considered heterogeneous and unbalanced (Blättler et al., 2013).

Please find below a figure 5 summarizing all of the Master Programs in Management's strengths, weaknesses, opportunities, and threats (SWOT analysis).

Taking into consideration the opportunities and strengths, together for elements for a short-term strategy, it could be inferred that there is a possibility of growth in the higher education landscape due to the demand and the efforts and investment from the Government's side to fulfill those application placements (Neto, 2016; Silvano, 2010).

Bearing in mind the threats, the strengths can empower and give competitive advantage to some higher education institutions and universities in a significant risk environment due to the economic crisis background for some students (Rodrigues, 2007; Neto, 2016).

Seeing how the scholarships can fill in for the structural gap in skills and market needs and how a poor investment in communication infrastructure can difficult communication and targeting its audience if weaknesses and opportunities tangle together (Štimac & Šimić, 2012; Silvano, 2010).

All threats and weaknesses considered, the economic crisis, along with the competitive environment, can constitute a problem to the higher education institutions. This one has already some issues concerning communications, its information structure and its weak structural gap, may affect the universities since the students and academics' dropout rate might increase (leading to fewer revenues) (Silvano, 2010; Rodrigues, 2007).

All in all, every opportunity should be maximized with its strength and the higher education institutions should plan ahead and manage its weaknesses to avoid the worst possible scenarios (Rodrigues, 2007; Silvano, 2010; Neto, 2016).

Taking into consideration the list of digital marketing tools presented in chapter 2.5.2, a ranking was made to access the Portuguese universities on how much and how intensive the use of these tools are taken into consideration. For this, a factor analysis was performed. The variables analyzed were divided into 3 main ones and were given a value 1 if sign of these tools existed, and 0 if these were not present for the first two tools. To evaluate the intensity, and how much effort they put in, for the last category (Content and Social Media), it was assigned a rather a value of 0.5 if they were present, but not that much active, and 1 if the institution was active in the last week. The universities who have more signs of each tool, and therefore, a higher

value, will have a higher ranking in this analysis. The factors analyzed are as followed:

Figure 5 SWOT Analysis of Portuguese Higher Education

S	W	O	T
Digital infrastructure investment	Available Information, Communication & Participation.	Complexity & Dynamism of Operations	Growing competiton from european market - high tuition fees compared to european neighbor also impose a threat
Strong Internationalization Presence	Slow structural weakness (in terms of population's training and skills and qualifications. schools underachievements, dropouts and minimums qualifications below European Standards);	Young population and strong demand from students	
Strong link with the business world; Relation between higher education and labor market;		Govenment incentives: scholarships and funding for international students;	Economical Crisis - lead to high level unemployment : gap between the Portuguese higher education and the labor market needs and requirement;
Bologna regime and the role of Education in Portugal's economy	Lack of experience in international marketing activities	Establishment of International companies in the country and economic growth of portuguese-speaking countries as Brasil	Rising cost for faculty (international members for internationalization)
Focus on quality and good local reputation (and building its international ranking)	Weak website and inferior to other top business school	Improvement on the Website;	
		Process of aquisition of accreditations - EQUIS and AACSB	

Source: Adapted from Štimac & Šimić (2012), Rodrigues (2007), Neto (2016) and Silvano (2010)

i. *Website*

For each element it was given 0.14 values (14%), and these elements were chosen as they indicate adequate, content-wise and satisfactory information that students would search for. These were: descriptive page with introduction of the program; tuition fee information; curriculum information; faculty members (professors); Accreditations and/or employment opportunities information; admission and recruitment process information; and easy to find information.

ii. *Search Engine Marketing*

For this category, the elements analyzed were signs of ads of the program in google result page, and ranking first on the search result page when searching for the name of the program. For each, it was attributed 0.5 values (50%).

iii. *Content Marketing and Presence in Social Media*

This group had into account both, content presence in blogs and presence in the following social media: LinkedIn, Facebook, Twitter, Youtube, and Other social media that the program might be present and/or that the University's is present. For each, it was handed over 0.17 points (17%). When mentioning the social media criteria, it has to be of the program and not of the institution or university, and that is the reason it was included in "Others".

Table 6, found in Annex 1 has a detailed analysis of the Portuguese Master Programs in Management factor analysis, as well the percentage and ratings given to each factor. Follows below the first three best ranking universities determined to access the Portuguese universities on how much they implement digital marketing tools, according to this analysis:

1. Master in International Management by ISCTE Business School and Masters in Management by Católica Porto Business School (1st place, 1.82 points);
2. Masters in Management by Nova School of Business and Economics; Master in Management by ISCTE Business School; Masters in International Management by Nova School Of Business And Economics;

CEMS Master's in International Management (CEMS MIM) by CEMS;

Master in Management by University of Algarve (2nd place, 1.68 points);

3. Master in Management of Services and Technology by ISCTE Business School (3rd place, 1.65 points);

The full list can be found in table 6 in Annex 1.

3.3. DEVELOPING AN EFFECTIVE DIGITAL MARKETING STRATEGY

According to Hanover Research (2014), the most important tool for social and online marketing is a website that is effective and intuitive. This is achieved if it obtains the statue of "ultimate brand statement" for the higher education institutions and universities. Yet, not matter the increase of digital marketing strategy, the most effective activities are event-based happenings, and direct and close interaction with potential students (Hanover Research, 2014).

Strengthening communication strategy is essential. PR methods need to update since the news spread online differently nowadays. Once was the source and original news as Google news or picked up by online news portals, and greater online sites, that now is a type of social consumption (example social media Twitter, Facebook, e-mail, comments, links). Its difficult attribution during dissemination and linkage to the source, and new potentials the value of the social conversation.

As seen previously in the background regarding technological development and mobile users, there are many channels, and it becomes decisive that universities use the right tools to promote their Master Programs in Management. Following are the most common social media platforms most used, its pros and cons (Leech, 2015):

i. *Facebook*

Facebook is the largest social network for people to create, shares, update status and exchange messages. It is great for brand exposure and to create customer relations. However, it is not SEO friendly, and it is difficult to stand out in a competitive and saturated environment (Leech, 2015). It is a robust platform where it is possible to obtain valuable analytic insights but low in organic reach. Master

Programs in Management institution benefits by getting their message out and obtaining students feedback. Not only it may have a profile that encourages interaction, but it can put its content visible in the user's newsfeed. The ability for universities to drive traffic for each post is challenging, and somehow viral potential is very low. Google's external Search Engine traffic is low (referrals to page are around 27%) (Leech, 2015). It is the university's responsibility if they will implement SEO practices. The best is to maintain it in the social interaction domain.

ii.   Twitter

Twitter is considered a microblogging service. It enables users to send post, text/based ones up to 140 characters. Its ability to respond to students at a really fast past overcomes the cons. Nevertheless, finding a balance between what is considered spam and what to promote, is key. It also has a vast drop off rate of the followers (Leech, 2015). Just like the previous one, it is a central hub for real time information. Not only has it the advantage of concise, brief, short and quick post to simple monitorization and conversation management, but its platform also creates the base for real-time interaction with students and Master Programs in Management institutions, increases brand visibility and can generate impact quickly. Just like Facebook, spam is a concern to students and distinguishing the blurred line between noise and content is key. It demonstrates a good tool to determine traffic from other websites, but the "no link" or characters limitation makes it hard to put into practice Google's algorithms.

iii.   Youtube

The video-sharing website is popular and user-friendly. It is beneficial to promote user-generated content such as video clips and blogging. It is considered one of the best and effective ways that help built the brand (Leech, 2015). For innovative and interactive ways of teaching and learning, this has shown positive effects, even though the traffic is limited and makes it difficult to return (redirect) to the primary website. Some of the Master Programs in Management institution's savvy can be displayed. This powerful channel responds to complains, encourages interactions

through submissions and builds reputation. It is the second choice to Facebook when it comes to researching or institutions by users, therefore it is necessary that the message and content are consistent (Leech, 2015). Since videos usually rank high and well on the search result pages, it is excellent for SEO practices and increases Master Programs in Management institutions reputation and brand exposure.

iv.   *LinkedIn*

LinkedIn is a business network where organizations and universities can share and update information and content, and to recruit. Unfortunately, due to its nature, it only drives sales for B2B, however it is a valuable recruitment tool. It is not the most essential channel; though it encourages institutions to respond to industry-related questions to encourage and engage users. It has an impact in the reputation and the institutions' exposure. It is all about showing off, and many interested or potential stakeholders and professionals can stumble across it. It lacks the consistency and generating site traffic such as other social media such as Facebook, but is well positioned in the search result pages (average usage of SEO) (Leech, 2015).

v.   *Google+, Flickr, Tumblr, Instagram, DIGG and others*

Google+ has a social network where is it easy to interact with students and faculty, since it has the advantage of being integrated with other Google applications. Still, this is limited to students who have the administration's access as Google users. Many users do not use this platform yet and therefore has a sizable inactive user-base (Leech, 2015). It also offers great SEO benefits (perks of being owned by Google) and can be linked to Google Adwords and Youtube. With Flickr, it is possible to increase the visual impact of the university's brand and its Master Programs in Management, tough caution should be taken into account since only sharing photos and video content might become dull, boring and less appealing - since Youtube is mostly used.

Whilst Tumblr is a social network and microblog, where users may post text, image, videos and interact with the sharing option. This great platform is mainly used

between younger students, but this type-like blogging generates most of its traffic from within the platform (Leech, 2015).

On the other side, Instagram is a growing social media, photo and video content. It is one of the primary mobile apps nowadays for students and it is tapping new audience and for higher education, this could be seen as an opportunity. The drawback of this tool lays on the lack of links and traffic management. Although some apps are offering analytics, it still is limited and advertising is still in their early stages.

Pinterest has been positively received by students. Its online collaging resource-based platform allows students to pinpoint, bookmark and organize their inspirational sharing. It is, however, not effective for institutions with limited online presence (e-commerce) nor to reach everyone since it has shown that it is highly directed to female gender.

DIGG is a recent website (social news) that allows interactivity for every story submitted between its users. Not only it rides the opportunity of exposure and proper linkage with other social media such as Facebook and Twitter, but it is hard and not designed for customer interaction (Leech, 2015).

Snapchat, another mobile application to share pictures, has demonstrated that the location-based data obtained can be beneficial for business, however, institutions do not use it that much since it requires a high level of creativity and it is highly competitive to stand out.

Independent of the channel(s) chosen, what matters is that it is the best fit for the needs. As reported by Leech (2015), the three rules of engagement are: i) Protection; ii) Disclosure; iii) Common Sense. The first one relates to the extra caution regards the organization's intel, the second one concerning the transparency of the institution's presence on social media and the last one respects to keep professionalism and appropriate communication.

Concerning topics such as allocation of time efforts and resource, it must be taken into account that Social Media takes Time. According to the report, it takes 15 minutes a day to Listen; 20 minutes a day to Promote; 30 minutes a day to Participate; 3 to 5 hours a week to Publish and 5 to 10 hours a week to Build Community (Leech, 2015).

Since increasing number of students are using digital information in their decision journey, more and more it is important to have a cohesive online presence, or in other words, to be digitally savvy (Jackson & Kallsen, 2017). This could be the line between luring students to schedule a visit and applying or not, in the Master Programs in Management' institutions.

According to Jackson & Kallsen (2017), students are accessing websites on their mobile phones, and that number is surprising: 80% of students have accessed it once, and 60% of students access the website and learning material with mobile devices at least once a week. Moreover, the statistics do not stop here: 68% of students prefer e-mail as their preferred mode of communication as regards to schooling and 53% expect a reply within the same day, or up to 24h after sending an e-mail. This is a sign that students prefer a more online approach when it comes to education and it is showing its impact and results: 37% of schedules visits at the university's campus happen after a visit of the university's website, once again, on their mobile device (Jackson & Kallsen, 2017).

Yet, students' expectations are not met and their experience on mobile websites and sites have not been promising. In fact, 80% of students mentioned that the quality of their experience with university's mobile websites was "challenging" or merely "OK" (Jackson & Kallsen, 2017).

Following are some creative and out-of-the-box digital marketing campaigns that Jackson and Kallsen (2017) put altogether about what higher education universities have done to optimize their probability of success.

i. *University Listicles*

What is more effective than the university's information, ideas and contents transparency truth and convincing facts? Oklahoma State University has found a creative and fun way to expose their information regarding their programs and university by "listicle" – article structure-type that lists and short-lists put together the main ideas. Its thematical structure is easy to capture mobile users (Jackson & Kallsen, 2017).

ii.   BTS

Since most universities display the final results, some have taken the opposite approach and shown the behind-the-scenes contents, specially student-led events (Jackson & Kallsen, 2017). This has attracted attention since this social media strategy focuses on much more than students value, other than the final results. It highlights and reinforces the universities own preconceived ideas.

iii.   Interactive Quiz

The kind of content the university elects affects profoundly the following factors: focus, quality, value, and influence. Leveraging these in the social media can create a strong customer relationship and enhance the targeted audience. The interactive quizzes are the most underrated types of contents and can draw many audience with its contents, with personality-type quizzes, "Which (blank) are you?"-type quizzes, knowledge tests, and so many others. The University of Oklahoma released the "What Kind of Holiday Breaker Are You?" quiz during university breaks, interacting with the students that accessed it.

iv.   Other Platforms and Social Media Takeovers

Many Universities limit themselves to Facebook and Twitter to promote its programs. However, universities can reach out many more students in other different social media, such as Snapchat or Tumblr (Jackson & Kallsen, 2017). They can engage with students in different tones (in some more casual than others) in different platforms.

Oklahoma City University formed a marketing team sometimes constituted with some savvy students and handled them the keys to some social medias like Snapchat, Instagram, and Twitter. The results of the outcomes have been positive with students (mainly generation Z) actually engaging on the content.

v.   *Student Blogs*

Oklahoma Baptist University hired students to write blogs for the website of their university. Similar results to the ones of social media appeared, while giving the university more control over the content. This lets students experiences to create a culture that many students will relate to. Some universities also could enhance and take this to the next level by giving direction for international students to write these since they could reach out to incoming and international students (Jackson & Kallsen, 2017).

vi.   *University Data in Infographics*

Rose State University found out that Infographics could be, not only fun but fabulous to attract and draw students attention. The amount of information drawn by students is such that the message gets apparently passed on to its audience (Jackson & Kallsen, 2017).

vii.   *Marketing the Uni's Mascot*

Who said that universities could not incorporate its Mascot in its marketing? Well, the University of Texas challenged this by creating a guide that is helpful for students on where to take senior pictures, using its Mascot as the model. This has engaged with students and interacted with them. Many future students were attracted by this close interaction between the university and its students (Jackson & Kallsen, 2017).

viii.   *Connecting students through Music*

Some universities have been the talk of some social media due to its innovative way to interact with its students. The idea out-of-the-box cames when the university used social media platforms to ask its students for recommendations or to share their themed playlist, either for an event happening in the university, for the class breaks or even to commemorate a specific day (Jackson & Kallsen, 2017). Since digital playlist

can be shared quickly, and there are applications that support this, such as Spotify, the students felt closer to the university.

ix.   University's Photo Shot

The University of Oklahoma has put its ideas on creating new brand content for its social media channels and did not disappoint potential students and its followers. It uploaded photos of its campus, all in different seasons, so that students could be amazed by it.

x.   University's Pinterest Boards

This interactive platform has inspired the University of Central Oklahoma and University of Michigan to go beyond and allow its fans to add content on its Pinterest boards (different for different events, to promote campus, city and programs) and it has showcased the interactivity with its students and school spirit (Jackson & Kallsen, 2017; Mulder, 2016).

xi.   Create Snap Filter

Some Universities have long realized that many students are across several social medias and Snap being one that can be easily installed on the students mobile (if it was not already installed), and created customized filters for upcoming events or based on interests and location. This has gotten so many students engaged with the university (Jackson & Kallsen, 2017). Loughborough University promoted its campus during special events, such as 'Open Day' based on location (Mulder, 2016).

xii.   Create Hashtags or Apps

The power of user-generated contents should never be overlooked since it has the possibility of lasting longer than the occasion. Some universities created a hashtag to allow students to use them at any time and any place to know what is happening always and real-time. Some universities have also taken it further by later including

these on a blog, on a post or articles (Jackson & Kallsen, 2017). The University of Salford built awareness through the #salfie hashtag and encouraged students to take pictures with a polaroid-style #salfie frame around the university's campus at the beginning of the semester (Mulder, 2016). Some even took it further with a "Match Made in Salford" tinder inspired University Course Finder. It enabled students to interact with the university's courses and programs by swiping left or right for potential course based on customized and personalized grades and interests (Mulder, 2016).

4. METHODOLOGY AND DATA COLLECTION

4.1. RESEARCH CONTEXT AND KEY CRITERIA

To conduct a research on the quality of Master Programs in Management in Portugal, one has to consult the literature and take key ideas. Key information and elements that future students and parents look for when searching their program are as important as their criteria for universities and followed by Balwa (2009) and Cardoso, et al., 2014, these are:

    i.   Rank Position;

    ii.   Reviews from previous students (alumni) and peers;

    iii.   Employment opportunities after graduation;

    iv.   Tuition fees and scholarships;

    v.   BSc/MSc programs;

    vi.   How university presents itself to international students (NextportChina, 2015):

        a.   English preparation courses for foreign students;

        b.   National policy towards international students;

        c.   Discrimination of tuition fees for international students;

        d.   Online information available and easy and accessible online application process;

    vii.   Student life information;

    viii.   Campus information;

    ix.   Surrounding area and location;

    x.   Provided services and FAQs.

All of these components and key ingredients are vital and should be visible and present on the institution's website and social media strategy (NextportChina, 2015). In Figure 6, the objectives for some elements should be taken into consideration for a successful simple online strategy.

Figure 6 Objectives of website and social media's content strategy
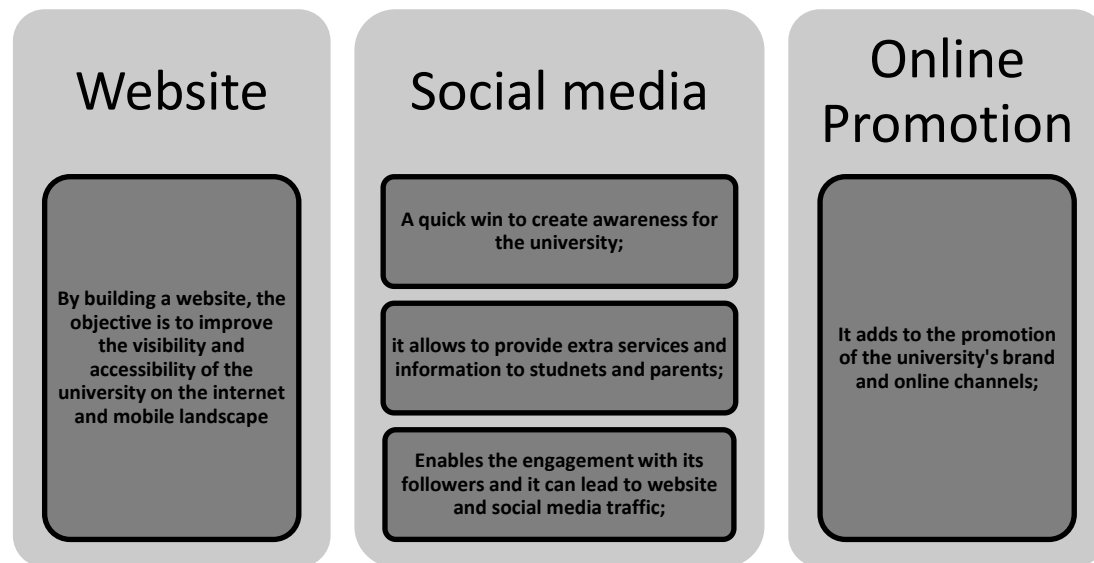
Source: Adapted from NextportChina (2015)

Recruitment strategies most commonly used in higher education systems are focusing on international students and new audiences like non-traditional learners and working adults (Hanover Research, 2014), yet few top-tier institutions and universities have effective and robust online website and social media presence. Its online education program offering still lacks despite the popular education done online - online learning (Hanover Research, 2014). New technological-based methods are dispersed due to its promising, engaging and interest-captivating nature. Models, methods and approaches such as the gamification, "flipped classrooms" are spreading quickly and new tools are under development (Hanover Research, 2014).

A survey conducted in 2009 with 15.000 higher education students from the EU27 showed that these criteria had an impact on the decision of the higher education master program and university (Eurobarameter, 2009).

Following are the main pertinent information from the report, which was taken into consideration to choose the variables to analyze in the survey in Portugal (Eurobarameter, 2009):

    i.   88% of students agreed that all qualified students should have the right to study in higher education systems;

    ii.   65% of students, in the higher education system, believe that the higher education should be free of charge, while 33% believed that it was acceptable as long as grants and loans were available;

iii. 97% of students support the idea of linkage and importance of academic providing the knowledge and skills to be successful in the labor market;

iv. 91% of students believed in the importance of personal development;

v. 87% of students believed higher education played a vital and active role in society;

vi. 83% of students choose the institution based on quality/reputation of the university's program;

vii. 81% of students in higher education believed that students should be a considerable part and involved in quality reports and rankings of these higher education institutions;

viii. 87% of students support the importance of higher education to foster entrepreneurship and innovation;

ix. ¾ of students working towards a bachelor degree title would want to continue their studies in the higher education system.

4.2. DATA COLLECTION: QUANTITATIVE RESEARCH AND RESEARCH ETHICS

The survey collected took into account the basis that it needed quantitative methods. There is so much new information regarding digital strategy and social media and networks, however, the higher education industry in Portugal is not that much researched, or at least not for Master Programs in Management. The fact that the digital is starting to appear more in the corporate world does not mean that in Portugal the same is happening.

The survey's objectives are as followed:

i. To gather primary information about the future students and academics on the quality of the Master Programs in Management in Portugal, at the moment;

ii. Identifying the most criteria to choose the program;

iii. Finding important elements of digital strategy, that students value;

The questionnaire has as the main audience, targeting the population of higher education students studying or that have a Master degree in Management, or possible

future students interested in undertaking a Master Programs in Management in Portugal. It is only relevant if the group selected has researched for Master in Management in Portugal and come into contact with any promotional reach from any institution, since for the survey, their opinion on the quality of these programs and channels can be used to attract and retain them.

To determine the sample size, it was determined a confidence level of 95%, and a confidence interval of 25. For the population, it was used a traditional rule of thumb for the calculation to determine the population size (this is an assumption since there is no information available of this data, so an approximate intuitive was done). If there are around 19 Master Programs in Management in Portugal (according to Master Studies) and 42 management bachelor degree, and if we consider that there are around 25 students in each class that makes a total of 1525. Since some people are no longer studying but would like to return to the academic for professional reasons, or possible students from other degrees would be interested in getting into the Master Programs in Management world, then it could be considered half of the previous total, 763. Summing all of these, the total population, approximately, would be 2288. Putting all these three factors together, 95% confidence level, 25 for the confidence interval and population size of 2288, the minimum sample size needed in this case is 16[3].

After gathering all the information needed for the literature review, it served as the basis for the questionnaire. The form is divided into six sections. The first one consists of a cover letter where a small introduction of the study is described. The purpose of the study, the confidentiality of information and a voluntary consent term is included.

The second section consists of only one question, where the main audience is targeted. If they have no relation or interest with a Master Programs in Management, then the form is submitted, otherwise, the respondent continues to the third section. This was made to rule out pointless feedback or biased information.

The third part has eight demographic questions, and the respondent can be analyzed in several categories such as age, gender, country of residence, level of education, marital status, household composition, gross monthly salary and employment status.

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[3] It was used an online sample calculator with 95% margin error and 25% of margin error: https://www.surveysystem.com/sscalc.htm#one (15 minimum)
https://www.surveymonkey.com/mp/sample-size-calculator/?ut_source=help_center (16 minimum)

The fourth segment includes nine questions regarding the respondents' beginning decision journey – questions related to the research and criteria used to get to the evaluations and consideration phase, or purchase phase. The last but one segment consists of questions about the information available and their experience towards it. The final part of the question talks about the expectations and digital tools in higher education to identify their reaction to it. The survey can be found in Annex 2 (Figures 9, 10, 11, 12, 13, 14, 15 and 16).

There are three types of questions:

i. Likert scale question (5-point linear scale, being 1 = least important and 5= most important);

ii. Multiple choices where respondent can only answer one;

iii. Checkboxes where respondents could select as many as they saw it suited

Concerning the pre-testing, this was executed on the 20th and 21st of January, collecting a sample of 16 respondents. The survey took place online for five business days, between the 22nd and the 26th of January through the social network, mainly email and Facebook groups. There were two purposes of the pre-test. The first one was to assure the clarity of the survey to respondents and take into consideration some recommendations for alterations. The second drive was to run a Cronbach's alpha test that returned a result of 0.887 (see the corresponding analysis section).

There is always the debate of ethical issues, mainly due to the online methods where information can be easily shown, twisted and so one. To overcome these issues, the questionnaire took into account by opting not asking personal details, other than demographic questions, and protect their anonymity.

5. RESULTS OF PRIMARY DATA: INFORMATION ANALYSIS, DISCUSSION AND RECOMMENDATIONS

The results from the quantitative research were obtained through the questionnaire and analyzed into three parts: testing the reliability of the questionnaire (Cronbach's alpha); the sample characterization (demographic statistics) and univariant analysis. All the data and output included in this thesis are presented with the assistance of XLSTAT program (Statistical software for excel).

The questionnaire gathered 82 respondents online and, from the total of answers, 23 were not part of the target group. The first question of the survey is a control question, where people who are submitting and consenting taking the questionnaire are encountered with the question. This will prevent the data collected from being answered by individuals who do not fit the target group and interested in Master Programs in Management in Portugal.

5.1. CRONBACH'S ALPHA (α COEFFICIENT)

For the pre-testing of the questionnaire and to measure its reliability, Cronbach's alpha was used on the grounds that it is the most common measure used to assess the internal consistency of a survey that contains multiple Likert-scale items and it is also appropriate for interval level variables. See Annex 3 for the reliability analysis.

For our pre-testing sample, 16 respondents answered the questionnaire and two main groups of questions were analyzed (mainly the Likert-type questions, which total 20 variables). These were:

    i.   From Section IV in Annex 3, question 2, to rank the importance of the given criteria when choosing the Master Programs in Management, in a scale from 1 to 5 (from "not important at all" to "extremely important");

    ii.   From Section V in Annex 3, question 5, to rank the respondent's position for the best student experience in accordance with the criteria given. It was also analyzed on a scale from 1 (Strongly Disagree) to 5 (Strongly Agree).

There was no reverse score, and Excel ran a Reliability Analysis (check Annex 3, Table 7, 8, 9, 10, 11, 12, 13, 14 and 15), and Cronbach's alpha ran on the items of this questionnaire, which the following Table 5 shows the results:

Table 5 Cronbach's Alpha (Pre-test)

Cronbach's alpha	Standardized Cronbach's Alpha
0.887	0.892

Source: Own elaboration on Excel

A Cronbach's alpha coefficient of 0.887 demonstrates that the survey is reliable, since, for internal consistency, the score has to be over 0.7.

For further analysis, the summary statistics in Table 7 (Annex 3) should be taken into consideration to check that the scores are similar to each other since they are on the same stand. The table offers a view of the means and standard deviations for each item, and any value that scores higher or very low compared to others may need to be analyzed to examine possible removal. This way, the questionnaire can be sure to be more reliable. Giving a look at the table, it could be seen that questions C2.4 (mean of 4.563) and C2.6 (mean of 3.313) score higher and lower, respectively, than the others and that they can be problematic.

In Table 15 (Annex 3), there are two main columns from the deleted items statistics table that should be given focus, and those are "<Scale/deleted item> Correlation" and "<Scale/deleted item> Cronbach's alpha". These will determine if the questions should be or not deleted to make the survey more reliable. The first of the columns display how each one correlates with the overall score of the questionnaire, while the other column gives the Cronbach's alpha score that would be if the question was removed from the survey. Both C2.4 and C2.6 score lower than 0.3 for the total correlation of the item in the overall questionnaire, however, although the Cronbach's alpha score is relatively a little bit higher than if the items were not removed, it does not impact the reliability of the survey drastically. Therefore, no question is decided to be removed from the questionnaire.

Overall, after the reliability analysis performed on the 20 items (Likert-scale questions from the questionnaire), the Cronbach's alpha of 0.887 has shown an acceptable and reliable questionnaire. Carried out the analysis, all items are worth the retentions, since removing them would result in a decrease in the alpha value, with the

exception of C2.4 and C2.6. The removal of these items was considered and therefore concluded not to be taken out.

5.2. UNIVARIANT ANALYSIS: SAMPLE CHARACTERIZATION

To have a comprehensive understanding of the results, a descriptive analysis of the demographics and its frequencies, and other variables descriptions were carried out. The sample characterization can be found in Annex 4, from the array of Figures 18 until Figures 78, and where the demographics are the first nine graphs (Figures 18 - 26). All questions with more than one checkbox were separated and transformed into dichotomous variables, and due to the ordinal nature of most questions of the data (Likert-type Questions), the use of parametric techniques was not used to analyze these Likert-type data (better to use the analysis of variance techniques such Mann-Whitney, Wilcoxon Rank Sum test or Chi-Square). For quantitative and continuous variables, Person's correlation coefficient was determined, and dichotomous variants were also a subset in this analysis since in these case, it is equivalent to the phi coefficient[4]. For the other variables, Spearman Rank Correlation was calculated (for ordinal and continuous variables).

5.2.1. Survey Response Rate

The online survey had 82 responses, however, due to the control question, in the beginning, it left it with 59 answers (target group). From Figure 17, 72% of respondents were interested in taking a Master Programs in Management or have some kind of relation with it, and those will be the ones analyzed, as per the other 23 individuals, a total of 28%, that did not have any interest, were taken out of the following analysis.

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[4] If phi < 0.3, then there is a weak correlation (and if doing a bivariant analysis, these two variables might not be related)

5.2.2. Demographic statistics

As shown in Figure 18, our sample is characterized by a balance between the gender of respondents: 51% Male, and 49% Female. There is not that much distinction between them, so a correlation analysis or association test with this variable and others will not bring that much input into the discussion

The biggest age-range groups correspond to those planning on starting their academic journey, or still taking a Master Programs in Management or have finished it. As seen in Figure 19 (Annex 4), 28 respondents are between 21 and 24, and 26 are between 25 and 30 years old.

Most participants resident in Portugal (78%), while others interested in the program in Portugal correspond to other countries, mainly from Europe. To see the discrimination of the countries, please check Figure 20 and 21 in Annex 4.

There is some distribution in terms of education qualifications, since the most answer have their Bachelor degree (19), followed by Masters or equivalent (18) and post-graduation (11). Some students start to worry about their study path since 12% of respondents have a secondary education, and might start their higher education track as seen in Figure 22 in Annex 4.

As expected, the majority of answerers are single, with only 10 Married and one divorced. Please see figure 23 in Annex 4. The number of household members has a range from 1 to 8, being the most frequents ones two household members to four members as displayed in Figure 24 in Annex 4. There is also a vast dispersion in terms of employment Status, varying from students, employed by wages, self-employed and others. In Figure 25 in Annex 4 there is a better understanding of these respondents in Annex 4.

As regards to household income, 39% preferred not to answer, followed by 22% earning between 1000€ and 1499€. More information can be found in Figure 26.

30 Males
29 Females

46 Portugal
13 International

11 Master Titles
11Post Graduation
19 Bachelor
+ others

Figure 7 Infographics of Demographic of Sampling

5.2.3. Univariant analysis and descriptive analysis of other variables

i.   *Sources used to find information regarding the Master Programs in Management*

As shown in Figures 27, 28, 29, 30, 31, 32, 33, 34, 35 and 36 in Annex 4, the percentage of the sources used to start their student journey and search for a Master Programs in Management are the following: Events and fairs (31%), Social Media (39%), Search Engine such as Google (78%), E-mail (31%), Blogs (10%), Website of the university (85%), Ads (27%), Recommendations from friends and parents (69%), alumni referrals (37%) and others only 5%. Taking into consideration all the literature review and research, Website is the main first image students encounter. A content-wise and easy, reliable and accurate information provided can be determinant for a future student and academic. Google is one of the main search engines in today's world and investing in SEO and SEM might turn out to be the most efficient tool. Recommendations from friends and parents and Alumni reinforce the importance of WOM and that building reputation can affect the decision, or at least, make the program reachable and in the future students search process and decision set. Other sources such as Social Media, Ads and E-mail, all online sources, and promotional tools that can be explored. There is a market, and it can grow so universities have to take into consideration and be in some channels to step up their game, compared to its competitors.

ii. *Importance of the following factors/criteria:*

    a. *Rank Position:* As seen in Figure 37 in Annex 4, 81% of respondents perceived the ranking as important or extremely important;

    b. *Importance of Quality of the program and Curriculum:* In Figure 38 of Annex 4, 75% agree that quality of the program is important or extremely important;

    c. *Importance of Recommendations from Alumni, Parents and Friends:* 15 surveyees do not think it is neither important or critical (N/A), 25 think it is important, and only 14 believe it is extremely important. This can be seen in Figure 39 from Annex 4;

d. *Importance of Employment Opportunities:* This is one of the Likert-type questions that have one of the most participants in agreement, with 78% believing that it is an extremely important factor, and 14% certain it is important. Its Figure 40 can be found in Annex 4;

e. *Importance of Available Information:* As regards to the information online available, 15 individuals consider it is extremely important, 20 individuals hold it is important and 18 suppose it is not important nor significant as shown in Figure 41 in Annex 4;

f. *Importance of Geographic Location of the Institution and Program:* From all this set off question, and taking into consideration Figure 42 in Annex 4, eight participants believed that location is not an important at all or important when choosing the program, as opposed to 37 individuals that settle for its importance or extremely importance.

iii. *Main Criteria and important decision factor*

In accordance to the participants of our survey in Figure 43 of Annex 4, the most common factors chosen were the following: "employment opportunities" (17 answers); "Reputation/Ranking Position" (15 answers); "Quality of education and curriculum" (14 answers) and "Scholarship/financial assistance, tuition fees and study costs" (8 answers). "Geographic location and transportation system" (1), "Infrastructure (Physical Buildings" (1), Recommendations from Alumni (1) and "Teaching Members and Curriculum" (2) were the least chosen. Given the nature of this question, it forced participants to give a thought about which criteria they considered important and therefore the most decisive factor when choosing a program. The Master Programs in Management could take this information into account and use it a base of what attracts new future applications and which channels to best convey these images and factors.

iv. *Overall Quality Perceived from the Master Programs in Management*

Figure 44 in Annex 4shows that the sample are thorn between excellent and unacceptable quality (23 participants) and good quality (30 participants). No participant believed it was unacceptable, and yet only 3 gave an excellent score. Since quality is one of the most popular criteria chosen by participants as a decisive

factor seen previously, taking this perception into the Master Programs in Management can be key in meeting the gap and creating a unique position in its students' mind and tools to change it.

v. *Satisfactory information available online and if it is easy to find*

44 survey-takers are satisfied with the availability and easy access of information found online about Master Programs in Management, leaving the 23% of surveyees not thinking the same way. This information is available in Figure 45 in Annex 4. Master Programs in Management responsibles and coordinators for the website and online content platforms should upgrade, organize and revise their contents in a way that it becomes more intuitive for searchers to find the wanted information.

vi. *Intuitive Website and Content Wise Adequate*

Something similar as the previous question happens and it can be found in Figure 46 in Annex 4. 43 agree that the website of the university about the program is intuitive and with the most search information, however 15 think otherwise and 1 believe that information "could be clearer on info about subjects". Again, with this question, it can be seen that there is some room for improvement for the institutions as regards to their websites.

vii. *Recruitment and Application process*

Most of respondents passed through an entirely online/digital application and recruitment process and that number rounds 61%, and 24% Mixed one. Only 12% corresponds to a face-to-face process which demonstrates that digital has become part of some aspects of the university's process and leveraging these resources, as seen in the literature review, may bring benefits to the attraction of future students to programs. For a visual information, please see Figure 47 in Annex 4.

viii. *Confidence level in the delivery of accurate information*

In general, in Figure 48 in Annex 4, the level of confidence in the delivery of accurate information vary between very unlikely (2), unlikely (8), N/A (13), likely (24) and certain (12). Also, here, some progress can be done by the universities and Master Programs in Management marketer responsible for the information converted,

how it is delivered and which channels to use. During the literature review, some tools were mentioned.

ix. *Elements that deliver the best student experience:*

a. *Acquired knowledge responds to expectations:* For this measure, 64% Strongly agree and 24% somewhat agrees. There is a strong believe that the service offered by programs and universities should try to meet students' expectations (See figure 49 in Annex 4);

b. *High Program Quality:* The distribution here is different than the previous one. 49% Strongly agree with the importance of the quality element in their program for a best student experience, as well as the 32% of participants that somewhat agree (Figure 50 in Annex 4).

c. *Adequate resources (library, PCs, classroom, presentation equipment and similar):* In Figure 51 from Annex 4, it can be seen the approximately 71% of the survey-takers somewhat or strongly agree with the impact of resources in their student experience, as opposed to 8%, who somewhat disagree with the others.

d. *"High quality of work teaching staff", "high quality of work by non-teaching staff", "good knowledge and capabilities of teaching staff" and "good knowledge and capabilities of non-teaching staff":* The visual support can be found in Annex 4, in the figures number 52, 53, 54 and 55. Surprisingly, in these graphs, in what relates to the non-teaching members, participants has shown some strong beliefs that these also have a decisive impact in the students experience (not as much as teaching staff). Universities, and therefore programs, can integrate all its stakeholders into having an active role in transpiring the universities' values.

e. *Credibility of teaching staff:* 46 respondents have somewhat or strongly agreed with the credibility of its faculty members and therefore, the Master Programs in Management should focus on leveraging its labor resource and building reputation to attract these type of students (Figure 56 in Annex 4).

f. *"Good organization of schedule", "Good organization of Opening Hours" and "Good online system (e-learning platform, wi-fi, etc)":* As

seen with the previous element, the schedule factor has the same number of somewhat and strongly agree respondents and only 20 strongly agreeing with the opening hours elements (Figure 57 and 58 in Annex 4). Nevertheless, in all, no one strongly disagreed with these factor, rising the same mark as the previous point: how can programs and universities leverage and take advantage of this, should it want to attract more students and enhance their experience? Online resources can be optimized to augmented with digital and IT solutions, creating this way a better overall student experience.

g. *Good reputation of the institution:* As shown in Figure 59 in Annex 4, this factor has the most "strongly agree" frequency, with just 40 participants (accounting for 68% alone). The other 20% represent the survey-takers that somehow agree. Reputation, as it has been verified throughout these analysis, plays an important role in student's decision in choosing the Master Programs in Management, as well as vital factor that plays in students best experience journey.

x. *Social Media where students can be found*

As seen in Figures 61 until 65 in Annex 4, the percentage of the following social media are the ratio of the participants that are present in those platforms: Facebook (93%), Twitter (58%), Youtube (56%), LinkedIn (81%), Instagram (85%), Pinterest (36%) and others (10%, being these Snap, Whastapp and Reddit). Knowing where to find and target its target group (students for master management programs).

xi. *Google search Engine was used for the research?*

There is no doubt, with 95 % of respondents seen in Figure 69 in Annex 4, that Google is the dominant player and if such tools such as google analytics exist, universities might rethink which channels it should invest to get closer to their main students. A quick simple google search for *Master Programs in Management in Portugal* in English will only return Master in Management ads from other competitors that are not located in Portugal (up to date, from France and UK); However, a *Mestrado de Gestão em Portugal* (Master Programs in Management in Portuguese) will not return any ads to date, and only the organic results will rank first.

xii.   *Other Promotional tools (Events, Leaflets, etc.)*

Since traditional tools are still effective and used to attract students to the programs, this question obtains a positive answer by only 21 respondents. Please see Figure 70 in Annex 4. The rest did not come into contact with these offline-type promotional tools the program should can continue to use these channels, however, as perceived from the literature review, digital can empower and make it reach to more people, faster and in a more dynamic and interactive approach.

xiii.   *"Master Programs in Management in Social Media" and "Perceive University Lacks Online Presence and Interaction with its Students"*

In figure 71 in Annex 4, 68% of respondents (40 individuals) believe that the search or their Master Programs in Management is not present online in any social media. There is an opportunity for a different channel for universities to address, taking into account all the benefits previously mentioned in adapting digital into the university's landscape.

One the other side, almost half of the responses (46%) are not sure that universities lack online presence. This could be maybe because they have a website, an internal online platform and institutional e-mail for communication. Further investigation, other than the one found in Figure 72 in Annex 4, should take place to analysis it deeply, since it could bring interesting results. Additionally, it seems important to emphasize that 20% did not feel the online presence or did not come across anything in this competitive environment nowadays. These could be potential students and attracting them by creating a more deeper relationship (as seen in the literature review) with students, and engaging them.

xiv.   *Sources where students would like to find information regarding Master Programs in Management*

As shown in Figures 73,74, 75, 76, 77 and 78 in Annex 4, the vast majority of where respondents that would like to find information regarding the Master Programs in Management are as followed: Social Media (64%), Mobile Applications (58%), Events and Campaigns (69%), Blogs (22%) and E-mail (56%).

Social Media has revolutionized the state of marketing, on how to promote and advertise, with platforms such as Facebook, Twitter, LinkedIn, Youtube and many

others. With the results, it could be inferred that it is no longer enough to incorporate social media as a separate case and that is should be included, connected and related to the marketing plan. All in all, traditional media should not be left behind but together with social media. Digital is the bridge and some inferences could be shown as some tiny steps in the Portuguese higher education market for it.

6. LIMITATIONS, CONTRIBUTIONS TO THE FIELD AND RECOMMENDATIONS

This master dissertation is at an academic and theoretical level, and therefore the assessment done in here is at a broad and summary level. No particular case was resorted and therefore Master Programs in Management in Portugal should be studied and diagnose its environments, its strengths and weaknesses and apply it to the current case. The results provided by the survey and this thesis should not be universal. The reasons for that are followed: ´

    i.   Although the study took place in an up-to-date data collection, the reach of the survey was weak, accomplishing the minimum statistical size for the sample and may not have the most accurate representation of our target group and population;

    ii.   Constant change in the world that requires adjustments and future revision since what is efficient yesterday and today, may not be the case in the future. Marketing techniques are changing all the time, and even much more are the digital marketing tools that are appearing at the speed of light;

    iii.   Results of the survey demonstrated a biased vein since the sample was not random, but rather a collection of answer from colleagues, management groups and faculty online;

    iv.   The questions on the survey could have been more adequate and specific and concise; That is reflected in the long survey and the feedback received;

    v.   The questionnaire took place as an online form (Google Platform in the Internet and Mobile) and therefore some constraints such as low response rate, addressing target group and assumption for the low quality of answers since it is time-consuming for respondents to fill out the survey can be found;

    vi.   The reach of this survey was also limited to only Master Programs in Management in Portugal, and to some extent that concentrated our search in that niche area.

The abundance and emerging studies on digital marketing and its implementation in other fields that not corporate have proven the importance and confirmed the necessity to explore further the topic and investigate it.

Although this thesis' main goal is to assess the criteria and evaluation/crafting a digital marketing strategy for Master Program in Management in Portugal, some follow-up recommendations came into light and some attention should be shed on the following topics.

Stronger relationships should be strengthened between graduates, higher education institutions and businesses and professional bodies. Taking into consideration the problems inherent in marketing higher education (Table 4), the Portuguese market and Master Program in Management, universities can apply efforts to work towards them. The main idea is that for quality in higher education (one of the key differentiation element of a university), the university should cover both, inside and external factors, with its key player and that marketing plays a role in anticipating the needs of potential students, academics and public. Not only this is done to achieve higher quality standards, but it gives the institution a better market position, national recognition and international reputation. Allowing graduates to experience practical techniques give them the skills to successfully survive the market once they finish the program and increase their employment opportunities (one of the criteria that respondents expressed as important and decisive to choose the program). Expressing the availability to work professional bodies and also associations have been proven to be helpful in promoting employability promotion strategies. Moreover, these aspects can be leveraged with the proliferation of the information due to the increasing use of digital means.

This study, all and all, was challenging and hopefully is a tiny step for opening more research in this market, and into studying this area and bringing some inputs.

7. CONCLUSION

From this thesis, the following remarks that derived from it are below described.

This thesis tried to address the criteria for assessing a digital marketing strategy in the Master Program in Management in Portugal. After realizing the necessity of a marketing approach for the success of the management of higher education programs in Portugal through the literature review, results show that students are digitally present, however, Portuguese Master Programs in Management still lack to explore these new channels that emerged. For better characterization of the higher education population, further studies need to take place. For other purposes in the Portuguese higher education system, further studies may need to take place for a more adequate and satisfactory result and to fit its needs better.

As what happens in the corporate environment, the marketing approach of the Master Program in Management depends heavily on the market analysis and planning, the pillar to recognize and categorize the potential and current customer (students and academics) and meet their needs. Universities should work hand in hand with its stakeholders – with the government, businesses and society in order to cover key differentiation element for quality in higher education and in this case, for Master Program in Management in Portugal. This may help fill the gap between graduates and jobs in the labor market and also develop different scenarios to prepare, avoid or leverage its advantages. Choosing the digital marketing strategy is subject to the attractiveness of the educational market and where marketing knowledge stands and its statue. Again, the future of Master Programs in Management in Portugal relies on futuristic and new ideas of its key interveners.

Finally, every university is different and should find the solution that better fits their needs, as well as keeping up with the changes that shape the higher education market.

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9. ANNEXES

9.1. ANNEX 1 – UNIVERSITIES RANKING OF DIGITAL MARKETING TOOLS USAGE

Label:

U1 Master in International Management by ISCTE Business School – Instituto Universitário De Lisboa;

U2 Masters in Management by Católica Porto Business School;

U3 Masters in Management by Nova School of Business and Economics;

U4 Master in Management by ISCTE Business School – Instituto Universitário de Lisboa;

U5 Masters in International Management by Nova School Of Business And Economics;

U6 CEMS Master's in International Management (CEMS MIM) by CEMS – The global Alliance in Management Education;

U7 Master in Management by University of Algarve;

U8 MPhil in Management by Oporto Global University - Universidade Portucalense;

U9 Master in Management of Services and Technology by ISCTE Business School – Instituto Universitário De Lisboa;

U10 Master in Management Studies by University of Minho – School of Economics and Management;

U11 Master in Management by University of Porto School Of Economics And Management;

U12 QTEM - Quantitative Techniques for Economics and Management by University of Porto School Of Economics And Management;

U13 Master in Management by Polytechnic Institute of Bragança;

U14 Master's Degree In Management Of Social Economy Organizations by Instituto Politécnico De Santarém;

U15 Master's Degree In Management by Universidade De Évora;

U16 Master's Degree in Management by Universidade Europeia;

U17 Master In Traffic, Mobility And Road Safety by IMF Business School Portugal;

U18 Management Advisory by Instituto Superior De Contabilidade E Administração Do Porto

U19 Management of Organizations by Instituto Superior De Contabilidade e Administração Do Porto;

U20 Master's Degree In Management And Business Strategy by Universidade Europeia;

FW1 Factor Website: Desciptive info page

FW2 Factor Website: Tuition Fee

FW3 Factor Website: curriculum

FW4 Factor Website: faculty members

FW5 Factor Website: accreditations/emp opp info

FW6 Factor Website: adm and recru process

FW7 Factor Website: Easy to find info

FC1 Factor Content Marketing and Presence in Social Media: LinkedIn

FC2   Factor Content Marketing and Presence in Social Media: Facebook

FC3   Factor Content Marketing and Presence in Social Media: Twitter

FC4   Factor Content Marketing and Presence in Social Media: Youtube

FC5   Factor Content Marketing and Presence in Social Media: Other SM

FC6   Factor Content Marketing and Presence in Social Media: Blogs

FS1   Factor Search Engine Marketing: SEO (Google first ranking)

FS2   Factor Search Engine Marketing: SEM (Ads)

Table 6 Universities ranking according to usage of digital marketing tools

	FW1	FW2	FW3	FW4	FW5	FW6	FW7	Subtotal	FC1	FC2	FC3	FC4	FC5	FC6	Subtotal	FS1	FS2	Subtotal	Total
U1	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.98	0	0	0	0	0.2	0.2	0.34	0.5	0	0.5	1.82
U2	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.98	0	0	0	0	0.2	0.2	0.34	0.5	0	0.5	1.82
U3	0.14	0.14	0.14	0	0.14	0.14	0.14	0.84	0	0	0	0	0.2	0.2	0.34	0.5	0	0.5	1.68
U4	0.14	0.14	0.14	0	0.14	0.14	0.14	0.84	0	0	0	0	0.2	0.2	0.34	0.5	0	0.5	1.68
U5	0.14	0.14	0.14	0	0.14	0.14	0.14	0.84	0	0	0	0	0.2	0.2	0.34	0.5	0	0.5	1.68
U6	0.14	0.14	0.14	0	0.14	0.14	0.14	0.84	0	0	0	0	0.2	0.2	0.34	0.5	0	0.5	1.68
U7	0.14	0	0.14	0.14	0.14	0.14	0.14	0.84	0	0	0	0	0.2	0.2	0.34	0.5	0	0.5	1.68
U8	0.14	0.14	0.14	0	0.14	0.14	0.14	0.84	0	0	0	0	0.2	0.2	0.34	0.5	0	0.5	1.68
U9	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.98	0	0	0	0	0.2	0	0.17	0.5	0	0.5	1.65
U10	0.14	0.14	0.14	0	0.14	0.14	0.14	0.84	0	0	0	0	0.2	0	0.17	0.5	0	0.5	1.51

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	U11	U12	U13	U14	U15	U16	U17	U18	U19	U20
	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0	0.14
	0.14	0	0	0.14	0.14	0	0	0	0	0
	0	0	0.14	0.14	0.14	0	0.14	0.14	0	0
	0	0	0	0.14	0.14	0	0.14	0	0	0
	0	0.14	0	0	0	0	0	0	0	0
	0.14	0.14	0.14	0.14	0	0	0	0	0	0
	0.14	0.14	0.14	0	0	0	0.14	0	0	0
	0.56	0.56	0.56	0.7	0.56	0.14	0.56	0.28	0	0.14
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0.2	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0.2	0.2	0	0.2	0.2	0	0	0.2	0.2	0
	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	0.34	0.34	0.17	0.51	0.34	0.17	0.17	0.34	0.34	0.17
	0.5	0.5	0.5	0	0	0.5	0	0	0	0
	0	0	0	0	0.5	0	0	0	0	0
	0.5	0.5	0.5	0	0	0.5	0	0	0	0
	1.4	1.4	1.23	1.21	0.9	0.81	0.73	0.62	0.34	0.31

9.2. ANNEX 2 - SURVEY

Survey Link:

https://docs.google.com/forms/d/e/1FAIpQLSeBYO18w_WxsN_bIjXSzwSdPAWXl

F0x_ewDUj15poFsW6w-aw/viewform?usp=sf_link

Figure 8 Survey Section I

Digital Strategy in Higher Education

Hello,
I am Teresa Silva and I am currently studying International Management (Master Program) at ISCTE
Business School (Lisbon, Portugal). I am working under the supervision of Professor Álvaro Rosa
and for my thesis, I am researching about digital strategy in Management Master Programs in
Portugal and to evaluate the quality of the programs.

Summary Description:
I am inviting you for a survey regarding your opinion on the quality of the management master
programs in Portugal (either you are interested in becoming a future master student, you are
studying currently or you already finished your studies). The survey will not take longer than fifteen
minutes to complete. The questions are about the topic mentioned and has also demographic
characteristics-based questions.

Voluntariness and confidentiality
Participation in this study is voluntary. You may decline to answer a question by leaving it blank,
and you may withdraw your participation at any time by not submitting your responses. There are
no known or anticipated risks associated with participation in this study. All data will be kept
strictly confidential.

* Required

Consent of Participation *

With full knowledge of all foregoing, I agree, of my own free will, to participate in this study. If you
do not wish to participate, please close your web browser.

☐ I agree to participate (Take the survey now)

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Figure 9 Survey Section II

Digital Strategy in Higher Education

* Required

Interests in Management Master Programs

1. What is your relation with management master programs? *

○ I am interested in applying for one

○ I am taking a management master degree at the moment

○ I finished my management master degree

○ I do not have any relation

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Figure 10 Survey Section III

Digital Strategy in Higher Education

* Required

Part I - Demographics

Gender: *

○ Female

○ Male

○ Prefer not to answer

Age *

○ <17

○ 18-21

○ 21-24

○ 25-30

○ 30-45

○ >45

○ Prefer not to anwser

Which Country do you reside? *

Your answer

Education *

○ Primary education

○ Secondary education

○ Professional degree

○ Bachelor Education

○ Post graduatation

○ Masters or equivalent

○ Doctorial or equivalent

○ Prefer not to answer

Marital Status *

○ Single (never married)

○ Married or with Domestic Partner

○ Divorced/separated

○ Prefer not to answer

Household Composition: Nº of household members *

Your answer

Employment Status: are you currently...? *

○ Student

○ Employed for wages

○ Self-employed

○ Out of work and looking for work

○ Out of work but not currently looking for work

○ A homemaker

○ Military

○ Retired

○ Unable to work

○ Other

Hourshehold Income: Gross Monthly Salary (€) *

○ <600

○ 600-799

○ 800-999

○ 1000-1499

○ 1500-1999

○ 2000 – 2499

○ >2500

○ No Income

○ Prefer not to answer

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Figure 11 Survey Section IV, Part 1

Part II - Research, Quality and Education Criteria

This section will focus on the beginning of your decision journey - the research fase.

1. What were the sources used to search for a Management Master Programs in Portugal? *

- [ ] Events and fairs

- [ ] Social Media

- [ ] Search Engines Like Google

- [ ] E-mail

- [ ] Blogs

- [ ] Website of the university

- [ ] Ads

- [ ] Recommendations of friends and parents

- [ ] Alumni referrals

- [ ] Other

2. Please rank the importance of the following criteria used to choose the management master program, according to a scale from 1 - "Not important at all" to 5 - "Extremely important" *

	1 - Not Important at All	2	3	4	5 - Extremely Important
Rank Position	○	○	○	○	○
Quality of Curriculum and teaching members of the program	○	○	○	○	○
Recommendations from Alumni and parents, and reviews from friends	○	○	○	○	○
Employment Opportunities after graduation	○	○	○	○	○
Available information Online such as services provided info, students life info, campus info, FAQs and easy application process	○	○	○	○	○
Geographic Location	○	○	○	○	○

Figure 12 Survey Section IV, Part 2

3. Which element would be the most important decision factor to choose the Management Master Program in your opinion? *

○ Recommendations from Alumni

○ Quality of education and curriculum;

○ Scholarship/Financial Assistance; Tuition fees and study costs;

○ Reputation / rankings (accreditation)

○ Geographical location and transportation system;

○ Teaching members and curriculum

○ Infrastructure (Physical buildings);

○ Employment opportunities

○ Admission process and placement;

○ Did not succeed in enrollment to other institution:

○ Other: _____

4. Overall, how do you rate the quality of the management program and educational service provided so far? *

Choose the option that you most identify with: 1. Unacceptable; 2. Poor; 3. Adequate; 4. Good; 5. Excellent

	1	2	3	4	5	
Unacceptable	○	○	○	○	○	Excellent

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Figure 13 Survey Section V, Part 1

Part III - Information Available

1. Was it easy to find satisfactory information available online regarding the program? *

○ Yes

○ No

○ Other: _____

2. Was the website intuitive and content-wise adequate? *

○ Yes

○ No

○ Other: _____

3. How was the application and recruitment process? *

○ In Person

○ Online/Digital

○ Mix

○ Other:

4. What is your level of confidence you believe is in the delivery of accurate and relevant information presented by institutions? *

	1	2	3	4	5	
Very Unlikely	○	○	○	○	○	Certain

Figure 14 Survey Section V

5. Please rate the following according to a scale from 1 – "Strongly Disagree" to 7 – "Strongly Agree" that you relate the most as an element that delivers the best student experience * *

	1 - Strongly Disagree	2 - Somewhat Disagree	3 - N/A or neither agree nor disagree	4 - Somewhat Agree	5 - Strongly Agree
Acquired knowledge responds to my expectations	○	○	○	○	○
High program quality	○	○	○	○	○
Adequate resources (library, PCs, classrooms, presentation equipment, and similar)	○	○	○	○	○
High quality of work of teaching staff	○	○	○	○	○
High quality of work by non-teaching staff	○	○	○	○	○
Good knowledge and capabilities of teaching staff	○	○	○	○	○
Good knowledge and capabilities of non-teaching staff	○	○	○	○	○
Credibility of teaching staff	○	○	○	○	○
Good organization of schedule	○	○	○	○	○
Good organization of opening hours	○	○	○	○	○
Good reputation of institution	○	○	○	○	○
Good online system (e-learning platform, wi-fi, etc)	○	○	○	○	○

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Figure 15 Survey Section VI, Part 1

PART IV - Digital in Higher Education

1. Which Social Media are you present? *

☐ Facebook

☐ Twitter

☐ Youtube

☐ LinkedIn

☐ Instagram

☐ Pinterest

☐ Other: _____

2. Did you search in Google (Search Engine) for the program? *

○ Yes

○ No

○ Other: _____

3. Did you come into contact with other promotional tools? (e.g leaflet, events, etc) *

○ Yes

○ No

4. Is the Management Master Program present in any Social Media? *

○ Yes

○ No

○ Other: _____

Figure 16 Survey Section VI, Part 2

5. Do you feel the university lacks an online presence and interaction with its students? *

○ Yes

○ No

○ Not Sure

○ Other: _____

6. How would you like to find information regarding the Management Master Program? *

☐ Social Media such as Facebook, Youtube and Instagram

☐ Mobile Application

☐ Events and Campagins

☐ Blogs

☐ Email

☐ Other: _____

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Digital Strategy in Higher Education

Your response has been recorded.

Submit another response

9.3. ANNEX 3 – RELIABILITY ANALYSIS

Table 7 Pre-test: Summary Statistics (Items)

Variable	Observations	Obs. with missing data	Obs. without missing data	Minimum	Maximum	Mean	Std. deviation
C2.1	16	0	16	2.000	5.000	3.875	0.885
c2.2	16	0	16	3.000	5.000	3.875	0.719
c2.3	16	0	16	1.000	5.000	3.688	1.138
c2.4	16	0	16	2.000	5.000	4.563	0.892
c2.5	16	0	16	2.000	5.000	3.688	1.078
c2.6	16	0	16	1.000	5.000	3.313	1.401
C4	16	0	16	2.000	5.000	3.688	0.704
D4	16	0	16	2.000	5.000	3.750	0.683
D5.1	16	0	16	1.000	5.000	4.063	1.063
D5.2	16	0	16	3.000	5.000	4.000	0.730
D5.3	16	0	16	2.000	5.000	3.625	0.806
D5.4	16	0	16	2.000	5.000	4.250	0.856
D5.5	16	0	16	2.000	5.000	3.438	1.094
D5.6	16	0	16	2.000	5.000	4.188	0.911
D5.7	16	0	16	2.000	5.000	3.375	0.885
D5.8	16	0	16	2.000	5.000	3.875	1.025
D5.9	16	0	16	2.000	5.000	3.938	0.854
D5.10	16	0	16	2.000	5.000	3.500	1.033
D5.11	16	0	16	2.000	5.000	4.438	0.964
D5.12	16	0	16	2.000	5.000	4.063	0.772

Source: Own elaboration on Excel

Table 8 Pre-test: Summary Statistics (Scale)

Variable	Observations	Obs. with missing data	Obs. without missing data	Minimum	Maximum	Mean	Std. deviation
Scale	16	0	16	55.000	93.000	77.188	10.622

Source: Own elaboration on Excel

Table 9 Pre-test: Correlation Matrix

Variables	C2.1	c2.2	c2.3	c2.4	c2.5	c2.6	C4	D4	D5.1	D5.2
C2.1	1	0.288	0.554	0.179	0.306	-0.020	0.575	0.606	0.576	0.103
c2.2	0.288	1	0.112	-0.091	0.290	0.240	0.445	0.204	0.011	0.254
c2.3	0.554	0.112	1	0.447	0.567	0.107	0.452	0.321	0.458	0.241
c2.4	0.179	-0.091	0.447	1	0.126	0.010	0.086	0.027	-0.110	-0.102
c2.5	0.306	0.290	0.567	0.126	1	0.378	0.653	0.430	0.367	0.508
c2.6	-0.020	0.240	0.107	0.010	0.378	1	0.308	-0.122	0.120	0.130
C4	0.575	0.445	0.452	0.086	0.653	0.308	1	0.520	0.117	0.000
D4	0.606	0.204	0.321	0.027	0.430	-0.122	0.520	1	0.482	0.267
D5.1	0.576	0.011	0.458	-0.110	0.367	0.120	0.117	0.482	1	0.687
D5.2	0.103	0.254	0.241	-0.102	0.508	0.130	0.000	0.267	0.687	1
D5.3	-0.163	0.029	0.009	0.035	0.393	0.229	0.015	0.061	0.185	0.453
D5.4	0.132	0.054	0.222	-0.284	0.668	0.375	0.249	0.228	0.495	0.640
D5.5	0.129	0.159	0.064	-0.064	0.746	0.253	0.536	0.245	0.204	0.417
D5.6	0.031	0.344	0.189	-0.056	0.675	0.474	0.409	0.188	0.263	0.602
D5.7	-0.021	-0.131	0.058	-0.032	0.480	0.222	0.415	0.165	0.044	0.206
D5.8	0.055	-0.023	-0.093	-0.210	0.445	0.401	0.497	0.238	0.130	0.178
D5.9	0.165	0.204	0.116	0.049	0.339	-0.038	0.076	0.086	0.078	0.321
D5.10	0.365	0.359	0.595	0.109	0.688	0.115	0.413	0.283	0.456	0.530
D5.11	0.303	0.277	-0.049	-0.073	0.140	0.089	0.117	0.278	0.167	0.284
D5.12	0.305	-0.105	0.100	0.042	0.265	0.042	0.038	0.284	0.320	0.237

D5.3	D5.4	D5.5	D5.6	D5.7	D5.8	D5.9	D5.10	D5.11	D5.12
-0.163	0.132	0.129	0.031	-0.021	0.055	0.165	0.365	0.303	0.305
0.029	0.054	0.159	0.344	-0.131	-0.023	0.204	0.359	0.277	-0.105
0.009	0.222	0.064	0.189	0.058	-0.093	0.116	0.595	-0.049	0.100
0.035	-0.284	-0.064	-0.056	-0.032	-0.210	0.049	0.109	-0.073	0.042
0.393	0.668	0.746	0.675	0.480	0.445	0.339	0.688	0.140	0.265
0.229	0.375	0.253	0.474	0.222	0.401	-0.038	0.115	0.089	0.042
0.015	0.249	0.536	0.409	0.415	0.497	0.076	0.413	0.117	0.038
0.061	0.228	0.245	0.188	0.165	0.238	0.086	0.283	0.278	0.284
0.185	0.495	0.204	0.263	0.044	0.130	0.078	0.456	0.167	0.320
0.453	0.640	0.417	0.602	0.206	0.178	0.321	0.530	0.284	0.237
1	0.435	0.425	0.465	0.490	0.262	0.545	0.560	0.139	0.576
0.435	1	0.659	0.791	0.484	0.570	0.570	0.603	0.505	0.580
0.425	0.659	1	0.716	0.715	0.707	0.317	0.561	0.249	0.360
0.465	0.791	0.716	1	0.569	0.741	0.531	0.603	0.584	0.362
0.490	0.484	0.715	0.569	1	0.717	0.210	0.365	0.264	0.451
0.262	0.570	0.707	0.741	0.717	1	0.219	0.189	0.464	0.263
0.545	0.570	0.317	0.531	0.210	0.219	1	0.567	0.683	0.714
0.560	0.603	0.561	0.603	0.365	0.189	0.567	1	0.234	0.544
0.139	0.505	0.249	0.584	0.264	0.464	0.683	0.234	1	0.588
0.576	0.580	0.360	0.362	0.451	0.263	0.714	0.544	0.588	1

Source: Own elaboration on Excel

Table 10 Pre-test: Covariance Matrix

Variables	C2.1	c2.2	c2.3	c2.4	c2.5	c2.6	C4	D4	D5.1	D5.2
C2.1	**333**	0.183	0.558	0.142	0.292	-0.025	0.358	0.367	0.542	0.067
c2.2	0.183	**667**	0.092	-0.058	0.225	0.242	0.225	0.100	0.008	0.133
c2.3	0.558	0.092	**333**	0.454	0.696	0.171	0.363	0.250	0.554	0.200
c2.4	0.142	-0.058	0.454	**333**	0.121	0.013	0.054	0.017	-0.104	-0.067
c2.5	0.292	0.225	0.696	0.121	**1.1625**	0.571	0.496	0.317	0.421	0.400
c2.6	-0.025	0.242	0.171	0.013	0.571	**1.9625**	0.304	-0.117	0.179	0.133
C4	0.358	0.225	0.363	0.054	0.496	0.304	**0.495833**	0.250	0.088	0.000
D4	0.367	0.100	0.250	0.017	0.317	-0.117	0.250	**0.466667**	0.350	0.133
D5.1	0.542	0.008	0.554	-0.104	0.421	0.179	0.088	0.350	**1.129167**	0.533
D5.2	0.067	0.133	0.200	-0.067	0.400	0.133	0.000	0.133	0.533	**0.533333**
D5.3	-0.117	0.017	0.008	0.025	0.342	0.258	0.008	0.033	0.158	0.267
D5.4	0.100	0.033	0.217	-0.217	0.617	0.450	0.150	0.133	0.450	0.400
D5.5	0.125	0.125	0.079	-0.063	0.879	0.388	0.413	0.183	0.238	0.333
D5.6	0.025	0.225	0.196	-0.046	0.663	0.604	0.263	0.117	0.254	0.400
D5.7	-0.017	-0.083	0.058	-0.025	0.458	0.275	0.258	0.100	0.042	0.133
D5.8	0.050	-0.017	-0.108	-0.192	0.492	0.575	0.358	0.167	0.142	0.133
D5.9	0.125	0.125	0.113	0.038	0.313	-0.046	0.046	0.050	0.071	0.200
D5.10	0.333	0.267	0.700	0.100	0.767	0.167	0.300	0.200	0.500	0.400
D5.11	0.258	0.192	-0.054	-0.063	0.146	0.121	0.079	0.183	0.171	0.200
D5.12	0.208	-0.058	0.088	0.029	0.221	0.046	0.021	0.150	0.263	0.133

D5.3	D5.4	D5.5	D5.6	D5.7	D5.8	D5.9	D5.10	D5.11	D5.12
-0.117	0.100	0.125	0.025	-0.017	0.050	0.125	0.333	0.258	0.208
0.017	0.033	0.125	0.225	-0.083	-0.017	0.125	0.267	0.192	-0.058
0.008	0.217	0.079	0.196	0.058	-0.108	0.113	0.700	-0.054	0.088
0.025	-0.217	-0.063	-0.046	-0.025	-0.192	0.038	0.100	-0.063	0.029
0.342	0.617	0.879	0.663	0.458	0.492	0.313	0.767	0.146	0.221
0.258	0.450	0.388	0.604	0.275	0.575	-0.046	0.167	0.121	0.046
0.008	0.150	0.413	0.263	0.258	0.358	0.046	0.300	0.079	0.021
0.033	0.133	0.183	0.117	0.100	0.167	0.050	0.200	0.183	0.150
0.158	0.450	0.238	0.254	0.042	0.142	0.071	0.500	0.171	0.263
0.267	0.400	0.333	0.400	0.133	0.133	0.200	0.400	0.200	0.133
0.65	0.300	0.375	0.342	0.350	0.217	0.375	0.467	0.108	0.358
0.300	**0.733333**	0.617	0.617	0.367	0.500	0.417	0.533	0.417	0.383
0.375	0.617	**1.195833**	0.713	0.692	0.792	0.296	0.633	0.263	0.304
0.342	0.617	0.713	**0.829167**	0.458	0.692	0.413	0.567	0.513	0.254
0.350	0.367	0.692	0.458	**0.783333**	0.650	0.158	0.333	0.225	0.308
0.217	0.500	0.792	0.692	0.650	**1.05**	0.192	0.200	0.458	0.208
0.375	0.417	0.296	0.413	0.158	0.192	**0.729167**	0.500	0.563	0.471
0.467	0.533	0.633	0.567	0.333	0.200	0.500	**1.066667**	0.233	0.433
0.108	0.417	0.263	0.513	0.225	0.458	0.563	0.233	**0.929167**	0.438
0.358	0.383	0.304	0.254	0.308	0.208	0.471	0.433	0.438	**0.595833**

Source: Own elaboration on Excel

Table 11 Pre-test: Analysis of Variance

Source	DF	Sum of squares	Mean squares	F	Pr > F
Between subjects	15	84.622	5.641	8.886	**< 0.0001**
Within subjects	304	216.050	0.711		
Between measures	19	35.109	1.848	2.911	**< 0.0001**
Residual	285	180.941	0.635		
Total	319	300.672	0.943		

*Computed against model Y=Mean(Y)

Source: Own elaboration on Excel

Table 12 Pre-test: Cronbach's Alpha Statistics

Cronbach's alpha	Standardized Cronbach's Alpha
0.887	0.892

Source: Own elaboration on Excel

Table 13 Pre-test: Guttman's Statistics

Guttman L1	Guttman L2	Guttman L3	Guttman L4	Guttman L5	Guttman L6
0.843	0.902	0.887	0.991	0.881	1.000

Source: Own elaboration on Excel

Table 14 Pre-Test: Display Of The Best Split-Half

Split-Half 1	Split-Half 2
c2.2	C2.1
c2.4	c2.3
c2.5	c2.6
C4	D4
D5.1	D5.2
D5.3	D5.5
D5.4	D5.6
D5.8	D5.7
D5.10	D5.9
D5.11	D5.12

Source: Own elaboration on Excel

Table 15 Pre-Test: Deleted Items Statistics

Variable	\<Scale/deleted item> Mean	\<Scale/deleted item> Variance	\<Scale/deleted item> Correlation	\<Scale/deleted item> R²	\<Scale/deleted item> Cronbach's alpha	\<Scale/deleted item> Guttman L6
C2.1	73.313	104.896	0.394	1.000	0.885	1.000
c2.2	73.313	108.363	0.264	1.000	0.888	1.000
c2.3	73.500	102.267	0.402	1.000	0.886	1.000
c2.4	72.625	111.717	0.017	1.000	0.896	1.000
c2.5	73.500	94.800	0.803	1.000	0.871	1.000
c2.6	73.875	102.250	0.304	1.000	0.893	1.000
C4	73.500	104.267	0.561	1.000	0.881	1.000
D4	73.438	106.396	0.423	1.000	0.885	1.000
D5.1	73.125	101.983	0.453	1.000	0.884	1.000
D5.2	73.188	104.029	0.555	1.000	0.881	1.000
D5.3	73.563	104.396	0.472	1.000	0.883	1.000
D5.4	72.938	99.129	0.760	1.000	0.875	1.000
D5.5	73.750	96.867	0.686	1.000	0.876	1.000
D5.6	73.000	97.467	0.808	1.000	0.873	1.000
D5.7	73.813	102.563	0.529	1.000	0.881	1.000
D5.8	73.313	100.763	0.536	1.000	0.881	1.000
D5.9	73.250	103.267	0.509	1.000	0.882	1.000
D5.10	73.688	96.496	0.752	1.000	0.874	1.000
D5.11	72.750	103.000	0.455	1.000	0.884	1.000
D5.12	73.125	103.717	0.542	1.000	0.881	1.000

Source: Own elaboration on Excel

9.4. ANNEX 4 – SAMPLE CHARACTERIZATION (SC)

For the Sample Characterization, apart from the univariant analysis of each question of the questionnaire that give the frequencies or percentage, a further descriptive analysis was performed to determine the following main results:

i. ***Median***: the exact middle value of the set of values;

ii. ***Mean***: the average of the set of values; also, it described the central tendency of the data analyzed;

iii. ***Mode***: The most frequent occurring answer for that variable;

iv. ***Minimum, Maximum, Range and Quartiles:*** basic measure of spread of the surveyed data and they determine spread of data values; including minimum value and maximum and divide then into quartiles (25%, 50%, 75%);

v. ***Variance and standard deviation***; basic measure of how much each individual response differs from the mean of all responses and the measure of spread of values in a distribution (how much the values vary from the mean);

vi. If it follows a ***Normal distribution***: it assumes that the data are distributed normally. Some variables do not follow a normal distribution, and therefore other correlations and tests should be used instead;

vii. ***Kurtosis and skewness***: it measures the degree of which a set of data values differs from the normal distribution. The first one refers to the whole extent of the distribution curve and how distant with more extreme or less possible data values than normal distribution; the second one refers to the measure of the asymmetry of the distribution, which means it is the extent to which the tails of the data are more drawn to one side than the other or if it is balances (=0).

viii. ***Chi-Square test***: Since this test compares the observed frequencies with expected frequencies, it gives the states of independence of variables (with a null-hypothesis type test, it compares p-value and significance level of 0.05, and if the first is less or equal than the significance level, than the null-hypothesis is rejected).

Figure 17 Sample Characterization (SC) Survey Response Rate
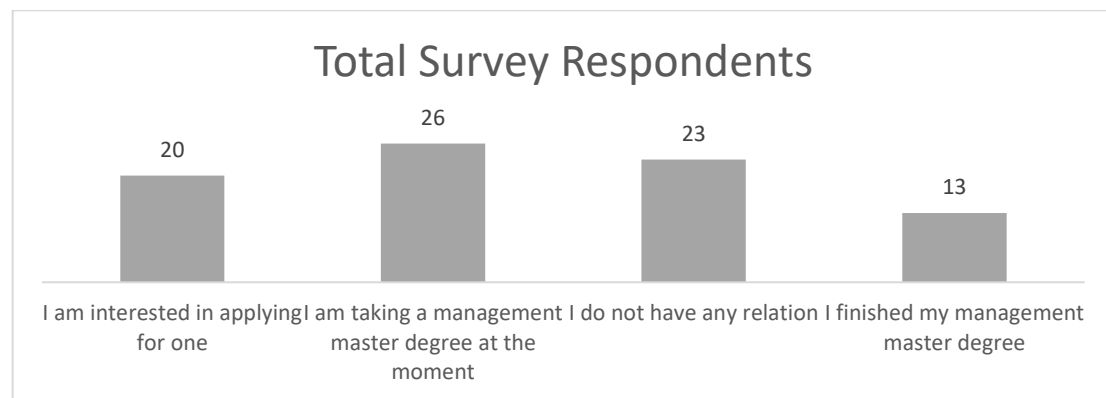
Source: Own Elaboration in Excel

Figure 18 SC: Gender
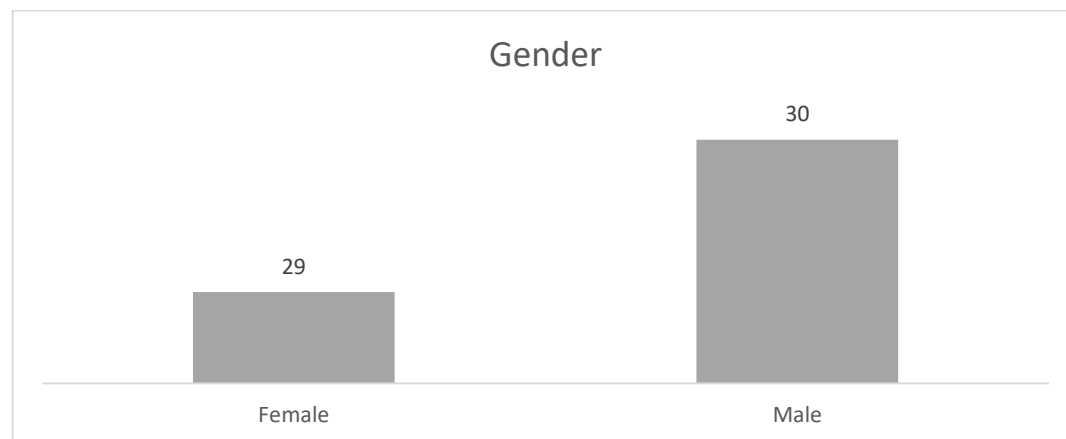
Source: Own Elaboration in Excel

Figure 19 SC: Age
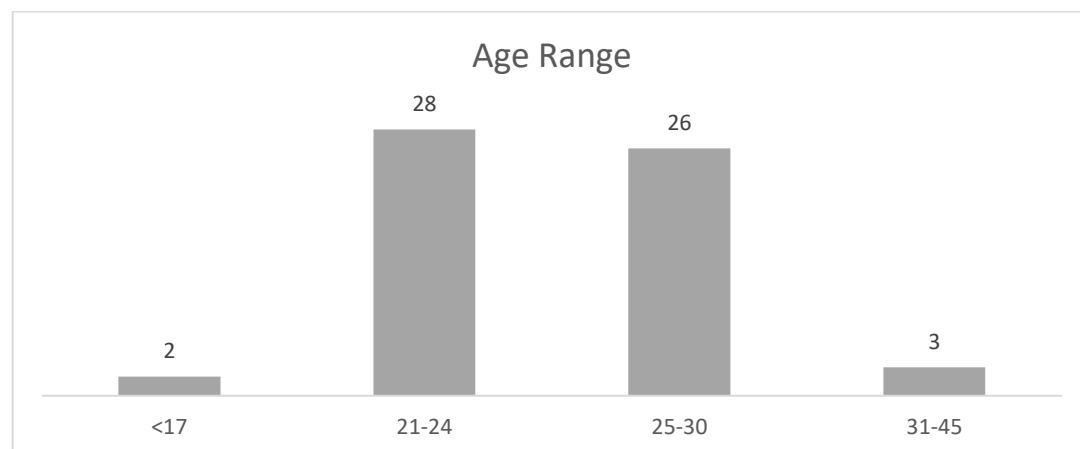
Source: Own Elaboration in Excel

Figure 20 SC: Country of Residence Part 1
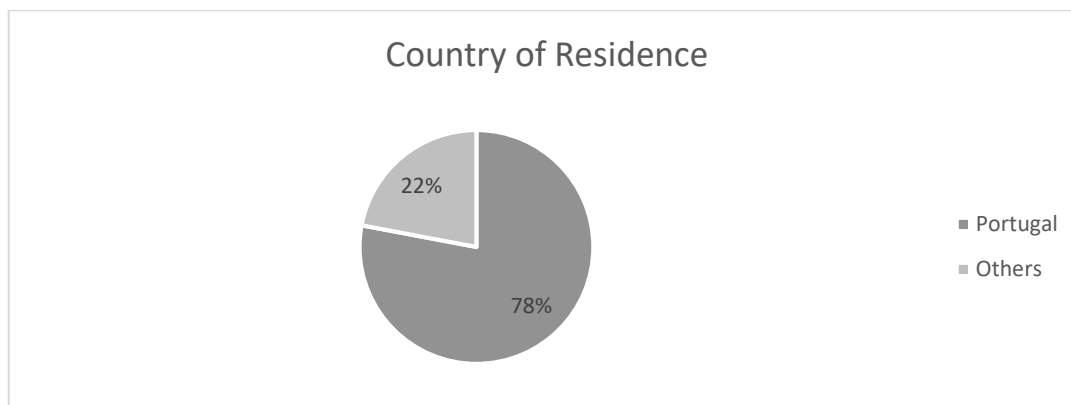
Source: Own Elaboration in Excel

Figure 21 SC: Other Countries of Residence Part II
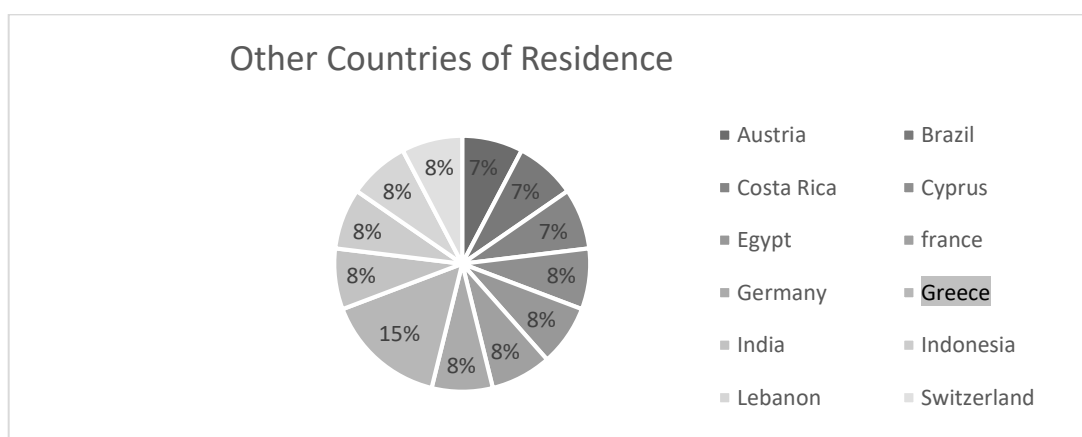
Source: Own Elaboration in Excel

Figure 22 SC: Education
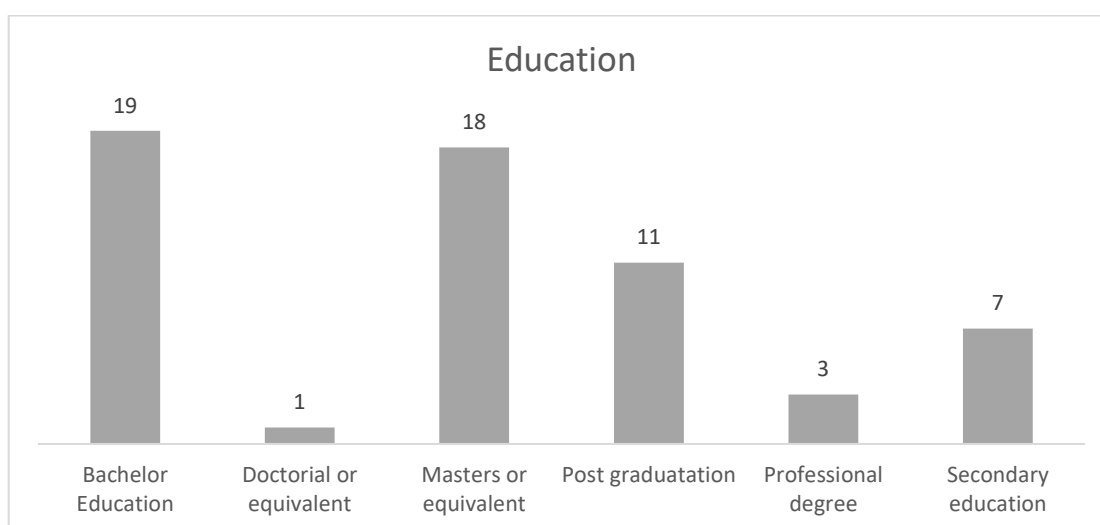
Source: Own Elaboration in Excel

Figure 23 SC: Marital Status
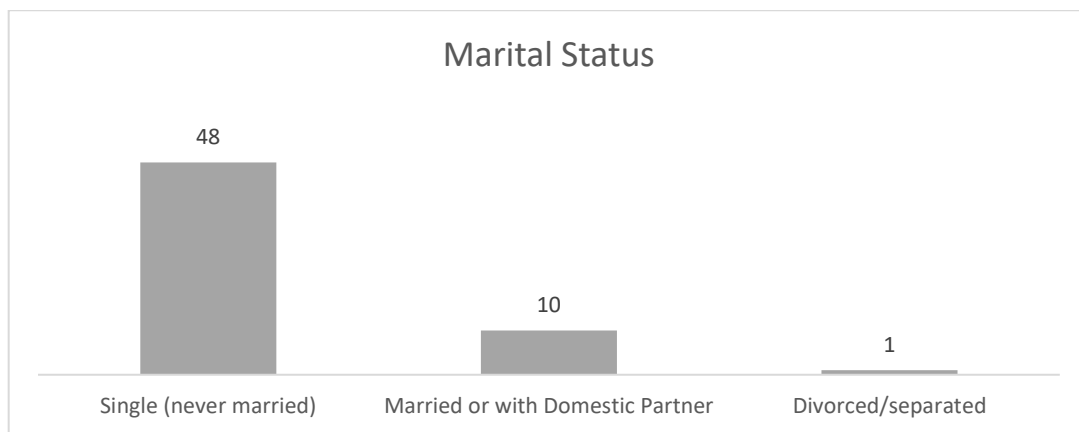
Source: Own Elaboration in Excel

Figure 24 SC: Nº Household Members
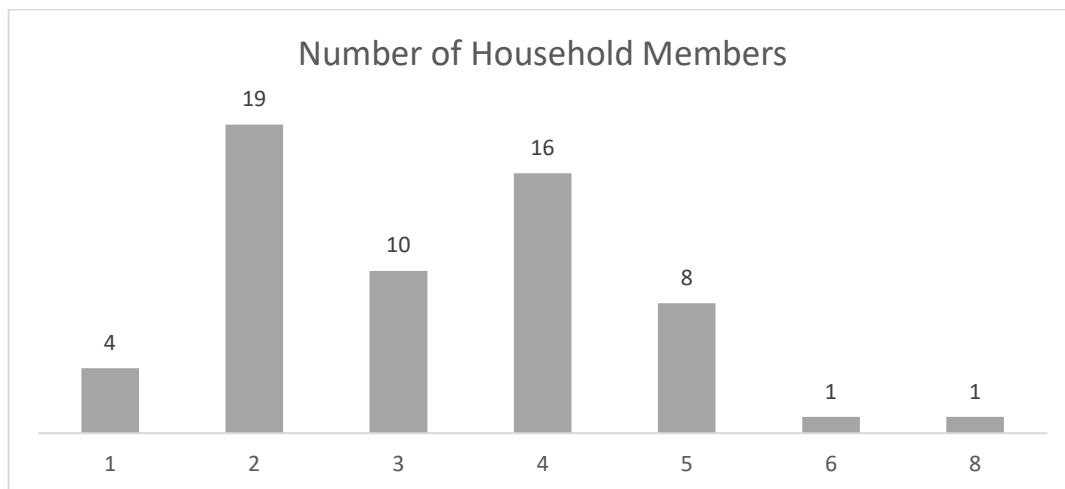
Source: Own Elaboration in Excel

Figure 25 SC: Employment Status
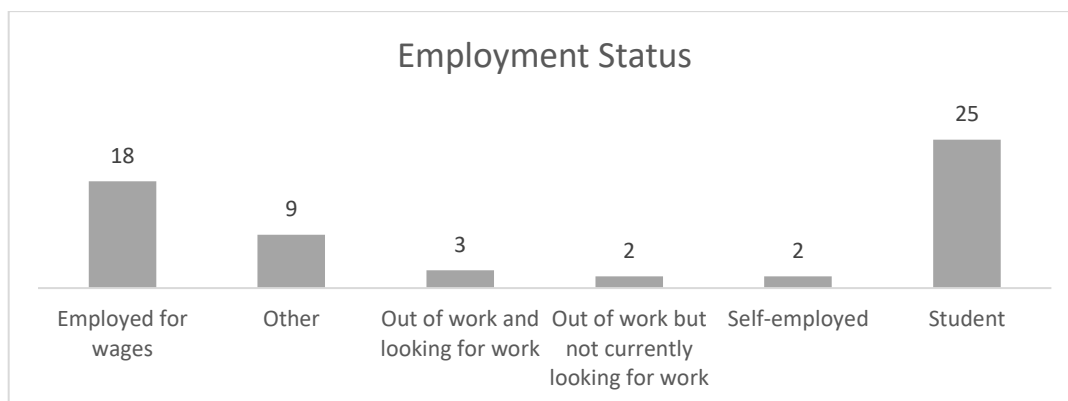
Source: Own Elaboration in Excel

Figure 26 SC: Household Income
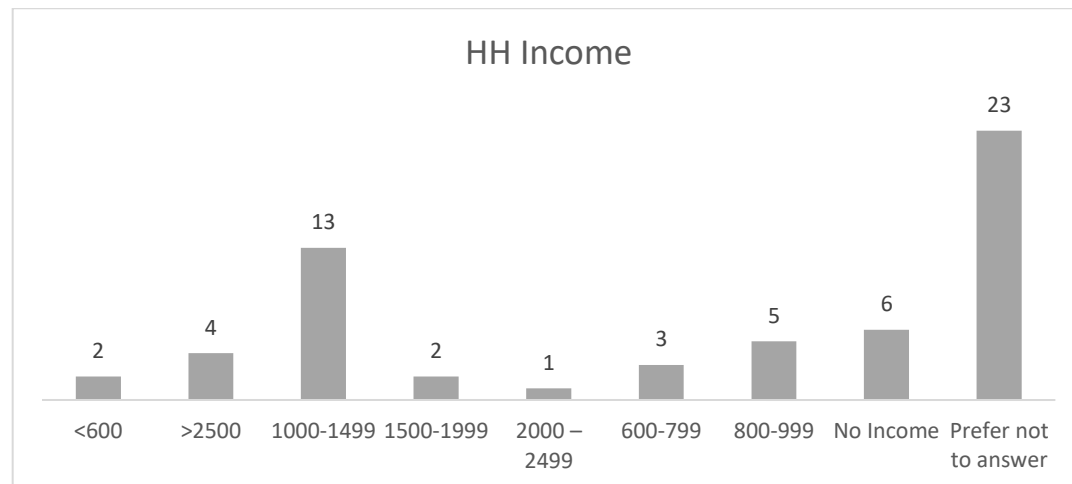
Source: Own Elaboration in Excel

Table 16 Descriptive Analysis on Demographic Variables (Section III)

Statistic	B1 Gender	B2 Age	B3 Country 1	B4 Education	B5 Marital Status	B6 HH	B7 Employ Status	B8 HH€
Minimum	1.000	1.000	1.000	2.000	1.000	1.000	1.000	1.000
Maximum	2.000	5.000	2.000	7.000	3.000	8.000	10.000	9.000
Range	1.000	4.000	1.000	5.000	2.000	7.000	9.000	8.000
1st Quartile	1.000	3.000	1.000	4.000	1.000	2.000	1.000	4.000
Median	2.000	3.000	1.000	5.000	1.000	3.000	2.000	7.000
3rd Quartile	2.000	4.000	1.000	6.000	1.000	4.000	3.000	9.000
Sum	89.000	205.000	72.000	269.000	71.000	190.000	179.000	374.000
Mean	1.508	3.475	1.220	4.559	1.203	3.220	3.034	6.339
Variance (n-1)	0.254	0.564	0.175	1.802	0.199	1.968	9.826	7.331
Standard deviation (n-1)	0.504	0.751	0.418	1.343	0.446	1.403	3.135	2.708
Skewness (Pearson)	-0.034	-0.775	1.349	-0.451	2.043	0.661	1.598	-0.390
Skewness (Fisher)	-0.035	-0.795	1.385	-0.463	2.096	0.678	1.640	-0.400
Kurtosis (Pearson)	-1.999	2.218	-0.179	-0.660	3.415	0.656	0.937	-1.399
Kurtosis (Fisher)	-2.070	2.527	-0.086	-0.611	3.832	0.824	1.130	-1.417
Chi-square (Observed value)	479.023	133.273	485.140	82.539	454.901	46.851	191.129	100.848
Chi-square (Critical value)	14.067	14.067	14.067	14.067	14.067	14.067	14.067	14.067
DF	7	7	7	7	7	7	7	7
p-value (Two-tailed)	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
alpha	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05

Source: Own Elaboration in Excel

Figure 27 SC: Sources Used - Events
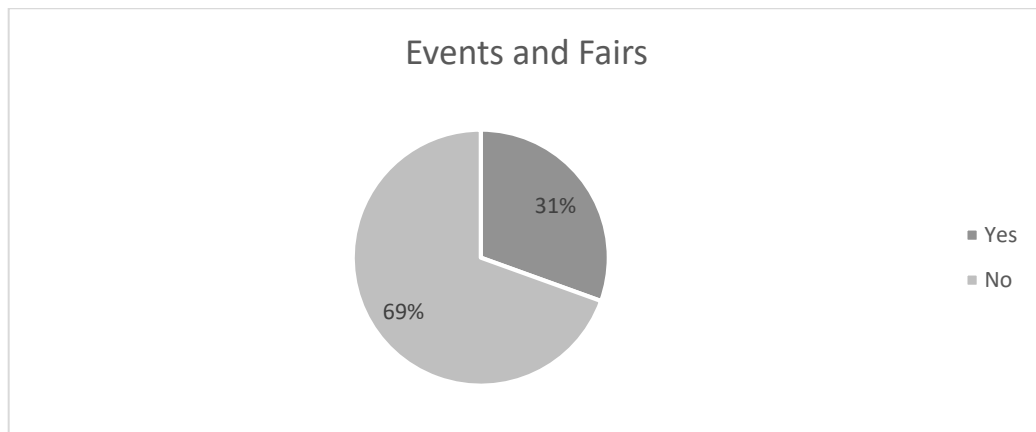
Source: Own Elaboration in Excel

Figure 28 SC: Sources Used - Social Media
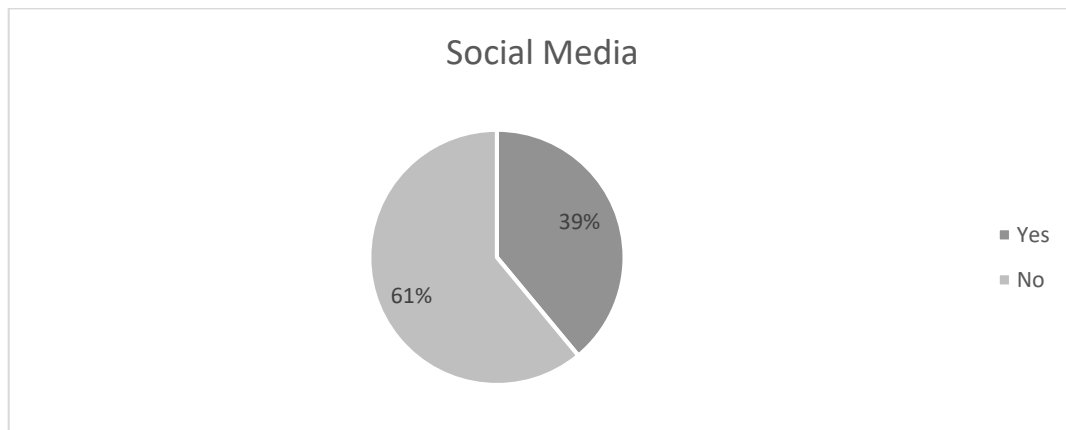
Source: Own Elaboration in Excel

Figure 29 SC: Sources Used – Search Engines
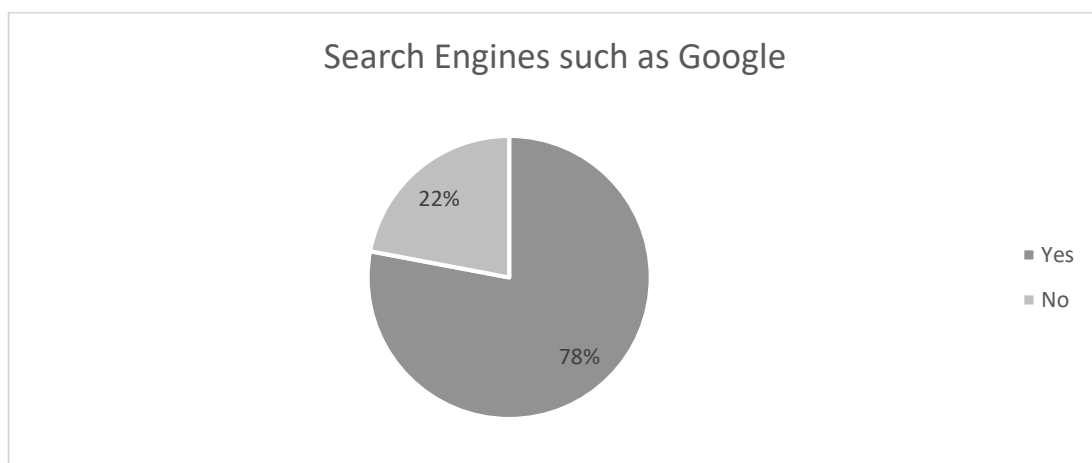
Source: Own Elaboration in Excel

Figure 30 SC: Sources Used – E-mail
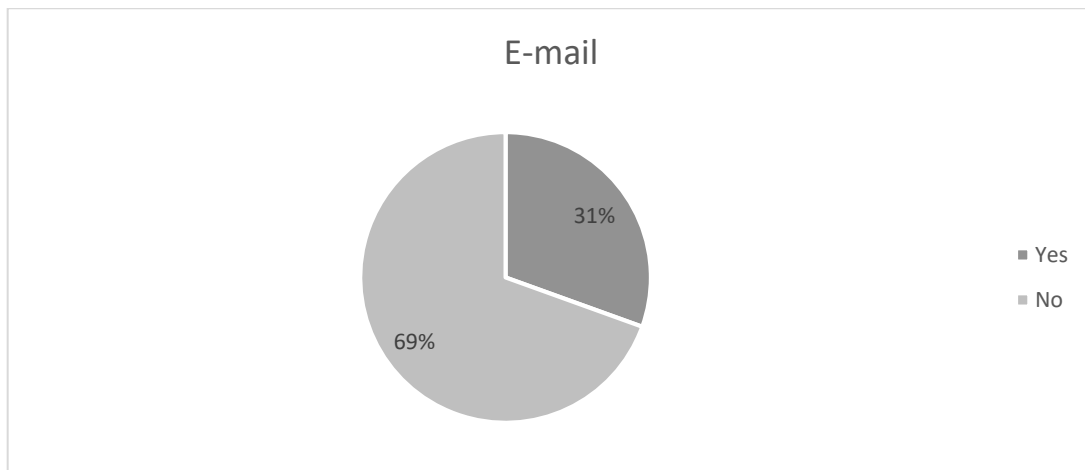
Source: Own Elaboration in Excel

Figure 31 SC: Sources Used - Blogs
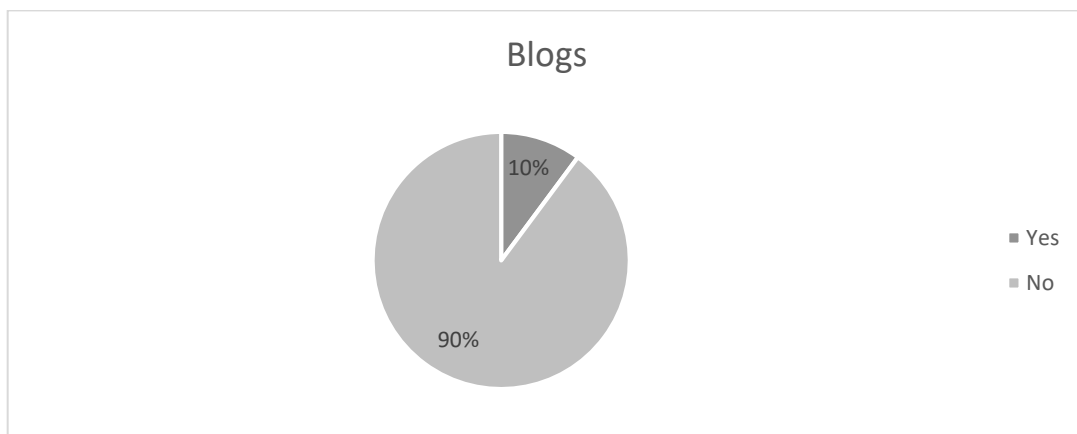
Source: Own Elaboration in Excel

Figure 32 SC: Sources Used - Website of the University
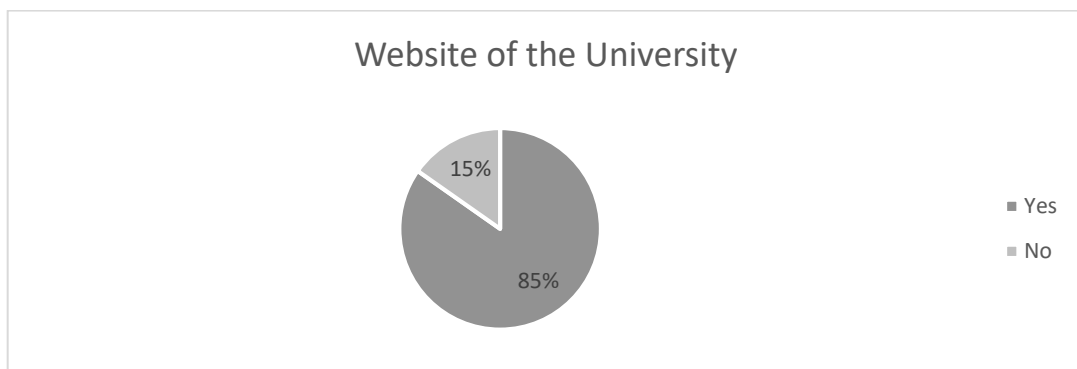
Source: Own Elaboration in Excel

Figure 33 SC: Sources Used - Ads

Ads

27% Yes
73% No
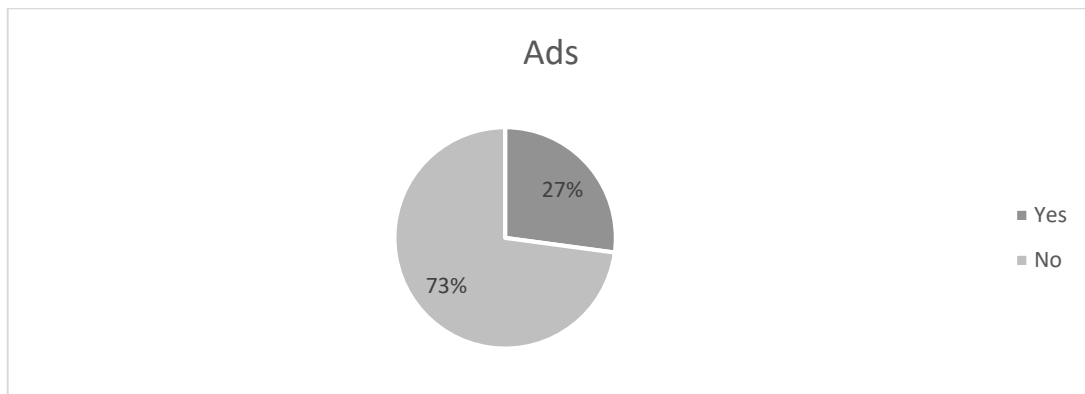
Source: Own Elaboration in Excel

Figure 34 SC: Sources Used - Recommendations from Friends and Parents

Recommendations from friends and parents

31%
69%
Yes
No
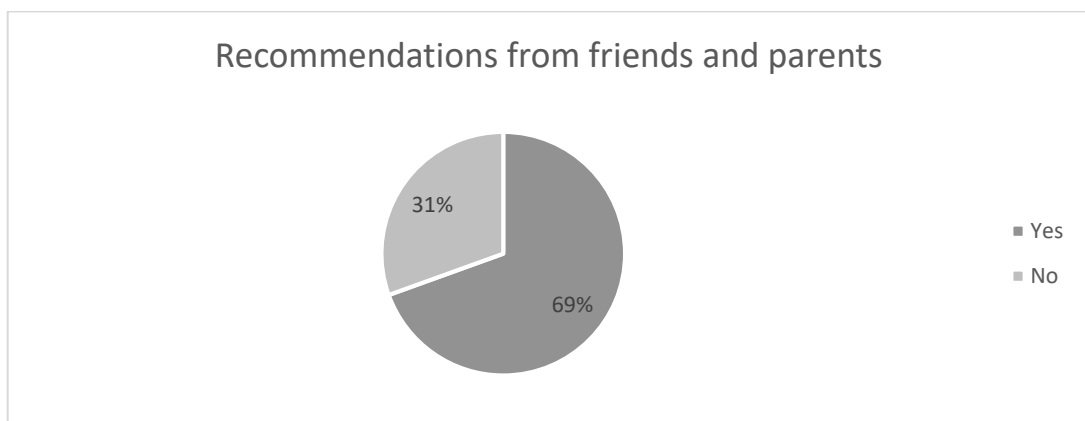
Source: Own Elaboration in Excel

Figure 35 SC: Sources Used - Alumni Referrals

Alumni Referrals

37% Yes
63% No
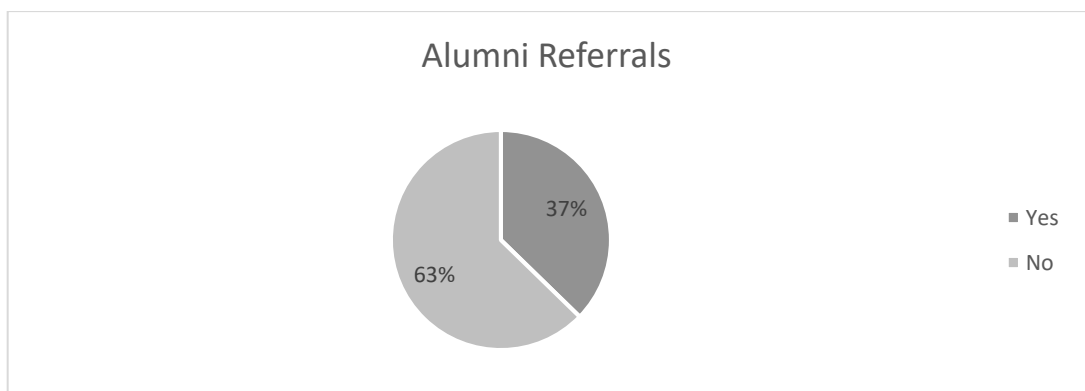
Source: Own Elaboration in Excel

Figure 36 SC: Sources Used - Others
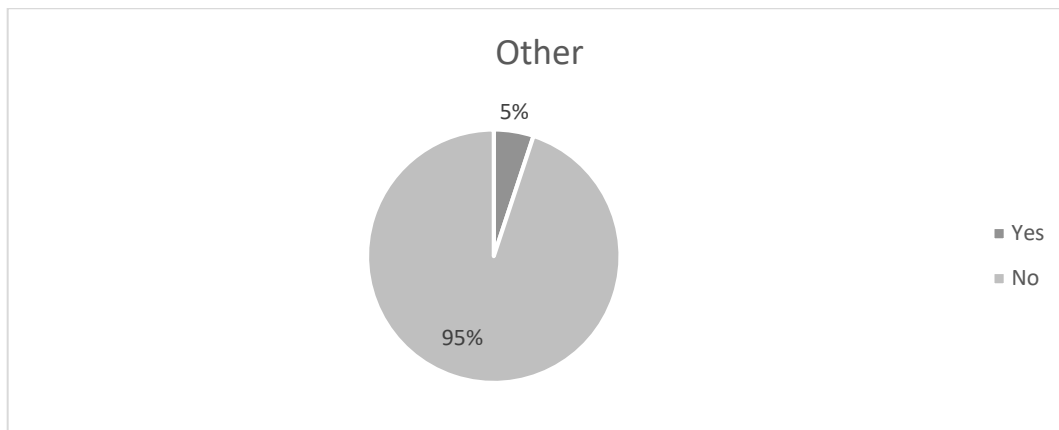
Source: Own Elaboration in Excel

Figure 37 SC: Rank Position Importance
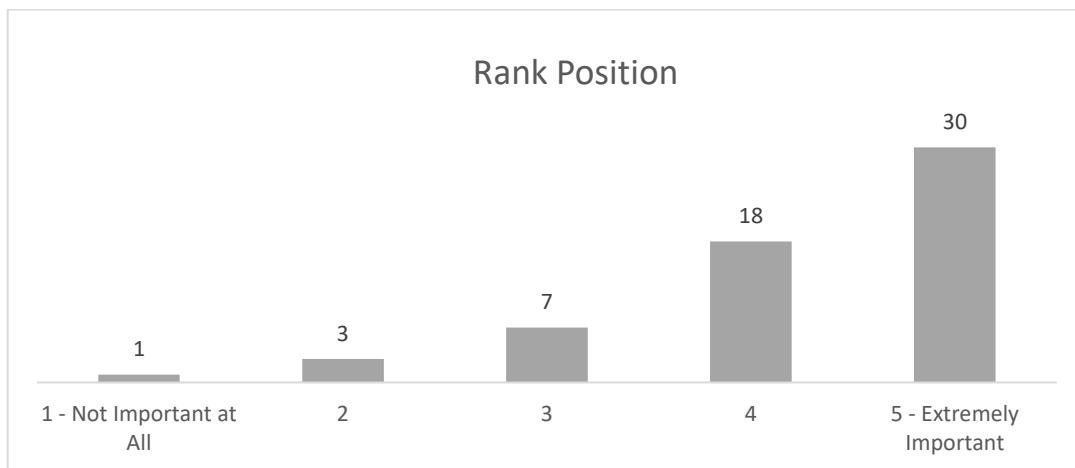
Source: Own Elaboration in Excel

Figure 38 SC: Quality Importance
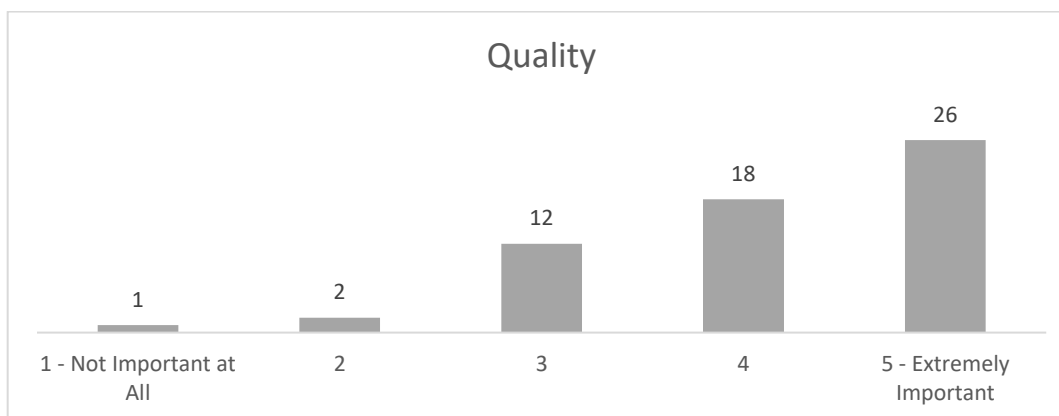
Source: Own Elaboration in Excel

Figure 39 SC: Recommendations from Alumni, Friends and Parents Importance
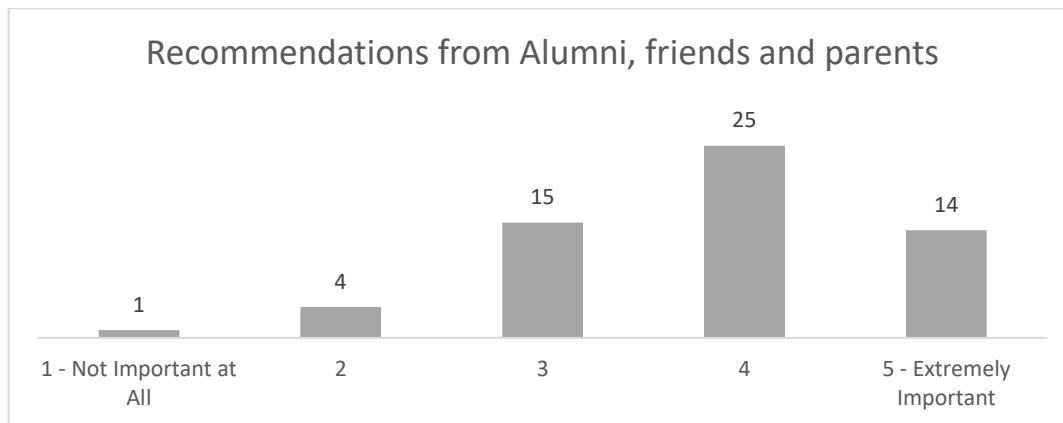
Source: Own Elaboration in Excel

Figure 40 SC: Employment Opportunities Importance
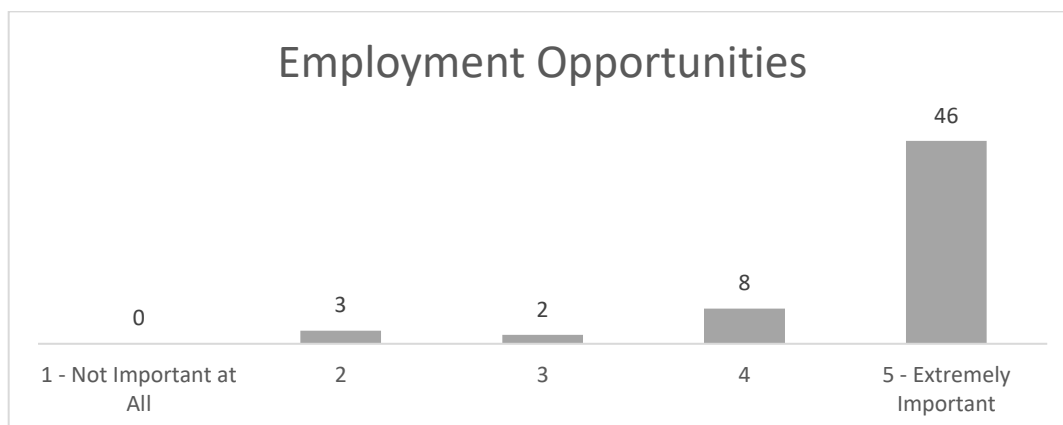
Source: Own Elaboration in Excel

Figure 41 SC: Information Available Online Importance
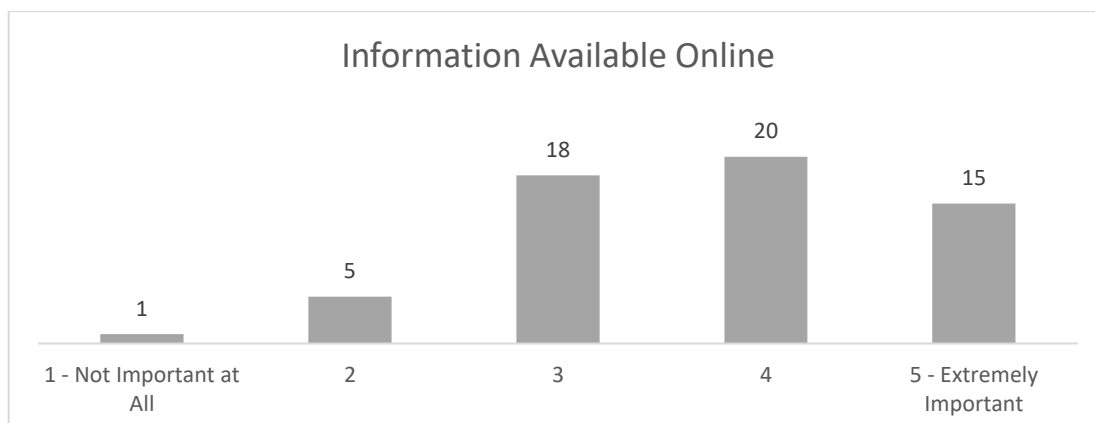
Source: Own Elaboration in Excel

Figure 42 SC: Geographic Location Importance
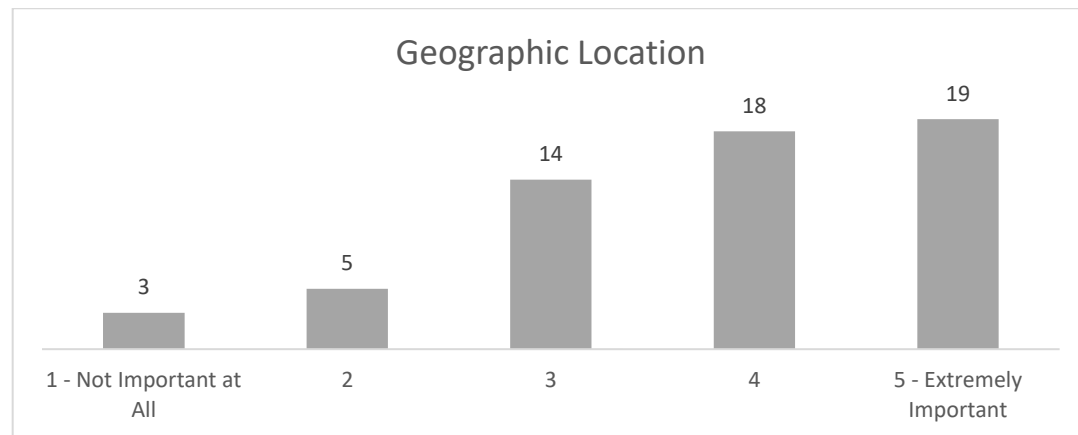
Source: Own Elaboration in Excel

Figure 43 SC: Criteria - Sample Characterization: Important Factor
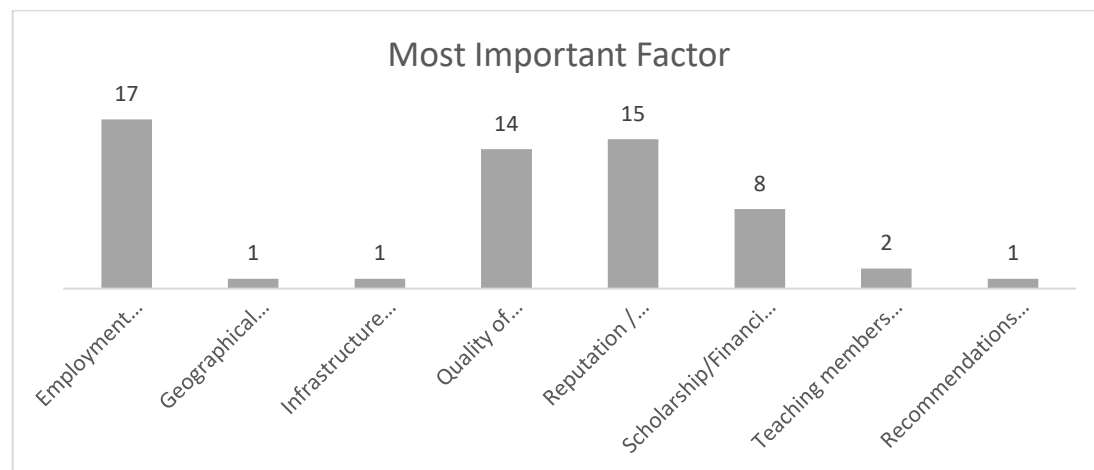
Source: Own Elaboration in Excel

Figure 44 SC: Perceived Overall Quality of Master Programs in Management
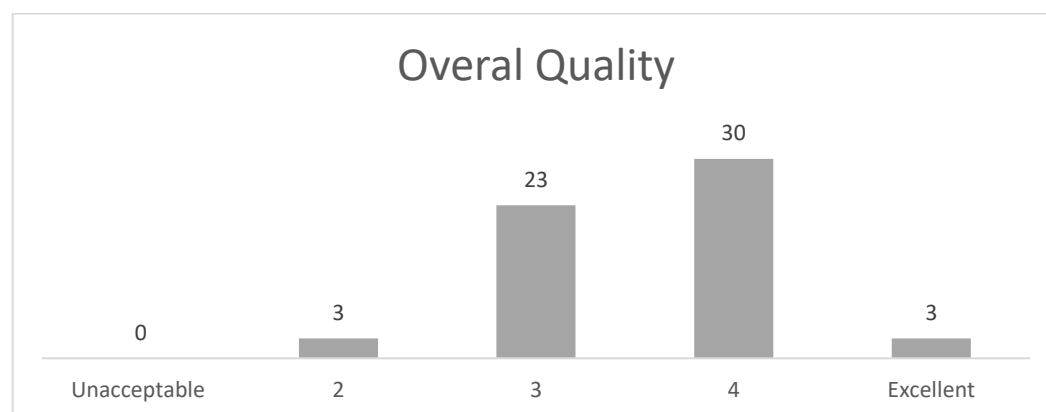
Source: Own Elaboration in Excel

Figure 45 SC: Easy to Find Satisfactory Information Available Online

Satisfatory Infomation available online is easy to find
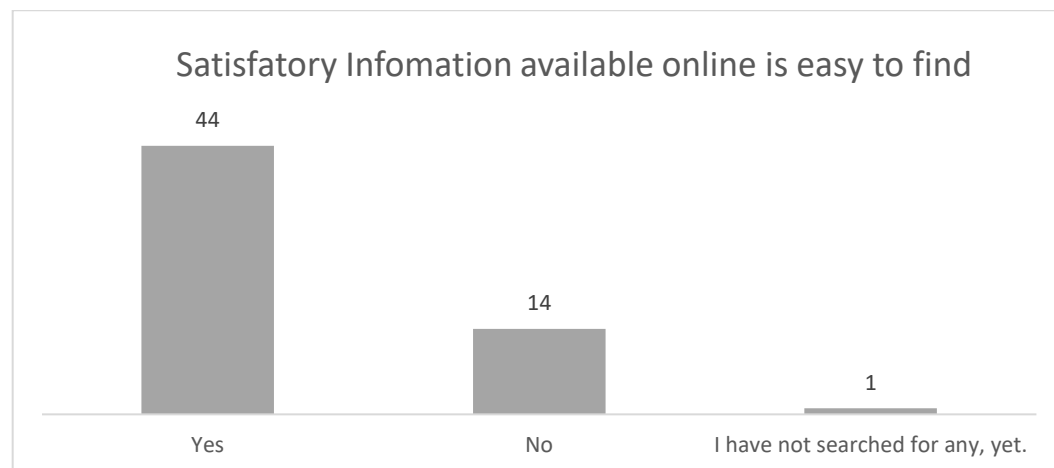
Source: Own Elaboration in Excel

Figure 46 SC: Intuitive Website and Content-Wise Adequate Information

Intuitive Website and Content-Wise Adequate
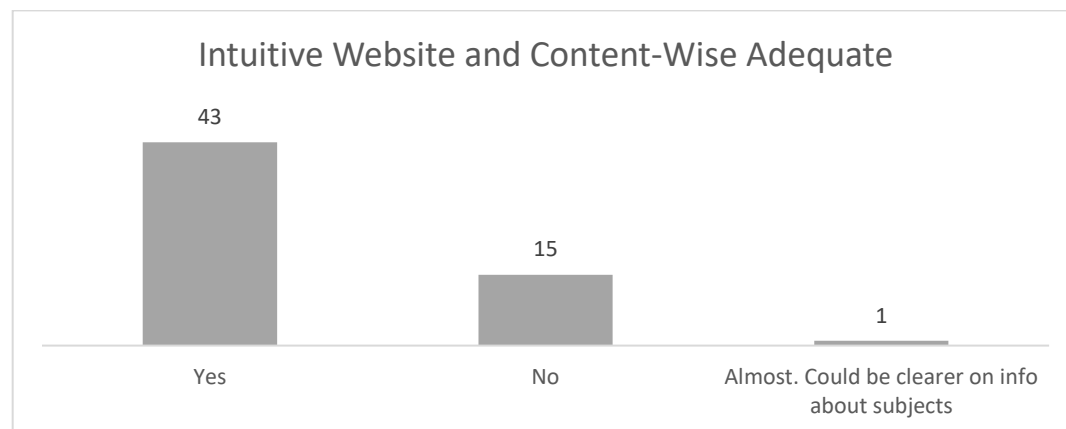
Source: Own Elaboration in Excel

Figure 47 SC: Recruitment and Application Process

Recruitment and Application Process
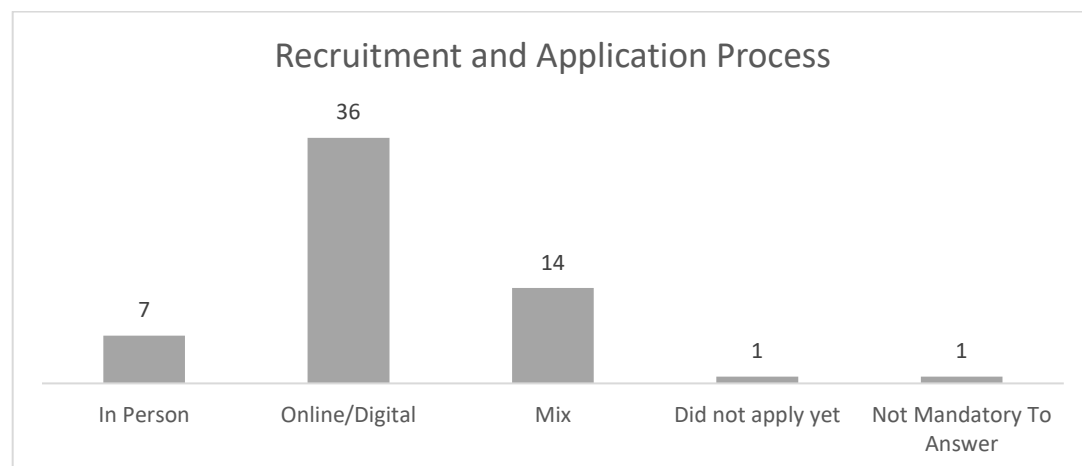
Source: Own Elaboration in Excel

Table 17 Descriptive Analysis of Section IV

Statistic	Minimum	Maximum	Range	1st Quartile	Median	3rd Quartile	Sum	Mean	Variance (n-1)	Standard deviation
C1.1 SOURCE	1.000	2.000	1.000	1.000	2.000	2.000	100.000	1.695	0.216	0.464
C1.2 SOURCE	1.000	2.000	1.000	1.000	2.000	2.000	95.000	1.610	0.242	0.492
C1.3 SOURCE	1.000	2.000	1.000	1.000	1.000	1.000	72.000	1.220	0.175	0.418
C1.4 SOURCE	1.000	2.000	1.000	1.000	2.000	2.000	100.000	1.695	0.216	0.464
C1.5 SOURCE	1.000	2.000	1.000	2.000	2.000	2.000	112.000	1.898	1.898	1.898
C1.6 SOURCE	1.000	2.000	1.000	1.000	1.000	1.000	68.000	1.153	0.132	0.363
C1.7 SOURCE	1.000	2.000	1.000	1.000	2.000	2.000	102.000	1.729	0.201	0.448
C1.8 SOURCE	1.000	2.000	1.000	1.000	1.000	2.000	77.000	1.305	0.216	0.464
C1.9 SOURCE	1.000	2.000	1.000	1.000	2.000	2.000	96.000	1.627	0.238	0.488
C1.10 SOURCE	1.000	2.000	1.000	2.000	2.000	2.000	115.000	1.949	0.049	0.222
C2.1 Rank	1.000	5.000	4.000	4.000	5.000	5.000	250.000	4.237	0.943	0.971
c2.2 Quality	1.000	5.000	4.000	3.500	4.000	5.000	243.000	4.119	0.934	0.966
C2.3 Rec Alumni	1.000	5.000	4.000	3.000	4.000	4.000	224.000	3.797	0.889	0.943
C2.4 Emp	2.000	5.000	3.000	5.000	5.000	5.000	274.000	4.644	0.613	0.783
C2.5 Info Avai	1.000	5.000	4.000	3.000	4.000	4.500	220.000	3.729	0.994	0.997
C2.6 Location	1.000	5.000	4.000	3.000	4.000	5.000	222.000	3.763	1.322	1.150

alpha	p-value (True)	DF	Chi-squares	Chi-squares	Kurtosis (Fisher)	Kurtosis (Pearson)	Skewness (Fisher)	Skewness
0.05	< 0.0001	7	14.067	476.500	-1.290	-1.283	-0.869	-0.847
0.05	< 0.0001	7	14.067	479.260	-1.849	-1.796	-0.464	-0.452
0.05	< 0.0001	7	14.067	485.140	-0.086	-0.179	1.385	1.349
0.05	< 0.0001	7	14.067	476.500	-1.290	-1.283	-0.869	-0.847
0.05	< 0.0001	7	14.067	495.203	1.898	1.898	1.898	1.898
0.05	< 0.0001	7	14.067	522.664	2.001	1.736	1.984	1.933
0.05	< 0.0001	7	14.067	473.643	-0.916	-0.940	-1.056	-1.029
0.05	< 0.0001	7	14.067	479.380	-1.290	-1.283	0.869	0.847
0.05	< 0.0001	7	14.067	3012.679	-1.770	-1.724	-0.540	-0.526
0.05	< 0.0001	7	14.067	476.500	16.157	14.720	-4.196	-4.089
0.05	< 0.0001	7	14.067	116.251	1.391	1.176	-1.320	-1.286
0.05	< 0.0001	7	14.067	105.944	0.551	0.406	-0.957	-0.932
0.05	< 0.0001	7	14.067	87.626	0.184	0.069	-0.597	-0.582
0.05	< 0.0001	7	14.067	338.581	5.164	4.637	-2.398	-2.336
0.05	< 0.0001	7	14.067	89.170	-0.367	-0.436	-0.395	-0.384
0.05	< 0.0001	7	14.067	97.560	-0.182	-0.267	-0.712	-0.694

Figure 48 SC: Level of Confidence in the delivery of Accurate Information
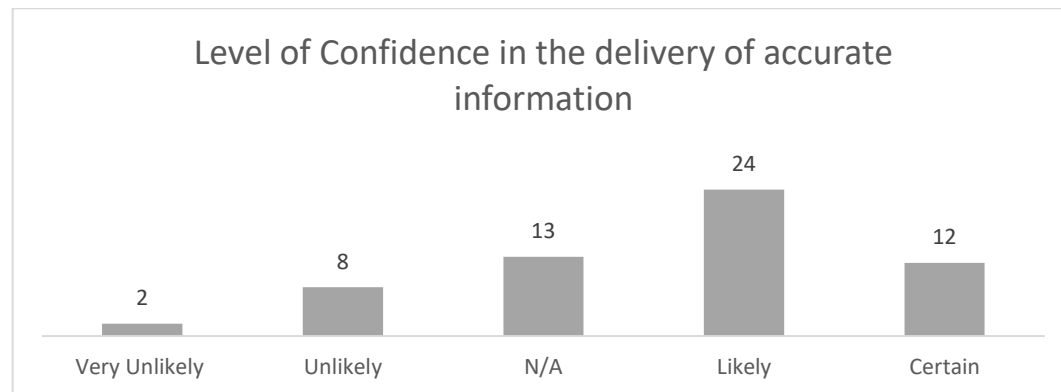
Source: Own Elaboration in Excel

Figure 49 SC: Importance of Acquired knowledge meeting expectations
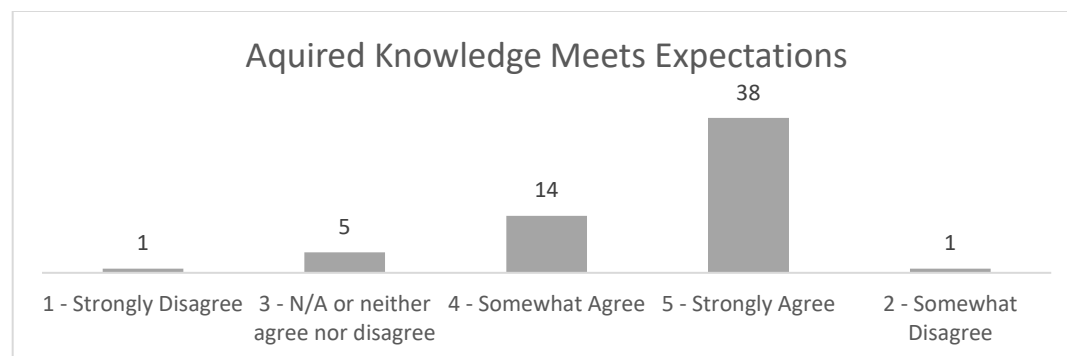
Source: Own Elaboration in Excel

Figure 50 SC: Importance of High Quality Programs
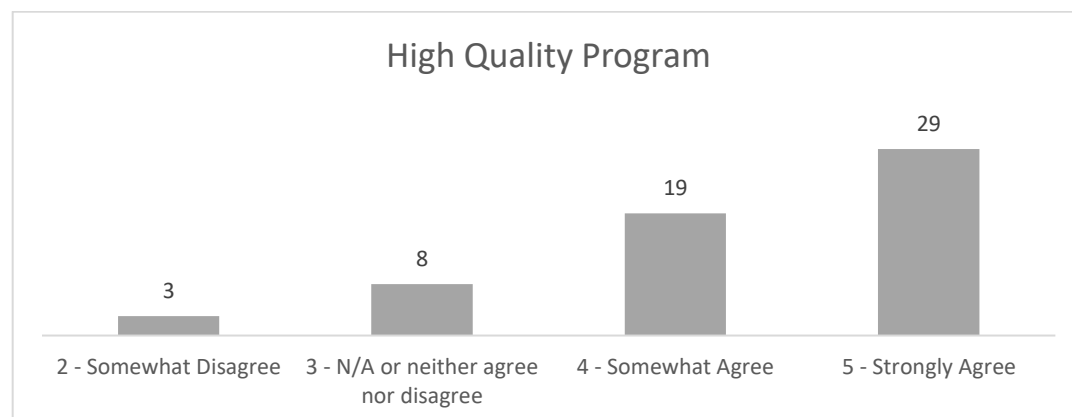
Source: Own Elaboration in Excel

Figure 51 SC: Importance of Available Resources
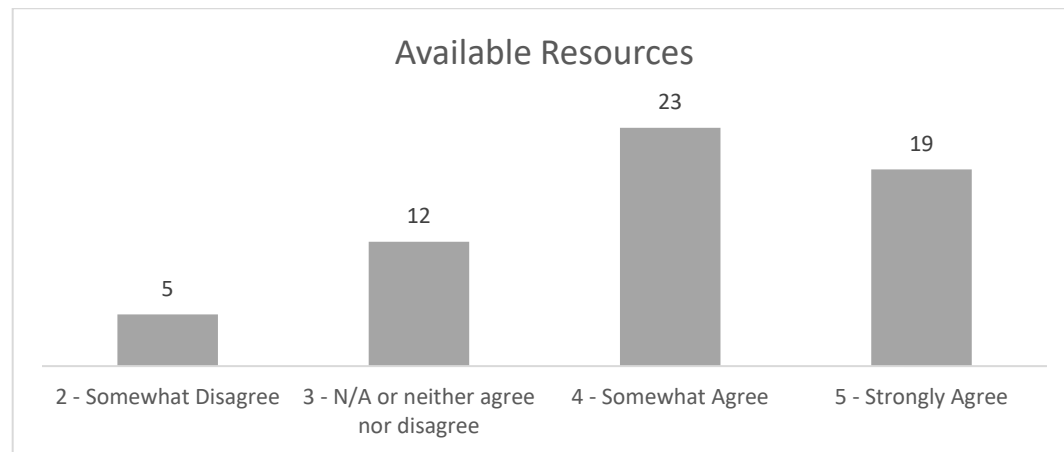
Source: Own Elaboration in Excel
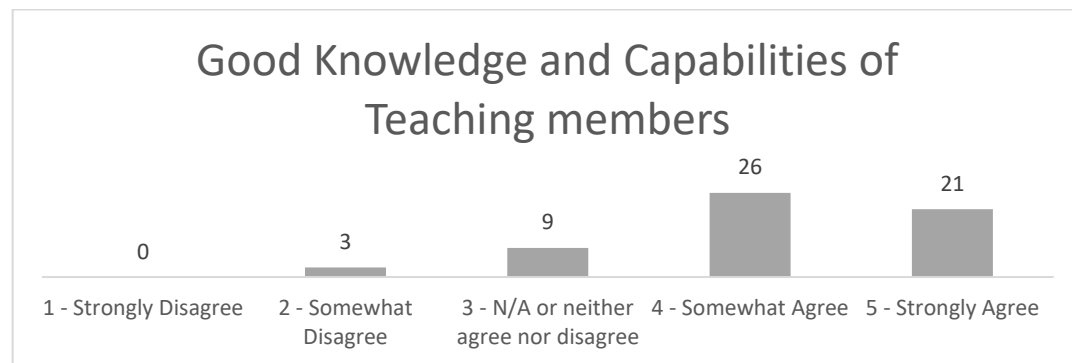
Figure 52 SC: Importance of High Quality of Teaching Members
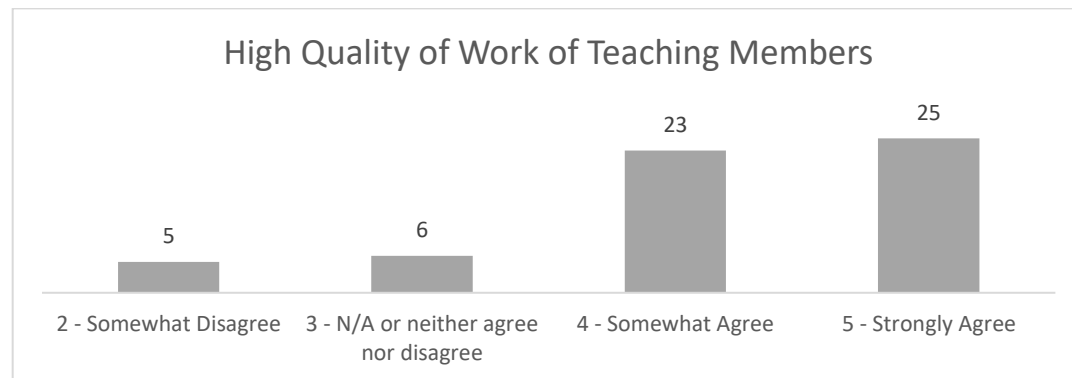
Source: Own Elaboration in Excel

Figure 53 SC: Importance of High Quality of Work of Non-Teaching Staff
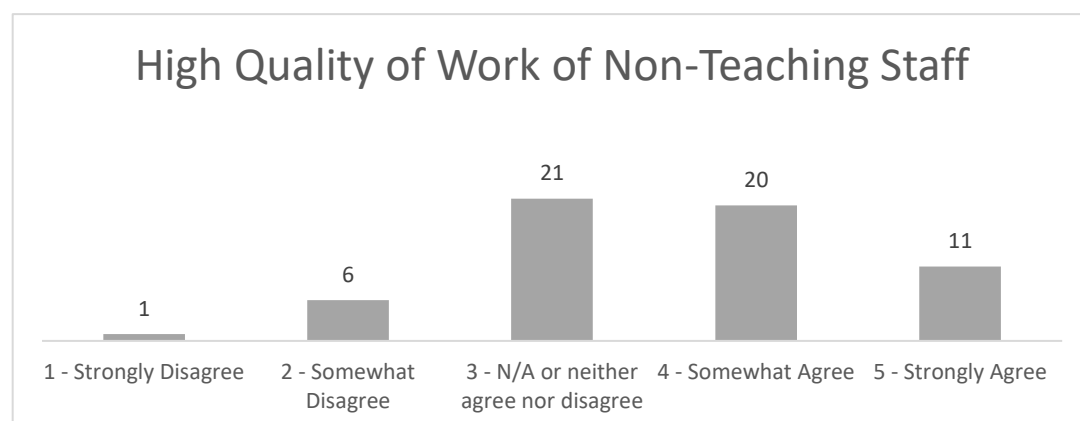
Source: Own Elaboration in Excel

Figure 54 SC: Importance of Good knowledge and Capabilities of Teaching Members

Source: Own Elaboration in Excel

Figure 55 SC:Importance of Google Knowledge and Capabilities of Non-Teaching Members
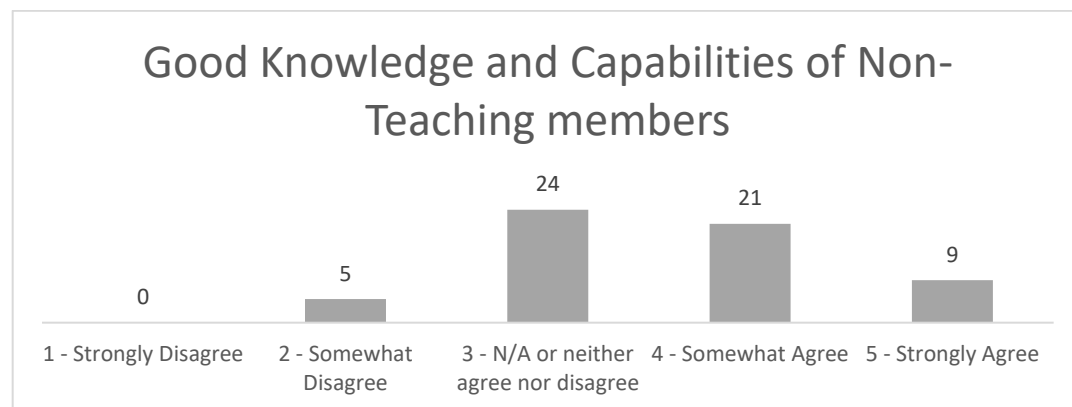
Source: Own Elaboration in Excel

Figure 56 SC: Importance of Credibility of Teaching Staff
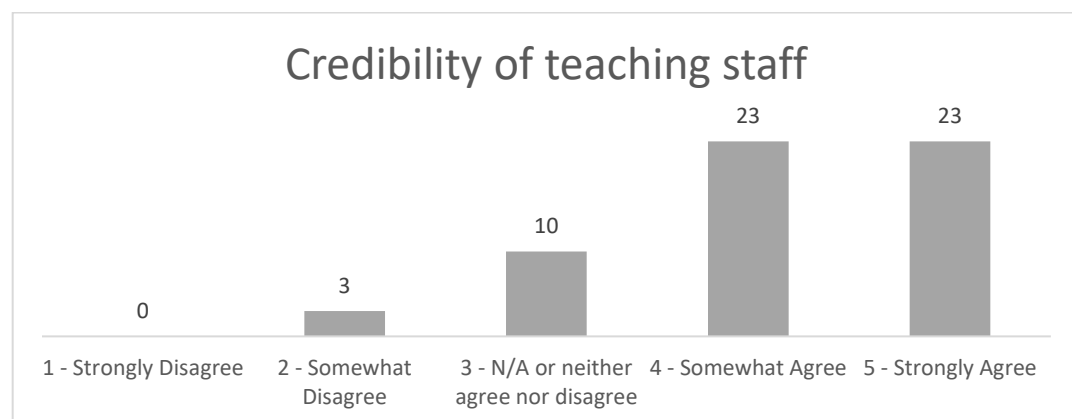
Source: Own Elaboration in Excel

Figure 57 SC: Importance of Good Organization of Schedule
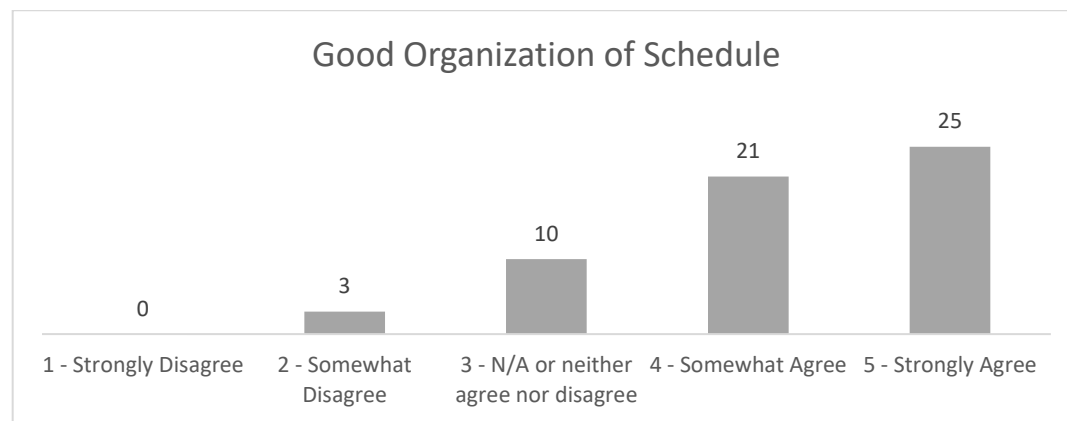
Source: Own Elaboration in Excel

Figure 58 SC: Importance of Good Organization of Opening Hours
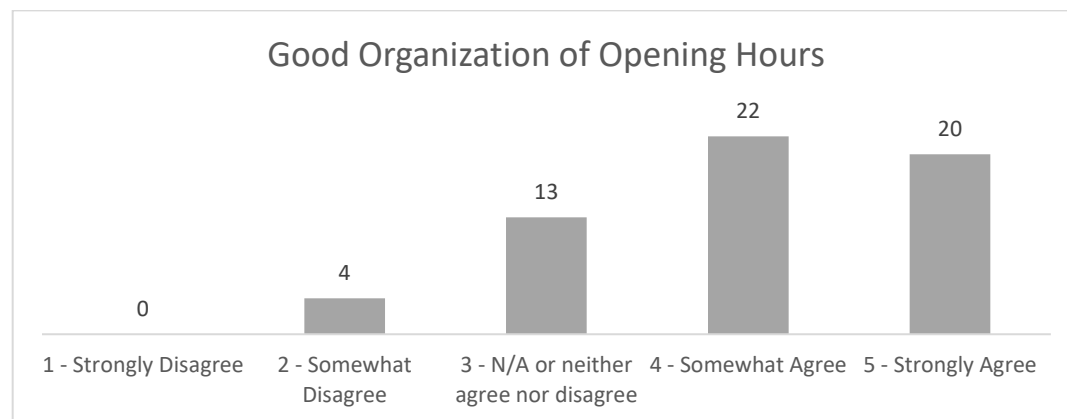
Source: Own Elaboration in Excel

Figure 59 SC: Importance of Good Reputation of the University

Source: Own Elaboration in Excel

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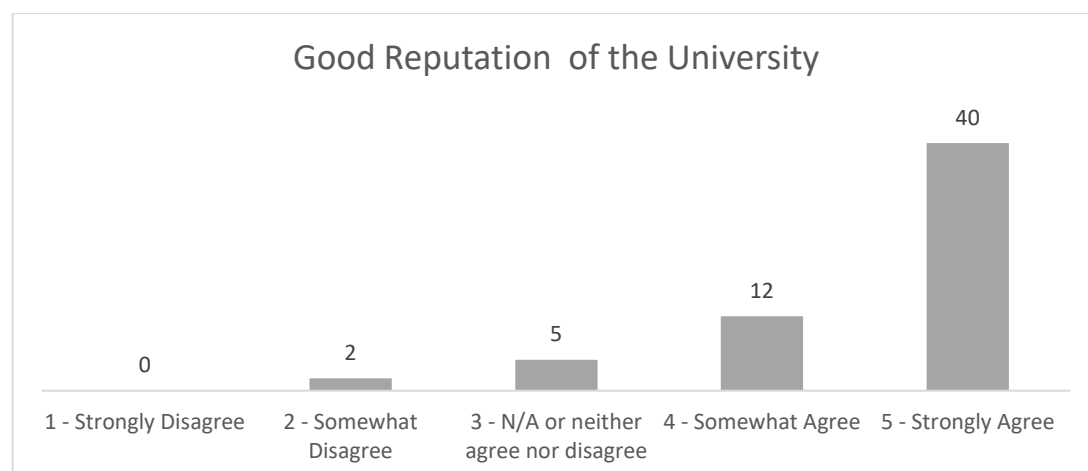
Figure 60 SC: Importance of Good Online Systems
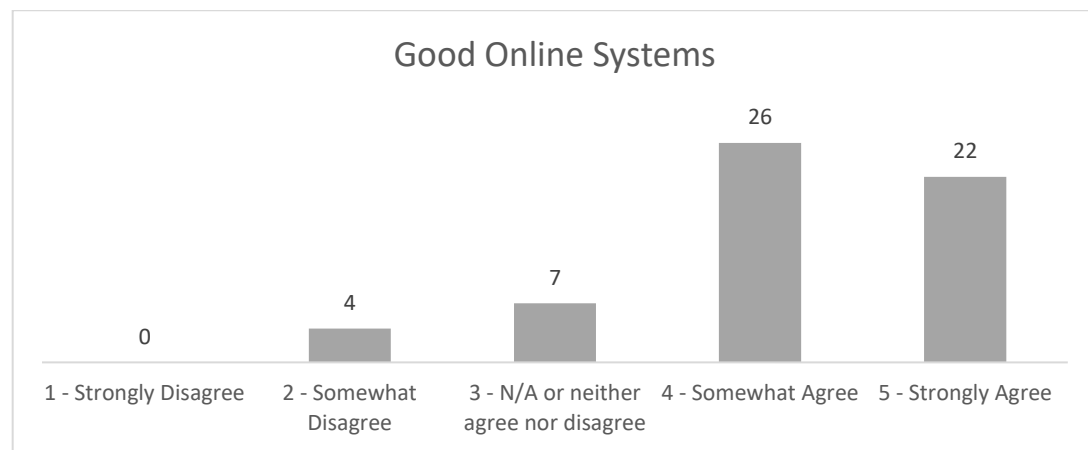
Source: Own Elaboration in Excel

Table 18 Descriptive Analysis of Section V

| Statistic	Minimum	Maximum	Range	1st Quartile	Median	3rd Quartile	Sum	Mean	Variance (n-1)	Standard deviation (n-1)
D1 Info Easy	1.000	3.000	2.000	1.000	1.000	1.500	75.000	1.271	0.236	0.485
D2 Website	1.000	3.000	2.000	1.000	1.000	2.000	76.000	1.288	0.243	0.493
D3 recrut process	1.000	4.000	3.000	2.000	2.000	3.000	129.000	2.186	0.465	0.682
D4 confiden	1.000	5.000	4.000	3.000	4.000	4.000	213.000	3.610	1.139	1.067
D5.1 Knowl	1.000	5.000	4.000	4.000	5.000	5.000	264.000	4.475	0.736	0.858
D5.2 High	2.000	5.000	3.000	4.000	4.000	5.000	251.000	4.254	0.779	0.883
D5.3 Resour	2.000	5.000	3.000	3.000	4.000	5.000	233.000	3.949	0.877	0.936
D5.4 Trust	2.000	5.000	3.000	4.000	4.000	5.000	245.000	4.153	0.856	0.925
D5.5 Non	1.000	5.000	4.000	3.000	4.000	4.000	211.000	3.576	0.938	0.969
D5.6 Trust in	2.000	5.000	3.000	4.000	4.000	5.000	242.000	4.102	0.714	0.845
D5.7 Non	2.000	5.000	3.000	3.000	4.000	4.000	211.000	3.576	0.731	0.855
D5.8 Credibili	2.000	5.000	3.000	4.000	4.000	5.000	243.000	4.119	0.762	0.873
D5.9 Schedul	2.000	5.000	3.000	4.000	4.000	5.000	245.000	4.153	0.787	0.887
D5.10 Oper H	2.000	5.000	3.000	3.000	4.000	5.000	235.000	3.983	0.845	0.919
D5.11 Persist	2.000	5.000	3.000	4.000	5.000	5.000	267.000	4.525	0.633	0.796
D5.12 Online	2.000	5.000	3.000	4.000	4.000	5.000	243.000	4.119	0.762	0.873

alpha	p-value (Two-tailed)	DF	Chi-square (Critical value)	Chi-square (Observed value)	Kurtosis (Fisher)	Kurtosis (Pearson)	Skewness (Fisher)	Skewness (Pearson)
0.05	< 0.0001	7	14.067	230.468	1.361	1.148	1.516	1.477
0.05	< 0.0001	7	14.067	216.992	0.958	0.779	1.399	1.363
0.05	< 0.0001	7	14.067	124.081	0.530	0.386	0.425	0.414
0.05	< 0.0001	7	14.067	89.903	-0.304	-0.379	-0.562	-0.548
0.05	< 0.0001	7	14.067	235.999	4.260	3.808	-1.952	-1.902
0.05	< 0.0001	7	14.067	151.400	0.188	0.072	-0.997	-0.972
0.05	< 0.0001	7	14.067	131.586	-0.547	-0.602	-0.549	-0.535
0.05	< 0.0001	7	14.067	155.338	0.255	0.134	-0.990	-0.965
0.05	< 0.0001	7	14.067	87.878	-0.353	-0.424	-0.223	-0.217
0.05	< 0.0001	7	14.067	130.640	0.047	-0.056	-0.731	-0.712
0.05	< 0.0001	7	14.067	121.342	-0.616	-0.665	0.097	0.094
0.05	< 0.0001	7	14.067	133.411	-0.195	-0.279	-0.720	-0.702
0.05	< 0.0001	7	14.067	138.648	-0.228	-0.309	-0.770	-0.750
0.05	< 0.0001	7	14.067	130.604	-0.604	-0.654	-0.518	-0.504
0.05	< 0.0001	7	14.067	198.694	2.154	1.875	-1.681	-1.638
0.05	< 0.0001	7	14.067	140.991	0.295	0.170	-0.881	-0.859

Figure 61 SC: Social Media Students Are Present - Facebook

Facebook

7%

93%

- Yes
- No
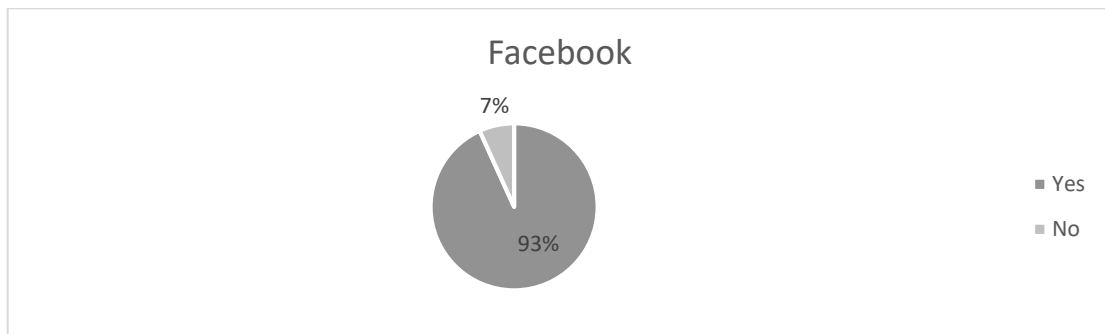
Source: Own Elaboration in Excel

Figure 62 SC: Social Media Students Are Present - Twitter

Twitter

42%

58%

- Yes
- No
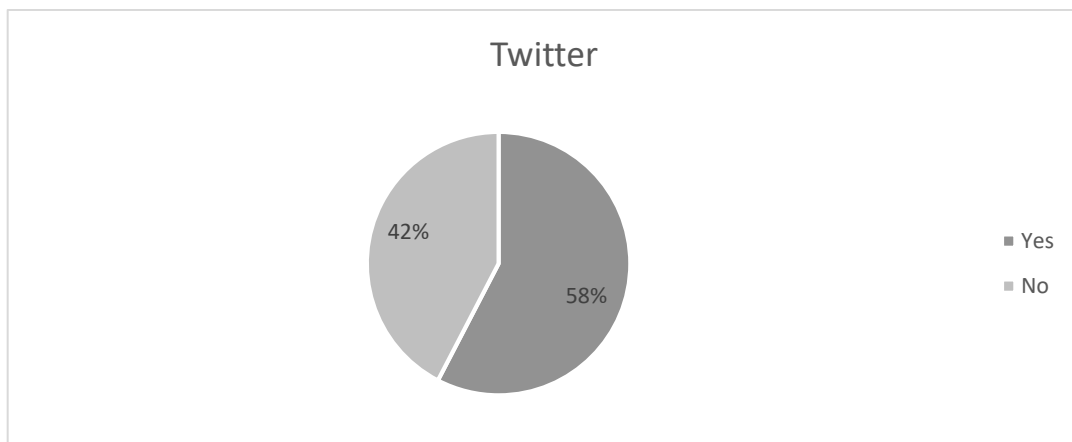
Source: Own Elaboration in Excel

Figure 63 SC: Social Media Students Are Present - Youtube

Youtube

44%

56%

- Yes
- No
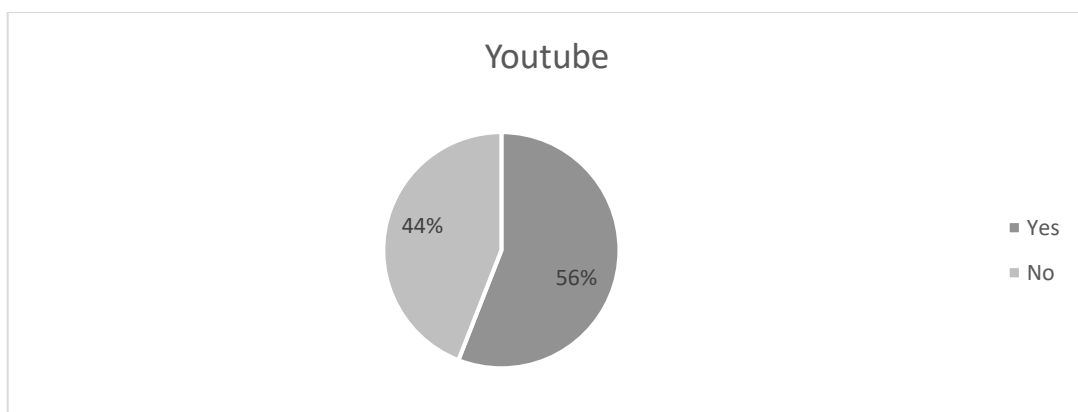
Source: Own Elaboration in Excel

Figure 64 SC: Social Media Students Are Present - LinkedIn
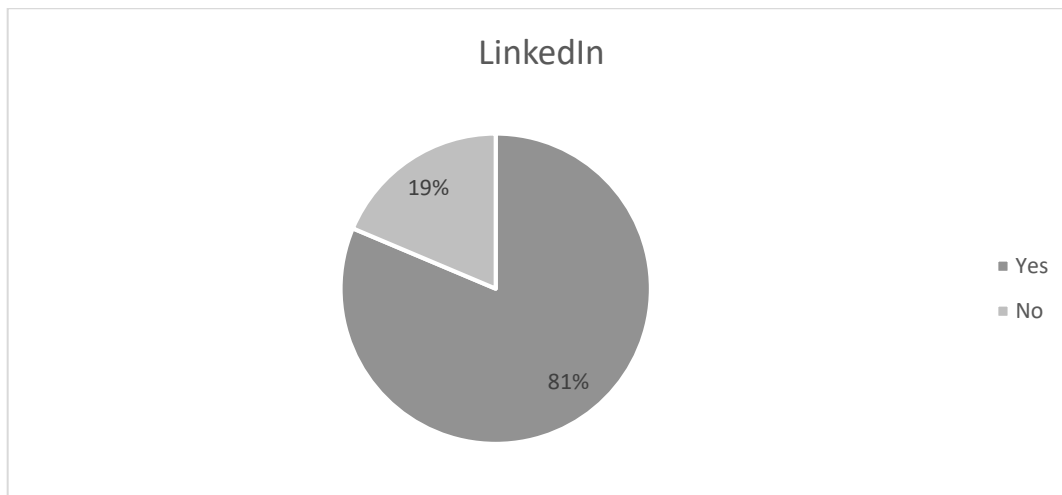
Source: Own Elaboration in Excel

Figure 65 SC: Social Media Students Are Present - Instagram
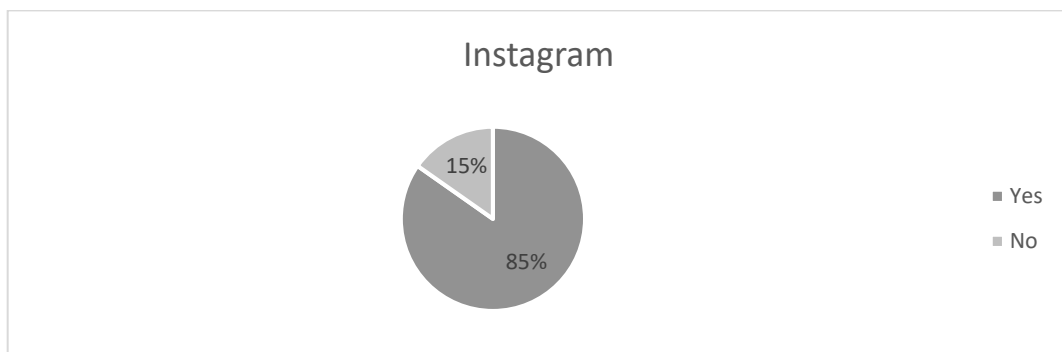
Source: Own Elaboration in Excel

Figure 66 SC: Social Media Students Are Present - Pinterest
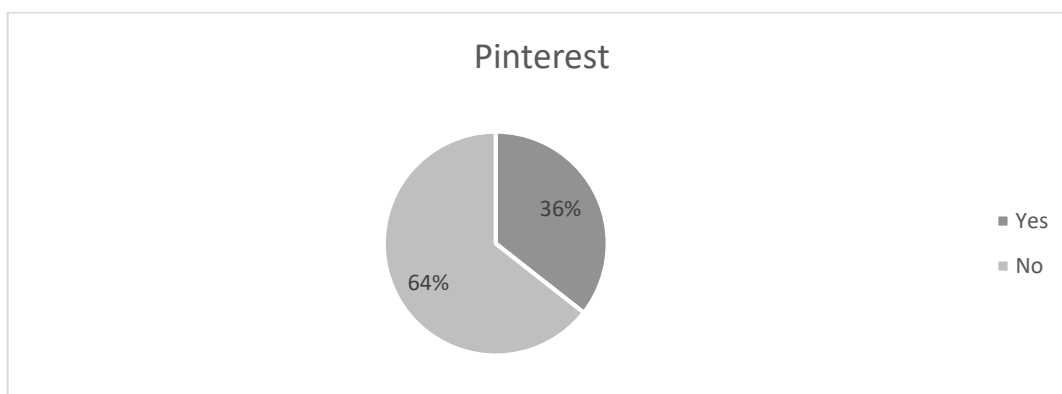
Source: Own Elaboration in Excel

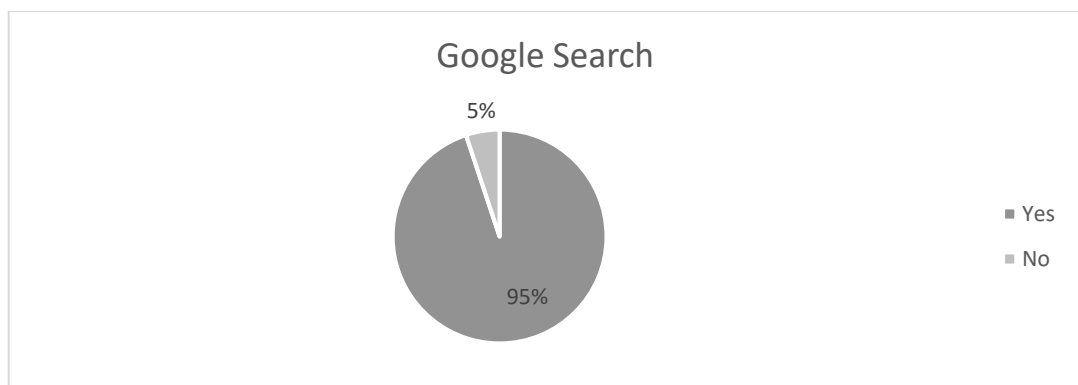**Figure 67 SC: Social Media Students Are Present - Others (Part 1)**
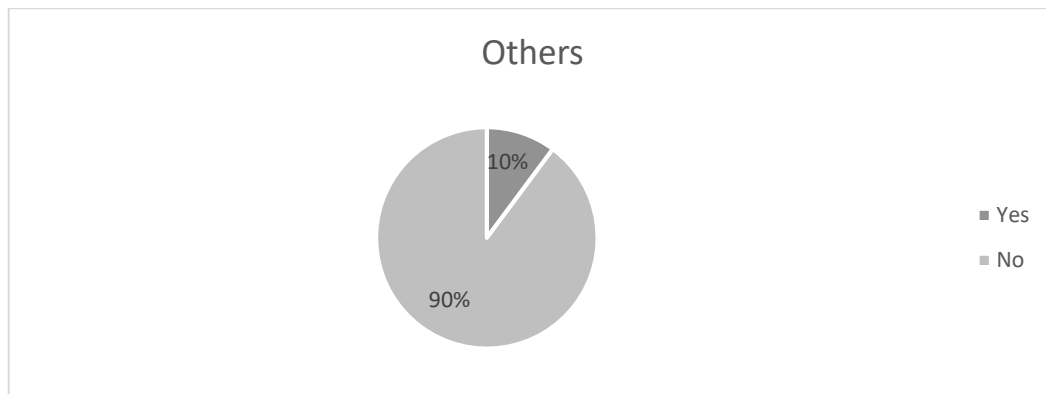
Source: Own Elaboration in Excel

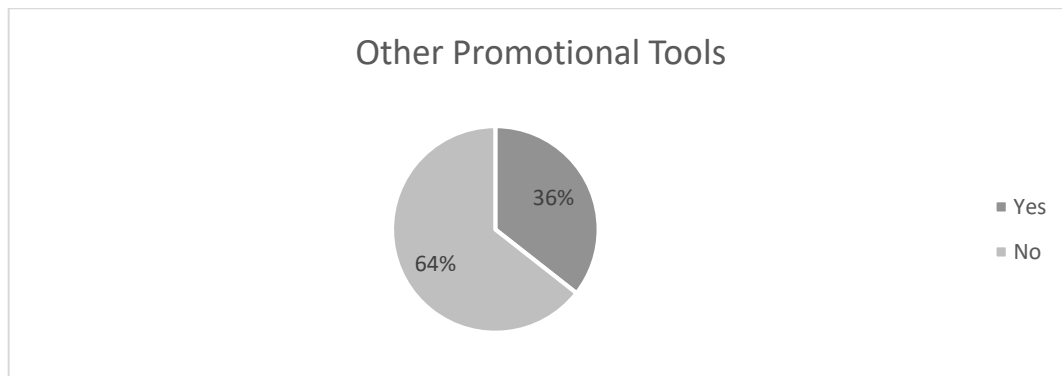**Figure 68 SC: Social Media Students Are Present - Others (Part 2)**
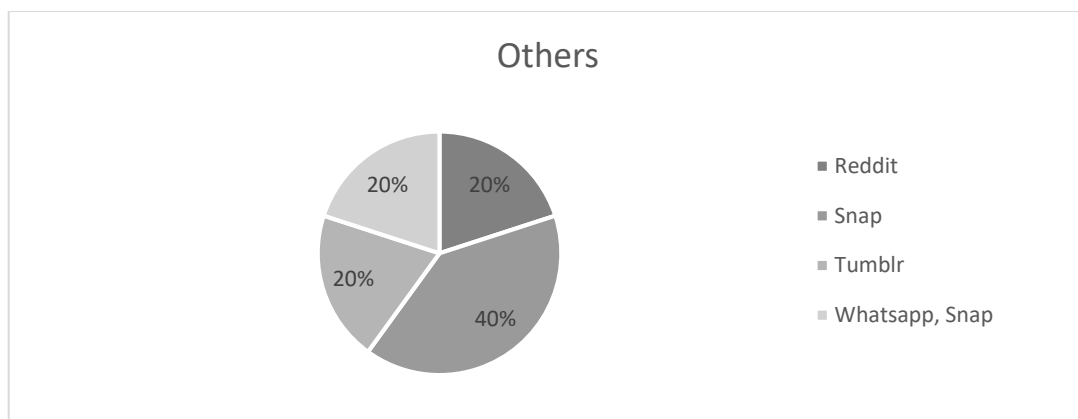
Source: Own Elaboration in Excel

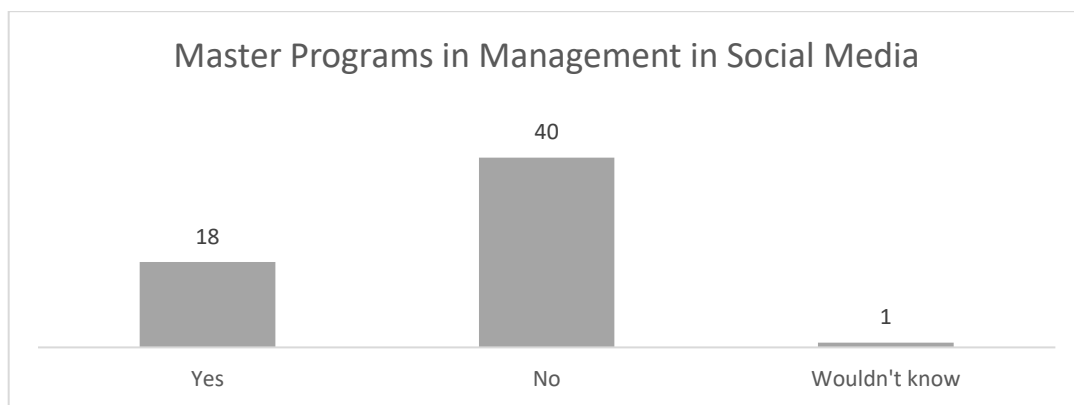**Figure 69 SC: Search in Google for the Program?**

Source: Own Elaboration in Excel

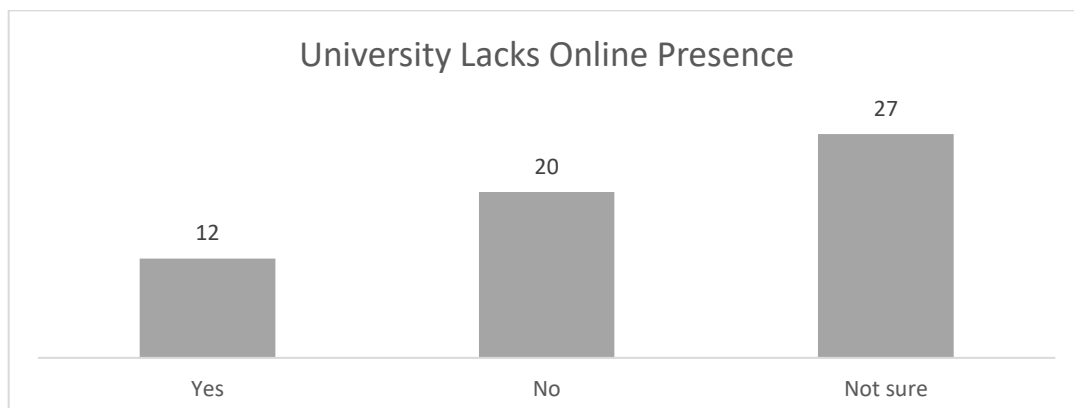**Figure 70 SC: Contact with other Promotional Tools?**

Source: Own Elaboration in Excel

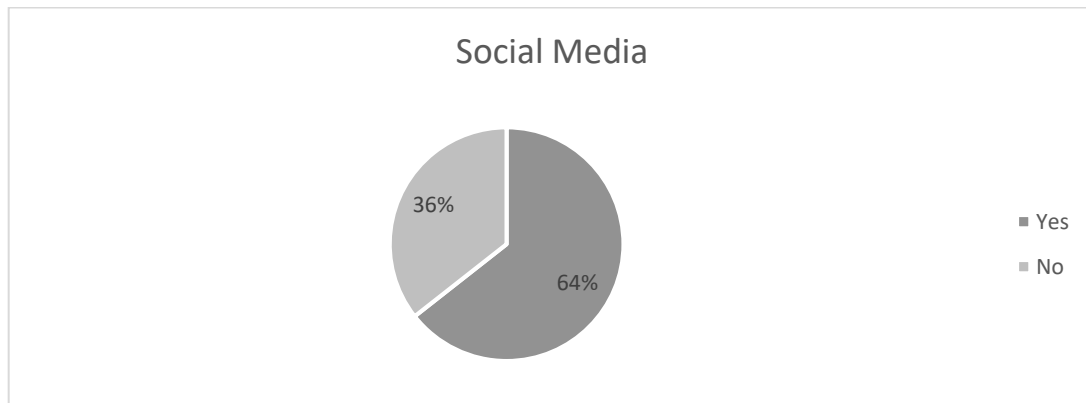**Figure 71 SC: Is the Master Programs in Management present in any Social Media?**

Source: Own Elaboration in Excel

Figure 72 SC: Students Perceive that University Lacks Online Presence
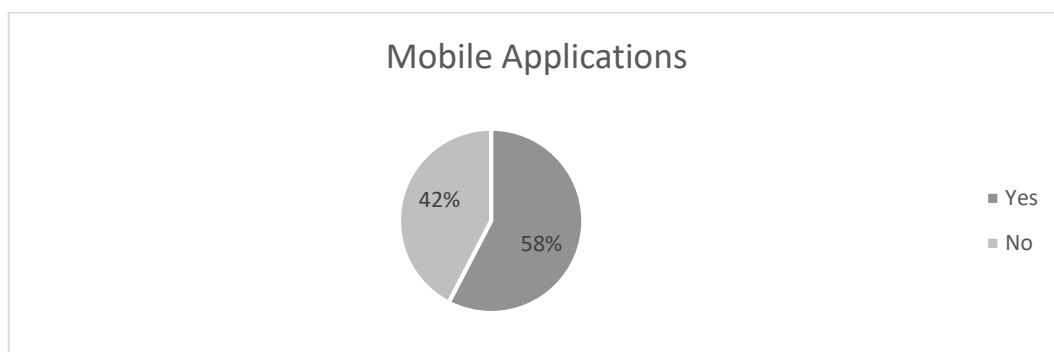

Source: Own Elaboration in Excel

Figure 73 SC: Sources Where Students would like to find about the Program - Social Media
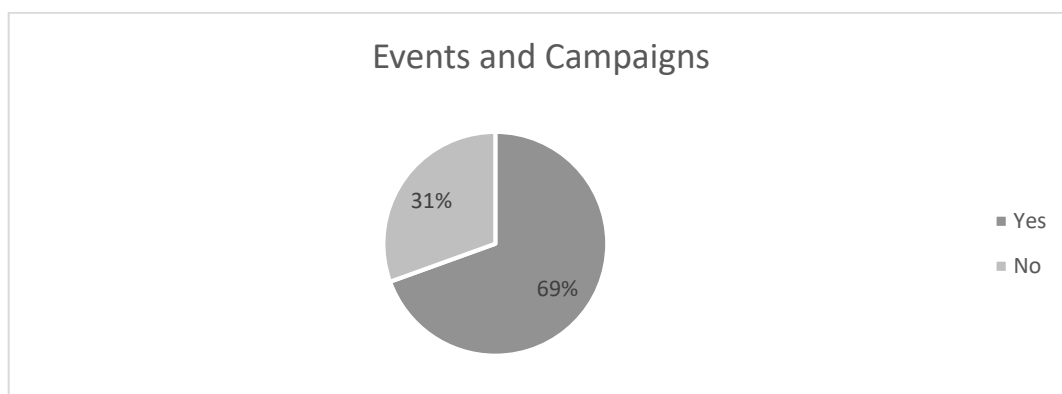

Source: Own Elaboration in Excel

Figure 74 SC: Sources Where Students would like to find about the Program - Mobile Applications
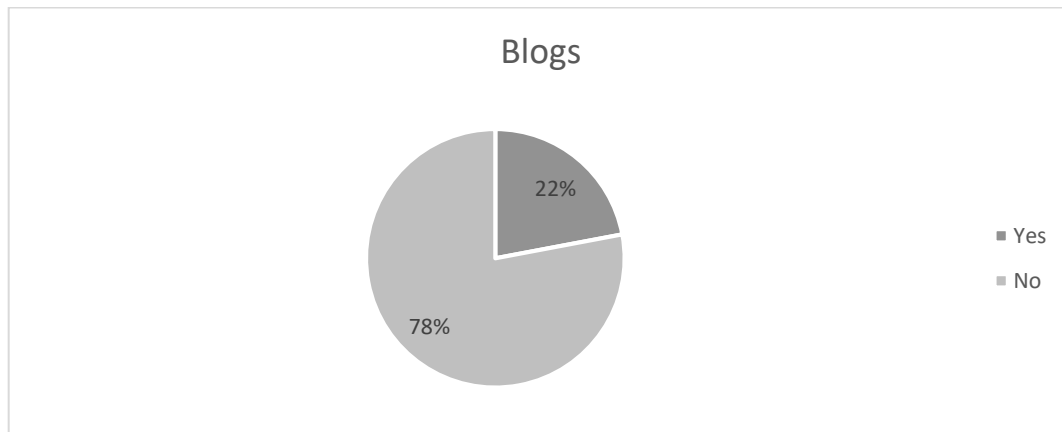

Source: Own Elaboration in Excel

Figure 75 SC: Sources Where Students would like to find about the Program - Events and Campaigns

Source: Own Elaboration in Excel

Figure 76 SC: Sources Where Students would like to find about the Program - Blogs

Source: Own Elaboration in Excel

Figure 77 SC: Sources Where Students would like to find about the Program - E-mail
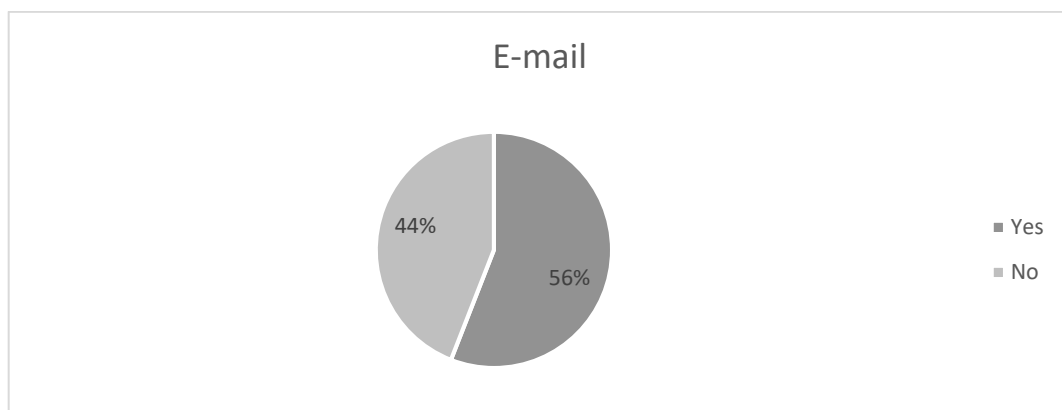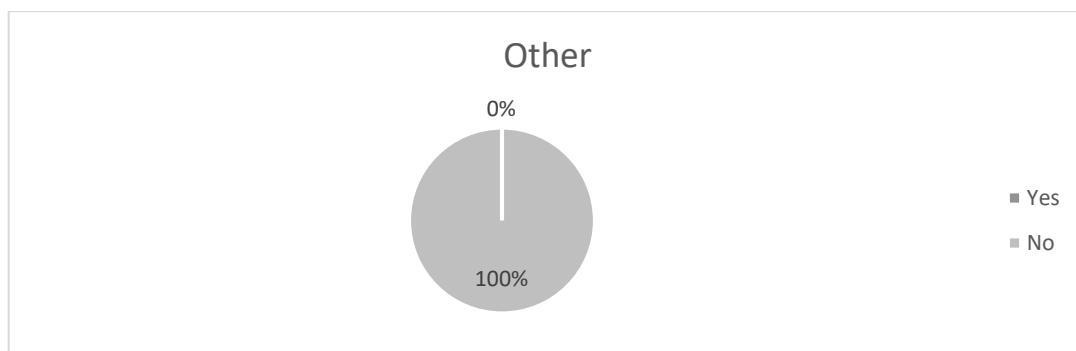

Source: Own Elaboration in Excel

Figure 78 SC: Sources Where Students would like to find about the Program - Others

Source: Own Elaboration in Excel

Table 19 Descriptive Analysis of Section VI

Statistic	Minimum	Maximum	Range	1st Quartile	Median	3rd Quartile	Sum	Mean	Variance (n-1)	Standard deviation (n-1)
e1.1 FB CODE	1.000	2.000	1.000	1.000	1.000	1.000	63.000	1.068	0.064	0.254
e1.2 TW CODE	1.000	2.000	1.000	1.000	1.000	2.000	84.000	1.424	0.248	0.498
e1.3 YT CODE	1.000	2.000	1.000	1.000	1.000	2.000	85.000	1.441	0.251	0.501
e1.4 LI CODE	1.000	2.000	1.000	1.000	1.000	1.000	70.000	1.186	0.154	0.393
e1.5 INSTA	1.000	2.000	1.000	1.000	1.000	1.000	68.000	1.153	0.132	0.363
e1.6 PINT CODE	1.000	2.000	1.000	1.000	2.000	2.000	97.000	1.644	0.233	0.483
e1.7.1 OTHER	1.000	2.000	1.000	2.000	2.000	2.000	112.000	1.898	0.093	0.305
e2 Google	1.000	2.000	1.000	1.000	1.000	1.000	62.000	1.051	0.049	0.222
E3 Offline	1.000	2.000	1.000	1.000	2.000	2.000	97.000	1.644	0.233	0.483
E4 MMP in SM	1.000	3.000	2.000	1.000	2.000	2.000	101.000	1.712	0.243	0.493
E5 LACK presence	1.000	3.000	2.000	2.000	2.000	3.000	133.000	2.254	0.607	0.779
e6.1 SM Find Info	1.000	2.000	1.000	1.000	1.000	2.000	80.000	1.356	0.233	0.483
e6.2 Mobile	1.000	2.000	1.000	1.000	1.000	2.000	84.000	1.424	0.248	0.498
e6.3 event	1.000	2.000	1.000	1.000	1.000	2.000	77.000	1.305	0.216	0.464
e6.4 User	1.000	2.000	1.000	2.000	2.000	2.000	105.000	1.780	0.175	0.418
e6.5 email	1.000	2.000	1.000	1.000	1.000	2.000	85.000	1.441	0.251	0.501
e6.6 other	2.000	2.000	0.000	2.000	2.000	2.000	118.000	2.000	0.000	0.000

alpha	p-value (Two-tailed)	DF	Chi-square (Critical)	Chi-square (Observed)	Kurtosis (Fisher)	Kurtosis (Pearson)	Skewness (Fisher)	Skewness (Pearson)
0.05	< 0.0001	7	14.067	2943.282	10.818	9.823	3.529	3.438
0.05	< 0.0001	7	14.067	478.744	-1.968	-1.905	0.317	0.309
0.05	< 0.0001	7	14.067	478.754	-2.009	-1.943	0.245	0.239
0.05	< 0.0001	7	14.067	493.861	0.755	0.593	1.653	1.610
0.05	< 0.0001	7	14.067	522.664	2.001	1.736	1.984	1.933
0.05	< 0.0001	7	14.067	478.721	-1.677	-1.638	-0.618	-0.602
0.05	< 0.0001	7	14.067	495.203	5.502	4.947	-2.705	-2.636
0.05	< 0.0001	7	14.067	19575.462	16.157	14.720	4.196	4.089
0.05	< 0.0001	7	14.067	478.721	-1.677	-1.638	-0.618	-0.602
0.05	< 0.0001	7	14.067	186.855	-0.687	-0.730	-0.506	-0.493
0.05	< 0.0001	7	14.067	246.130	-1.181	-1.183	-0.484	-0.471
0.05	< 0.0001	7	14.067	478.931	-1.677	-1.638	0.618	0.602
0.05	< 0.0001	7	14.067	478.744	-1.968	-1.905	0.317	0.309
0.05	< 0.0001	7	14.067	479.380	-1.290	-1.283	0.869	0.847
0.05	< 0.0001	7	14.067	466.841	-0.086	-0.179	-1.385	-1.349
0.05	< 0.0001	7	14.067	478.754	-2.009	-1.943	0.245	0.239
0.05	< 0.0001		29.500					