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Fake news on social media: A study of the students' acceptance of misinformation about chosen university

Research Proposal submitted by

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List of Acronyms and Abbreviations

TPB	Theory of Planned Behavior
TRA	Theory Reasoned Action
TAM	Technology Acceptance Model
SCT	Social Cognitive Theory
UTAUT	Unified Theory of Acceptance and Use of Technology Model
UTAUT2	Unified Theory of Acceptance and Use of Technology Extended
SNS theory	Social networking site dependency theory
UGT	Uses gratification theory
CMC	Computer mediated communication
ELM	Elaboration Likelihood model
FFM	Five Factor Model
STOPS	Situational
IAM	Information and Adaptation model
SIT	Social impact theory
PSI	para-social interaction
SMN	Social Media Network
ERG	existence relatedness growth
SLT	Social learning theory
GT	Grounded theory
ICT	Information communication technology
WoM	Word of mouth
e-WoM	electronic Word of mouth
s-WoM	social Word of mouth

Vocabulary and terminology

misinformation	false information without harm
disinformation	false information that is intended to manipulate, cause damage, or guide people, organizations, and countries in the wrong direction
malinformation	to information that stems from the truth but is often exaggerated in a way that misleads and causes potential harm
post truth era	time of massive proliferation of fake news
CDJ	customer's decision journey
WWW	World Wide Web
HEI	Higher education institutes
CRT	Cognitive reflection test
FB	Facebook
IS	information system
IT	information technology
AI	Artificial intelligence
WCU	world-class universities
B2B	Business to business
B2C	Business to client
SNS	social networks sites

CONTENT

List of Tables

List of figures

1. Introduction

1.1. Background

Social media has considerably revolutionized our life all round suchwise technological platforms might rapidly spread information for numerous internet users. Originally, the digital platforms were used invented to simplify in short term the virtual communication between peers, friends, even unknown. But in long-time vision, they were used as marketing and also opinion maker tools, making possible for digital platforms to play a key role for creating, strengthening, and enhancing relationships among different users, such as companies, individual, or even social, education and public organizations. But it appears that there are some negative and even pernicious effects of their use, mainly related to the production and dissemination of inverse or even false headlines. That is considered as a dark side of social media use.

Truly, media technologies are constantly improving by the Internet opportunities (Vosoughi et al, 2018). Nowadays political, business leaders or even influencers use different social media as communication channel to express their first impressions, statements or even to talk about their personal experience on relevant issues -at social, economic, and political level- achieving great audience impact.

This is not a forbidden and unusual thing even for presidents to utilize Twitter or Blog (Persily, 2017). As Kaplan & Haenlein, (2010) stated in their paper, social media is "*a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and allow the creation and exchange of user generated content*". The dramatic turn of evolution has occured while people recognised its values thank to the creation, sharing, and exchanging of information on social media platforms (Ngai et al, 2014). Surprisingly, over last years the essential disruptive trend appeared through the dissemination of false information on social media. The explosive rapid growth of fabricated information has obviously impact on business as much as society due to the combined effects: trust, information attitude, information sharing via social media in "multicultural perspective" (Wang et al, 2021).

At the present time, we can witness the explosive growth of fake news, particularly, via media resources (Pennycook & Rand, 2019). Such a sort of counterfeit stories has a powerful effect thanks to rapid and massive spreading (Vosoughi et al, 2018). The one

of the impressive cases of media impact occurred during the USA election in 2016 (Allcott & Gentzkow, 2017). In the candidate racing, turbulences are the norm and not the exception, but that year was extraordinary situation with "*8,711,000 shares, reactions, and comments on Facebook, ironically, larger than the total of 7,367,000 for the top twenty most-discussed election stories posted by 19 major news websites*" (Zhou et al, 2019). Everybody could observe the high extent of misrepresented facts (Persily, 2017). In the U.S presidential campaign all media technologies were utilized to disqualify the other candidate (Allcott & Gentzkow, 2017). Most of the spurious news touch Donald Trump (Persily, 2017) created gossips around his personality as a politician and businessman. These new words (fake news) started their history not more than a hundred years, boosted the social media. Moreover, the usage of them increased by 365% in the period of 2016-2017 (Hunt, 2017). Despite the emergence and use of verifiers that analyse and check the nature and veracity of information, authority must be more vigilant regarding to social information stream, especially, if it relates to youngsters (Hemsley-Brown & Oplatka, 2016). Whereas they are more inexperienced users in dealing with business with high interest to information.

Moreover, they are users who use social networks as their main source of information, which are not checked and contrasted, and offer high levels of credibility or certain decisions, such as University election, these sources of information are really important. That is to say, throughout the journey application for university or private higher school, young people face large-scale information and marketing campaign.

Whilst plenty of scholars are puzzled how to identify the trustworthy information in the digital era (Pennycook&Rand, 2018) to assist students in such serious difficulties. However, higher education entities are strongly committed to a marketing orientation, with the risk that marketers, having huge desire to attract more applicants, might exaggerate data and present their institutes in better light. By studying Tess (2013) the key idea of social media is to become "a facilitator and enhancer of learning is worth investigating". It should be a great navigator in a virtual world with some challenges also. In other words, influence of misinformation, without appropriate media literacy skills, raises a rather risk for users for misleading. Thus, for youngsters is likely difficult to differentiate the veracity of the primary resources, for instance, presented information on the institute sites. As Tejedor et al (2021) posits that this understudied topic has to be the focus of more research, presenting diagnostic analysis with relevant influencing factors.

Exploring undergraduates' destination choices in higher education, social media have had a transformative effect on decision-making (Binkley et al, 2012). Much of the prior works were articulated the importance of online information flow for education industry with stress on students' perception of erroneous information. The quality of published information concerns all of us, and it can touch any business or industry without exclusion. No doubts that Higher education enhances the career opportunities, increase of employability, forming personality, improving the standards of living and social status (Hemsley-Brown & Oplatka, 2016). How in one article the effect of education was formulated (The importance of education, n.d.):

"*Education is often used by people to shape their 'social identity', framing their understanding of themselves and their relationships with other people. A positive, affirming social identity is associated with a range of positive outcomes in life, such as increased wellbeing, health, social trust and political engagement*".

That's why youngsters' taking decision-process towards study destination might be fateful, especially, under social media influence. Dissemination of truthful news and implausible content within online environment occurs constantly, pointing out the importance of its categorization. With the growing influence of internet, this paper analyzes the social media impact on the student's destination choice.

Supporting the above-mentioned ongoing aspect, this research tends to verify the leading undergraduate's analytical reasoning to trust in incorrect headlines. It is supposed to become the pioneer research on this topic, considering the news as determinant to make decision. Also, this study constitutes a relatively new area which has emerged from considering students in the positioning of customers in the educational industry. Hence the quality of information might have a significant role in choosing one institute instead of another one.

1.2.Present situation

In the globalization era the process of getting and sharing information is most likely connected with the Internet and new media. And young people are forwarders there, being such active users of digital platforms (Kotler et al, 2017). As studied in the papers

about the invention of online networking (Tess, 2013; Hemsley-Brown & Oplatka, 2016; Tejedor et al, 2021), emergence of computers and blogging allowed users to generate new content much faster. That is an idea to describe your feeling, thinking, doing with further posting on the Internet. Social networking history started in the 1990s, and for a short track managed to occupy all spheres of life showing it's negative and positive sides. It seems that the majority of people believes in positive usage of social media, but the evolution of marketing offering, and concretely the arrival of misinformation makes us be thoughtful about it.

To account for the previous research findings through a review of papers published in leading academic journals (Web of Science), we summarized the number of articles on the impact of fake news distribution on social media (Figure 1.1.). Providing a narrative way, it helps to understand and substantiate its impact on users' decision-making, particularly, for students.

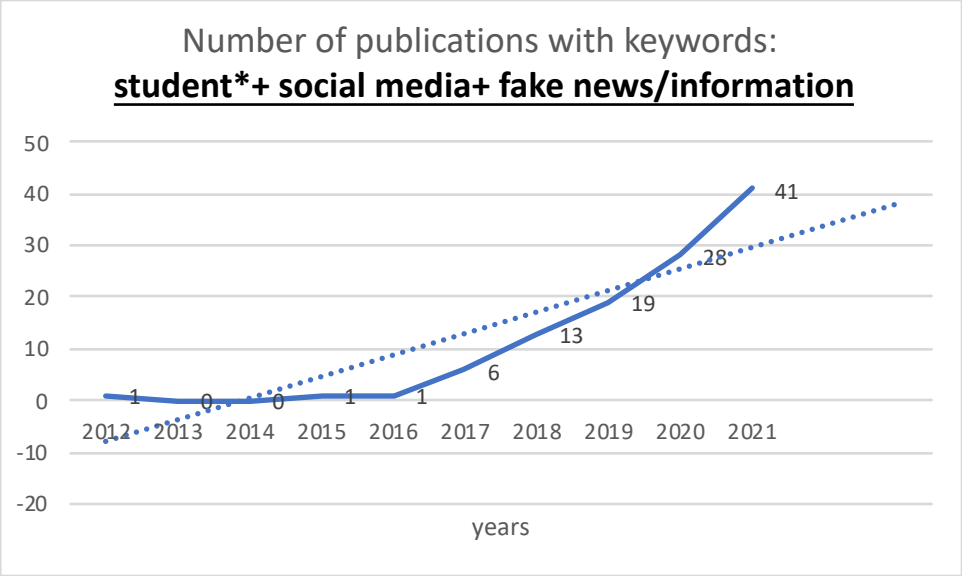


Figure 1.1. Recent articles of fake news on social media among students. Source: Own elaboration

In the graph, it is apparently illustrated the exponential dynamic of academic interest in this topic. Especially, while we focus on three fields in one research – false information, social media, and young students.

1.2.1. The adolescent of digital information power

The first great step-up in the mind of evolution alongside the digital revolution came out thanks to serious financial crises in 1998, 2008, 2011, which generated significant market volatility at the end of the XX century and the beginning of the XXI century (Sabol, 2013; Duncan, 2017). In such a stormy period information becomes not just a tool and a new resource to put ahead, but sometimes, it is used for manipulation also. As the digital environment nowadays becomes a tool for empowering users through the search and exchange of information, the dissemination of false information can contribute to information illiteracy. Over the last decades, the spreading of misleading information via the Internet has turned into one of the most popular controversies (Kozyreva et al, 2020). Many are concerned about the "grey" purpose of misinformation and the intentionality of shaping public opinion (Tejedor et al, 2021). Implausible headlines often feature fabricated content to motivate people to do something. And it might be done in favour of one person or group of interested people for different reasons.

Assessing the preconditionss of student's online engagement, we have to take into consideration the desire of the Higher education industry to enhance academic functioning. In this direction, private and public institutes have installed special services on social media platforms. Most of them present news, learning activities, and update admission rules on LinkedIn. Others actively face challenge on FB, Instagram and Telegram.

1.2.2. The digitalization and innovation

The coming of an unstable time has happened at the same time as two other big changes: the technological revolution and the Internet emergence (and, social media).

The 4th Industrial revolution, namely, biological, physical, and digital technologies, enriches the society with huge range of innovations and know-how for supplying humans with a plenty of devices. That is incredibly altering the reality and standard of living. Mostly economic, political, and social environments are getting the maximum injection from digitalization (Lee et al, 2017; Tandoc et al, 2018). ICT (information communication technology) is marching with nearly unlimited Internet resources and Artificial intelligence (Eurostat, 2021). As a result, the traditional question has to be addressed to academics: what is further? Evolution and engineering progress don't allow for the situation for analysis, so as all examinations might only encompass the stage or moment of the

technological impact. Notwithstanding, the common tendency is quite logical to refer to the essence of competences and skills that businessmen who have to manage the companies, possessing the needed knowledge. Consequently, the importance of preparating the future leaders is impossible to overestimate because actually, from them the economy will depends on it in a whole. In other words, formation of advanced leaders is absolutely correlated with the level of their education (Long, 2017).

For that reason, the different methods of teaching have been applied in Higher education, however, for the last decade the essential role has belonged to e-learning (distance education) (Borrero, 2014), which considers the tendencies and expectations of future leaders, customers, experts, businessmen etc. That was permitted to utilize the day-to-day technological instruments as a Skype conference or webinars. Above all, this is just one of the latest but not least serious application in the practice of the breakthrough of information communication and technology (ICT) (Rosenberg & Foshay, 2007) in a constructive manner. Otherwise, the coming phenomenon of the Millennials generation is gamification (Ruiz-Alba et al, 2018) which occupies many environments for socializing in the business (Berbegal-Mirabent et al, 2016) and the learning process.
As consequences of the implementation of modern upgraded instruments into the business and education systems as well, professors have to be imposed by the widespread of their influence on a daily basis, being forwarders. All in all, it is quite difficult to overestimate the role of education to be the pioneer of advanced technology for the new generation. That is why, according to the US Web-based Education Commission, 2000, teachers had to apply contemporary technological tools and resources in order to intensify the learning activities. Furthermore, in 2013 (AACSB) Association of Advance Collegiate Schools of Business declared new norms and standards for accreditation and membership, where one of the obligatory issues is to advance technological and innovative approach (Kosnik et al, 2013)

Throughout the forecasting, the prospective of global economy growth, directly equating to the development of software, hardware and IT service (McKinzey, 2014) in order to demonstrate the sustainable revenue growth with high performance. Simultaneously, the fast-growing business unveils the demand of newly formed businessmen (Ruiz-Alba et al, 2018) with high level of IT knowledge and skills to utilize brand-new devices. One more thing, studying the topic of technology in education, it has to be emphasized that the usefulness of above studied issues for evolving career and company revenue (Rajib et

al, 2017). More generally, these basic findings are consistent with the research TPB model implication towards adoption of software and ICT in the educational context.

1.2.3. Students' power as Customers

Together with the advent of hi-tech and digitalization accompanied later by social media, relation the customer-business was re-assessed and reinforced by new service and marketing opportunities (Kiani, 1998). Such a digital world offers a comprehensive model of connection "many-to-many communication model", where the primary role belongs to mobile and computer applications. The contemporary business balance is going to adjust the shift into the interactions between customers and business to create digital armed clients (Duncan, 2017). It is happened due to the unique and powerful features of Internet. Given this, in the new environment marketing functions suggest more interactive consumption to "establish dialogue with customers" rather than talk to them (Kiani, 1998; Fader & Winer, 2012). The important point here that customers are seeking to be partners, enhancing "customers value" (Mithas et al, 2005). To deal with this difficulty, companies have to be more involved in decision-making process and centralize marketing strategy around this particular stakeholder. Customer orientation touches all spheres of business, and Higher Education Institutions (HEIs) (Alves et al, 2016) also.
From coming perspectives, students-centered education is considered as a mainstream which, from university side, involves a new marketing content and strategy. Generation Z preferences are shifting the business in a modern paradigm of automatization of process and technical SEO, for instance, optimize your email program with AI. Such customer power might be described by their ability to "get what they want, whenever they want, from whomever they want" (Fader & Winer, 2012). As a consequence, companies, or any other kind of institution engaging with the consumer requires implementing the strategies and actions that let them align their offer to the clients' requirements, needs and desires. According to the recent study of popular business ideas (Garside, 2020), educational service encompasses the wide-spread integrated issues. As such, a chat-bot as a form of "conversation marketing" allows for automatically rapid response that increases business KPIs to convert them in "leads" (LaBianca, 2022). Another critical thing that mobile friendly website has become the norm and perceived as a standard accessory. Alongside with that, Gen Z is obsessed with visual content because they live online and breathe the digital world. Such automated intuition is so native for youngsters that might

catch as “must have” for businesses. On the other hand, it pushes marketing elements towards better marketing and “on-brand good design”.

In line with this context, Edward Deming said (2018) in his book “*you can’t manage what you don’t measure*”. But now this phrase is transformed into “*if you can’t measure it, you can’t improve it*” to underline the essence of tracking KPIs – traffic sources, social media engagement, number of applications, response rate etc. These days around “*64% of prospective college students prefer text and articles on college sites*” (LaBianca, 2022). This is a fact which can’t be ignored. Higher institution branding is a topic for many international discussions, especially, during and post-Covid period. But this is not an emerging phenomenon anymore. It is just reality where there are Campus Days at university with guest speakers as well as online Open doors for applicants abroad. As with any company, every institute desires to strengthen its image and attain the highest chunk of students (Abbas & Wallusch, 2022). Although students have limitless choice, they are under control of university suggestions. Quite recently, the customers revolution launched the electronic communities which generate a new form “Word of mouth” (WoM). In many companies marketing it occupies a significant part with a dominant paradigm because the quality of service might result in positive or negative customers’ decision making.
Considering the students as customers in the education industry, the proponents of this idea believe in the brand image that only enhances the concern for their mutual actions. Likewise, Bay & Daniel (2001) are quite skeptical of this formula ’’customer is always right” in HIE. They are rather partners in this adventure to create something unique with mutual benefits.

1.2.4. The traditional media vs social media, and the arriving new media

Facts show that all over the world there is a tendency to lean towards new media and just keep traditional media as an alternative. To illustrate it, we have to take into account that “*U.S. newspaper circulation fell in 2018 to its lowest level since 1940*” (Grieco, 2020). The digital platforms currently managed to replace printed newspapers and compete for audience as much as for advertising revenue. Migration of readers to other media is so notable, especially, in terms of pandemic (Adgate, 2021) when the local market suffered

essentially. With economic slowdown, the revenue of newspapers reduced crucially during 2020-2021 that provoked a new wave of battle between traditional and social media. For instance, in the USA West Virginia publisher opened a lawsuit against Facebook and Google for monopolizing digital advertising (n.d.).

According to Tandoc et al (2018), in today's society "the digitization of news has challenged traditional definitions of news". The average customer who used to follow promotion messages or friends' recommendation, should adopt her or his shopping manners in the digital environment (Leach et al, 2018). In addition to that, social media allows users to reunite in new communities and online societies of friends or followers. In contrast, traditional media mostly focus on the expression of the last news.

Effective social media communication follows the logic of sharing information or posting news to generate discussion of subscribers. As a result of that, customers might talk about negative and positive experiences or give feedback about product/service (Kotler, 2017). According to a recent study of Fetcherin (2020), people most of all rely on the opinion of friends and relatives as well as social media users' recommendations.

1.2.5. Phenomenon of social media and Gen Z

Recent studies indicate that the impact of social media in Spain reaches 29 million Spaniards, which actively use social media for about two hours a day (Usuarios de redes sociales en España, 2021). Although the average age of users is 39 years old (men 49% vs. women 51%), the fastest growing cohort is amongst those born in the last two decades. Similar data was found in the European data, where the 16-34 age group cohort is the predominant user group of social media (Educational attainment statistics, 2021). A trend that has led to a proliferation of studies on the impact of social media on youth and the spread of misinformation. The contemporary view on the "FakeNewsNet" (Botha & Pieterse, 2020) is presented here to analyse the influence of false news on social media in order to study the topic of youngsters' decision-making. Most research on false stories concerns people who perceive them as reliable information and therefore act incorrectly accordingly (Ostendorf et al, 2020). For example, applicants for a place at a higher education institution (HEI) may detect some inaccurate information about the college or university (Obermeit, 2012), which discourages them, and therefore not make the decision to apply.

Massive flooding of fake news has been recently released on the market, especially during UK super-close vote of Brexit in 2016, tumultuous U.S. presidential election 2016, the COVID-19 pandemic. Referring to the prior research (Thompson &Oppenheimer, 2016); Tejedor et al, 2021), the public response is very sensitive to the significant social, economic and political events such as a pandemic, and social media technologies utilized this benefit to facilitate online communication all over the world. In the same case, new media appeared to essentially contribute (Chen et al, 2021) in dissemination of inaccurate information. Traditionally a higher risk perceived, higher consumer implication, and, consequently, higher use of information (Lazer et al, 2018).

1.2.6. Quality of information and role of social media

There have been numerous studies to investigate false headlines' influence with different direct and side effects. "The popularization of fake news has taken place in a very particular informative and communicative situation, characterized by digital noise, 'infoxication' and information disorder" (Tejedor et al, 2021).

Understanding the fake news is necessary to detect it from a different perspective :1) facilitate interdisciplinary connection, 2) touch fake news challenges 3) adoption of the technique in data mining, information, and social search (Zhou et al, 2019). 4) Real-world social phenomena point out to different social media networking with certain attributes and sociality. At the same time, according to Eriksson (2018) raising public awareness of social media is just about "using social media's potential to create dialogue…" and "pre-event planning, partnerships with the public, listening to the public's concerns, and understanding the audience's need for credible sources ".

1.2.7. The digital market and B2C

For the last decades, one of the most popular ideas in business literature is the point of adoption the different devices into the marketplace as well Business to Client (B2C) as Business to Business (B2B) (Archer & Gebauer, 2002). This topic with multiple choice of decisions, is boosting interest of practitioners, attempting to discover the key factors. Nevertheless, from the side of business the response is logical: what brings in money that has to be developed. And some industries rely on this statement fully, being dependent on customer streams, mostly from Internet (Foon, & Fah, 2011). Electronic market widely

occurs in Business-to-Business scheme thanks to elaboration of IT technology, for instance, in the banking system. That was a crucial historical point for delivering payment capacity by credit or debit cards instead of cash, for both sides - Buyers and Sellers. Diversification of electronic marketplace (EM) revealed the new option for E-commerce as a separated category which might become one of the major topics for investigation in this field. For the data of McKinsey report (2018), E-commerce market is growing up by 40% in 2018 and is still on its way to achieve maturity and sustainability. Some industries were crucially modified to operate on the market only in and by Internet network that fosters to cut the expenses and increase the profit. Nowadays, there is a well-known marketing strategy of “low cost” or dumping which finds out a plenty of followers. And especially, airlines get used to utilize their service of booking tickets only through internet for getting a competitive advantage towards tightly battling with rivals. In context of studying the influence of technological evolution of devices, it has to be simplified the two general areas of interaction in practice: information system (IS) and information technology (IT). Otherwise speaking, some industries have succeeded in adjustment software, others – implemented just devices into business. Wireless network technologies service is marching globally to intervene in the dormant areas.

1.3. The Higher education industry

In front of the enormous concern that the HEI market is standing on such as “increased competition worldwide for well-qualified students, to concerns about equality of access, and specific and local issues such as changes in funding for higher education and increased marketisation” (Hemsley-Brown & Oplatka, 2014).

This highly competitive environment, combined with a reduction in government funding (Choudaha, 2013), is leading to an increasing market orientation of the higher education system across the European Union (Wright & Shore, 2017). However, this trend is not homogeneous; quite the contrary, as it contains strong variations between countries. For example, in Spain, the public higher education industry is less commercilized than in other European countries (Jayadeva et al, 2021).

As higher education is increasingly assigned a relevant role in building the knowledge economy, students in developed and developing countries are eagely seeking access to

universities recognized for their world-class research capabilities, called world-class universities (WCU) (Kim et al, 2018). According to a report by Eurostat (Educational attainment statistics, 2021), in 2020 more than 40 % of young people in the EU (aged 25-34) had completed their higher education studies. Regarding the globalization of the higher education market, according to the "UNESCO Science report towards 2030", between 2000 and 2018, the number of overseas students worldwide has increased from 1.6 million to 5.6 million, mainly concentrated in the UK, US, and the EU (UNESCO, 2021).

However, both the use of WCUs, i.e., a paramount orientation towards the 'Western' standard of higher education, and the unlimited growth of the internationalization process have been criticized. WCUs are criticized on two grounds: first, because the criteria for measuring quality contain biases that favor universities located in Western countries (James-MacEachern & Yun, 2017), and second, because they set them up as the ideal model towards which all other countries should orient their higher education institutions (Shahjahan, 2016). On the other hand, there has also been criticism of the unrestricted growth of internationalization of higher education, an outcome that most students around the world want to access (Altbach, 2016), leading to a massive movement of international students, the use of overseas branch campuses in developing countries, the dominance of the English language over most autochthonous languages, which seems to have reached an inflection point, especially in Europe and North America.

The interest to the determination of new external factors which has significant impact on the management education arose from the period of the first commerce management schools on the market. At the same time, throughout of industrialization and era of discovery, attitude and value of business education is notably altering to shift the gradient towards the practical outcome (Nicolletti et al, 2016). In this scope, the value of particular forces driving the system explicitly is persuasive topic for research.

To identify the explicit factors, scholars studied mostly the political, social and economic conditions (Ortiz, 2004) at last but not at least. The causes are veiled under the circumstances of national and local market issues (Gerasimenko & Molchanova, 2017). Another reason has been discovered for the last a few decades, it is climate change impact (Nicolletti et al, 2016) that is increasing demand of skilled leaders to the risk management. In fact, the 21t century is enriched by the financial crisis else that is reasonably speculated in framework of key drivers to the present education system for

preparing a new formation of entrepreneurs (Kailer, 2009). At the same time, a plenty of publications contribute the valuable result of business education for graduating the future leaders and entrepreneurs in order to encompass the topic of technology (Whitaker et al, 2016) and the impact globalization effect, which is prudent. Thus, it was identified a shortage of findings analyzing the political factors within exogenous influence on the education system of business schools.

1.3.1. The role of students at Higher education

In today's fast-growing economy the question "how to win" for the customer's voice is more than topical because it assumes some conjoined aspects such as economic, social, psychological aspects and their interaction. This seems to support the conclusion of the EU report of Consumer behaviour conducted in 2020 (European commission, 2020), namely, that buyer choices depend on social and national specifics. Moreover, e-shopping is going up steadily with the biggest increase among young users (Eurostat, 2022). In pandemic period online activity, facing many challenges was adapted to new customer behavior. Rationale of research this topic at the Higher education crosses the choice behavior, globalisation, student mobility and supply/demand (Hemsley-Brown&Oplatka, 2016). For the last 10 years these new issues have begun playing the essential role. There were plenty of reasons for that, for instance, financial crisis 2008, non-stop-going worldwide globalization with massive takeovers and acquisitions, and, recently happened, isolation during COVID 19 (Abbas&Wallusch, 2022). The economic situation affects clients and respectively, their choices so much although it varies by brands and changes demand of products. In other words, some attributes of goods are getting more important for clients' needs than previously used to be the case. Having examined this point, both scholars and marketers have to revisit these studies again in a couple years due to technical progress plus the non-stable reaction of buyers on any external factors, for example, by Schiffman et al (2008) "*the seasons, the weather, the economy, competitors and, even, recent news stories".*

The most common argument in favor of studying this topic is the difficulty of simulation in a laboratory, as the real life used to contain plenty of variables which alter from day-to-day. Marketers should have to determine the criteria of choice and buyer's needs with the purpose to persuade them. On the other hand, such knowledge provides the competitive advantage against rivals.

During the pandemic, the Higher Education business was squeezed in condition of downsizing and limits of operations. Thus, online activities had to compensate such losses thanks to the implementation of digitalization in the education industry (Abbas&Wallusch, 2022). But the quality of distance learning is arguable among scholars and practitioners (Liu et al, 2021) during the Covid-19. Thus, applicants on their way face new variables in their choice to get Higher Education with specific parameters of buying product or quality of service. In turn, the social, political and economic changes of globalization led higher education to "*marketisation, because universities have to compete for students and resources by adopting market-like ideologies and diversity policies*" (Oplatka & Hemsley-Brown, 2010). Such challenges have accelerated competition on education market to modify institutions a better way.

1.3.2. Customer decision journey to the product

All markets pursue the aim to attract as many clients as they possibly can. Thus, digital and social media are drivers of marketing. For this reason, many companies permanently struggle tackling this challenge. Such a task has been discussed in numerous researches (Tejedor, 2021; Tandoc et al, 2018; Taylor et al, 2005; Hemsley-Brown & Oplatka, 2016), and it goes on to be the actual topic for studies with practical focus. The complexity of this one is shown through the many variables. Objectively, clients are led by the opinion of their friends and relatives, advertising, price, previous experience using rational or intuition/emotional approach. It is likely to be the one of the most crucial barriers for business development. One must admit that there is an obvious shortage of information relating to some industries and countries. In addition, much data could be updated with examination of new models and collecting outcomes after implication of some corporate marketing strategies.

The consumer decision journey goes through the so-called "the funnel" (Court et al, 2009) – from recognition needs, up to post-purchasing service (Dubovsky, 2019). This explanation greatly simplifies the judgment making procedure. Nowadays, "funnel" theory has lost its force by reason of more complicated processes which might be explained with usage of the circular approach: 1 – consideration, 2- assessment, 3 – buying process, 4 – getting experience. Researchers have stressed the importance of clients' loyalty, which is going through the all stages. This goal might be achieved by the intensification of communication channels with current and potential clients. At the same time, it does not

work in an appropriate way in some industries where marketing studies of ‘’customer’s decision journey’’ or CDJ are conducted.

McKinsey consultants Galante et al (2013) have highlighted four issues which can be thoroughly investigated by the others:

-clients cannot be clearly divided into macro groups so there is heterogeneity with a set of micro unities

-digital is the main channel in order to get the mass market

-boundary between “commerce and content” is vague

-decision journey seems to be similar in all channels

Based on the above represented conclusions, one of the priority tasks is identification of micro segments with specific consumer buying behavior. Thus, here one moment could be clarified as how buyers changed the decision after negative experience. In other words, it supposed to consider the perspectives of learning process through CDJ. On the other hand, a marketing strategy may be examined in some companies thanks to identification of the appropriate complaints such as a category of buyers who would be returned and reduce the negative reaction.

1.4. The social media business

World Wide Web, usually called web, is an information system with diversified services regarding to demands of companies and individuals. World computer network collects web pages storing information and giving users access to billions of sites through their devices – computer, phones. People can interact by texts, videos, audios, and digital images etc. Since 1989, when the World Wide Web was invented by British computer scientist Tim Berners-Lee (The birth of the web, n.d.), computers’ technology has been modified and upgraded to serve us a more user-friendly data networking through an effective global information system. Originally, there was an enquiry to automate information-sharing between scientists from different countries. Later on, the company

CERN, where this programmer worked for, released an open license to give a “green light” for its maximum dissemination.

In more than 20 years, the emergence of social media came out with the site “SixDegrees” justifying it in the publication “The history of social marketing” (n.a). It is dated to 1997. No doubts, the evolution of social media began much earlier than this date. And the precursors might refer to the telegraph message of Morse (Ngai et al, 2014), Usenet system, instant messaging.

As far as we know social media covers all Internet-based technological applications, under the principles of Web 2.0, to provide and generate content for using or exchanging (Alves et al, 2016). In accordance with initial logic, it contributes communication, interaction and collaboration of Internet users (Kaplan & Haenlein, 2010). In addition, social media is much more than brand awareness and online marketing in the virtual world (Kiani, 1998). Concept of social media marketing presents “*various marketing activities such as branding, market research, customer relationship management, service provision, and sales*” (eMarketer, 2013).

At the same token, Alves et al (2016) disclose the social media marketing that is a form of digital marketing, assisting with the achievement of marketing and branding goals. More clearly, social media platforms include blogging, posting, sharing, tweeting, social networking. To advance customer-company relationships, firms have to improve digital marketing engagement (Tiago & Verissimo, 2014). And companies faced the internal and external pressure examining customer attitude to digital marketing. The dark side of social media (Talwar et al, 2019) appeared as the fake news phenomenon, which is described as sharing false information among social media users.

Studies find, “Half of Americans see fake news as a bigger threat than terrorism” (Siddiqui, 2019); “What magic teaches us about misinformation” (Harford, 2021); “Buzzword or Real Threat? Fake News Is More Dangerous Than You Think” (Van der Lanz, 2021); “Censorious governments are abusing “fake news” laws” (Maida, 2021) are some recent headlines of Forbes, The Guardian, and The Economist on the importance of fake news. These headlines only underline the harmful and “snowballing” trend that the distribution of fake news, mainly through social media, is having on the field of information. As practitioners debate perspectives on deliberate disinformation, the distribution of pseudo-news has accelerated through increased use of new technologies (Botha & Pieterse, 2020) and social media, identifying key “actors” such as Twitter and Facebook (Hanz & Kingsland, 2020). This widens the debate on the truthfulness of media

sources and particular technological platforms. One of the main concerns about the dissemination of false information is its destructive impact on the credibility and reliability of information published in the media, which is why it should be regulated by law and media rules. For example, the EU Commission intends to tackle online disinformation by using the Code of Practice on Disinformation to enforce democratic standards and ethics in the market (Tackling online disinformation, 2019.)

The overall social media market has altered its dynamic, "increasing power of customers" to battle for more competitive positions of firms (Porter, & Michael; ilustraciones Gibbs, 2001). In the light of the changing landscape, OECD (Organisation for Economic Co-operation and Development) identified twelve good practices, related to social media in risk and crisis communication (The use of social media in risk and crisis communication, n.d.):

1) Raising public awareness toward risks
2) Monitoring situation awareness
3) Advancing preparedness
4) Informing and warning
5) Better response through enthusiasm of volunteers
6) Detecting survivors and victims
7) Steering reputational influence
8) Providing incentives
9) Studying the post-crisis
10) Keeping close partnerships and cooperation
11) Creating trust
12) Enhancing recovery management

All in all, considering the huge potential of social media industry thank to massive customer acceptance of this innovation, "number of researchers has considered customers could depend and use social media platforms as source of information in their purchasing process" (Alalwan et al, 2017).

1.5. Problem identification

As mentioned earlier, the business competitive background has dramatically amended with the coming of the tech revolution, the internet, and the digitalization (Duncan, 2017).

At the present time, new media technologies affect directly on the financial situation of each company in the industry with consequent success (Hair, 2017; Kotler, 2017). However, each business circulates with its own life-cycle with digital marketing strategic, especially on social media, to be in competition with others (Sabol et al, 2013).

Why is it important to study the impact of social media? Why is it so crucial to focus on youngers' reactions to fake news? In the literature, the study of the power of social media or how customers adapt to this new technology are not unique research topics. Throughout the 20th century, the most important forms of mass communication were developed: radio, magazines, phones, typewriting (Chaffee & Metzger, 2001). Each of these media profoundly altered the way in which information was transmitted. The emergence of Covid -19 and the resulting restrictions of social isolation have led to the dominance of online relationships, which has become the "Big Tech" (How digital technology is easing the burden, 2020). However, this increased social concentration around online media has also served not only to diffuse information relevant to confined people, but also to proliferate fake news.

In fact, the use of the term "fake news" increased by 365% between 2016 and 2017 (Flood, 2017). The primary group of consumers of online information, including fake news, comprises teenagers and young people (Alves et al, 2016). Youth is an attractive target market because their opinions are easily manipulated in electoral processes to drive opinion changes concerning different companies (Marginson, 2016).

With the core question in mind, we intend to employ a range of methods to examine young people reaction on fake news, and criteria influencing students' choice. Previous research indicates that human intelligence is correlated with CRT performance (Frederick, 2005; Thompson & Oppenheimer, 2016). In essence, our findings shall foster the further studying of the distinction between intuition and deliberation. In order to achieve the research objectives, we will utilize the Cognitive Reflection Test (CRT) model (Oechssler et al, 2009; Mosleh et al, 2021).

A research gap has been identified regarding the phenomenon of misinformation (specifying its difference with disinformation), as well as its distribution through social media. There is little information about its impact on the users' decision-making process (Tejedor et al, 2021). Moreover, to the best of our knowledge, there are no precedents

that study its influence on students' decision making when applying to one university or another.

1.6. Research objectives

This project advances the recognition of the decision-making process and assess students' perception to discrete information. Acordingly, we intend to use different of methodologies to measure students' reactions to the veracity of real and fake news.

In fact, this research has several main objectives:

- To comprehend what factors drive customers in the education industry
- To understand what dictate students' attitude towards pseudo-information on social media, as part of the customer habits
- To investigate the correlation between attitude and people behavior: the higher the attitude, the higher the acceptance
- To identify and assess how false information can influence customer decision - making in terms of the rationality or intuition of the process

Consequently, the title of this research is the following one: "Fake news on social media: A study of the students' acceptance of misinformation about chosen university".

1.7. Research question

To our knowledge, no previous research has investigated the degree of acceptance of fake news related to the choice of university or business school, taking into account students' heuristic bias and their dependence on social media. Based on the Theory of Reasoned Action (TRA), the attitude towards fake news is considered an antecedent of the acceptance of this type of news. Furthermore, based on the Social Cognitive Theory, the degree of fake news knowledge of the subject is considered as a precedent of that attitude. In addition, regarding the theory of para-social interaction, another precedent is occurred which is the degree of para-social interaction. Finally, based on the Theory of Gratification in use, the desire to search for information is another precedent of the attitude.

To test the hypotheses of this study, market research among Spanish students is proposed to explore the influence of fake information, produced on social media platforms, on the decision to select a public university or business school to pursue their studies.

To answer the major question, we must study the internal and external factors influencing student decision-making and their behavior in the flow of fake news on social media. In addition, some specific issues will be disclosed in our paper:

- What is the nature of fake information?
- What is the role of social media?
- What type of false information are cycling in the market?
- How does higher education engage students through social media?
- What is the impact of implausible headlines on student's choice a destination?
- What is the susceptibility to false information among young people?
- How do students spot misinformation?
- Is it an emotional or rational process linked to youngsters' intelligence?

In summary, this research project is going to scrutinize the students' attitude and behavior in consuming misinformation on social digital platforms, which particularly affects their taking decision in higher education.

1.8. Research question importance

This research is relevant in today's world because customer experience, defined as "*a function of a set of interactions between customers and some part of an organization*", (Nysveen et al, 2013), and "*a multidimensional construct that involves cognitive, emotional, behavioral, sensorial, and social components*" (Lemon & Verhoef, 2016).

The most common argument in favour of current study is the difficulty in putting this simulation into practice and predicting the results. To draw up the problematic areas, we must pay attention the following issues:

A) Higher education is a prestige (Czerwonka, 2017) and obtaining a university or business school certificate increase one's probability of becoming a successful candidate in the job market.
B) Students are customers in educational industry (Eagle & Brennan, 2007) with their preferences and relevant characteristics, who have to make decision in favour of one school over another. And here it appears so engaging situation, when young people have to weigh the pros and cons and rely on some sort of information.
C) To make these decisions, the students should search the market (Souter & Turner, 2002) and the most widespread and common tool now is to utilise internet and media, where they may encounter both accurate and inaccurate news.
D) To assess the situation regarding the impact of the previously mentioned factors, we must investigate the cognitive reaction among undergraduates. An unsolved question is whether belief in implausible information is driven primarily by gut feeling, known as "partisanship" (Pennycook & Rand, 2018).

In a fact, the business environment used to contain plenty of variables - accurate and not proper news which might have impact on the image of entity. Thus, Cognitive Reflection Test (CRT) might moderate the research to assess humans based on their major analytical strategy in perceiving misleading news. In other words, it was identified that people with low CRT scores tend to trust the fake news more easily (Pennycook & Rand, 2019) than those with high CRT scores. Therefore, the implication of the CRT model will be examined with students at Barcelona University and a private business school to estimate their perception of both correct and fake information.

1.9. Scope of the research

The role of fake news and human behavior has been analyzed in various aspects, including politics (Lee et al, 2017; Galak & Critcher, 2022; Pennycook & Rand, 2018); education (Chandra et al, 2017) ; tourism (Peco-Torres et al, 2020; Sousa et al, 2021); health and beauty (de Regt et al, 2019); food industry (Castellini et al, 2021); football and entertainment industry (Firgolska & Kurchrska, 2019); real estate market (Onete et al, 2020); Coronavirus Infodemic (Zarei et al, 2021); media market (Wilczek, 2020); social networks (Carusona et al, 2017); the book market (Volkova et al, 2020); the higher education industry (Onursoy et al, 2020); brand management (Borges-Tiago et al, 2020); journalism and linguistic (Ivancova et al, 2021); and social media (Chen et al, 2020; Chang, 2021). Conceptualizing the effect of online news, Ernst &Young states on its site:

"*In an online world of misinformation, trust is a powerful weapon for retaining audiences and advertisers and standing apart from the noise*".

The focus of this analysis is false headline in social media, which might transform the youngsters' position about applying to university. This pseudo-news is understood as "„news articles that are intentionally and verifiably false, and could mislead readers" (Allcott&Gentzkow, 2017). According to Colliander (2019), the proliferation of such information typically chases specific goals and provoke actions such as liking, sharing, and commenting. In general, Tandoc et al (2018) have recently classified into six types - "satire, parody, fabrication, manipulation, propaganda, and advertising". This research focuses on exactly fabricated stories. To investigate the outcomes and consequences of fake news impact, it's crucial to consider false content on social media like FB, Instagram, Twitter, YouTube, given the evolving nature of digital technologies. While the dissemination process and channels are clear, in turn, the outcome and consequences are challenging to measure. As Di Domenico et al (2021) state "*the impact of fake news exists at societal, firm and consumer levels".* There is growing concern about to the last one – consumer, namely, their attitude and behavior because it might be linked to psychological bias. The study will be based on theories aimed at understanding the consumer behavior, the role of social media, and the broader environmental context. Colliander (2019) points out that individual behavior is correlated with social surrounding. In our case it is the online community on digital platforms. But quite often non-human agents operate in media, such as computer algorithms like social bots. Lazer et al (2018) suggest that between "9% and 15% of Twitter users and 60 million Facebook accounts are thought to be social bots" where Facebook rather becomes "FAKEbook".

To answer the question of whether the high influence of inaccurate news modifies decision-making, we test perception of false information from digital platforms among undergraduates. One specific detail in doing this is examining participants' cognitive ability through Cognitive Reflection Test to distinguish intuitive reactions and rational choices.

1.10. Architecture of the dissertation

To examine the research question and encompass the entire scope of the project, this thesis is designed into seven chapters.

The first chapter takes the lead in the background and deals with the principal components of the research: research question, research objectives, and scope of the study.

The second section presents the literature review and synthesizes on the influence of fake news via social media on undergraduates' decision-making. Be more precise, this chapter describes various theories and models on human behavior in the framework of information stream on social media such as: customers' desire and decision making; youngsters' interaction on digital social platforms; creation of virtual communities and consideration of main influencers; people attitude to fake information and their reaction on it; rationality vs intuition for taking decision.

A new methodology is outlined in the third section to unveil both the qualitative and quantitative approaches. IN this chapter, we propose a structural model with particular procedure to focus on students' attitude and investigate their behavior within the defined constructs. A survey-based quantitative method will be used to inspect the degree of influence of misinformation on undergraduates. Focus group and individual interviews will allow us to explore personal feeling towards fake news.

The fourth chapter goes straight into the results of studying and discuss the findings related to the proposed hypothesis.
The fifth chapter covers a summary of the research and offers recommendations for future scholars to address the research question and confirm or reject the hypotheses.
The sixth chapter presents certain limitations in the study to address the propositions for future research. Furthermore, this chapter discusses the academic, and managerial contribution to demonstrate the benefit for the public society and academic peers.

In the appendix of this project, you will be able to get additional information, including the questionnaire, interview question, and various tables.

2. Conceptual framework

2.1. Introduction

2.1.1. Global concern of fake news and social media

This study uses a multidisciplinary approach that combines the decision-making process of students, the use and impact of social media as a source of information that young people use to build their knowledge, beliefs, and attitudes, and finally the effect of fake news on the decision-making process. The objective is to analyse the impact of fake news published on social networks on the decision-making process of youth, particularly in relevant situations such as the choice of a university.

The more social media is used, the more difficult it becomes to discern between the fake news and true ones (Ostendorf et al, 2020). Aware of their high incidence and strength, the Council of Europe (n.a.) reported growing concern about the volume of information pollution, categorizing such "*noise*" into three types – misinformation, disinformation and malinformation. These three terms help to highlight the nuances with varying degrees of intentionality, but also damage and misrepresentation to business reputations and the creation of mistrust among consumers (Cyber, 2022). Indeed, there are recent examples of court cases in which Google and Amazon (n.a.) were investigated for issuing false reviews on the Internet that mislead online shoppers. Posting and disseminating fake news does not just happen between individuals; it also evolves into distribution on mainstream social media such as Twitter and Facebook (Hanz, & Kingsland, 2020). According to Statista (2021), social media platforms such as Twitter, YouTube, and Facebook are leading players in this damaging trend of spreading fake news. The advantages of using social media as a quick and easy way to search for information break down when faced with the challenge of widespread misinformation online (Syam & Nurrahmi, 2020). Considering that social media is a source of global news for 34.8% (Datareportal, 2022), any fake information can spread in a few seconds all over the Internet. In addition, the majority of the audience is under 34 years old, surfing the Internet every day for a minimum of 7-8 hours per week (Horn & Veermans, 2019; Zakharov & Maybee, 2019). On the other hand, the Internet and social media are basic sources for disseminating news that can reach the educational community, aiding in customer retention, and advertising institutional ranking in order to "recruit" new students (Guilbault, 2016; Kimmons et al, 2017).

To avoid risk of misleading and vague expression, it is necessary to prevent such cases. So, information pollution becomes a problem for the public due to perceived fake news and the detection of untrue stories. But, in order to move forward and create “reliable algorithms for flagging “fake news” (Egelhofer & Lecheler, 2019), we should consider this phenomenon in-depth. It must also be noted that the vast majority of subjective and external rumor around this topic demonstrate the varied nature of it. The media-user network and information mess are not the only factors among numerous influencers. Anxiety and personal trust closely accompany this topic, which is notably related to the misbelief of misinformation (Chen et al, 2021). In relation to the abovementioned statement, recent research claimed the circulation of fabricated information is connected with the proliferation of social bots and low-credibility resources (Molina et al, 2021). Another point is to touch the aim of the misinformation, where publishing deceptive and incorrect information has financial reasons (advertising and digital marketing) that bring company revenue (Allcott & Gentzkow, 2017) or also enhance company notoriety or reputation (Jahng et al, 2021). Sponsored content creates both long-tern economic and social impacts.

2.1.2. Theoretical foundation of student behavior

Different theories need to be used to explain how students accept fake news in the selection process of a higher education institution. The impact of social media and Web 2.0 provides significant opportunities for decision-making. Note that a significant part of theories explains the adoption of innovations based on customer attitudes, like Technology Acceptance Model (TAM) (Davis, 1989) or the Unified Theory of Acceptance and Use of Technology (UTAUT), formulated by Venkatesh et al (2003). However, there are other theories that focus on the psychological aspects. According to the specification of research team of Wisdom et al (2014), there are about twenty theoretical frameworks describing multi-level adoption. The synthesis entails not only the implementation of theories but also the assessment of external factors, individual, and innovation characteristics. Wisdom et al (2014) bring more information about the background of the problem of the mechanism of the technology adoption to go along with the academic model “input—process-output” (Figure 2.1.)

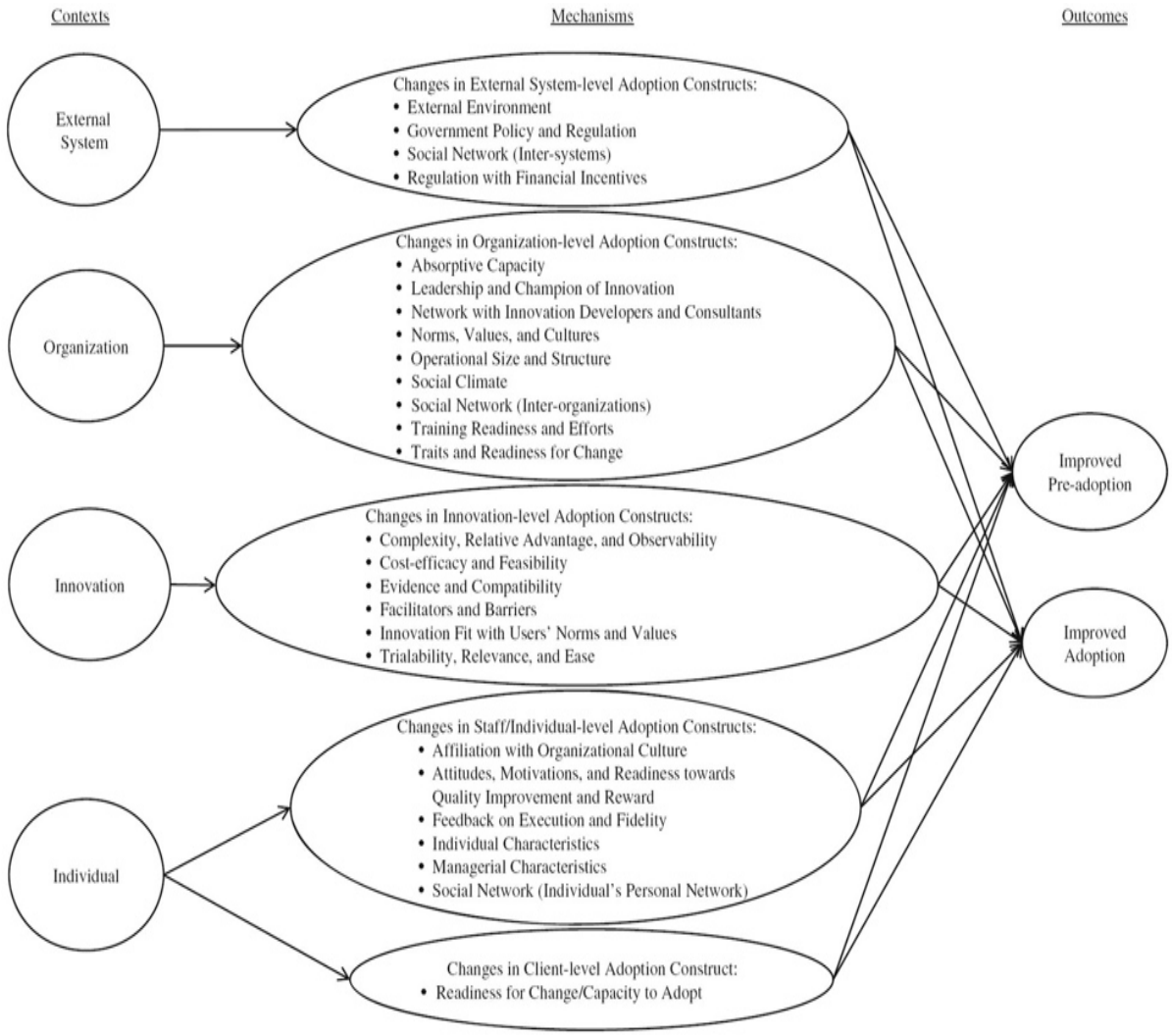


Figure 2.1 Context-outcome mechanism of innovation adoption (Wisdom et al, 2014).

There exists a considerable body of literature that studies all three stages of mechanisms which commences from the "input" as a "context" - innovation, individuals, organizations, external systems. Secondly, the particular changes with "context" are presented, explaining certain regulation mechanisms inside of this phase, for instance, adjustments in external systems in line with social network. The third stage leads to "adoption" or "improved pre-adoption". There was a significant positive correlation between personal level and technology adoption system.

One of the most popular is **Theory of Reasoned Action (TRA),** proposed by Ajzen and Fishbein (1977), which shows that attitude is one of the fundamental antecedents of the intention to use or accept a social behaviour. In the same line, the **Social cognitive theory (SCT)** initially developed by Bandura (1989) and used in different fields of knowledge such as psychology, education, and communication, argues that a part of subjects' knowledge is acquired through the observation of other subjects during social

relations and through learning and experience with external means (Govindaraju, 2021). So, this theory considers the “reciprocal causation” of three determinants – human behavior, personality, and the external environment (Glanz, 2015) to highlight media communication as a “mediating mechanism”. Thus, human social cognition affects environment, and, in turn, drives a behavioral model. Understanding social maturity “through electronic interactive networking” is one of approaches at the interpersonal level that explains a new social landscape where people can interact online (Hoffman et al, 2014).

On the other hand, note that several publications have documented the relevance of trust-building (Zanuddin & Shin, 2020; Eger et al, 2020) and fake news on social media (Apuke & Omar, 2020). **Social Networking Site (SNS) Dependency Theory** expresses that increased use of social media generates greater engagement with the community with which information is shared, as it can build and strengthen the ties of individual users (strong and weak) in online and offline communities (Lee et al, 2017). Finally, **Uses and Gratifications Theory (UGT)** proposes a theoretical basis for understanding how and why users seek out and engage with specific media. It views the audience as having an active and responsible role in their consumption. It assumes that media audience members are not passive consumers, but rather, that they consume media to achieve some kind of desire and need for gratification and are therefore responsible for their consumption (Menon & Meghana, 2021).

Social Networking Sites (SNSs) are virtual communities to construct profile, articulate opinion, and share connections (Kuss & Griffiths, 2011). Since Facebook was invented by Mark Zuckerberg in 2004 for connection of Harvard students, social selection and peer influence have attracted the interest of scientists for more detailed analysis of the network evolution and even re-estimate the previous findings, for examples, TRA, UGT, and the Media Ecology Theory (Moreno & Koff, 2016). On the Internet ,people could be engaged in different activities which lead to a variety of consequences (Lewis, 2012). Examining evolution of the Facebook friend network, this study shows a potential decrease in engagement in real-life communities with lower performance, as well as relationship problems. Furthermore, Bianchi & Phillips (2005) noted that there is *networking dependence* when the use of social networks impairs performance at work, academic life or interpersonal relationships by involving higher-than-desired use or recieving complaints from friends and family about abusive use. At the same time, Lewis (2012) reported evidence of a positive evolution in which people have a stronger tendency to

adopt tastes in that online social cluster. This project goes further to study the network dependence on public individuals as actors to exhibit the model of coevolution. No doubts, online society is a reciprocal system with dynamic diffusion of preferences and social ties. Along this line, Wang et al (2021) established that people with “low cognitive abilities relied more on source credibility and argument quality”. Consequently, the degree of dependence of the subject may moderate both the attitude and the degree of acceptance of fake news as well as cognitive ability. That refers to the fundamentals of **Dual Processing Theory** (Kahneman, 2018) and encompasses two different kinds of thinking: associative and true reasoning. In fact, factors shaping the decision of students online should be articulated under the scope of cognitive processing because “information search as an indication of rationality in student choice of higher education” (Menon & Meghana, 2021).

According to Pennycook & Rand (2019), humans can be classified according to their propensity to use intuitive or rational systems in their decision-making. However, they also highlighted that the use of heuristics responds to an inclination of humans to "lazy thinking", that is, to not expend much cognitive energy on decisions of little consequence (Pennycook & Rand, 2018). Therefore this propensity to use heuristics facilitates the acceptance of fake news, as challenging it would require an energy-intensive cognitive process (Frederick, 2005). As Pennycook & Rand (2019) commented, "*people fall in love with fake news because they don't think*". Predictably, many scholars are passionate about the phenomenon of rational and intuitive reaction, which results in decision-making (Stanovich et al, 2011; Oechssler et al, 2009; Kahnemann, 2011). What is more, other scholars are introduced to the new term: partisanship (Kahan, 2017; Pennycook & Rand, 2018) to decode the drivers of engagement. To clarify this point, findings have shown that susceptibility to fake news is driven by rather vague thinking (Pennycook & Rand, 2019).

Getting accepted into college is a great challenge for youngers. Searching for and choosing a university or business school to pursue higher education is just one example where applicants seek advice on social media based on the opinions of peers and friends (Ng et al, 2020). However, to distinguish between fake and real news, individuals must develop information literacy competence and have sufficient skills to verify the veracity of published data (Jones-Jang et al, 2021). Better education on media dissemination, as well as increased motivation of users to identify and eliminate fake news, could prevent its spread (Zanuddin & Shin, 2020). Research on problem solving by Kim et al (2018) illustrated that situational motivation, critical thinking and media literacy are central

elements contributing to the identification of fabricated information. However, students' media literacy training is quite lacking (Choi & Kim, 2017).

2.1.3. Students' consumption of information

Further studies are required to understand the key principles of this interconnectedness more fully to reveal the factors influencing the acceptance of fake news. This has also promoted the growth of interest in this issue in the context of student-consumer (dis)satisfaction (Nixon et al, 2016) in parallel with public education and private courses.

The desire of customers for feeling, living, and enjoying experiences are in a focus of literature, that evidencing how the reasons and criteria used during people's decision-making are changing (Ajzen, & Fishbein, 1977; Frederick, 2005; Abbas, & Wallusch, 2022; Lemon&Verhoef, 2016). Understanding customer experience throughout the customer journey is a crucial for companies in this era of increasingly complex customer behavior. The students, as customers, are not fully rational problem solvers; consequently, the cognitive approach and the expected value that a product might partly provide explain the overall customer behavior (Holbrook, & Jackson,1996). This started at the end of 20th century, while experiential theorists confirmed the importance of emotional aspects in describing customers' decision-making journey (Lemon & Verhoef, 2016). The relation between experiential perspective of consumer behavior and hedonic consumption was discovered (Obada, 2019).

In fact, scientists' interest was to unveil (Holbrook, & Jackson,1996; Syam & Nurrahmi, 2020) three consumption motives:

A. Cognitive seeking (thinking).
B. Sense seeking (senses).
C. Newness-seeking experience (freshness/novelty).

Moreover, as Kranz et al (2018) note, this understanding might be crucial to substitute *"the earlier information-processing theory with an experiential approach emphasizing emotions, feelings and sub-consciousness*". Considering the experience of customers from a holistic side with cognitive issues, we have to account also hedonic, symbolic, and aesthetic information needs (Kranz et al, 2018).

Since the research question was raised, the academic literature has evolved to target the concept of customer behavior, which has broadened and completed multiple definitions of their behavior, experience, motives, influencing factors, moderators, and mediators (Lemon & Verhoef, 2016). Our exploratory research aims to study dissemination of fake news and to highlight the importance and need for information literacy because of "fake news" (Lazer et al, 2018).

2.2. Fake news paradox

2.2.1 Definition

According to Tandoc et al (2018), there are two principal motives to produce fake news – financial and ideological. Interdisciplinary research shows the growing and rapid interest in this topic because of evidence of threats and generated problems (Tejedor et al, 2021). Popularization of this phenomenon came from political environment (Pennycook& Rand, 2018), and is currently mostly studied in phycological, marketing, entertainment, and education areas.

Now, fake news has become a buzzword, but the current sources offer various definitions (Table 2.1.). According to Sayed (2015), the term "*fake news" has appeared in the business literature through different views, including "computer and information science, political science, journalism, social science, psychology and economics*" (Zafarani et al, 2019).

The term "fake news" is defined as "a form of falsehood intended to primarily deceive people by mimicking the look and feel of real news" (Tandoc et al, 2018). Although "*false stories appear to be news, spread on the Internet or using other media, usually created to influence political views or as a joke*" (Molina et al, 2021), the phenomenon regained attention with a new wave after 2016 Presidential election in the USA. It is a modern concept of "yellow journalism" (Lamprou et al, 2021), where published content is without evidence. With the combination of both terms, we can talk about "fake news" as news placed on websites or social media to intentionally mislead the feelings (Allcott & Gentzkow, 2017) and beliefs of the receiver of the message, making it less credible and reliable. The cause of that is partly explained by the behavior of online consumers who do not attempt to understand is this publication highlighting the news, opinion, or advertising (Hoewe & Peacock, 2020). In the circulation of fabricated information, the

providers of false news often "*promotes particular ideas or people that they favor, often by discrediting others*" (Allcott & Gentzkow, 2017; Tandoc et al, 2018). In some cases, malicious accounts on social media are created by social bots, cyborg users, and trolls (Shu et al, 2014).

Importantly as well, pseudo-news used to imitate the real information through the "*activity of gathering, assessing, creating, and presenting news and information*" (Lazer et al, 2018). Users of online information usually tend to share stories or messages across different groups, often without paying attention to the quality of content (Resende et al, 2019). This is what exactly politicians often do to focus public attention on different news and misdirect the audience.

Authors definition characteristics	
Allcott and Gentzkow (2017, p. 213)	*'We define "fake news" to be news articles that are intentionally and verifiably false and could mislead readers.'*
Bakir & McStay (2018, p. 154)	*'we define fake news as either wholly false or containing deliberately misleading elements incorporated within its content or context.'*
DiFranzo and Gloria-Garcia (2017, p. 34)	*'Fake news is a (...) term for false news stories that are packaged and published as if they were genuine.'*
Guess et al. (2018, pp. 1–2)	*'a new form of political misinformation that features prominently in journalistic accounts of the 2016 U.S. presidential election'*
Horne & Adalı (2017, p. 1)	*'an underlying assumption in fake news discussion is that it is written to look like real news, fooling the reader (...). Fake news in contrast has the intention to deceive, making the reader believe it is correct.'*
Lazer et al. (2017, p. 4)	*'Here we define fake news as misinformation that has the trappings of traditional news media, with the presumed associated editorial processes'*
Lazer et al. (2018, p. 1094)	*'We define "fake news" to be fabricated information that mimics news media content in form but not in organizational process or intent. (...) we view the defining element of fake news to be the intent and processes of the publisher.*
McNair (2017, p. 38)	*'Intentional disinformation (invention or falsification of known facts) for political and/or commercial purposes, presented as real news.*
Mustafaraj & Metaxas (2017, p. 2)	*The term " fake news" refers to lies presented as news, that is, falsehoods online formatted and circulated in such a way that a reader might mistake them for legitimate news articles.'*
Nelson and Taneja (2018, p. 3721)	*'Now, the term more commonly refers to false or misleading information made to look like a fact based news story'*
Pennycook and Rand (2019, p. 2)	*fabricated stories presented as if from legitimate sources'*
Tandoc et al. (2018, pp. 147– 148)	*'Fake news (...) takes on some form of credibility by trying to appear like real news (...) 'current definitions seem to focus (...) on fabrications that are low in facticity and high in the immediate intention to deceive.'*

Table 2.1. Different definition of fake news (Egelhofer & Lecheler, 2019)

2.2.2. Taxonomy of false information

Various approaches have been proposed to solve this issue like taxonomy fake news (Molina et al, 2021; Rubin et al, 1985; Tandoc et al, 2018; Egelhofer & Lecheler, 2019.)

The typology of Tandoc et al (2018) is the most popular among academics. According to them, fabricated information can be classified into six categories: *"news satire, news parody, fabrication, manipulation, advertising, and propaganda"* to tackle it by using reporting and flagging symbolic. The typology operationalizes the term "fake news" in two dimensions – level of facticity and deception to enhance our understanding of the phenomenon where deception is level of immediate intention. For instance, satire is about a high facticity and low deception. In contrast, fabrication is about low in facticity and high deception. It is also worth noting that manipulation is often "based on facts, but includes embellishments that have no factual basis".

<table>
<tr><td></td><td colspan="2">Author's immediate intention to deceive</td></tr>
<tr><td>Level of facticity</td><td>High</td><td>Low</td></tr>
<tr><td rowspan="2">High</td><td>Native advertising</td><td rowspan="2">News satire</td></tr>
<tr><td>Propaganda</td></tr>
<tr><td rowspan="2">Low</td><td>Manipulation</td><td rowspan="2">News parody</td></tr>
<tr><td>Fabrication</td></tr>
</table>

Table 2.2. Classified fabricated information (Tandoc et al, 2018)

Further studies disentangle the conceptual differences and similarities (Molina et al, 2021) among suggested types. As long as suggested taxonomy by Molina et al (2021) of "fake news" is conducted on a meaning analysis, the Decision Tree model was developed to advance studying around falsehood. Once identified, the research detected seven types of online content labeled as "fake news"- "false news, polarized content, satire, misreporting, commentary, persuasive information, and citizen journalism" (Molina et al, 2021). Another typology of false information was suggested by Egelhofer & Lecheler (2019).

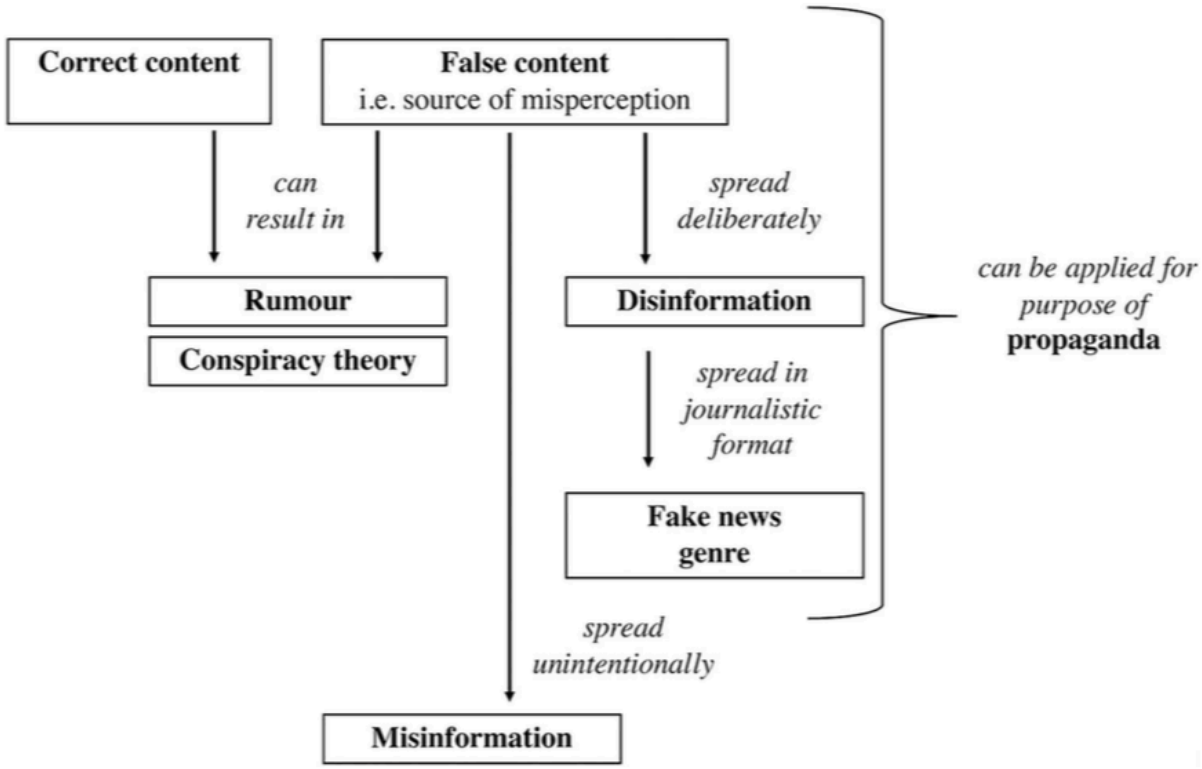


Figure 2.2. Misinformation origin (Egelhofer & Lecheler, 2019)

According to this classification (Figure 2.2.) fake news is displayed as a separated genre and emerged from disinformation. Moreover, fake news stories were dedicated in parallel with misinformation. Wardle & Derakhshan (2017) define misinformation as "*the inadvertent sharing of false information*" which getting the facts wrong. In turn, disinformation refers to "*dissemination of false information with the deliberate intent to deceive or mislead*" (Oxford Dictionary). Conspiracy theories seemed to describe the context of misinformation and disinformation based on misperception. What is more, in line with prior content, disinformation exceeds the meaning "fake news" (Egelhofer & Lecheler, 2019) and connected with rumors so as it projects a subjective emotional condition (Allport & Postman, 1947). Table 2.2. illustrates this relationship. Importantly, in our context, it occurs today to be growing for propagandistic intent related to false information.

Social media rumors aim at positive, negative, and neutral outcomes (Al-Zaman, 2021), where the dominant surge is negative and often appears from online media. Just to clarify, this evidence that it must contain incorrected information, designated as a short post circulating through high-volume streams in real time (Vosoughi et al, 2018). And again, its "veracity status is yet to be verified at the time of spreading" (Zubiaga et al, 2017).

More often than not, it is re-tweeted opinion of public figures or leaders. As a common rule, special attention should be paid to the consequences of pseudo-news, which often harmful effect on individuals and society.

The rapid dissemination of fake news, thanks to its low cost and easy access on Internet, take a stand on an extremely negative impact on society and individuals (Shu et al, 2014). Another classification is proposal by Potthast et al (2017), which points out the fact that it distorts real data, creating a dishonest intention to mislead consumers. All along, detecting fake news on social media poses some challenging research problems. To bring up discussion of fake news from the traditional media level up to social media, we have to describe this differentiation because these concepts are usually misunderstood. The generally accepted use of the term “fake news’’ refers to “that is intentionally and verifiably false” (Shu et al, 2014). In the study, these authors take a new look at fake news detection problem by characterization, considering the media ecology of fake news over time from TV, radio, and now, online news and social media. Principally, “traditional fake news” compared to “fake news on social media” is all about problem before social media appeared on Internet (Fainmesser &Galeotti, 2021). In the past, the ground of discovering truth is about social and model content. After a while, studying of social context was enhanced by science foundation to research key features of fake news. While decision making might be described by rational theory, in this content, the fake news consumption cycle is seen as two-players strategy game – publisher and consumer (Oliver, 2021) because consumers prefer to receive information that confirms their existing views (Nyhan &Reifler, 2010). Accordingly, the aforementioned characteristics are applicable for categorization of fake news on social media with some unique additions.

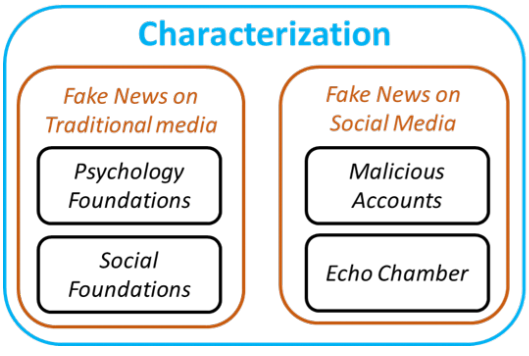


Figure 2.3. Characterization of fake news on traditional and social media (Shu et al, 2014)

Over the last few years, online social networks (OSNs), such as Facebook, Instagram, Twitter demonstrate the fast growth of social interaction due to sharing photos, videos, opinion, feelings etc. A study has shown (Lazer et al, 2017) that increased exposure to fabricated information often has the intention of misinforming to generate malicious

activity, including spamming, phishing, fake accounts, malware. In a similiar manner, people express their emotions or opinions to find homogeneous groups close to their interest. That helps them "polarize" their opinion and result in an "echo chamber" effect. The cause is that fake news contains following characteristics (Shu et al, 2014): social credibility and "frequency heuristic" (hearing often some information people fall in trust of that and favor).

2.2.3. Characteristics of the "fake news"

According to Lamprou et al (2021), "*the main objectives of fake stories are to manage public opinion, control the social situation, form a specified impression, or justify someone's policy and actions*" to be armed the following characteristics:

- polarized and sensationalist content where information is presented highly emotionally with elements of partisanship (Allcott & Gentzkow, 2017)
- "*blended with facts and practices that go well beyond anything resembling "news*" (Lamprou et al, 2021)
- "*false connection, false context, manipulated content, misleading content*" (*Wardle & Derakhshan, 2017)*
- "…*include some forms of automated accounts used for astroturfing, networks of fake followers, fabricated or manipulated videos, targeted advertising, organized trolling, visual memes, and much more*'' (Lamprou et al, 2021)
- "*fake news is a (devaluating) label for disliked media reports (such as used by former US President Trump), on the other hand, it refers to a genre of inaccurate information disguised as journalism*" (Egelhofer & Lecheler 2019).
- "*not factual and have no basis in reality, and thus, are unable to be verified*" (Cohen, 2017)
- "*information authenticity, author intention, and whether the given information is in form of new*" (Zafarani et al, 2019)
- Sender-receiver interaction process can be direct or indirect, and controlled or non-controlled (Sayed, 2015)

To turning to the various symbolic spots of false information, Molina et al (2021) stated the classification of online content to identify it and differentiate fake news from legitimate news like misreporting. By introducing a taxonomy of operational indicators in four domains—linguistic, source, structure, and network, it might expose an algorithm to

detect distinguishing features of fake news and contrast it with real ones (Table 2.3.). Internet-based media environment reminds us of the importance of truth necessary for defining misinformation. That study has evolved this topic to the Decision Tree examination to classify the certain types of content by picking specific features. With this objective in mind, online content having such taxonomy can be assessed by a machine-learning algorithm for false news detection. Due to the complexity of online environment and analysis, this study is remarkable to provide a certain strategy and pinpoint key differentiating elements of fabricated stories.

Message and linguistic	Sources and intentions	Structural	Network
Factuality: • Not factual. • One-sided reporting. Message quality: • Grammar, spelling or punctuation mistakes. • Does not adhere to journalistic style. • Cites first names. Lexical and syntactical: • Present tense verbs. Rhetorical elements: • Discrepancies or omissions. • "Spectacle" and narrative writing. • Emotionally charged. • Use of hyperboles. • Common man appeals. • Arguments from authority. • Ad-hominem attacks. • Demonizing the out-group. • Conspirational reasoning. • Logic flaws. Headline • All CAPS and exclamations. • Misleading and clickbait headlines. Sound bites: • Editing soundbites to create sensationalism. Photos/videos: • Altered pixel structure. • Shadows, reflections, and perspective distortions. • Use of photos out of context.	Sources of the message: • Unverified sources. • No quotes or made-up quotes. • No source attribution. Intentionality: • Intentionally false. • Revenue purpose. Independence: • Source of origin is not reputable. Pedigree: • Originated in an obscure site or social media post. • Not vetted by mainstream media.	URL: • Not reputable ending (.com.co). • Recently registered URL. • Designed to look like established site. • Ephemeral site. About Us section: • Does not have information about the editor or listed owner. Contact Us section: • E-mail is a "personal" address Uncommon journalistic practices: • Provide a Free PDF version. • Asks users to send their stories for publication. Comments: • Asks users to comment to access an article. • Red flag if many users say it is false.	Personalization and Customization: • Circulated via social media where content is tailored to user interests. Social media shares: • Often shared through social media by mutual friends or preidentified accounts. Author: • Written by bots and algorithms. Metadata: • Metadata indicators of authenticity.

Table 2.3. Features of fabricated news (Molina et al, 2021)

For the purpose to predict consequences and dissemination of false information, Molina et al (2021) undertook the study to disambiguate the nature of online content under the label of "fake news".

2.3. Customer experience consuming fabricated news

Where are we now? The synonym of the Information Age is the “post-truth “era where the Internet has caused fake news to spread exponentially. McIntyre (2018) defines post-truth world when “alternative facts” replace actual facts, and feelings have more weight than evidence. This phenomenon became prominent from 2016 after widespread discussion of disinformation and misinformation tendency (Horne, 2021), and how, social media works as a catalyst for exposure to fake news. The growing abundance of misinformation affecting consumer behavior is a real problem for business, namely, company brands (Obada, 2019) because the information environment with a fake flow has a major impact on the user’s behavior. Thus, perceptions of information and its analysis puts up individual customer experience connected with its self-efficacy (Lamprou et al, 2021). Accordingly, this is the difference between what a customer expects to get and what customer perceives to get (Pine & Gilmore, 1998), because experience is process-oriented and can be managed, while customer satisfaction is personally oriented outcome, and it is the result of customer experience (CX) (Schmitt et al, 2003). To be more specific, the final satisfaction for a customer (Grewal & Sharma, 1991) ‘*influenced throughout the entire sales process, from pre-purchase product expectations to post-purchase resolution of complaints”* (Agnihotri et al, 2015). On social media, the flow pinpoints experience by SNS human users which is often indicated by sharing fake news. Coming from Internet, that exhibits brand perception on social media through social media behavior of users (Perera et al, 2020).

There are multiple definitions of customer experience existing with specification of product or service. Further, we refer to the product experience. De Keyser et al (2015) depict customer experience as “*comprised of the cognitive, emotional, physical, sensorial, spiritual, and social elements that mark the customer’s direct or indirect interaction with (an)other market actor(s)*” at every point of buying journey. According to Klaus (2015) and Brakus (2009), among others, there is a positive correlation between consumer experiences and information, even, it is designed to manipulate public opinion (Watson, 2018).

Satisfaction is defined as a conscious evaluation or cognitive judgment that the product has performed relatively well or poorly or that the product was suitable or unsuitable for its purpose. Insight from customers’ satisfaction for predicting their behavior on social media is a principal part of business now to build up specific loyalty and retain customers

(Ramanathan et al, 2017). The emergence and acceptance of social media for e-commerce exposes how important information communication so as the public quickly reacts through different social media platforms such as Twitter, Facebook and store-based discussion forums. As noted by Giese & Cote (2000), "*consumer satisfaction is a response to a particular purchase or consumption-related aspect occurring at a specific point in time".*

Some of new trends around the use of fake news in media have increased interest in studying them during the customer journey. This challenge puts to the assessment both customer experience and the use and acceptance of such information to be satisfied or neglect it. Information helps in the formation of expectations, but also, at the assessment that consumers make of the product or service's value proposition. As Schmitt et al (2003) stated, the customer satisfaction framework only includes the expectations and performance from a functional and product perspective, while experiences consider both the functional and emotional dimensions of the product and service consumption. In this direction, experience might be defined as a personal issue engaged an emotional, material or cognitive levels.

As pointed out by a recent study (Zafarani et al, 2019) the examination of truthfulness of text is critically important for "*fake news early detection, check-worthy content identification, cross-domain/topic/language study of fake news, representation learning for fake news detection, and fake news intervention*" (Liu & Wu, 2018). In fact, misleading content is shared and spread by millions of people regularly, and a clear definition about truthfulness is likely to assist with identification of the general characteristics. Regrettably, people are susceptible to various manipulation, for instance, massive advertising campaigns. To study the influence of social media on consumer decisions, and perceptions, we systemize the industries' perspective (Alves et al, 2016) centered around the usage of social media (Table 2.4.) with evidence of fabricated content implementation

.

Author	Industry
Abdallah (2022)	tourism
Waszak et al., (2018)	health care
Allcott & Gentzkow, (2017)	social media

Pennycook&Rand (2018) Thompson&Oppenheimer (2016)	politics
Langrand (2021)	chemical industry
De Regt et al (2019)	beauty
Goldberg&Vanderberg (2019)	tobacco, coal, sugar
Chandra et al (2017); Tejedor et al (2021)	higher education
Adrian et al (2018)	energy
Clarke et al (2020)	finance

Table 2.4. The impacts of fake news across different fields. Source: own elaboration

2.4. The customer decision making process

The customer decision making journey has been asserted in the literature as "*the process a customer goes through, across all stages and touchpoints, that makes up the customer experience*" (Lemon & Verhoef, 2016). It is apparent that youngsters form impressions of university or business school brands mostly from touchpoints such as advertisement, university ranking, friends experience, news reports, family, etc (Ciriaci & Muscio, 2014). Understandably that there has been increased interest in social media where everyday millions of people communicate. Students decide, using all available information, and being active internet users, they might fall into the fake news stream of inaccurate social media posts. It is important to note that buying' process of students from a marketing perspective might be described by the same stages as a standard customer. By examining the selection of a university as a decision-making process, we might assume that students start their journey with a set of potential universities and reduce their number to make a "purchase".

It was postulated that customer decision-making path is the model of five phases (awareness, consideration, purchase, retention, loyalty) (Court et al, 2009). First of all, the consumer journey goes from the moment when consumer does not know the product, to beyond the purchase and post-purchase. More, this is a roadmap to success, started from awareness to ending with loyalty. As scientists stated this is cyclic process (Chen et al, 2020) while the experience was positive. The consensus view seems to draw that the individual path is unique (Court et al, 2009; Chen et al, 2021; Lemon & Verhoef, 2016).

To address this issue, there are some points to the consumer decision journey which is segmented into multiple phases by McKinsey (Ten years on the consumer decision journey: Where are we today, 2017) practitioners:

-External/Internal Stimulus – something working as a trigger to appeal motivate customers to find the solution;

-Consideration set – it entails to respect to knowledge about the specific product or service and leads to brand awareness

- Evaluation – buyer understands all available approaches and opportunities as well as alternatives.

- Purchase – action to buy something online, in-store, second-hand shopping, auction etc;

- Post-purchase– the aim of this stage is to get clients back for the second purchase keeping in mind that they might be satisfied or dissatisfied having a new experience

- Loyalty loop (extra step) – the last stage is when customers become great ones thanks to their positive experience, moreover, they might highly recommend this product/service to others.

The social dynamics that emerge in social networks is different than in reality. As a result, that affects the customer decision journey online. This will be dealt with in more consumer choices that is increasingly based on information shared by other consumers in SNSs (Carusona et al, 2017). It is reasonable to say there isn't a single shopping behavior decision making map that applies identically to all businesses. Chen et al (2021) affirmed that "*the consumers' decision-making process in the context of online purchases consists of three stages: information search, evaluation, and purchase*". Also note that, regardless of the absence of negative opinion, numerous people do not become regular customers or even loyal ones. An essential comment on the buying process is that 27% of shopping has been done online (E-commerce statistics for individuals, 2022). By Lemon &Verhoef (2016) research, customer buying process can be simplified only into three stages - pre-purchase, purchase, and post-purchase. As shown in previous studies (Neslin et al, 2006; Chen et al, 2020) these touchpoints are fundamental and classical to visualize the core of the process. As speculated above, consumer's attributes and choices will enhance the perception of causality (Stewart, 2009) in shopping decision making cycle. Nonetheless, the linear way might be non-linear and have some loops or bias (Richardson, 2010; Lemon & Verhoef, 2016). By understanding the stages of the journey and the challenges of each one, experts might suggest the marketing strategy for the company. From the other side, this block of knowledge will assist customers to achieve success. Social media

commences significant changes in customer-companies relations thanks to applied technologies where buyers feel more engaged being able to express their feedback. In our project, the role of influencers will be debated in-depth. In this sense, the customer interaction with external touchpoints like social media is in the center of this study.

2.5. Student's choice of the last study destination

One of our first findings is that we did not find any reference that addresses the proposed topic, i.e. how the spread of fake news about universities on social media affects their choice among students, in particular, the choice between public or private universities. Because of that to address this gap in the literature, we proceeded to look for references in adjacent areas: social media as a source of information for students, students' ability to identify fake news on the Internet, and, finally, the determinants for distinguishing public and private universities.

This section begins by examining a sample of selected studies (255 empirical research) from the extensive literature in order to establish the relevant theories that have been used to explain students' use of social media, the dissemination and credibility given to fake news and university choice. In addition, it will allow us to identify those factors used in empirical studies to estimate the proposed models based on these theories.

2.5.1 Social media as a source of information for students

Given that the target audience of university applicants in the short term will be Generation Z, and, given that the 16-34 age cohort is the dominant group on the Internet (Educational attainment statistics, 2021), the use of virtual communication becomes a basic tool to contact them. Hence, in the first stage, articles were selected that address key aspects of the use of social media by students. Although it is a highly competitive market, there is evidence that online advertising contributes to the impulsive reaction to apply to particular universities (Jan & Ammari, 2016; Kim et al, 2018).

How it was discussed above, higher education plays a relevant role in building the knowledge economy, so both governments and their students aspire to access WCU (World Conversation Unit) to receive the most relevant knowledge deemed (Altbach,

2016); Marginson, 2016). While the imposition of the WCU model has been criticized because it favors universities located in Europe and North America (Shahjahan, 2016), this does not seem to affect the mobility of overseas students, as it continues to increase, albeit at a slower pace than in the past (Choudaha, 2013).

One of the ways in which Generation Z young people find out about the characteristics of the universities they intend to apply is through the Internet and social media (Turner, 2015; Ng et al, 2020). The use of information posted on social media, although it can become one of the main tools for influencing people, has its own pros and cons (Erkan & Evans, 2016). Among the advantages is its convenience, as a wide range of information can be accessed 24/7, from computers and mobile devices, and, as disadvantages, the proliferation of fake news and post-truths for manipulative purposes.

The use of social media for sourcing information by students of higher education students has markedly increased, especially, on Facebook and Instagram for social networking, publishing, content sharing, and for collaboration (Suti & Sari, 2021). For example, Johnson (2010) postulated that, at the beginning of the 21st century, students still showed a preference for traditional sources to make their decisions, where the opinion of parents, relatives, faculty members or staff and "peer-to-peer communication" was taken into consideration (Ng et al, 2020). In the same way, it was not until the end of the first decade that respondents began to highlight university websites and social networking platforms, such as Facebook (FB), Myspace and YouTube, as sources used to obtain information, albeit in the latter positions (Suti & Sari, 2021). While traditional forms of communication are considered more reliable and credible, virtual platforms offer unlimited opportunities to acquire and transmit information easily (Dima et al, 2014). Therefore, the adoption of the Internet as a source of information is considered desirable as it has four advantages of its own: fast speed, low information search costs, the use of an application that is a new trend and has good expectations of use by Generation Z (Choudaha, 2013). The debate over increasing complexity of international student recruitment for HEI exposes several challenges: (a)rapidly-changing online environment (Paez et al, 2021); (b) existence of student segments differ by the level of education (University World news, 2022); (c) pressure of rivals in a highly competitive environment (Do&Le, 2020).

More recent studies, Jan & Ammari (2016) identified information distributed by social media, websites, and display ads as the most relevant and influential in students' decision making. In fact, electronic sources are taking on an increasing role in the spread of eWoM

(electronic word of mouth) (Perera et al, 2020), which is replacing traditional WoM (word of mouth); within a marketing strategy that seeks the participation of the consumer in the creation and dissemination of informative content. In a digital environment. While the website received the highest rating, social media has the advantage of using an informal communication style, with simple messages, heavy use of video, images, jargon, and exclamations that make it tremendously appealing to the target audience (Bruhn, 2012). Brings above, online content uploaded and disseminated on social networks has a high credibility for potential students. For example, Krol & Zdonek (2020) revealed the existence of correlations between students' use of social networks and the arousal of different intrinsic motivations to justify purchase decision processes. Furthermore, Zakharov & Maybee (2019) emphasized the role of the main channels i.e. WhatsApp, Skype, YouTube, Telegram, Email, GitHub, FB, Discord, in supporting undergraduate students taking online courses. Consequently, comments posted on university-linked forums are becoming increasingly important, due to the potential implications for students' selection process and the appearance of fake news could deter them from applying.

The influence of social media on students' decision-making has been the subject of extensive debate in the literature, with implications for behavioral theories. A wide variety of theoretical foundations has been collected in this review, ranging from qualitative theories to the basic theories of quantitative social psychology. In addition, wide varieties of topics relevant to students' use of social networks have also been examined to disseminate and promote unhealthy behaviors (Record et al, 2020). The use of SNSs (Hayman et al, 2019) embraces the consequences of students' behaviour to consume information posted (Ferroz & Zulfiqar, 2021). Introducing a new block, where we intend to introduce the first group of theories and models extracted from the literature which contains different models or theoretical bases used.

2.5.2. Qualitative theories, explaining human decision-making journey

Although most of the collected articles are based on quantitative research, some qualitative ones have been observed. The work by Hayman et al (2019) analyses the content of anonymous Facebook Confessions pages on higher education institutions. It is an online forum where university students publicly but anonymously share their experiences, perspectives, opinions and questions on a wide variety of academic and

non-academic topics (Junco, 2012). Researchers, based on Constructivist Grounded Theory (Charmaz, 2014), conducted a content analysis of the information and topics posted on confessions during an academic year (Hayman et al, 2019). The literature on Qualitative methods of analysis shows a variety of approaches. At the same time, in 20th century two scholars (Glaser et al,1968) managed to demonstrate simple as long as exclusive technique that advanced this area of holistic studying a lot.

This work discusses the significance of Grounded theory and its methodology. Thus, much research on Grounded theory has been done since Glaser and Strauss (1968) have developed it to introduce it to scientific audience. This concept is an effective way to improve your qualitative analysis having based on actual data. The exclusiveness of this approach derives from its name, and, there is not reference to prior research. Consequently, getting data and analyzing of them must be delivered consistently. Moreover, the methodology will be selected with association to having findings. This phenomenon has been widely admitted and accepted as unique. That research approach constitutes a relatively new area which has emerged from initial idea to data collection with an ongoing cycle.

According to ways of gathering data, scientists are not limited in their desire and methods – recorded, written, observed materials are accepted. This field closely follows the paradigm of Constant comparison operating by cycle regime. In other words, practitioner has to analyze the date and code it makes a theory or hypothesis. Actually, the experiment must be to develop round by round.

Glaser et al (1968) declared that such qualitative research would build up its further theory and be perceived as scientific generic approach. At the same time, GT methodological justifications granted essentially to modify the validity of qualitative research.

As long as considerable attention has been paid to the statement that "*analysis is an art and science*" (Corbin & Srauss, 2015), academics expose the interpretive act. GT methodology may not be orthodox in all situations that is not an arguable issue. There are various gaps and questions which should be studied with different ways. By Goulding (1998) research, GT benefit demonstrates the development method by flexibility that assume maximum freedom for research.

Widely considered to be a good way to confess the broad application of Grounded theory approach from studying of effectiveness in healthcare (Laws et al, 2009) till

implementation in manufacturing. No doubts, that in line with positive pole of advantages, there are some drawbacks. On the positive side, some studies have essentially documented the efficiency of this methodology in context of life complexity (Morse et al, 2016) – political, historical, social, cultural, and economic processes. And this emphasizes one more time the importance of this theory having demonstrated its developing aspect.

To address the questions outlined above, we are going to test changes in “consumer” behavior among students of Higher education towards external influence like fabricated news on social media. To describe simulations of experiment, it has to be mentioned specific area of research. It is named decision-process heterogeneity towards fake and real news. Due to suggested topic of study is likely a “pioneer” in this field and there is not much prior data. Evaluating the young people principals to make decision towards misinformation, a crucial open question is whether any external conditions influence consequences – their reactions. As anybody does not exist “in a vacuum” that presents findings in rather matrix action scheme. A systematic and investigative analysis is essential for the proposed study, and Grounded Theory can significantly aid in conducting a continuous and reflexive process while working with empirical determinants.
A specific approach of research is therefore needed for underground students of public and private business schools where information flow and dynamic of data is distributed intensively thank to digitalization. Assessing the people’s bias towards information it is presumed to compare data only among of some segments of current research, having lack of precious studies. There is a significant concern so it is suggested to apply both Qualitative (survey) and Quantitative methods (multiple regression analyses). How compatible might be the findings and relevant to each other in order to demonstrate representative and valuable outcomes?

It appears, GT might contribute to the empirical strength of our research project in line with quantitative descriptive method. We believe that it might be designed an innovative solution to discover a new perspective of analysis customer behavior.

2.5.3. Quantitative theories related to human decision-making

Among these theories, the dominant ones are publications on models of acceptance and intention to use social media, and some publications presenting persuasion models of communication.

One of the most prominent theories is the **theory of reasoned action (TRA**). Developed in the late 1960s by Ajzen & Fishbein (Figure 2.4.), this theory attempts to explain the relationship between the subject's attitude and normative beliefs (social acceptance) about behavior (Ajzen & Fishbein, 1975). In general, this model proposes that two independent variables: the attitude toward the act of behavior, and the subjective norm, determine the behavior intention (Montano & Kasprzyk, 2015). The Theory of Reasoned Action explains how to predict further human behavior. On top of that, it has been stated (Ramayah et al, 2003) that combinations of beliefs, evaluations, and motivation comply with a real behavior where attitude is a function of belief.

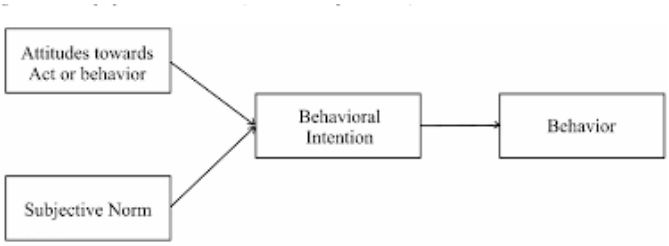


Figure 2.4. Model of Theory of reasoned action TRA (Ajzen & Fishbein, 1977)

With the growing interest in internet as a communication and relation environment, TRA was employed to assess media effect on purchase intention of university students (Ramayah et al, 2003). According to this study, this theory in predicting buying behavior among respondents aged 18-24 years old revealed a fact that younger choice of higher institution leans to "*having a good social and learning atmosphere"*. To add to that, TRA model has been used to explain undergraduate students' acquisition of knowledge of harmful issues related to social networks, such as a high degree of posts on Instagram that promote self-harm (Record et al, 2020).

An extension of the TRA theory is the **Theory of Planned Behavior** (Ajzen & Fishbein, 1977). This theory proposes to include perceived behavioral control, defined as the perceived ease or difficulty of performing a specific behavior. This theory has been applied to predict the intention to adopt the use of social media among groups of pre-adopters and post-adopters (Chang et al, 2021). It has also been used to analyse the effect of online university information sources on attitude, social norm and behavioral

control among students with high and low susceptibility to online information. In fact, students with low susceptibility sought advice in a traditional way using WoM (Ng et al, 2020). Or, understanding how the jumble of information posted on social networks makes it difficult for students to discriminate what is most relevant. That contributes to deteriorating the positive relationship that could be established between social networks and academic engagement, leading to negative consequences for knowledge acquisition (Feroz & Zulfiqar, 2021). Building on the Theory of reasoned action (TRA), the attitude towards fake news is considered an antecedent of the acceptance of this type of news. And, based on the Social Cognitive Theory (SCT), the degree of trust of the subject is viewed as a precedent of that attitude. Likewise, showing the theory of para-social interaction, another precedent is considered which is the degree of para-social interaction and, based on the theory of gratification in use, the desire to search for information is another precedent of the attitude.

Bandura (1989) was the first who has developed the connection of cognitive, behavioral, and environmental factors positing the learning of the social context of reciprocal causation as **Social Cognitive Theory (SCT)**. His book "Social Foundations of Thought and Action'' (1986) has received more than 112,000 citations (Google Scholar, September 2022) and has become a manual for psychologists. Albert Bandura began learning from Social Learning Theory (SLT) in the 1960s, focusing particularly on social experience. Traditionally, behavior theories depict mechanism of behavior changes, considering how behavior alters environmental conditions or, in turn, the influence of environment (Bandura, 2005). In this model of reciprocal causation, cognitive processing is central in the SCT theory, where individuals learn through observation and modelling.

To view cognition as brain processes and analyze different human capabilities, Bandura (2002) stated that "*people are both products and producers of their environment" (*Bandura, 2005). In such chance encounters, cognitive functioning involves knowledge and rationality that people love different types of difficulties in tasks. As a result, efficacy belief is a core to comprehend human agency which is reflected in self-efficacy theory (Bandura, 1989) as a sub-theory of SCT. That being the case that concept of "reciprocal determinism" is discussed in SCT to tag on some constructs and their effects of efficacy belief, emphasizing the past personal experience. Alongside, it should also be noted that people's performance is linked with assigned goals and behavior capability to achieve them. In order to successfully perform, a person has to engage in a specific behavior and

reason (Bandura, 2002). In conjunction with that, human expectations are usually rooted in previous experience positive or negative outcomes. That might be one of catalysator explaining social behavior. Besides that, what remains to be understood at this point is why and how this theory proposes justification of cognitive mechanism activity via internet? Support for this contention, the social cognitive approach within Social Cognitive Theory provides useful information to support young people's interest in media (LaRose &Eastin, 2004). The key constructs of SCT were developed initially for Social Learning Theory to be evolved later for addressing behavior change of individuals. With further development of environment and communication channel, social media intervened our life to emphasize the "*a persisting change in human performance or performance potential as a result of the learner's interaction with the environment*" (Driscoll, 1994).

According to Wenger (1998), people tend to trust information posted and distributed by social networks. The "level of online trust", based on social cognitive theory, would respond to a process where a 'subject trusts the content of the posted information because users simply replicate what their peers do (Wang et al, 2019). Talwar et al. (2019) established the relationship between the degree of online trust and a greater predisposition to the exchange of false information. Hence, they trust it, there is no problem participating in its dissemination, and do so as a matter of "communities' practice" interacting on social networks. On the other hand, the study by Weiss et al (2020), where authors propose a comprehensive model "of fake news dissemination", considers the user's trust in the veracity of social networks as a basic element for its dissemination. Social presence and perceived media richness are socially situated by human behavior (Bandura, 2002).

With the ever-increasing development of technology, the question of computer usage behavior requires the explanation of general determinants by specific concepts. And one of the pioneers was a model of technology acceptance. The Technology Acceptance Model (TAM), devised by Davis (1986), had the original idea to test user's attitude to computing technologies applying some user's characteristics. Davis's research model contributes acceptance of information technology by examining several variables - Perceived Usefulness (PU) and Perceived Ease of Use (PE) (Lai et al, 2017) to assess attitude and intention behavior (Venkatesh et al, 2003). His model demonstrated the significant relationship among variables and was validated in a variety of disciplines, including educational sciences.

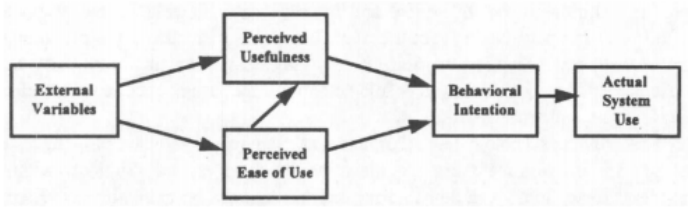


Figure 2.5. The finalized Technology Acceptance Model (Venkatesh et al, 2003)

Seeing success, it has been widely used in social network usage intention research to investigate similar scenarios with respect to different social networking technologies. For example, the TAM model has been used to assist in the study of Millennials' behavior to use social networking sites and the use of electronic resources (Hong, 2018), and to verify that online communication drives students' knowledge sharing, information sharing and discussion activity (Alalwan et al, 2019).

Recent theoretical and practical developments have revealed that the necessary explanation for customers' behavior using innovations, through theory and Unified Theory of Acceptance and Use of Technology (UTAUT), incredibly assists for this topic. In particular, the **UTAUT (Unified Theory of Acceptance and Use of Technology)** model has been used to assess the possibility of extending social networking technology to a learning management system (Khechine et al, 2020). Vintakech et al (2003) offered a theoretical model unifying major theories about information technology acceptance – Theory of Reasoned Action (TRA), the Technology Acceptance Model (TAM), the Theory of Planned Behavior (TPB), Model of Personal Computer Utilization, synthesized theory TAM/TPB, Motivational model, Diffusion of innovations theory, and Social Cognitive Theory.

This contemporary subject is maturing, with a wealth of well-understood methods and algorithms, describing human behavior adoption and intention towards the innovations. Actually, Theory of Reasoned Action (Ajzen & Fishbein, 1977) has become the predecessor of Theory of Planned Behavior, which was examining the attitude and intention, affecting the decision-making process. Together, it is closely crossed with the phenomenon of Technology Acceptance Model (TAM) (Davis, 1989), which justifies the individual acceptance of technology with two practical insights: perceived usefulness and perceived ease to use. Therefore, a variety of theoretical attempts have improved the understanding of the human behavior in adopting innovations, derived from psychology

and sociology accordingly (Davis et al. 1989). To clarify the UTAUT configuration, there has been mentioned four independent variables: 1) performance expectancy, 2) effort expectancy, 3) social influence, and 4) facilitating conditions.

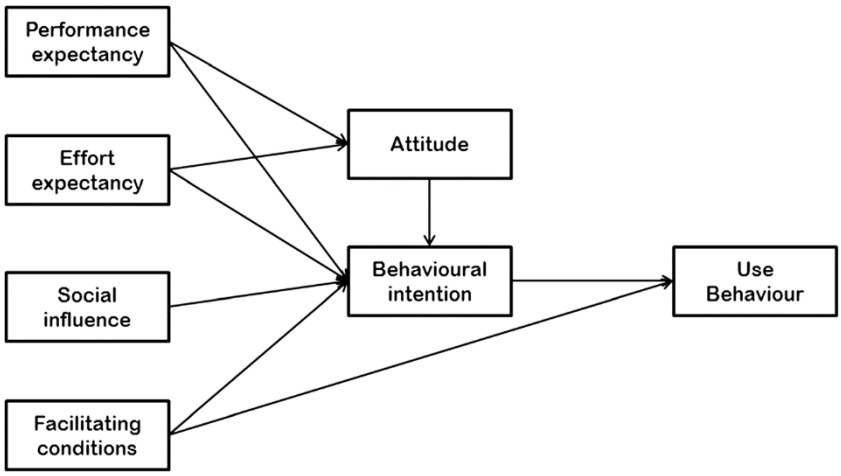


Figure 2.6. Proposed theoretical model of UTAUT. (Source: Venkatesh et al, 2003)

UTAUT went through a few modifications to evaluate different occurrences of the relationships between corresponding variables (Foon & Fah, 2011) - Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), Behavioral Intention (BI), and Usage Behavior (UB). Even so, the model has specific moderators such as age, gender, education, and voluntariness of use that is a crucial difference from TAM (although there were moderators in TAM2, TAM3- advanced versions of TAM) (Williams, 2015).

After all, an Extended UTAUT or e-UTAUT allows us to explain factors affecting online students' intention and use behavior in relation to the learning process on the Internet. The study of the student behavior on social media sites to participate in and encourage social movements generates pressure to take action via the Internet (Borrero et al, 2014; Borges-Tiago et al, 2020). As society responds to technological breakthrough, this expressive participation has been termed Internet Social Movements (Eriksson, 2018), which are willing to advance study around e-learning. In the context of this model research, HEI alters with technological progress and information innovation (Khechine et al, 2020) to highlight the essence of students' acceptance and use of various technologies across the world).

The Uses and Gratification theory (UGT) sheds light on the effects of social media interaction (Eger et al, 2020) by scrutinizing the motivators in human-human, human-message and human-community interactions. Interest in gratification through media goes back to mass communication when Blumler, Katz, and Guarevitch (1974) formulated this theory in the 1970s. The original idea was to discover the connection between Maslow's Pyramid of human needs (Hsu et al, 2007) and people usage of media. Following this, social-psychological mode and audience were turned into the Use and Gratification approach (LaRose et al, 2001). In particular, the latter was discussed by Krol & Zdonek (2020), highlighting the essential power of social media usage. By Ruggeiro et al (2000), study "*emergence of computer-mediated communication has revived the significance of uses and gratifications*". Understanding technology choice and use, along with specific variables, was key to the theoretical modelling of UGT. Originating from the functional perspective on traditional media communication like TV, radio, telephone, magazines, uses and gratification idea moved into Internet and social media (Shah et al, 2013) to study how specific needs might be satisfied there. Touching topic of cognitive needs, that is about acquiring knowledge and information (Lee et al, 2017) through blogs, websites, online library. Meanwhile, social interaction reveals connectedness of friends, groupmates, family via Facebook, instant messages, emails.

Taking a user or consumer-centered approach, UGT discusses the effects of the media on people to understand consumer motivations and behavior for media use in more web-specific scenarios. By referring to the media, an increasing number of online shopping sites have enforced the interest of scholars in understanding consumers' attitude and their intention to use the Internet (Galante et al, 2013). Finally, Liu & Wu (2018) raised the issue of social and information capital in the research of social media network (SMN). Due to interactivity, web users are more deeply involved in online activity, which distinguishes them essentially from another traditional media channel.

Theory of Existence, Relatedness, Growth (ERG) was firstly outlined in the study of Aldefer (1969), who was also examining Maslow's hierarchy of human needs for further perspectives. He proposed a categorization of human needs into three level comparing the five levels of Maslow: Existence, Relatedness, and Growth. The basis is on Existence making deal with the satisfaction of basic needs (for instance, physiological and safety needs), aligning with the first level of Maslow's hierarchy. The next group of need is Relatedness encompassing social relationship needs. And, finally, the Growth category is about the desire for personal development or self-esteem, similar to the last level of the

Maslow Pyramid. It is interesting to notice that Aldefer (1969) proposes a bidirectional movement between categories of needs (Abbas & Wallusch, 2022), meaning that when a need of lower category is satisfied, more effort will be invested in the higher category. But, when the attempt to satisfy the needs is frustrated, the individual will invest more effort in the lower category. The ERG theory has been employed to explore the contents of user communities, where online sharing knowledge is considered a valid external source of innovation (Hau & Kim, 2011). Research results of a study (Do & Le, 2020) supported the ERG theory that consumer satisfaction creates further higher desire for shopping.

Some publications speculate the credibility of sources and the quality of information published on media use the **Elaboration Likelihood Model (ELM)** as a theoretical basis (Cacioppo et al, 1986). Starting from a reseach of process towards attitude changes, this theory evolved, serving other theories to demonstrate persuasiveness and a variety of judgement changes. ELM is the most widely used model to study the persuasiveness of advertising, proposing the existence of two persuasive routes (Shu & Scott, 2014)) to reach consumers: the central and the peripheral routes. The central route (thinking logically) is used when the recipient is highly involved with the brand and motivated by processing the argument of the advertisement. In contrast, the peripheral route (cues-fear) is used when the recipient is not highly involved and motivated to process the information, so the persuasiveness of the peripheral elements (e.g. the popularity of the presenter) is used (Shu & Scott, 2014). This model has been utilized to evaluate three major factors of social persuasion – the nature of communication, the audience member (user), and the changes of attitude (Cacciopo et al, 1986). According to Nob (2021), that model can explain contribution of increasing students' academic performance. It has also been used to study the role that social media can play in enhancing the teaching of business ethics in an online educational environment, especially, with a lack of direct communication between teachers and students (Zhang et al, 2021). Recently, the persuasiveness of online marketing communication has been studied (Hong, 2018) at schools, finding the peripheral routes of persuasion have stronger effects on individual adoption of information than the central routes of persuasion. In a previous study, Chaffee, S. H., & Metzger, M. J. (2001) based their argument on the perception of risk involved in decision-making, concluding that perceived risk significantly increases the intention to adopt the central route, and has a large moderating effect on the peripheral route. There they confirmed the assumption that Facebook (85%), YouTube (65%), and

Instagram (56%) are the most attractive communication channels (Dima et al, 2014) where many attributes of visual media are found (Alalwan et al, 2019).

2.6. Digital Era and social media research

According to Kaplan & Haenlein (2010), social media is defined as a "*group of Internet—based applications that are built on the ideological and technological foundations of Web 2.0, which allow the creation and exchange of user-generated content"*. Since that this digital tool promotes products and service through online social channels, moreover, it produces effectiveness thanks to easy and rapid online communication. A comprehensive model of consumer behavior includes integration of numerous theories. In this section, we have grouped them to refine value of people's communication.

All in all, the abovementioned findings of TAM, UTAUT assist us understand the relationship between theory and practice, especially in the framework of the fast-growing technological evolution in various aspects of business. Further, we pinpoint the comprehensive theories related to the internet and social media.

2.6.1. Mapping role of theories in social media studies

Several interrelated theories have been developed to study social communication, including media impact and individual involvement - **Information Seeking Theory** (Ruggiero, 2000), **Social Cognitive Theory** (Wang et al, 2021), **Social Impact Theory** (Latane, 1981), Social Media Engagement (Prahalad&Ramaswamy, 2004), **Para-Social Interaction Theory** (PSI) (Horton & Wohl, 1956), and **Media System Dependency Theory** (Ball-Rokeach & DeFleur, 1976). With a specific focus on the notion of value creation and power of social media, we explore consequences of influence on social media users. Such understanding might better explain and predict the user's perceptions of new social media channels. Since idea of online channel use is likely to enrich the comprehension of social influence, the dynamic nature of richness perception has been clearly expressed in the studies (Prahalad&Ramaswamy, 2004).

There is a large volume of published studies, describing the role of social media. What we know about this topic is largely based upon empirical studies came out from 20th century and developed last 20 years. **Media System Dependency Theory (MSD)** proposed by Sandra Ball-Rokeach and Melvin DeFleur in 1976, allows us to conceptualize social network site (SNS) dependency. This theory is one of the mass communication theories, the first of its kind that states internet dependency relations and online consumer behavior are active elements of media. To begin with, MSD is able to explain long-term effect that stem from the Uses and Gratification theory (Patwardhan &Yang, 2003), namely, "*individual-level and societal-level conditions that influence the degree of importance of media in individuals' everyday lives*" (Jung, 2017). The process of creating a dependence relationship with target audience can assist in achieving people's goals using media power. Although people might get access to many interpersonal or corporate networks, social media still is one of the favorites for easy usage, despite their concerns about quality of information there (Tejedor et al, 2021). Drawing on media system dependency theory (Ball-Rokeach & DeFleur, 1976), internet users' relationships rather have an asymmetric approach.

In other words, MSD hypothesized "*the satisfaction of needs or the attainment of goals by individuals is contingent upon the resources of the other party*" (Ball-Rokeach & DeFleur 1976). According to this theory**,** individual-media relations over intensity of dependency relationship to meet a particular purpose. Media dependency perspective might reflect why people chat, share, and consume news online. Internet dependency relations were introduced by Patwardhan &Yang (2003) to clarify the consumer activities on Internet.

Online consumer behavior is studied through perceived helpfulness of media in understanding of social action or interaction and achieving social goals. The dimensions of Media System Dependency Relations cover a wide range of goals – social and self (Jung, 2017). As a possible antecedent of online activity, multidimensional elements of Internet Dependency Relations (IDR) come into play. For various reasons, a number of key issues might be addressed to study across individual goals and media, including Internet resources, where two approaches are mostly discussed by Uses and Gratifications and Media System Dependency. In this vein, media users rely on news media, for example, Facebook or Twitter, to obtain knowledge and information. It appears that media helps to build relationship, communicate, and share information to understand the current environment. Lee et al (2017) argued that individuals relying on SNS will be

more motivated for detecting facts. In fact, research on mistrust and misinformation in media exposure seek more resources and alternatives. As such, it is unlikely that social media is a reliable mass communication channel and credibility is a cue for answering on it (Molina et al, 2021). The first serious discussions and analyses of **parasocial interaction** (**PSI)** emerged during the 1950s with the study of Richard Wohl (Horton&Wohl, 1956), to be demanded for an explanation of social relationship online. Usually human interaction is performed by face-to face, but also it might be mediated from only one side. The benefit of that is to "*be related to the systems of patterned roles and social situations*" (Dibble et al, 2016) or achieve certain social status. After a while, it answers the question of how people interact via internet related to celebrities or other personalities (Kim et al, 2018).

The Para-Social Interaction (PSI) theory discusses the ways in which different types of media figure interact with people to produce various styles of relationship. It is necessary to specify what is meant by "media figures" that are considered as presenters, actors, and celebrities. Horton and Wohl (1956) defined parasocial interaction as a "*simulacrum of conversational give-and-take*" to express *"users experience as a response to a media performer (the "persona") in a media exposure situation"* (Dibble et al, 2016).

At the beginning, the implications of PSI did not get wide consideration and became a popular communication theory a bit late. However, the basis for "*path from social and task attraction to para-social interaction with a sense of relationship importance*" (Rebecca et al, 1987) was suggested by Horton and Wohl in the late 1950s. The authors regarded two essential functions of PSI: companionship and personal identity. Studies using the parasocial interaction scale have found that "companionship" describes several items. Such as, the first concept is about the gratification of needs for social interaction (Giles, 2002). Secondly, para-social interaction is triggered if media might affect such a relation to illustrate "person–program interaction". Lastly, the "empathetic interaction" component refers to study the extent of behavioral or affective response. In a recent approach, social-psychological insights into social interaction was enriched by Hartmann and Goldhoorn (2011), who implied a reciprocity "*a sense of mutual awareness, attention, and adjustment*". These researchers counted users' para-social interaction in the context of illusory experiences characterizing *"the more enduring, long-term, and usually positive, one-sided intimacy at a distance that users develop toward media performers".* Having discussed parasocial interaction, our research shall rely on the broad definition of Rubin et al (1985) who suggested even label of "media interaction" such as "*interpersonal*

involvement of the media user with what he or she consumes ... including seeking guidance from a media persona, seeing media personalities as friends, imagining being part of a favorite program's social world, and desiring to meet media performers" (Rubin et al, 1985).

Searching in the far-reaching fields of social psychology and relationship theory, we might expect similarities between PSI and social Interaction. This was examined by Rubin et al (1985) to explore evidence how social attraction is more important as a motivating factor than physical attractiveness. For further, it is important to say that social psychological theories of interaction and relationships were synchronized slowly and later to the same platform, especially with appearance of the Internet. Online communication and mediated social interaction become an alternative to face-to-face contacts performing similar functions (Giles, 2002). The most significant challenge is to count these public figures in the "physical realm" or they remain "imaginary" (Rebecca et al, 1987).

On account of modern technologies appear, interest occurs not only in studying people's social life but also paying attention to their online connection. In 2002 Giles formulated the Parasocial Interaction Modelling (Figure 2.8.) to draw the level of individual to individual or individual to group relationships. According to him, the level of formality and informality at the "social" end as well as size of group are crucial for this model. The more people involved in encounter, the weaker interaction with certain public figure. Up to this point, a few more qualities become important such as proximity (personal or distant contact) and potential relationship between "interactants" (unlimited or not). Clearly, there are plenty of links between levels, for instance, the most remarkable is how formal interaction changes into informal relationship on long-term period.

This PSI flowchart identifies the main part as a box with one arrow to modelling of the personal behavior or previously ideas will be discussed with other encounters. That role of media users is significant. This type of PSI model where the expression of opinion and judgement follow by watched episode was studied by Cohen (2017).

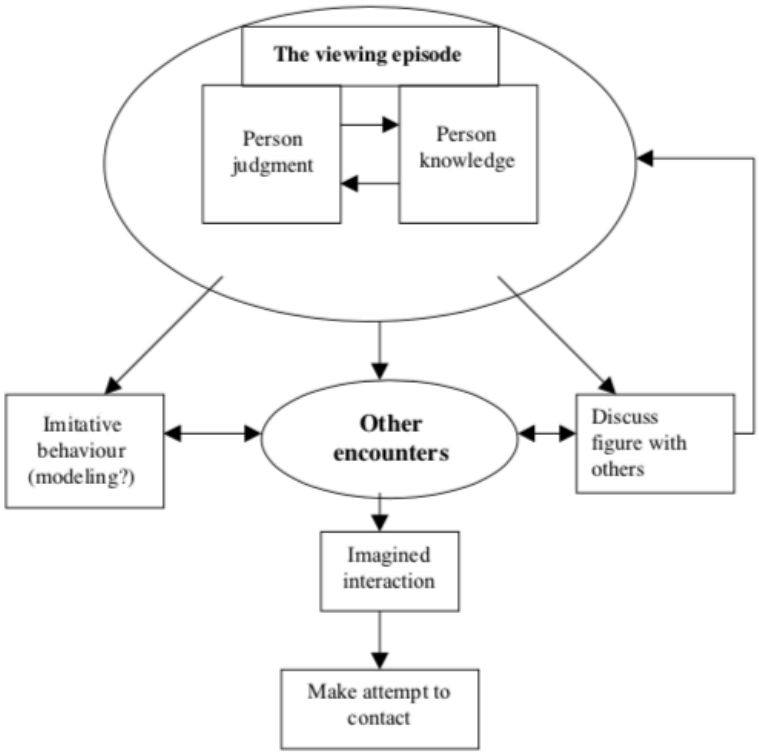


Figure 2.8. Stages of PSI (Giles, 2002)

In general, several scales have been proposed to measure parasocial interaction phenomena (Hartmann & Goldhoorn, 2011; Dibble et al, 2015), directly assessing psychological (cognitive, affective, and behavioral) involvement with a media persona. More recently, Auter and Palmgreen (2000) designed a multidimensional measurement of PSI, with the scale of the Audience–Persona Interaction (API). Although there are some opponents (Lea &Spears, 1995) arguing that exactly imaginary relationship or “pseudo-social” is dramatically sufficient.

An overview of Information seeking theories is a prominent field explaining the desire and reasons for using communication channels to address everyday life willingness of information seeking **(ELIS)**. These theoretical models explore human behavior towards "*socialization, entertainment, information seeking and information sharing*" (Apuke & Omar, 2021) to describe individual’s actions in dynamic “with time and space” (Bates, 1989). According to their proposals "*electronic communication technology can sufficiently alter the context of media use...*" (Ruggiero, 2000), as they offer the possibility to receive, share or republish content through social platforms. The massive activity of news sharing via the Internet during and after COVID has attracted the interest of researchers and practitioners (Apuke & Omar, 2020). Likewise, intensity in "information seeking" has been correlated with increased participation in information dissemination (Talwar et al, 2019).

A detailed examination of web-based information seeking community by Ruggiero (2000) showed a radical change framework based on three concepts - interactivity, connectedness and access. In other words, human behavior in the digital age can be interpreted by information acquisition online that one resource might allow you to get access another virtual resource to communicate with virtual users.

Believability of information is not a novel topic in communication. In this line, credibility of fake news should be articulated in the framework of social and para-social interaction. As Shin et al (2022) reported, fabricated stories are perceived as more credible when retweeted by celebrities. **Social impact theory (SIT)** (Latane', 1981) was developed to explain social forces by influence of individuals by the phenomenon - geographical and cultural levels to account "*how coherent structures of cultural elements emerge from the interactions of people located in space*" (Latane', 1996). Together with this conception, Handarkho et al (2021) learned it to show off the connection personal, commercial and hi-tech levels. His work examined the theoretical model via understanding mobile usage from trust and social experience to elucidate herd behavior in a group and illustrate the most significant contribution such ties to trust. Dynamic of Social impact theory in context of social media and e-commerce (Lee et al, 2017) also identified social media interaction ties and social media commitment as major contributing factors (Król & Zdonek, 2020).

2.6.2. Personal characteristics of social media users

The literature proposes a wide range of models that attempts to explain the personal traits of users which could become an important and even moderating component in the greater or lesser use of social networks among millennials (Wang et al, 2021). As such, Paez et al (2021) considered international students' social network personalities to show how those with a profile of "agreeableness and openness'' were positively associated with higher social media use. To be more clear, students with a less social profile interact more easily online than face-to-face.

Other studies, such as Ma & Chan (2014), uncover the ineffectiveness of social media for exchanging knowledge, as only a small proportion of all information exchanged is beneficial to users. Building on the Sociocultural theory by Vygotsky in 1978 about social interaction and the sharing of ideas and experiences, they explore those personal factors

that contribute to knowledge sharing behavior in student-student communication on social media. According to their results, cognitive change through the process of social communication and interaction are extremely important for both sides – individual experience and community knowledge (Wang et al, 2021). Following a similar line, Ferroz & Zulfiqar (2021) unveiled the use of engagement theory in social networks as a basis for explaining the user experience and looking for those characteristics that can contribute to improve engagement.

Another interesting work was proposed by Fuller et al (2016), who studied how the degree of anxiety generated by computer-mediated communication (CMC) affects students, specifically in their interaction with their virtual work team colleagues to complete assignments in a subject, and on performance outcomes. More anxious students participated less, posted fewer task-oriented messages, presented fewer novel topics, and were graded lower than the students who were less anxious. On top of that, the more anxious sent more messages related to social issues than to the fulfilment of tasks assigned in the subject (Fuller et al, 2016). Being almost pioneers in this field, they disclosed an important variable for understanding social media interactions.

Hofstede's cultural dimensions theory has also been used to examine students' motivation to use social media. As a consequence, Abbas & Wallusch (2022) have used these dimensions to investigate the role of Hofstede's three cultural dimensions (collectivism, power distance and uncertainty avoidance) in perceptions of privacy, trust, and motivations to use Facebook (FB) among Palestinian students in Israel. It exposes that cultural values are associated with motivation to use Facebook (Sharma & Lulandala (2021) through their effect on trust and privacy concerns. Proposals that leave many questions open.

2.6.3. Rationality of users prone to accept fake news

As for the characteristics of the subjects most likely to give credibility to fake news, few answers have been found in the period studied. The **dual-process theories** stand out, which provides an explanation of how thought is processed and propose the existence of two pathways: one unconscious, automatic and implicit (called System 1) and the other conscious and explicit (called System 2) (Kahneman, 2011; Pennycook & Rand, 2018).

Several schools of thought within psychology accept its existence, for example, evolutionary psychologists consider that System 2, which consists of a general reasoning system, evolved later and is unique to homo sapiens, while older heuristic subsystems, such as System 1, are similar to those of other hominids. According to the work of Pennycook & Rand (2019), people are more likely to use System 1 because it is faster and cheaper (in time and cognitive effort) than System 2. This puts light on the fact that users who use analytical thinking (System 2) are more likely to recognize a fabricated news than users of System 1. Also, different contexts contribute to a greater use of one system over the other, so in a context of objective risk with the pressure of stress, the use of impulsive or emotional decisions (System1) is triggered (Ostendorf et al., 2020). Here, the fundamental concern is the ability to make decisions following intuitive or rational thinking (Stanovich et al, 2011), as it will condition the credibility of fake news published on social media about different universities to which students intend to apply (Do & Le, 2020). As reported by Wang et al., (2021) on student's samples, cognitive processing might predict precautionary behaviour to social media rumor.

Taken together, these theoretical studies were summarized in the Table 5, titled "Social media and students' behavior", to provide further evidence of social media's dominating factor of students' behavior.

Theoretical underpinning	Reference	Research focus
Social media and students' behaviour		
Theory of Planned Behavior (TPB)	Ng et al, (2020); Hong (2018)	Usefulness is one of the dominating factors of students' intention through social media purchasing; students with high susceptibility to online information have a high extent to seek advice from others. Conversely, low susceptibility is connected with independency of decision-making.
Social cognitive theory (SCT)	Lee & Ma (2012)	Using a web in online learning demonstrated successful increase of physical activities Thanks to SCT the role of prior experience was justified as an individual enhancer self-efficacy in knowledge sharing online.
Computer mediated communication (CMC)	Fuller et al. (2016)	Higher anxious youngers (students North America universities) will spread mostly social-oriented messages and much less task-oriented messages.
TRA (Theory of reasoned action) +IAM (Information Adoption model)	Erkan & Evans (2016)	Quality, reliability, practicality, adoption, and needs of information are key influencers of consumption behaviour in social media.

Social exchange theory	Li, 2015	Sharing willingness is the most important factor for student-student interactions and information exchanges in virtual communities.
Sociocultural theory	Ma & Chan (2014)	Perceived online attachment (intrinsic) motivation has significant influence to sharing information online.
Elaboration likelihood model (ELM)	Shu & Scott (2014)	Online marketing communication with visual attributes is a dominating attribute for international students.
Social media Engagement theory	Feroz & Zulfiqar) 2021);	Social media engagement is positively associated with knowledge acquisition.
Hofstede cross-cultural theory	Abbas & Wallusch (2022); Sharma & Lulandala (2021)	Cultural values of Arab students across motivation to use a social media (FB) under stress of factors “trust” and “privacy”. Also, in Tanzania and India FB users show cultural similarity in “individualism” and “masculinity”, but significant differences in “indulgence” and “uncertainty”.
Social Impact theory	Hong (2018) Hondarkho et al (2020)	Twitter as one of social platform, positively contributed the studying process (comparing to Moodle) to improve performance.
Big five Personality traits	Paez et al. (2021)	Extraversion and Openness to experience are more related to eWOM. Moreover, conscientiousness and openness to experience as well as life satisfaction are essential indicators of social media usage. Moderating role of gender in social media addiction is demonstrated such as women spend more time in WhatsApp and Twitter; whereas men are in FB, YouTube, Instagram, and LinkedIn.
Dual-process theory	Wang et al. (2021)	Dual processing theory for decision making among journalism students provides insights into trust-building processes related to social media rumour
Uses and Gratification theory (UGT)	Eger et al. (2020); Hsu et al. (2007); Lee & Ma, (2012);	Motivation for using SNSs - interpersonal connectivity, social value and entertainment to enhance life satisfaction. High school students intend to create their social image in social media; however undergraduates prefer entertaining.
UTAUT model	Borges-Tiago et al. (2020) Borrero et al, 2014	Technology readiness and sex are main moderators in Internet social movements; female students are more inclined to use SNS as well as low-skilled students; entrepreneurial behaviour of students on social media targets performance being justified by behaviour of technology acceptance FB, Twitter were applied for e-learning process and demonstrated the perceived advantages and relevance; moreover, Instagram, Google+ showed high performance expectancy
TAM	Hong, 2018; Alalwan et al. (2017);	students choose using online social platforms for “richness content” that effects on their satisfaction of learning process; social media enhances online “tweeting” and “chatting”; “Perceived usefulness” and “ease of use” positively affect the intention of undergraduates to surf through online social media

Table 2.5. The studies with specific theories of undergraduate behaviour in social media from 2011 to 2021. Source: Own elaboration

2.7. Student's abilities to detect fake news

The objective of this section is to determine the evidence of students' capability to classify the false content against the reliable information. Another point here is to audit how undergraduates might diagnose disinformation and a level of its exposure on the decision-making process. As Lamprou et al (2021) stated "*the purpose of fact checkers and fact-checking organizations is to increase knowledge through the research and dissemination of facts mentioned in statements, either published or recorded*".

2.7.1. Consumption of fake information vs quality of content

For the purpose of analysis, a concrete set of publication was extracted from the general study related to the students' perception of pseudo-information. As understood from the literature, certain key issues are pointed out, namely, personal behavior, social behaviour, and students' intention to consume SNS content. On another note, the impact of social media communities in the scope of psychological aspect correlates with trust in the resource of information. However, increasing interest of digital platforms generates the question about information quality and validity hovering online. As a result, students have to determine the credibility of resources and information relying on either media/information literacy or verifying content by special tools.

The European Commission in the report of a multi-dimensional approach to disinformation (2018) defines the fake news as "*an ecosystem of production, propagation and consumption of false, inaccurate or misleading information that is profit-driven or seeks to cause public harm*". The credibility of online news is considered as one of top 10 global risks, often producing data fraudulence (OECD). It has also been reported that this trend seems to worsen out more in coming years. There have been numerous studies to investigate the disrupting mechanism of implausible headlines (Wang et al, 2021; Pennycook & Rand, 2018; Tejedor et al, 2021). As well as, this may be indicative of the recentness with digital activity and adoption of social media.

The ecosystem of information is likely threatened by rapid media transformation and exposure to artificial intelligence (Liu & Wu, 2018). Encouraging the fact that students

demonstrated the preoccupation of manipulating practice of fake news, as they are much aware of the need of “media literacy” (Eurostat, 2021). In accordance with Livingstone, (2005) media literacy has been defined as “*the ability to access, analyse, evaluate and create messages across a variety of context*”. A recent research article by Onursoy et al (2020) states that undergraduates encountering misinformation trusted, most of all, the online visual content supporting, the fact that media literacy which really might break in the diffusion and acceptance of pseudo-information. Disquiet with falsified information, this has triggered new enthusiasm opening avenues for future research in this segment (Pennycook & Rand, 2018).

Clarifying things, people categorized information in three ways – accurate information, misinformation and deliberate disinformation (Shu et al, 2014). The later one has a specific shade of its own, which can be bifurcated into two: intentional or malicious deception. We attempted to explore the fake news in content of misinformation that does “mischief with the truth” (Wilczek, 2020).). There seems to be supporting argument with respect to the lack of media literacy skills among students (Syam & Nurrahmi, 2020). With this, we also brim our focus on the question of individual literacy from several sides – media, information, digital and news to postulate that the principal issue belongs to information literacy (Jones-Jang et al, 2021). We cannot ignore the reality where the media social activity of students is found as occurring at least once a day (Horn & Veermans, 2019). Furthermore, the most popular social platforms are Instagram, Facebook (Eger et al, 2020), Twitter, Reddit, and YouTube. According to some experts (Zakharov & Maybe, 2019), the students are spending around 7 hours per day surfing the Internet, mostly, using their mobiles.

There seemed to be a compelling reason to argue the lack of media literacy skills among students (Syam & Nurrahmi, 2020). We must regard the question of individual literacy from several sides – media, information, digital, and news to bring up the principal issue belongs to information literacy (Jones-Jang et al, 2019). According to Livingstone, (2004) media literacy has been defined as “*the ability to access, analyse, evaluate and create messages across a variety of context*”.

In the same line, Horn & Veermans (2019) find that American students demonstrated a low level of critical thinking, which resulted in high acceptance rate of pseudo-information in social media, a contrast to the findings in Finland. Of particular interest in El Molina et al (2021) is the research around student’s news judgment and weak ability to define the

credibility. Interestingly, both categories of respondents – international and local displayed a low level of extent to identify the false news (Hanz & Kingsland, 2020). Nevertheless, undergraduates are well informed about such risk of getting fake information through social media (Eger et al., 2020), and they underlined. The authoritativeness of certain sources or some pages.

In one of the researches, fake news detection is split into two approaches: featured-based and knowledge. Accuracy of information was explored by analyzing the relationship between headlines and body text. Moreover, Weiss et al (2020) and Tejedor et al (2021) stated the models for students in HEI to classify users as fact-checkers and spreaders. In the investigation of Shu & Scott (2014), four research questions were discussed – presented false information and what message does it bring, writing styles, hype component, and the reliability of user sharing news.

2.7.2. Theoretical underpinning of students' media competency

The main theoretical premise behind student's media competency is incorporating personal traits, psychological features, media literacy skills and critical thinking. The principal external cause is "quality content". Therefore, this section with a narrow review of six theories, reflects undergraduates' ability to distinguish fabricated information in social media.

Taking this idea a step further, much of the literature has focused on the theories proposing explanation of undergraduates' qualification to classify fake information. In general, social media literacy might be defined as the capability to gain effectually and helpfully usage of information from media platforms. The veracity of spreading false news on the Internet was assessed by two-ways continuum, **Critical-Functional and Consuming-Prosuming** (Syam & Nurrahmi, 2020, with reporting of the essential ability to have functional and critical consuming. More specifically, Chen et al (2020) has configureted the four elements, namely, "*Functional Consuming, Critical Consuming, Functional Prosuming, and Critical Prosuming*", to stress the role of consuming skills, analysis, understanding, synthesis, and critical interpretation. Considerable attention has been paid to lack media literacy skills (Pennycook & Rand, 2019).

As pointed out earlier, the mechanism of disinformation action as systemic information pathology (Jones-Jang et al, 2021) was scrutinized in depth by Zanuddin & Shin (2019) through the **Situational Theory of Problem-Solving** (STOPS). This study underlined the findings of the previous research reflecting the essence of criticality and prosumtion in problem solving. With said that, "*ability to understand the media content (functional consumption), evaluate the accuracy of media messages (critical consumption), or create media content (functional consumption) did not contribute significantly to the motivation in solving fake news problems*" (Zainuddin & Shin, 2020). In turn, Horn & Veermans (2019) declared the low critical thinking of internet users among youngsters. These authors documented partial "critical prosumption" of young people to incite problem solving in fake news.

One of the main models in the study of personality is **the Five-factor model (FFM)** of personality, which is called "OCEAN" abbreviated from first letters of words -Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness to Experience. This model clearly stands out the contribution of all five variables with a "medium-size" portion of power to test inaccurate information. What is more, the first two traits are mostly discoursed in studying with a high extent of assumption to produce influence on decision-making (Apuke & Omar, 2021). Definetely, the ideal profile of student who is resistant to false information looks like emotionally balanced, goalless, extrovert, unbelieving person.

In e-WOM and online sharing information studies, the **Elaboration Likelihood Model** (ELM) was applied to identify the efficiency of various social media (Cacioppo et al, 1986). Also, the experimental investigation included implementation of Information Adoption Model (IAM) (Shu & Scott, 2014) to assess power of determinants and ground the concept of persuasion. Suggesting that "persuasion is a type of communication", the ELM and IAM might justify the persuasion and attitude changes. This might also affect students' university selection process, which can later be concluded that social media content plays an influential role, but the level of content verification is relatively considered low.

The research of Kuss & Griffiths (2011) suggests that students use social networking sites (SNSs) for sharing news (Hong, 2018), building community and web engagement. This further builds up the key idea of gratification. Users use SNS for achieving gratification through satisfying their needs and achieving personal goals in social media (Eger et al, 2020).

Students' position towards fake news has been recently investigated on the group of journalists by Tejedor et al (2021) to deal with student information habits and ties with different sources. Pennycook&Rand (2018) studied "Illusory truth effect", being interested in the nature and construction of fake news" considering its function of 'cheating,' 'manipulating,' 'confusing,' 'benefiting,' 'harming'. Along the same lines, audiences like young people are the most vulnerable to fake news (Wineburg & McGrew, 2016).

Theories and models	Authors	Key findings
Critical-Functional and Consuming-Prosuming framework	Syam & Nurrahmi (2020); Chen et al (2020)	Level of media literacy and critical-functional prosuming among undergraduates is very low that indicate rather "sharing information without verification". In turn, youngsters demonstrate high skills of critical/functional consuming. All in one, most of students failed to recognise fake news having a lack level of media literacy
Five-factor model (FFM) of personal traits	Wolverton & Stevens (2019)	Each of five factors showed the middle-size effect on an individual's ability to identify fake news stories; moreover, heuristic processing is positively susceptible to fraudulent information on SNS
Situational theory of problem-solving (STOPS)	Zainuddin and Shin, (2019)	Media literacy is correlated with motivation in problem solving; apart from that, media literacy is positively tied with fake news determination
Elaboration Likelihood Model (ELM) and Information Adoption Model (IAM)	Shu & Scott, (2014)	Student's choice of university depends on the quality of social media content: the higher argument quality, the more attractive study destination. In contrast, there is a weak correlation between a source credibility and destination study
Trust and Uses and Gratification Theory	Eger et al. (2020)	In general, students do not trust social media using it rather for entertainment activity and maintain relationship. At the same their gratification behaviour on social media is based on their practical experience
Critical thinking	Horn and Veermans (2019)	Critical thinking efficacy was not rather occurred among the USA students and might be estimated "bleak"; however Finnish students "armed" properly, having a high grade of given skill
Digital media and news literacy skills	Tejedor et al, 2021	Students ability to reveal false information on social media content is poor. They can't differentiate properly reliable and implausible information. At the same time, such skills depend on a faculty where a student is studying
Fake news knowledge (FNK)	Apuke and Omar, 2020	Level of fake news knowledge is directly correlated with fake news sharing: having a high level of knowledge, students are more sceptical to information. Moreover, FNK moderates SNS dependency and human behaviour

Table 2.6. Students' ability to identify the quality of information in Internet. Source: Own elaboration

2.8. Motivation for getting higher education

2.8.1. Consumer choice and brand

Brands identify, classify, and give content to the offer, products, and services. University brand association and students' choice are a process of selecting a higher education institution while the first intends to create a positive attitude (Borges-Tiago et al, 2020), and recruit youngers (including knowledge, feelings, and attitudes toward the brand). A brand is "*a name, term, sign, symbol or design, or a combination of these, intended to identify the goods or services of one seller or group of sellers and to differentiate them from those of competitors*" (Kotler et al, 2017).

Traditionally speaking, brands are labels that are applied to give meaning and a guarantee of quality to things (Schmitt et al, 2003). They were created to replace the face-to-face interactions between customers and craftspeople (Perera et al, 2020), that is to say, they were guarantees of the quality and trustworthiness of the person that was selling a product or offering a service. Brands are also used as containers of a lot of information about the product or service, its origin, the context of use, and consumption… which present it with a great value during the buying process. Additionally, brands do not only have the role to identify and contain information but also might differentiate from the rest of the offer.

Therefore, brands were created as identifiers, containers of trust, and differentiators when the interactions between customers and businesses moved to situations where the risk was two to one bigger than the reward (eMarketer, 2013). They increase the trust of the customer in the organization and in the capacity of the organization to provide the desired value, at the desired quality, and adapted to the customer's needs (Alves,et al, 2016). Then, it is reasonable to think that the brand also has a key element in the relationship-building between customers and businesses, becoming a principal component in keeping and making the relationship evolve.

Lambin (1991) distinguished seven different functions for brands, five on the side of the demand (identification, reference, guarantee, personalization, and playful), and two on the side of the offer (positioning and capitalization).

To sum up, brands act as a spokesman of the business and a source of trust for the customer, thereby pretending to be a mediator between the business and the customer in their process to build a relationship. Consequently, brands have significantly contributed in the strategy of organizations to consolidate, differentiate, and be successful. According to relevant authors such as Kotler et al (2017) and eMarketer

(2013), through strengthening and managing a brand, businesses can build an asset in the mind of their current and potential customers, thereby making the brand a competitive advantage to generate value and keep a long-term advantage.

2.9. Core determinants to prefer private vs public universities

In this section, we separately reflect the factors, touching student decision-making process, beneficial to either public or/and private education institute. Preliminary works (Leach et al, 2018; Fetscherin, 2020) in this field focused chiefly on the traditional media **influencers** such as word of mouth. In recent decades, the media sources and web activity have been moving into informal areas of communication such as social media to easier facilitate a student's selection process. To properly address this question, we concentrate on the studies have been published since 2011 till 2021.

Here, much attention has been drawn to modelling undergraduate selection and revealing the major drivers leading to private institute or public university choice. In the context of the HIE industry, the intriguing point of research is to expose the social media sources and modern communication media for commercial purpose. One of the tough challenges for all researchers in this domain is to test human behaviour theories and external factors to take decision. We separate them to gauge students' valuations, keeping in mind youngers' interaction with social media as well as communication marketing strategy of institutes. In general, the wide-spread Black box model of customer choice (Kotler et al, 2017) includes five-stage buying decision process, and it might be applied here as well: identification the needs, searching information, assessment of alternatives, make decision, and post-purchasing behaviour.

When students decide to pursue higher education, the studying program, education fee, location, and prominence are the paramount factors (Adgate, 2021) in the students' choice of university. While competition is intensified in the market, career perspectives are putting forward on the first position. That is to say, the expectation of students to successfully get employment (Ciriaci & Muscio, 2014) after graduating from a Higher institute has to be regarded as central. By the same token, Paris& Decker (2012) statement seems to be reasonable saying "think-manager, think-male" (Schein et al,

2006) due to the Eurostat statistics (2021) indicating that only 11,9% of the world business leaders are women. In further studies, the “man as manager” stereotype was indicated (Paris&Decker, 2012) with linkage - the higher management ranks have lower extent of female representation in the business position. As noted above, the number of wealthy women is not essential, but it is increasing every year , as illustrated by Forbes listing for 2019 and 2020 (Adgate, 2021).

2.9.1. Private institutes choice

“*High school students' decision on choosing university is understood as the ability or intention to make a university choice decision*” (Do & Le, 2020). University studying have undergone the evolutional increase in EU for the last decade. As for business schools, one clear advantage of the application process is to avoid the problem of entrance exam in most of schools (James-MacEachern &Yun, 2017). As well, potential candidates likely take into account published university data, graduate statistics, and comments on forums as reasonable issues. This appears to be a case of the trustworthiness of information on the Internet. Student preference for private institutions over public institutions is directly correlated with financial related factors (Van Laar et al, 2017). Remarkably, one of the significant factors for parents to choose private institutes or business schools is demonstrating “**modernization**” (Kusumawati et al, 2010) and a more progressive approach. The value of web sites is widely discussed at the current moment amid the increasing interest to distance learning and digitalization. Considerable insight has been gained with regard to factors and theories influencing student choice in their education degree (Table 2.7). For that, seeking behaviour of the UK millennials was examined through the variables of web site design and proper information on it with positive estimation of web value for creating decision behaviour. If we look into the prior research, evidence of traditional student (Wineburg & McGrew, 2016) influencers are found too; for instance, personal perception, opportunity, studying environments, quality of professors, program, and graduate success (Do & Le, 2020).

Through analysis of private higher education by Lee et al (2017) social media was indicated as “*part of their marketing and branding strategy*” in 100% of institutions. Internet search behavior is related to the online environment (Kusumawati et al, 2010). At the same time schoolers’ choice is mainly predisposed by institute reputation, qualification of teaching staff, and the “university tangibility”.

Factors and theories influencing student choice in a degree: public vs private universities		
traditional influencers	Fetcherin (2020)	Despite the difference in funding, choice criteria of private and public institutes are similar: individual perception, studying surrounding, location, quality of staff, program, career development and future opportunity
sWOM	James-MacEachern &Yun, 2017 Perera et al., 2020	Processing of information by relatives and friends' recommendations has a principal effect to take decision in favour of specific university
media addiction	Paez et al. (2021)	Private schoolers are more addicted to social media than public students; in public schools, social media active users are male, in turn, private institutes there are females. Common popular platform is What's up.
Entrepreneurship	Souitaris et al, 2007; Zhou et al, 2019	Social networks play an essential role to motivate students and promote entrepreneurial intention; higher tendency to entrepreneurship in male than female
employability	Ciriaci & Muscio, 2011	Often private institutes and business schools are associated with better employability
web site design	Foroudi et al, 2020; Magoc et al, 2011	Modernization, particularly, web site design is prevalent approach of business schools to attract students
education fees	Van Laar et al, 2017	Finance is a key factor for selecting institute for both private and public universities
university accreditation and ranking of business schools	Dowling-Hetherington, 2020	Comprehensive trend to verify institute in FT ranking or World global
Internationalization	Kusumawati et al, 2010	Foreign students prefer higher schools where social media, site and reference groups are developed; so as, it is more relevant to private education

Table 2.7. Student's factors to choose a degree: public vs private universities. Source: Own elaboration

2.9.2. Public universities alternative

In order to make enrolment decision about higher education institutes (HEIs), students are usually engaged to a great extent into social networking. This creates the phenomenon of electronic word of mouth (eWOM) with both positive and negative impacts. In an investigation into the sense of word-of-mouth (sWOM) and brand choice intention, Perera et al (2020) relied on uses and gratification theory (UGT) to reveal a powerful joint correlation between sWOM and emotional brand attachment. A detailed examination of emotional brand connection by Kim et al (2018) showed that and college-

choice process is fully correlated with external source of information at private US universities. American students primarily count on social media platforms. Although this project explored this connection for private institutes, we might assume that a similar outcome likely appears for undergraduates at public universities as well.

What is more, by Fetcherin (2020) study of the traditional WOM has still a greater perceived influence on students than eWOM. It seems that college sites, school ranking, likes/comments, and visitor tours are still perceived by high school students as relatively main choice factors.

2.9.3. General comments across international students

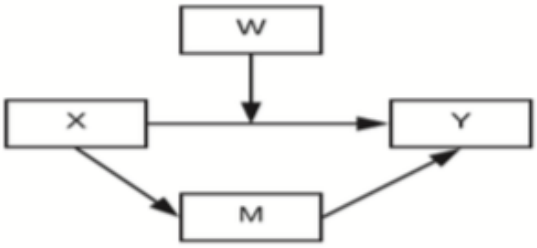
Kusumawati et al. (2020) reported on the recent findings of international student choice (Ortiz, 2004) of higher education, where social media, university sites, and reference groups were the most valuable determinant. The concept of International excellence and consumerist turn (Paez et al, 2021) appeared quite recently. There is a focus on the importance on "information sources used" (Obermeit, 2012), such as, internet, publications, social networks, campus video tours and visits reflect the ongoing interest to obtain data from online and offline resources. Van Laar et al. (2017) pointed out that parents' financial sponsorship is a crucial point for studying abroad. Furthermore, having a chance to get grand or scholarship for international students is vital. And here, the importance of marketing communication appears for discussion, where the influence of social media is not estimated in full.

Above all other factors, much more information on student choice has become available in relation on international university ranking (Dowling-Hetherington, 2020), accreditation, and ranking of business schools. So far, ranking is a practical instrument to compare various institutes regarding to program, syllabus, education fee, popularity, opportunity for career future etc. Nowadays, another one variable has come onto the market to be notable. Specifically, it is social media communication, which can't be eliminated from analysis.

To sum up, the changes of student determinants choice are emphasized by the dynamic interest to media and web sites from both sides – universities and applicants.

2.10. A conceptual causal-chain scheme of human behaviour in social media

The study of the literature with a causal-chain model (Mohammed et al, 2010) of inter-relationships is adopted here with some modifications to conceptualize the impact of misinformation and communication technology. This concept was broadly employed in social media researches (Ngai et al, 2014; Chen et al, 2021; Lee et al, 2017). So that, these experts draw a composition which consists of antecedents (as input), mediators, moderators, and results (as output). Input-moderator-mediator-output framework clearly illustrates the causality and effect. The interaction between research constructs – information and students' behaviour is justified by influencing factors. Here, the causal-chain diagram offered by Ngai et al (2014) for social media analysis (see Figure 2.9) was utilized. We have adjusted that framework for our goals where input is information, coming from social media resources, or particularly, social media.



X- antecedent; Y- outcome; W-moderator; M- mediator

Figure 2.9. Causal-chain research model with input-moderator-mediator-output framework (Leung et al, 2013)

There are some potentially open questions about the role of mediators and moderators which were actively studied within last 10 years (see Table 2.8). The moderating role belongs to the following intrinsic factors, connected with user's characteristics– gender, experience, user habit, and individual trait such as trust. Mediators might be grouped up in three dimensions: intrinsic – human features, extrinsic – media social platforms, and lastly, social items.

Moreover, although research has illuminated social media and information, there is not examination of pseudo-information dissemination, using a theoretical model to discover

the fundamentals and factors for justification. This is not yet fully presented in the literature.

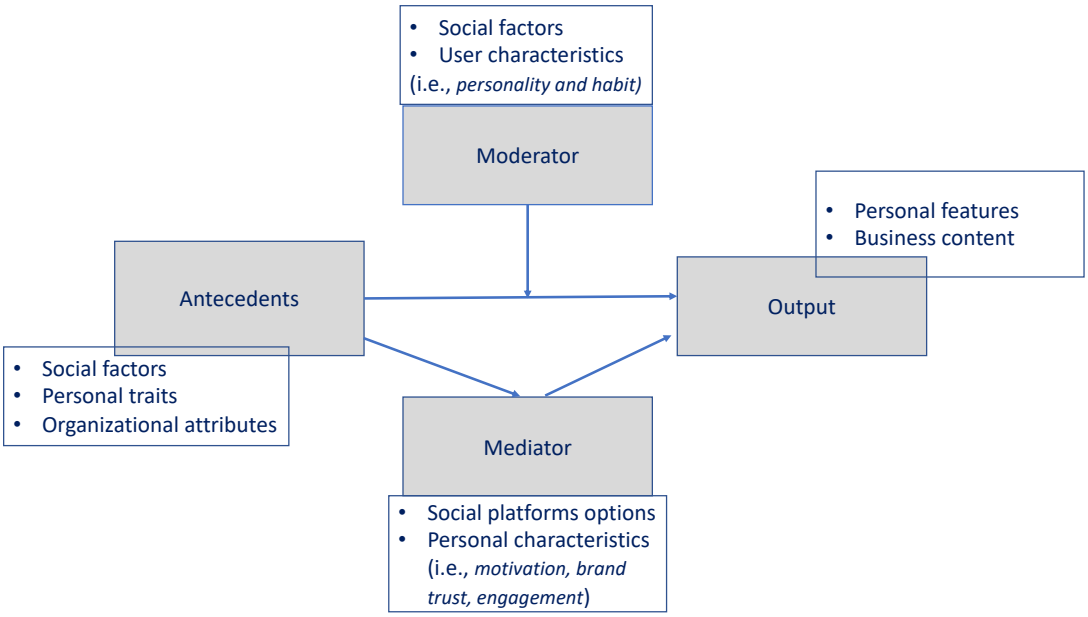


Figure 2.10. Adopted causal-chain model for social media studies through undergraduate choice of HIE. Source: Ngai et al (2021)

Relatedly, and our mind, it is critically important to overtake the analysis various components in the model of stimulus and response (Shu & Scott, 2014) where social media is "active extrinsic comprehensive mediator". As we observe, the debate continues about the best moderator and other mediator for steering students' behaviour. To put it more simply, mediators might be divided on a few groups – internal motivation and external factors related with social media platforms. The moderator list is limited by personal characteristics.

The outcomes stand out showing up a several deviations with positive and negative outcomes. The most striking result to emerge from the data is that we discovered increasing interest in this topic. The utility of such literature analysis is thus underlined by numerous prior publications, especially in last two years.

Input	
Social media	Alshuaibi,et al, 2018; Sagynbekova et al, 2020;: Suti & Sari, 2021; Razak et al, 2020
Mediator	
Brand co-creation&brand trust	Perera et al, 2020
Social media	Lee et al, 2017
Trust	Suti & Sari, 2021
Intrinsic motivation	Malik et al, 2020

Social capital	Heidari et al, 2020
e- WOM	Sagynbekova et al, 2020
Facebook	Suti & Sari, 2021
Instagram	Razak et al, 2020
Student engagement	Alshuabibi et al , 2018
Moderator	
Brand usage experience	Perera et al, 2020
Gender	Borrero et al, 2014
User habit	Sharif Fard et al, 2019
General trust	Kudrnac, 2020
Output	
Positive academic outcome	Nazir&Brouwer, 2020
Brand equity	Sagynbekova et al, 2020
Positive and negative performance	Boahene et al, 2019

Table 2.8. Analysis of attributes for causal-chain framework. Source: Own elaboration

In particular, the above-listed factors were disclosed in Table 2.8 and 2.9. to clarify the fake tendency on social media in the education industry. It has to be outlined that there is no examination of pseudo-information dissemination using a holistic model to discover the fundamentals and factors for justification of youngers' behaviour in the literature.

2.11.Hypothesis development

Grounded on previous propositions, this study attempts to explain the power that the publication of fabricated news stories has on students' attitude and decisions regarding choosing a university or business school where to pursue a postgraduate degree. Notwithstanding, the major question is: what kind of precedents makes students believe fake news and, therefore, take it into account when making a decision? Specifically, we will learn fake news posted on social media, which is often the most common sources of information for the target audience. On the other hand, we also persue moderating factor that regulate the weight of these factors on students' attitudes. The proposed model is depicted in the form of a path graph in Figure 4.

2.11.1. Perceived richness and attitude to fake news

Social cognitive theory is one of the main theories explaining the desire and reasons for using communication channels to get information. This theoretical model explores human behavior towards "socialization, entertainment, information seeking, and information sharing" (Apuke & Omar, 2021). According to their proposals "*electronic communication technology can sufficiently alter the context of media use...*" (Ruggiero,

2000), as they offer the possibility to receive, share, or republish content through social platforms. Additionally, intensity in "perceived richness" has been correlated with increased participation in information dissemination (Talwar et al, 2019). Based on these propositions, the following hypothesis is proposed:

H1 - A greater tendency to "perceived richness" will imply a greater attitude towards fake news

H1a - A greater tendency to "perceived richness" will increase social media dependency

2.11.2. Para-social interaction and attitude to fake news

The para-social relationship considers that social network users are more accepting of news posted on social networks if it comes from prominent members of society or is relevant to them (Apuke & Omar, 2021). As outlined in the literature review, parasocial theory supports our research to refer to emotional ties (Handarkho et al, 2021) respondents – students with "media figures" or idolised personalities to impulsively "buy" information and advice posted on social networks. More details on this were given above in Chapter 2.6.1. On this basis, we assume that:

H2: Greater para-social dependency will increase the attitude towards the use of fake news

2.11.3. Individual social networking site (SNS) dependency and attitude to fake news

The **theory of media dependency**, first proposed by Ball-Rokeach and DeFleur (1976) and later expanded in the work of Lee and Choi (2018), proposes the reasons for the dependence that individuals form on the media. This theory unveils the existence of a triangle of reciprocal influence between "media, audiences and society" (DeFleur & Ball-Rokeach, 1989). It is considered that through social networks, as a means of communication, people acquire information that helps them to form an idea about their beliefs and understanding of society. According to Apuke and Omar (2020), there is a positive connection between the degree of "Individual dependence on SNSs" and a greater willingness to share false information. Based on these propositions, the following hypothesis is proposed:

H3: 'Social networking site dependency' will imply a greater attitude towards fake news

2.11.4. Influencing role of fake news knowledge

Media and news literacy are dealing with a series of competencies to spot real and fake news. Otherwise, people might fall in for false news. The European Commission (n.d.) defines media literacy as the capacity to access, have a critical understanding of, and interact with the media. The impact fake news knowledge as an influencer we are going to estimate here to focus on the students' sensitivity to quality of information. It might become an "illusion truth effect" (Pennycook & Rand, 2018). As previously reported, the existence of two systems of information processing and rationality of decision making: an intuitive and a rational analytical one (Epstein & Pacini, 1999; Kahneman, 2011) is supported by studies of people's ability to distinguish between false and true news. Along with that, Daniel Kahneman's (2011) stated "dual processing" theory of human cognition: System1 and System2 (Stanovich et al, 2011) comprise two opposing reactions. System1 is responsible for automatic and emotional reactions to stimuli generated by incoming information and System2 seeks to use rational thought to generate a response. It is stated that the predisposition to use a heuristic or rational system may affect attitudes towards fake news. Consequently, we propose the following that:

H4: 'The effect of fake news will be stronger for individuals with low fake news knowledge

2.11.5. Effect of fake news attitude on acceptance of false information

The increasing use of open-source data generates discussion about its exposure to fake news. Generally, the consumption of false information is considered through the model of attitude-behavior relations (Bentler & Speckart, 1979) to show how intention positively or negatively affects a person's decision making. Besides that, people behave more confidently when they believe that the intentionality of news publications pursue beneficial ends. The origins of attitude came from self-interest, social identification (Boninger et al, 1995), feelings, belief (Kudrnac, 2020), experience, and knowledge (Wang et al, 2021). Apparently, the perception of information is closely related to the environment and the specific situation. According to the above discussion, social media platforms stimulate people to share information, re-post or re-tweet. Therefore, the following hypothesis is put forward:

H5: The higher the level of attitude towards fake news, the higher the level of acceptance of fake news

2.12.Proposed research framework

Initially, referring to the literature review and the hypothesis identification, and, later, postulating the research question and the goal of this research, the following empirical study is proposed. The model suggests measuring the effects of student's experience as customers in the Education industry, employing several social, media and behavior theories as units of research. As mentioned in the description of the "student behavior preferences" concept, customer experience is the broader concept, to study in one research that we shall narrow and build the project on Apuke &Omar (2021), Wang et al (2021), Tejedor et al (2021), Pennycook& Rand (2018), and Thompson & Oppenheimer (2016) human decision-making models. As a result, we consider that student selection of Higher Education using such specific elements:

- Perceived media richness
- Para-social interaction
- SNS dependency
- Fake news knowledge
- Cognitive processing

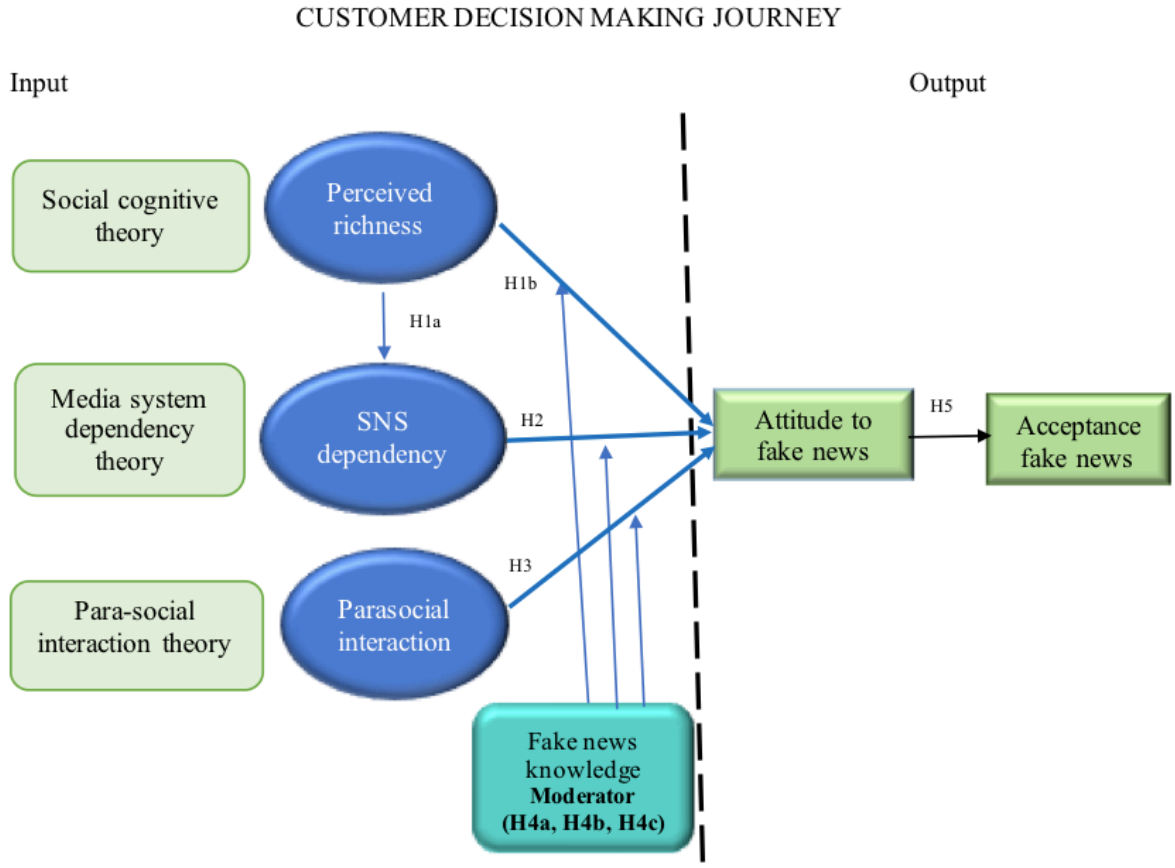


Figure 2.11. Theoretical framework of the empirical case based on the literature review. Source: Own elaboration.

3. Research design and methodology

This section inspects the research model to account the research question and achieve the objectives suggested in the Chapter #1.

3.1. Proposed design of research

Traditionally the study is established on the “Onion” research model (Saunders et al, 2011) and spans all layers. The first thing that needs to be done is formulating the research question and aim of the study with appropriate explorative methodology (Kotler et al, 2017). Constructing the relevant research tree with consideration of possible subdivisions may move forward this work and support with identification of alternatives methods. For this work, the realistic philosophical approach is applied to report the actual reality and diagnose the decision-making process in the business education being high sustainable to news. The empirical study includes the elaboration of a questionnaire, a pre-test to detect possible interpretation failures, fieldwork, data collection, and analysis to verify the model.

The major practical dilemma that confronts us is to identify the most appropriate methodological approach which would answer on our study questions. All in all, this problem can be tackled in two different ways: quantitative and qualitative analysis. In the prior researches (Frederick, 2005; Campitelli & Labollita, 2010; Allcott & Gentzkow, 2017; Pennycook& Rand, 2019) the most experiments have been developed with quantitative methods to examine this question. Here we will review the conjunction of qualitative and quantitative methods of research, keeping in mind the reasonable application of the deductive approach – from generalization of findings towards specific outcomes. To put in another way, from some statements and premises to logical conclusion.

Quite recently, Randolph et al (2008) paper considerably scrutinized the fact that 74.3% of studies utilized quantitative methods, 15.3% of researches were with qualitative methods, while others - 10.4% mixed methods. This research contemplates to incorporate this combination of approaches to run the mixed methodology of studying.

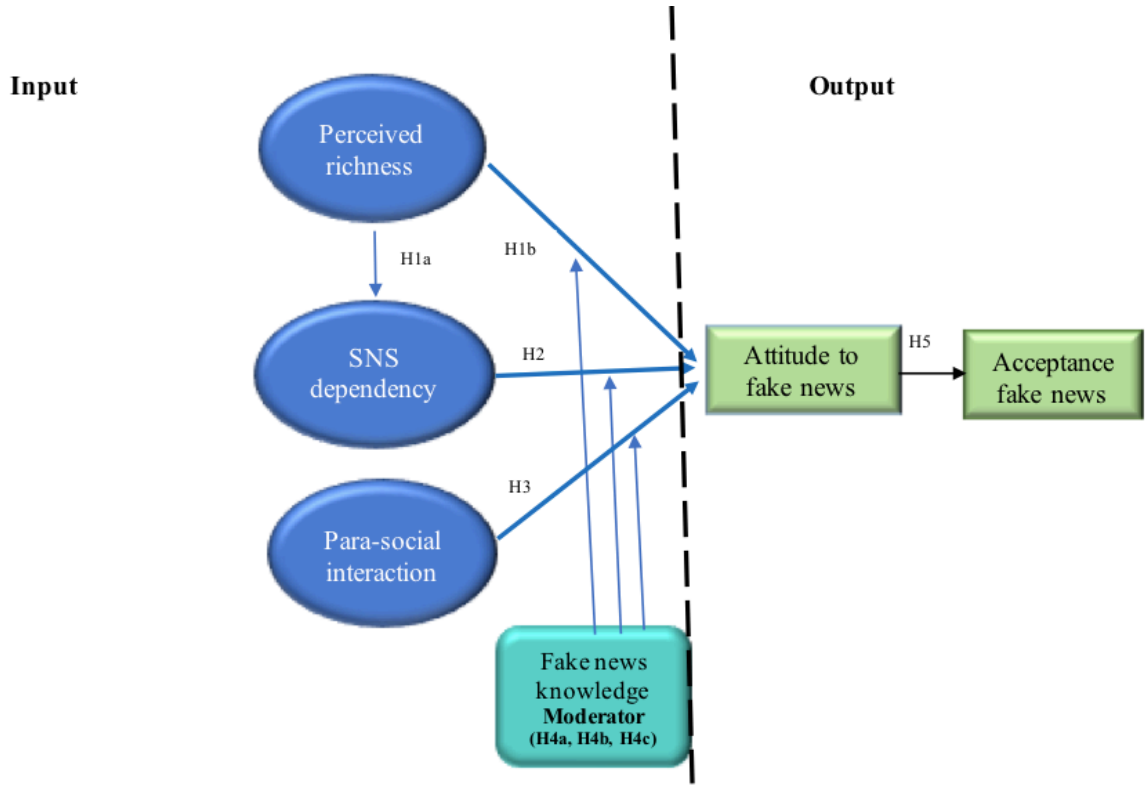


Figure 3.1. Theoretical framework based on the empirical LR research. Source: Own elaboration.

As proposed in Section 2, an empirical study to assess the effects of counterfeit information in the customer choice and on customer attitude to social media misleading (as a measure of reliance of social media) will be conducted, using surveys and interviews.

A survey-based quantitative approach will be employed to test six different hypotheses based on our theoretical model that states the relationship between students' perception of false information, social network dependency, influence of some public figures and, on the one hand, customer decision making and attitude to misinformation. That is to say, the goal of the survey will be to put to the test the relationship between perceived richness of information which lead to belief in it, SNS dependency, para-social interaction, and students' behavior and attitude to false headlines, summarized in six main hypotheses to draw the conceptual framework (Frederick, 2005; Pennycook& Rand, 2019; Apuke & Omar, 2020; Wang et al, 2021; Tejedor et al, 2021).

3.2. Research design

3.2.1.Research approach

With intention to achieve the objectives of this research, it is proposed to follow a hybrid methodology based on several methodologies, where the dominant one was exploratory research to configure the context of the study and a quantitative analysis proposing a model of relationships between factors, estimated by means of structural equation modelling (SEM). In conjunction with that students in the focus group were interviewed in a purpose to gather data of qualitative nature.

This review of the literature has made it possible to identify the paramount models implemented (Apuke & Omar, 2020; Wang et al, 2021; Tejedor et al, 2021; Thompson & Oppenheimer, 2016) to explain each of the determinants that have acted as independent variables, the potential moderators, and finally, the factors acting as dependent or explanatory variables. Having these issues in mind, an initial model is proposed with validated scale from a literature.

Though, we can highlight the use of the cognitive relation test (CRT) that deviates from the usual procedure of psychometric construction of scales formed by items. The CRT scale consists of seven questions that requires resolution. Frederick's approach to CRT mathematical questions (2005) has been a subject of some criticism due to its simplicity, and it could be improved. Later on, another version of the CRT model has been put forward, the CRT2 proposed by Thompson & Oppenheimer (2016), extends the scale from three to seven math questions. In our study we will apply the last version, CTR scale. The rest of the scales, as discussed above, are validated scales previously used in the literature by Apuke et al (2022) and Wang et al (2021). It is also expected to explore some other variables that could play role of moderators such as gender or students' previous studies (Frederick, 2005; Juanchich et al, 2016; Primi et al, 2018).

At the beginning, the collected data will be assessed by descriptive analysis through SPSS software, and later, SEM analysis with specification of essential constructs confirming hypothesis. Gender difference was investigated in prior studies (Frederick, 2005; Juanchich et al, 2016); however, CRT2 research did not display this result and requires further learning. Regarding our study, it is expected to get some evidence also pointing to higher numeracy for males (Primi et al, 2018). All in all, our presumption is to reaffirm the interaction of emotional and deliberative processes for taking decision in the educational industry.

This project follows the deductive approach; to put it another way, it attempts to test hypotheses based on the available knowledge of a distinct area, in this respect,

decision making and students' behavior towards misleading information presented in the previous sections of this thesis. The main goal of the deductive theory is to transform the conception of analysis into research variables through hypotheses that can be examined. Accordingly, the experimental part of the study has displayed a few stages: firstly, aggregate the data to make the hypothesis, and then, collect empirical data to inspect them.

The review will encompass the developments of the past ten years concerning the use of social networks by adolescents and students, the propagation of false news on the internet, and the impact of social networks on the selection of educational institutions.
For this research model, students from business schools in Barcelona and Madrid are interviewed.

3.2.2. Research data reliance and validity

Beyond a shadow of a doubt, the fundamental nature of research is its quality. More accurately, the validity and reliability of research data (Wilson et al, 2004) expose the efficiency of the experiment. We get to know their experience, belief, and settings as long as human behavior is investigated qualitatively (Corbin & Strauss, 2015; Creswell, 2003). Over and above, this combination of group and personal interviews grant us the opportunity to "dig" into the questions in-depth (Hyde, 2000). It must be given prominence that e-interviews are enormously valuable (Bampton & Cowton, 2002) for saving time and becoming the digital form of communication between the respondent and the scholar.

Owing to the various limitations of study, the problem of validity appears in any research. Another issue is that scholars won't be able to verify everything perfectly with not absolutely ideal research methods and fully calibrated tools (Kirk & Miller, 1986). To do so, the acknowledgement of accuracy is centrally bounded. Given into its generalization, quality data and their interpretations have to be considered within the framework of certain qualitative or quantitative approaches grounded on the accuracy of results. According to Jimenez-Buedo, & Miller (2010), internal and external reliability have to be distinguished, where the first one is linked with collecting, analyzing, and interpreting data. In turn, external reliability pertains solely to the function of replicability. Considering the evidence of reliability of data, the consistency and dependability of the findings from a piece of research have to be unmasked. That might expose the reliable findings with a certain extent of validity.

Without a shadow of doubt, the better the structure of the process, the higher the validity. In other words, these scholars underlined that in the content of qualitative method, the validity of unstructured interview is two times less than structured - 0,31 vs 0,62, respectively. And even more, it is important to note (Wilson et al, 2004) that it is positively correlated with the structure and design of the survey and, in turn, negatively connected with its length. Here, we implemented a structured interview procedure.

To draw inference from the mentioned above, the criterion validity logically depends on selected research approach and its composition. More than that, validity is also connected with the amount of built-in errors and deviations, which are predictable and finally might allow us to achieve a significant higher quality of studying. This implies that studying is associated with some blinded area and uncertainty which have to be affirmed, particularly, in order to avoid exactly the situation of non-qualified data sets. For minimizing this issue, the interview has to be conducted (Bampton & Cowton, 2002) by a competent interviewer and with the same interview panel in all experiments. Another thing that needs to be said is validity and repeatability are meaningful (Wilson et al, 2004).

Quality is enhanced by providing additional data with a quantitative evaluation participant intelligence. Again, we intend to apply cognitive reflection test (CRT) algorithm of Frederick (2005) three questions and set of four extra questions from CRT2 of Thompson and Oppenheimer (2016) study to explore this contemporary field. Alternatively stated, it is some sort of IQ test (using the CRT method) (Campitelli & Labollita, 2010). Overall, the experiment is conducted across some information items in the business education industry. Here, we will report how the deductive research strategy was adopted in a research survey-based quantitative approach checking six different hypotheses. Thanks to the self-administrated online survey methodology, a large amount of data will be collected and measured economically in a short period (Collins & Hussey, 2009).

After all, the principal research methodology is a survey to collect data from the respondents, and later, statistically prove the hypotheses, analyze the results, and provide details of the findings.

3.2.3. A qualitative methodology

We undertake the empirical analysis using data collected in both methods - quantitative and qualitative. All methods are not without their drawbacks, as will be discussed later, having some pros and cons. One should consider the research approach from another angle. In the opinion of Eriksson and Kovalainen (2016), the qualitative method grants you a "*wealth of detailed data on a small number of individuals*". To be more specific, there are numerous categories of collecting data, like case studies, observations, ethnographic stories, action research, and interviewing. This study employed a variety of data collection methods, including interviews and surveys, chosen for their advantages and good-fit in achieving the objectives of this research. One must admit that in other publication (Corbin &Strauss, 2015), it is stated that interviews are flexible and dynamic tool for practitioners, which can be easily adapted to experiment questions and illustrate "inside out" view of participants (Appendix D). Furthermore, a well-developed interview will ensure future perspectives (Morgan, 1997; Corbin &Strauss, 2015), enriching your idea. For this research model, group interviews and individual interviews were more relevant to draw out the students' opinion regarding common stereotypes and unreliable information. Within other advantages, they provide us with a more feasible and rapid way to gather data and assess our hypotheses in practice with regard to the opinions of higher education youth. Following the studies of Hyde (2000) and Klaus (2015), a qualitative method is the easiest way to compile the necessary data to understand, explain, and describe the peculiarity of fake headlines.

The quality can be enhanced by providing additional data during the group discussion. The descriptive part of the analysis is essentially supported by personal interviewing to provide the emotional issues and personal experience of respondents (Creswell, 2003), with cultural increments such as eyes contacts, pauses, head nods, fewer interruptions etc.

In this study, a comprehensive technique was employed to advance scholars' efficiency and gather a diverse range of information. We also investigate the potential of utilizing online resources for data collection.

3.2.4. A quantitative methodology

In business research, when it seems to be a paradox whether to prefer a quantitative or qualitative technique, most investigators mix both or choose only latter. If the qualitative admits to focus on root issues (Collins & Hussey, 2009) – WHY? and HOW? in contrast,

the quantitative method authorises only measure the number of objects (Creswell, 2003) and causal relationships between variables. That actually carries the fair values in the framework of increasing understanding of consumer attitude, as in our conditions, towards existing institutes and their service.

At the same time, practice demonstrates many cases where multiple data collection tactics are combined. For our research, the possibility of false information influence on students' choice has to be investigated by a quantitative method. This can entail building cross-connections between different variables and revealing new findings.

To explain how achieve two purposes simultaneously in our studying, for instance, applying qualitative and quantitative methods, Fielding & Schreier (2001) introduced the "idea of triangulation", which was developed later in other publications (Denzin, 2012; Corbin & Strauss, 2015). Remarkably, this concept can be interpreted broadly (Feilding & Schreier, 2001) to endorse the integration of validity and reliability as mechanisms of research.

Now the mixed method of research is becoming more prominent (Creswell, 2003) than it used to be. And as a result, triangulation is extensively explored by the academic community (Denzin, 2012; Fielding & Schreier, 2001). What emerges is that the essential number of instruments is extended by this decision and, certainly, the risk of obtaining the lack of research quality is reduced. In order to test different hypotheses, the deductive research strategy was applied in this research with a survey-based quantitative approach.

The experiment is thoroughly based on an online survey and a traditional paper mode at the private university and business school. Participants in the first data collection were from one of the Business School in Barcelona, Spain, and rest of dataset was gathered by students of Madrid business school. The questionnaire was designed by the common statements about social media, external influencing factors such as a power of public figures, and internal issue, namely, media literacy. The poll of students consists of undergraduates of entrepreneur and management classes (average age = 19 -26 years; 60% female).

A single pretest of individual and group interview has been conducted in the given project to go through the first step: preliminary data analysis, secondly, scrutinize the theme, lastly, interpret at the outcomes (Denzin, 2012). Data analysis slightly shifts from raw sources to accurate analysis where interviews predominate. When describing the data analysis process, the practitioner has to take into account the ultimate destination

and plan iterative actions. The analytical and interpretive foundations of the qualitative method expose the distinct decisive sides for sampling to clearly identify the possible challenges (Fielding & Schreier, 2001). The section of transforming data is needed, whereas group interviews (Eriksson & Kovalainen, 2016) encompass processing and transcribing data to identify coding. Be aware that coding will be able to summarize data and formulate conclusions.

3.2.5. Research strategy of data collection

Critical realism (Saunders et al, 2011) is the most appropriate in this case because assumes to investigate different levels of society that are closely connected: the individual and group level as well. By conducting the survey, one-to–one interview, focus group and online survey, the researcher will be able to operate the most relevant information from the consumer market. The methodology refers to the substantial analysis of the students' decision journey where mixed methods with elements of qualitative and quantitative approach may be applicable. Once research data is collected, the next stage is to analyze information using program methods such as SPSS and SEM (structural equation modelling), which may execute explorative factor analysis. It is obvious that the benefits of the work will be essential, as the research outcome has empirical value.

SPSS software version 21 is an analytical product for evaluation of the data collection and modelling future connections and interactions. With that, it ought to analyse the students' attitude and behaviour by embedding them in the education business to gain understanding of the process. Another competitive advantage is the possibility of making a ''smarter decision'' and refining the output. The execution of this IT product facilitates the analytical process and increases the quality of the outcome. It enables the direct response to a research question with the necessary statistical evidence.

With the main purpose of evaluating the impact of misinformation via social media on the students' decision journey to their last destination in education, the study has combined the measurement of different prominent studies (Toplak et al, 2011). The suggested survey was designed as an online survey on the Google Forms platform to be completed as a self-served questionnaire. Project design closely aligns with the item of logical approach and might serve as a ''blueprint" for fulfilling objectives and answering questions' (Cooper et al, 2006). To ensure the quality of answers, the audience has to be supplied with a goal of research and particular description of process.

3.2.6. Questionnaire structure and survey process

The survey is composed of a set of questions following the seven-point Likert scale (where “strongly disagree” (1) and “strongly agree” (7) represent the minimum and “maximum). This is the most common methodology of the previous analysis in the literature (Wang et al, 2021; Apuke&Omar, 2020). The goal of this survey is to gather quantitative data via online Google platform and support hypothesis by utilizing the Structural Equation Modelling (SEM) technique in EQS software 6.1 version. The survey data was collected at a specific time, following the example of cross-sectional studies, during the period from October 2021 till February 2022.

It is generally agreed at the present time that evaluation of people’s attitudes might be done using rating scales (Corbin & Strauss, 2015). In the business environment, the Likert scale is one of the informative rating scales with a major prevalence.

To assess buyer behaviour and clarify the factors influencing it, the AGREEMENT scale was applied. Originally, Likert (Wang et al, 2021) proposed measurement of importance with seven degrees. For illustration purposes, as per example shown:

Strongly disagree - disagree - slightly disagree - neither disagree- not agree - agree……agree…. - strongly agree

This thesis requires a meticulous specification of prior data (Apuke & Omar, 2020) and identification of new details; therefore, all questions comprise seven-point scales (Wang et al, 2021) (Appendix B). The goal of this form of assessment is to grade each interviewee’s answer respectively to the proposed Likert scale. In support of this form, general information (Cooper et al, 2006) about an individual, such as, age, education degree, income level etc., is collected in the introductory section. To be accurate, one could notice in this research that the survey might face issues if there is a lack of brevity, ease, explicitness, or neutrality.

Cognitive processing measurement by cognitive reflection test (CRT)

To assess the students’ intelligence and numeracy skills, they were invited to complete an additional test, with seven items, known as “bat and ball problem” , as proposed by Thompson and Oppenheimer (2016).

The questions proposed were the next one:

1. A bat and a ball cost £1.10 in total. The bat costs £1.00 more than the ball. How much does the ball cost? (Correct answer - £0.10)

2. If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets (Correct answer - 5min)

3. In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake? (Correct answer - 47 days)

4.If 3 elves can wrap 3 toys in 1 hour, how many elves are needed to wrap 6 toys in 2 hours? (Correct answer - 3 elves)

5. Jerry received both the 15th highest and the 15th lowest mark in the class. How many students are there in the class? (Correct answer - 29 students)

6. In an athletics team tall members are three times as likely to win a medal than short members. This year the team has won 60 medals so far. How many of these have been won by short athletes? (Correct answer -15)

7. How many cubic feet of dirt are there in a hole that is 3' deep x 3' wide x 3' long? (0 cubic feet, it is a hole)

The survey was sent out the students online to complete it over the internet by filling out questions on the web. We must confess that most of the students participated in the paper survey. The value of the online survey is the ability to collect data from a large number of people in a short amount of time. At the same time, the response rate of this category of respondents was much lower than traditional paper survey method. As a whole, approximately 250 students were interviewed. Campus students were randomly questioned via the thaditional paper-and-pencil method.

All contacts with online participants were made through electronic mail, providing them with a link allowing direct access to a web site containing the online survey (with no limit of time to complete it). Survey contains a cover letter explaining the main idea of research with instructions.

As soon as there are indicators of survey data quality, such as non-response error or missed questions, we might resume the significant efficiency of the paper mode.

This is a series of brain-teaser type questions designed to estimate intuitive versus analytical thinking connected with two types of processing (Dual system processing, LR, Chapter 2.5). Moving forward, a reflective or “intuitive” response is rather inaccurate, and as a result, respondents with low scores (0-2) fall in mistakes (Toplak et al, 2011). In turn, measured results of CRT with from 3 to 7 scores are interpreted as a rational thinking process (McPhetres, 2018). Overall, the 250 participants in this study were invited to take it. The goal of this CRT methodology is to study students’ numeracy skills and, in parallel, examine the acceptance of fake news as a rational or intuitive process.

The survey follows the following process: firstly, and thanks to the capabilities of Google Forms, the participants who had volunteered to participate in the study completed a questionnaire for 15 min. Once they have overcome the suggested questions, the researcher will obtain both general statistics of all participants and their answers.

Initially, each respondent will be asked to portray their demographic profile in Section A. This is a substantial aspect for descriptive analysis to consider the relationship between respondents’ characteristics and their answers. Then they must go through Section B “Cognitive processing”, which is also known as a short IQ test. In the case, if respondent missed the question or put “dash”, this question in the survey will be evaluated as “0”. The coding of this test is designed to grade 7 questions with a maximum of 7, where a correct answer earns “1” score and incorrect - “0”.

Further, respondents will evaluate their social networking experience to rank popular digital platforms regarding to their usefulness for getting information about HEI and customer satisfaction with those digital platforms. Withal, they will answer several questions related to the frequency of sharing information among relatives and friends. Lastly, in relation to the research objectives, in Section #3, data was obtained through a list of questions bounded with para-social interaction, SNS dependability, and perceived richness of information on social media.

Summarizing, all gathered data and information will have to be compared with relevant literature for the purpose of correct interpretation. It is suggested the results be published in the business literature to create a public effect.

3.3. Collecting primary data

Initially, the phase of collecting data commences with the elaboration of questionnaire. The first thing that needs to be discussed is the varieties of it. The most elementary type is a **self –completed questionnaire** distributed by the Internet, mail, or post and filled in by respondents. In contrast, the **interviewer-completed** modification of questionnaire suggests the accumulation data through an online form or face-to-face personal meeting. Faced with challenges in terms of time and cost, we prefer the first type. To eliminate the risk of misinterpreting, the researcher arranged a pilot test to receive interviewees feedback which is also important.

Common requirements to the interview include a limit of time to finish it less than 10 minutes; questions should be very understandable and simple; logic and coherence to accelerate the process. Bearing in mind the difference in the competence of respondents, the questionnaire has to be adjusted to the level of audience.

For any survey, the exploration must go through these stages:

- 1 stage - Designate the goal, type, mode, content
- 2 stage - Specify the format of collection data
- 3 stage – Design the questionnaire

To be prominent, one could notice in this study the use of both variants increases the quality due to the sufficient arguments – saving time and reduce the cost, control for the process, more than 90% of papers completed online via Google Forms, and only the last 15% were mailed to the students of Madrid University. The average duration to proceed survey was 10 minutes. Although, international students spent up to 15 minutes and often demanded the comments on Section B (Cognitive test). For mail and Internet survey, a cover letter may yield supplemental output. So, it targets to clearly represent the idea and importance of this study, plus, it helps in positioning readers towards support.

In total, questionnaires were distributed among 250 students of business school and university. All in all, there were contained 210 filled in papers. After checking the questionnaires for mistakes or missing data, there were 205 documents remains.

3.4. Pilot testing

Before beginning of the large project, it is suggested to arrange rather beneficial thing as a pilot study. It is a small scale of research with purpose of testing by some group of buyers. Our assumption is to indicate the possible errors or gaps in the process. Factually, it implies that if something was determined as invalid or non-feasible, there is a chance to adapt the survey.

Because of these potential risks and limitation, academics have to acknowledge the necessity of a trial experiment to ensure the quality of findings. At this stage of understanding, this is a narrow neck, researchers believe that a pre-test would discover the area for improvement and modification. The advantages of its implication are to illuminate the processing bias (Polit& Beck, 2010), activating a flexible scheme of research towards accurate measurement.

There has been refined the questionnaire for survey, having examined it with a group of 31 students of GBSB Global business school – undergraduates. Thus, some questions were simplified or paraphrased for better more understanding and to help interviewees with clear awareness of the meaning. Some learners recommended how to improve the structure and order to avoid the possible mistakes in the future.

3.5. Tool for the research

This research was conceptualized based on Wang et al (2021), Apuke&Omar (2020), Weiss et al (2020), Pennycook&Rand (2018), and Tejedor et al (2021) research projects.

Statistical analysis was performed by using six factors, assuming a significance level of interaction. This research aims to measure three different variables (Perceived richness, Para-social Interaction and SNS dependency) with one moderator - Fake news knowledge which were examined through the questionnaire.Regarding the data collection survey, it was separated into three sections, with a total of 21 questions, appearing in a specific order in the questionnaire.

The sampling of this study was collected through the Google Forms sheet via Digital Panel. You will be able to find the sampling of this panel by the following LINK.

In relation to the customer's gender, age, academic degree, family income level, there were no specific conditions, considering that the education industry and social media experience encompass all types of gender, ages, and income levels. Nevertheless, we expected to see a sample with a balanced gender and age. There are following sections in the questionnaire (Table 3.1.):

- Section A: Demographic characteristics
- Section B: Cognitive processing
- Section C: Nature of misinformation and its influence

#	Type	Question	Author
Q1		I have no problem using information shared on social media about my chosen university, if it was shared by someone I admired and respect	Apuke&Omar (2020)
Q2	**Parasocial interaction**	I consider the opinion about my chosen university of a public figure whom I admire and respect	Apuke&Omar (2020)
Q3		I seek the opinion of a public figure whom I admired, and respect related to my chosen university	Apuke&Omar(2020)
Q4		Social media provides variety of information according to my requirements related to a chosen university	Wang et al (2021)
Q5	**Percieved richness**	Social media is an internet-based form of communication with a huge number of diversified users, having different opinions about a chosen university	Wang et al (2021)
Q6		In social media I get quick response, comments, and feedback from others on my shared content about a chosen university.	Wang et al (2021)
Q7		With the help of social media, I can share all kinds of information and content about a chosen university with multiple users at a time	Wang et al (2021)
Q8		I frequently obtain information about a chosen institute (where I am currently studying) through social media	Apuke&Omar (2020)
Q9	**Social media dependency**	I make use of the information related to a chosen institute found on social media	Apuke&Omar (2020)
Q10		I immediately update information about a chosen institute received from social media	Apuke&Omar (2020)
Q11		I think the social media is the most convenient way for sharing information and contents about a chosen university	Wang et al (2021)
Q12	**Fake news attitude**	I like to share pictures, videos and information about a chosen university via social media platforms	Wang et al (2021)
Q13		I have positive attitude towards content about a chosen university sharing on social media in the future	Wang et al (2021)

Q14		I regularly use social media as a source of communication about a chosen university (where I am currently studying) and sharing information with others	Wang et al (2021)
Q15	**Fake news acceptance behavior**	From time to time I involve in group discussions on social media about a chosen university	Wang et al (2021)
Q16		Most of the time on my social media account I upload useful documents and files about a chosen university to share with others	Wang et al (2021)
Q17		Headlines what are too alarmist, ridiculous or unlikely	Tejedor et al, 2021
Q18		The medium in which it is published	Tejedor et al, 2021
Q19	**Fake news knowledge**	Common sense/logic/coordination	Tejedor et al, 2021
Q20		The unreality of the content	Tejedor et al, 2021
Q21		Sources of information are cited	Tejedor et al, 2021
Q22	**Cognitive processing**	Short IQ test (7 questions where the maximum score is 7) Cognitive reflection test by	Frederick, 2005; Thompson&Oppenheimer , 2016

Table 3.1. Questionnaire developed (Sections B&C). Source: Own elaboration.

In relation to the Customer decision making, constructs were measured through Wang et al (2021) and Apuke &Omar (2020) methodologies. As stated in the literature review, the Cognitive test created by Frederick (2005) was adaptable to assess customers' intelligence and allows us to measure the rationality of choice vs emotional attitude, including the direct and indirect influencers between the customer and other factors in the education industry. Three special categories of variables (Perceived richness, Parasocial Interaction and SNS dependency) are measured through multiple questions using a seven-point Likert scale, anchored by a scale from "strongly disagree" (as minimum score - 1) to "strongly agree" (as maximum score 7).

Regarding the effect of information on human attitude and behavior, a few earlier published articles were studied by Wang et al (2021) using their 7-item scale, which has six dimensions – information benefits, information richness, trust, past experience, and finally, generated attitude and customer behavior (each dimension measured by three or four questions). In a parallel, this idea was modified by Apuke & Omar (2020; 2021). The last study was extremely close to our goals speculating the role of fake news. That so provides the usage of an additional set of interesting combination of variables such as – para-social interaction, SNS dependency, and perceived richness. Last but not least, in that research the moderator Fake news knowledge tested the importance of media competency. Additionally, cognitive

processing was employed as a driver from Thompson & Oppenheimer, (2016) to eliminate a myth about fully rationality in the human decision process.

Not to mention, the respondents finish the survey by answering questions about the frequency they spend per week in the game and the amount of time that they have been playing the game.

Question	Type	Variable	Input/Output
I have no problem using information shared on social media about my chosen university, if it was shared by someone I admired and respect	Parasocial interaction	PI1	Input
I consider the opinion about my chosen university of a public figure whom I admire and respect	Parasocial interaction	PI2	Input
I seek the opinion of a public figure whom I admired, and respect related to my chosen university	Parasocial interaction	PI3	Input
I usually base my ideas on information about a chosen university obtained from his/her social media pages	Parasocial interaction	PI4	Input
Social media provides variety of information according to my requirements related to a chosen university	Percieved richness	PR1	Input
Social media is an internet-based form of communication with a huge number of diversified users, having different opinions about a chosen university	Percieved richness	PR2	Input
In social media I get quick response, comments, and feedback from others on my shared content about a chosen university.	Percieved richness	PR3	Input
With the help of social media, I can share all kinds of information and content about a chosen university with multiple users at a time	Percieved richness	PR4	Input
I frequently obtain information about a chosen institute (where I am currently studying) through social media	Social media dependency	ISMD1	Input
I make use of the information related to a chosen institute found on social media	Social media dependency	ISMD2	Input
I immediately update information about a chosen institute received from social media	Social media dependency	ISMD3	Input
I think the social media is the most convenient way for sharing information and contents about a chosen university	Fake news sharing attitude	FNA1	Output
I like to share pictures, videos and information about a chosen university via social media platforms	Fake news sharing attitude	FNA2	Output
I have positive attitude towards content about a chosen university sharing on social media in the future	Fake news sharing attitude	FNA3	Output
I regularly use social media as a source of communication about a chosen university (where I am currently studying) and sharing information with others	Fake news acceptance behavior	FNAB1	Output
From time to time I involve in group discussions on social media about a chosen university	Fake news acceptance behavior	FNAB2	Output
Most of the time on my social media account I upload useful documents and files about a chosen university to share with others	Fake news acceptance behavior	FNAB3	Output
Headlines what are too alarmist, ridiculous or unlikely	Fake news knowledge	FNK1	Input
The medium in which it is published	Fake news knowledge	FNK2	Input

Common sense/logic/coordination	Fake news knowledge	FNK3	Input
The unreality of the content	Fake news knowledge	FNK4	Input
Sources of information are cited	Fake news knowledge	FNK5	Input

Table 3.2. Final dataset. Source: Own elaboration.

That is presented in the Figure 3.3. below based on the literature revision.

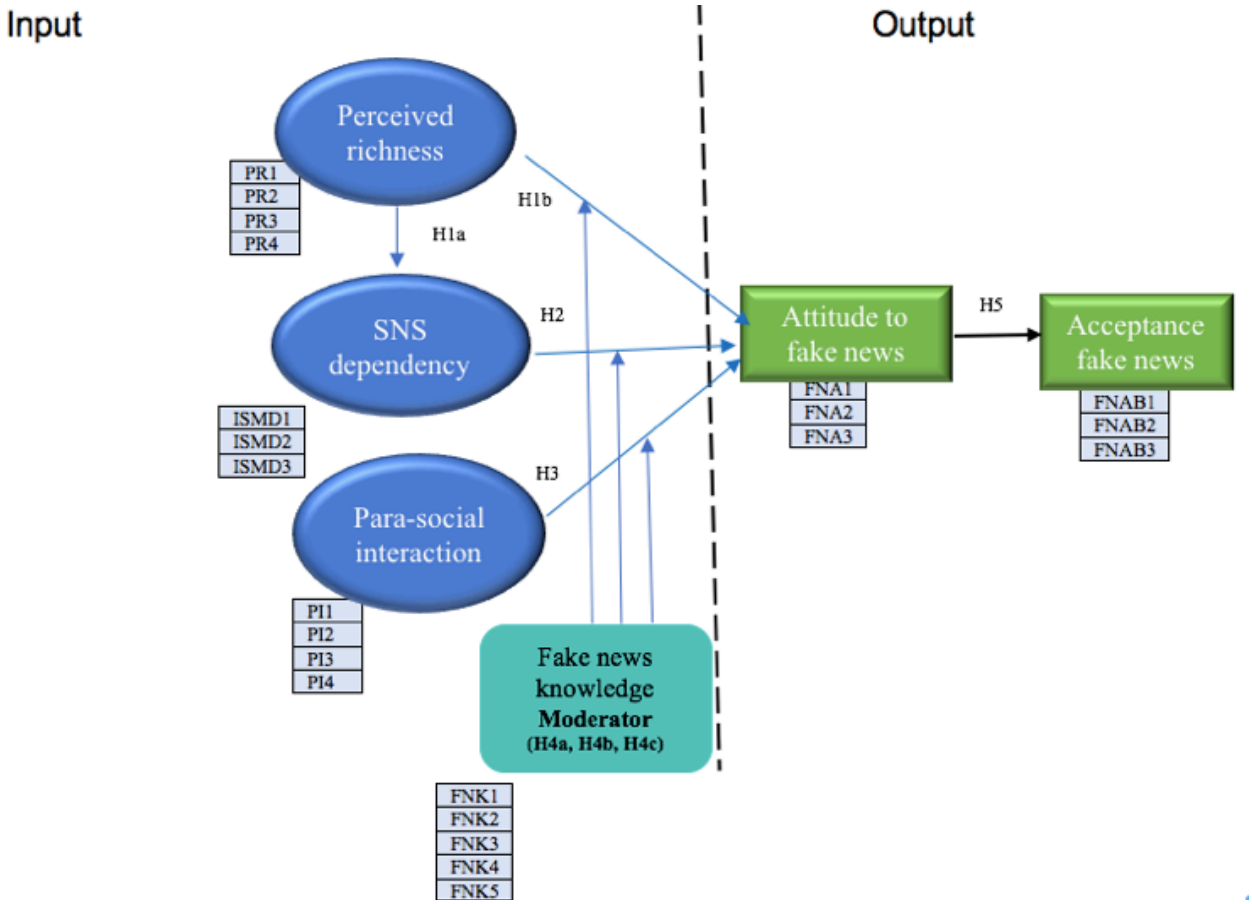


Figure 3.1. Measuring Scales based on the literature review. Source: Own elaboration.

3.6. Data analysis methods

Data analysis is a dramatically critical point of research, with cleaning data, processing raw statistics to reveal the relevant information supporting scholar's assumptions. In this type of study, data gathered in the survey was analyzed by Structural Equation Modelling (Hair et al, 2014), which is a popular model in the social and behavioral sciences. SEM is a statistical technique to analyze a structural model and assess relations between observed and latent variables (Lei & Wu, 2007).

The statistical methodology to be suggested is a structural equation modeling, which presents multivariate analysis of causal modelling to be in line with the requirements of the methodology. Having identified the group of participants for survey, the vital issue is to fix the sample size for obtaining the reliable and representative results. The hypothesis-testing approach bears a certain logic of two stages: 1 – causal process under the services of structural equation; 2 – validation of structural model, to project the correlation between directly and indirectly observed variables. Since programming was taken into consideration of science studies, LISREL, AMOS and EQS software have come to be one of the respectful tools to classify all variables into categories – measured (observed) and unmeasured (latent). In this research, the EQS software ran the raw data input files to evaluate dataset by a certain formula:

DATA=MODEL + RESIDUALS (where residuals are experimental errors)

According to Pui-Wa Lei and Qiong Wu (2007), "*SEM is a versatile statistical modeling tool … where a general rule of thumb is that the minimum sample size should be no less than 200*". In this context, the structural equation model shall test the constructs to rely on a combination of particular links and supposed by prior research (Hair et al, 2017). Similarly, Richter et al (2016) work reported, this methodological technique should be adjusted "in changeable nature and complexity". To be clearer, SEM allows determining the extent of fit a theoretical model to sample data. It is getting highly popular for the last decade in counseling research. Finally, the most prevalent definition refers to Kaplan & Haenlein (2010):

"Structural equation modeling can perhaps best be defined as a class of methodologies that seeks to represent hypotheses about the means, variances and covariances of observed data in terms of a smaller number of 'structural' parameters defined by a hypothesized underlying model".

This tool has evolved from statistical technique to a valuable methodology in broad research areas for combating and conducting various statistical procedure. On the other hand, it is a more complicated research instrument than others, having its pros and cons. The principal advantage of SEM methodology is its flexibility (Richter et al, 2016) due to applying the system of regression equations, not only multiple regression analysis. It

means under one “umbrella”’, different multitude techniques were combined to clarify the regressive dependencies between variables.

As ever, the data was collected thank to completed online questionnaire in Google sheets, and it was explored for the accuracy of completed file. As a result, data was proceeded into SPSS, to begin analyzing it on data validity and reliability, with further codification and storage of the data.

Action research is defined by specific stages.

Type of Analysis	Objective	Technical approach	Software
Preliminary analysis	Cleaning up the data	Verifying of the survey data, and preparing the database for further steps	Google Forms Sheet
Descriptive analysis	Providing a basic information about variables and understanding the results	Descriptive analysis to identify similarities among variables and sort them in certain categories	SPSS version 12 for Mac (64-bit)
Explorative analysis	Confirm the reliability of the scales	Correlation analysis and factor analysis	SPSS version 12 for Mac (64-bit)
Confirmative analysis	Assessing the model fit	Structural Equations Modelling	Multivariant software EQS 6.1 version, authored by Bentler 1985-2020

Table 3.3. Types of analysis applied in research. Source: Own elaboration.

3.7. Summary of the section

Describing the data analysis process, the practitioner has to take into account the ultimate destination and plan iterative actions. Analytical and interpretive foundations of the qualitative method expose the distinct decisive sides for sampling to identify clear the possible challenges (Hyde, 2000). This section of transforming data (Eriksson, & Kovalainen, 2016) encompasses processing and transcribing data to identify coding. Also, be aware that coding will be able to summarize data and formulate the conclusion.

In this chapter, the research activity tackles to answer the research question abovementioned (Chapter 1.7). This section has stressed the stated research design with a quantitative online survey to gather data, the sample size and sampling technique in this study. Further, the statistical methodology used to analyze the data is also presented:

Structural Equations Modelling. At the bottom, the chapter includes a description of the instrument of data collection that is adopted and more details of the data analysis method. All these elements are provided with the required justification.

After defining the research design, the data gathering methodology, and the data analysis method, Chapter Four is about the results and analysis.

4. Results

In this section, the results of the research will be presenting, with the aim of comprehensive description and justification of the key findings of the thesis.

Note that before obtaining the data, a single pretest of individuals has been conducted in the given project with a purpose to eliminate possible errors and clarify the research process. Data analysis will slightly shift from matted sources to accurate analysis where survey is predominated.

4.1. Sample collected

The collection of data was conducted between October 2021 and February 2022 following the expected process via the Google Form panel. The target population is international students enrolled in business courses at Spanish universities. According to Spanish University Minister (2021), in 2021, the international students' population in the Spanish universities was about 175.382 students, that means the 12,52% of the total number of students enrolled in Spain (Datos y cifras del sistema universitario Espanol, 2022).

The difficulties in accessing the target population made it necessary to use non-probability (convenience) sampling, consisting of international students enrolled in private business schools. A total of 250 questionnaires were collected, and only 205 of them were proceeded, having valid responses. With this number of responses, the amount is larger than the desired research goal of 200, following Lei and Wu (2007) conditions.

Population	International students
Geographic àmbit	Spain
Sampling	Simple convenience sampling
Sample	205
Fieldwork	October 2021 and February 2022

Table 4.1. Technical data of the studying. Source: Own elaboration

As long as the data was collected via online processed Google sheets, it was verified in a purpose to checking fcompleteness and identifying the spoiled sheets or questionnaires with mistakes or missed sections. After that, it was uploaded into SPSS on Mac to process it further, studying and proceeding to do the codification and storage of the data. Ultimately, the dataset was transferred to EQS 6.1 version in March 2022, where the Structural Equations Modelling was conducted.

Students were asked to rate the 15 criteria using the Likert scale methodology with seven grades, from ‘’strongly disagree‘’ to “strongly agree’’. Respondents had to demonstrate the preferences for influencing factors on their decision-making in Higher Education Institution.

4.2. Respondents’ characteristics

The obtained dataset is a balanced sample in gender and in age, the two most important control variables in the education industry. The sample obtained is a fully balanced sample in gender. Despite that, looking at the details, three groups of age were participated in survey where two groups contained more women than men (18-19 years, 26-30 years), and one group - with more men than women (20-25 years).

Variable	Types	Percentage
Gender	Female	50,5%
	Male	49,5 %

Table 4.2. Gender. Source: Own elaboration.

Regarding age, the sample collected has a different representation in the groups of age above 18 years old, where nobody was in the group of age over 30 years old. The group with the highest sample is the one of 20-25 years old, and the group with the lowest sample is the one with 26-30 years old.

Variable	Types	Percentage
Age	18-19 years old	27%
	20-25 years old	66,5%
	26-30 years old	6,5%
	More than 30 years old	0%

Table 4.3. Age groups. Source: Own elaboration.

The majority of the respondents have a high school diploma (44%) and a bachelor's degree (34%). The smallest presented group is the master's degree level of education (4%).

Variable	Types	Percentage
Level of education	College degree	18%
	High school diploma	44%
	Bachelor's degree	34%
	Master's degree	4%
	Postgraduate or professional degree	0%

Table 4.4. Level of Education. Source: Own elaboration.

Regarding family income, 29% of the sample has an income of $80k or more, which is the biggest group. Other categories of the respondents with family income $60,000-$79,999; $40,000-$59,999; $20,000-$39,999 and less $19,999 had more or less similar shares in the common statistics.

Variable	Types	Percentage
	Under 19,999 euro	17%
	$20,000 – $39,999 euro	19%
	$40,000 – $59,999	15%
	$60,000 – $79,999	17%
	$80,000 or over	**29%**

Table 4.5. Level of Income. Source: Own elaboration.

This sample has demonstrated a wide spectrum of geographical diversity, ranging from the USA and Latin America tol Indonesia and Pacific area, but it lacks any students from China.

Variable	Types	Percentage
Country of birth	European zone	60%
	North America	2%
	South America	5%
	Africa	10%
	Middle East	13%
	Asia	2%
	CIS (Ex-USSR)	8%

Table 4.6. Region of birth. Source: Own elaboration.

The impact of social media was explored through individuals' preferences for utilizing seven digital platforms - Facebook, Twitter, Youtube, Snapchat, LinkedIn, TikTok, and Instagram. In this sense, it is an interesting fact that only a small group of the respondents do not use social networking sites (6,3%) to obtain information about a chosen university or business school.

The leaners have estimated Snapchat (18%), TikTok (6%), Twitter (12%) with minimum scores as useless resource platforms for getting information, in contrast, Instagram (29%) and Youtube (15%) were recognized as the best ones on social media.

Surprisingly, professional digital resource LinkedIn showed sufficiently low scores among other platforms (Appendix B). Fifty percent of the group aged 18-19 years old prefer Instagram, but this category of customers is not so numerous (27%). The age group 20-25 years (66,5%) is the largest group among those interviewed, but the one that shows a lower degree of followers on Instagram (25%). Generally speaking, this data is correlated with official statistics. Thus, the Global Web Index (GWI) summary for 2021 (Social, n.a.) showing social network account ownership and active usage are male aged 25-34. Among social media trends the fast growth of TikTok is the most remarkable (Table 4.8). At the same time, video of TikTok and content of Snapchat are more consumed for entertainment reasons than for getting information (Chaffee et al, 2001). Although only 2% of those interviewed reported that they use Snapchat, it is a popular social platform among U.S. teenagers and young adults getting a dominant position specifically there.

That only shows a fact that in a group of international respondents there were several undergraduates from the USA.

Variable	Types	Percentage
Social networking sites	Instagram	29%
	Youtube	15%
	TikTok	6%
	LinkedIn	5%
	Twitter	4%
	SnapChat	2%
	Facebook	0,5%

Table 4.7. Social networking site ranking of usage for search information about HEI. Source: Own elaboration.

With the completion of these steps, we keep going to present the significance of our data which is supported by official statistics. To illustrate this point, we studied students' experience and frequency usage. Here we examine respondents background on social platforms. This is a sample with high social media experience, 30% of students have been using social media around 7-9 years (Figure 4.1). This is mainly explained by the age groups of more than 20 years old who were born in digital marketing era. They begen engaging with online resources as early they desired to play children' games, particularly, during their early childhood.

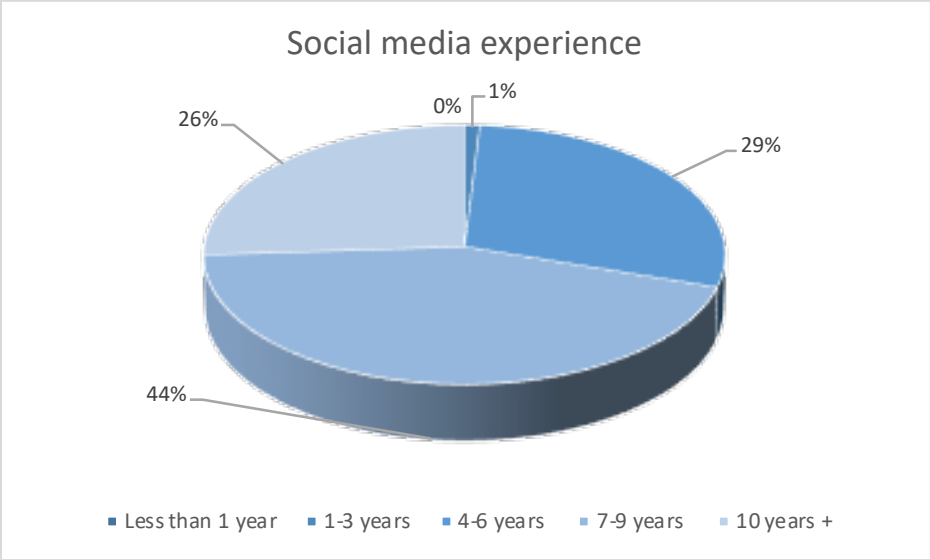


Figure 4.1. Experience of using social media. Source: Own elaboration.

In the light of this evidence, it is crystal clear that most of respondents have more than 4 years of experience (99%), but approximately 44% of them have 7-9 years of internet background, while 26% of respondents passes over a decade of experience.

Variable	Type	Percentage
Frequency of family/relatives/friends' discussion of social media news	every day	18%
	a few times a week	**26%**
	once a week	10%
	sometimes	**30%**
	rarely	15%

Table 4.8. Frequency of discussion about social media news. Source: Own elaboration.

Two groups were identified with the highest interest in social media information. They "sometimes" (30%) engage with it (Table 4.8), and "a few times a week" (26%) participate in discussions. Nearly one-fifth of learners actively have a talk about news from social media on a daily basis. Broadly speaking, we encountered the documentation of online social media activity alighs with GWI report (n.d.), which stated that daily users of digital platforms spend 2 hours and 29 min (July 2022) on average every day.

The majority of respondents expressing the opinion were younger, aged 20-25years, and female (Table 4.9). Next, the groups of age were grouped to create 3 differentiable segments:

Age	Age group	Female	Male
18-19	Group 1	8%	19%
20-25	Group 2	42%	24,5%
26-30	Group 3	1%	5,5%

Table 4.9. Group of Age. Source: Own elaboration.

Finally, social media value was assessed by estimating the frequency of weekly usage on the social media (times a week), and identifying the most digital platforms:

Age	Frequency	Social media activity
18-19	Group 1	Every day or few times a week
20-25	Group 2	Every day / sometimes
26-30	Group 3	Few times a week

Table 4.10. Age preferences on social media. Source: Own elaboration.

Although majority respondents are online regularly, in the age group 18-25, there is a small portion of students (12%) who visits social media sites “rarely”, with specific characteristics related to age (20-25), gender (male).

To sum up, the obtained sample is a relevant representation of international social media users that have been using information from the Internet for an extended period of time. Overall, there are no significant age and gender differences in user characteristics– the younger (Group #1), the more active on social media (Table 4.10). That is in line with IAB Spanish report (Estudio de redes sociales 2022). With this in mind, European statistics Eurostat (2022) reported that 87% of young users aged 16-24 participate in online social networking. Females are more interested in Instagram and Tiktok posts than men. Our survey resulta are practically the same as those proposed by Hoag et al (2017) and Guilbault (2016).

Regarding demographics, it is a balanced sample in terms of gender, and it has a significantly high level of income and education. An analysis of frequency did not show clear trends, however, the highest extent of respondents (30%) obtains information from social networking “sometimes” or “a few times a week” (26%); while the smallest category (10%) of respondents picks up information on social media “once a week”.

4.3. Numeracy skills and cognitive reflection test (CRT)

According to Zampetakis et al (2011), students’ profiles of universities and business schools reflect entrepreneurial intention (Do & Le, 2020; Blackman, 2022; Kailer, 2009 Zhou et al, 2019) as a common tendency amid high technological and rapidly changing business operations. That exhibits a desire for self-realization (Arranz et al, 2019) and idea to start their own business. Being goal-oriented and ambitious, they are usually very good at math. All of them share the same mindsets, use the business language and thinking method. Most students who attend business schools are always seeking the opportunity to achieve degrees which will help them in the future.
To organize this review, we first describe student profile of business schools briefly. The evidence from the Columbia business school report (Blackman, 2022) points to the idea that entrepreneurship is a significant factor for future business leaders. In the list of applicants’ characteristics, the number one is entrepreneurship:

1 – entrepreneurial mindset

2 – social intelligence

3 – team leadership

To produce a resume with greater clarity in regard to learners’ characteristics, we take into consideration theoretical studies. For instance, the Theory of Planned Behavior (TPB) justifies the entrepreneurial intentions (Souitaris et al, 2007). The concept of intelligence is important for understanding human behavior and it defines people’s ability to learn, make decision, adapt to the environment, demonstrate emotional knowledge, and critical thinking etc. It might further be assessed by an IQ test and is used as a moderator (Frederick, 2005; Thompson & Oppenheimer, 2016). The CRT is a popular tool in “heuristic-and-bias research” (Pennycook &Rand, 2018) to measure a person’s propensity for intuitive or analytical responses. The cognitive test is a set of mathematical

questions linked with rational thinking. In respect of the original article, Frederick's publication was cited more than 5500 times in Google Scholar, where three-items allow to measure the cognitive style. To be more correct, "*CRT scores are predictive of the types of choices that feature prominently in tests of decision-making theories*" (Frederick, 2005). Not surprisingly, there is still high interest in this study to practice this test in different areas of science.

The 7-items CRT might provide evidence of cognitive load influencing outcomes of decision making that are normally associated with reflective processes (McPhetres, 2018). Importantly, participants calculated seven questions, which were summed up by scores ranging from 0 (intuitive) to 7(reflective). Scoring the intuitive/incorrect response was correlated with 0-2 scores, and the correct/reflective response shows 3 -7 scores. Toplak et al (2011) reported that "*the cognitive reflection test as a predictor of performance on heuristics-and-biases tasks*". That means, in further support of our interpretation, the same participants were assessed by determining fake news and cognitive ability to spot it, having some competencies because CRT is a potent measure tool of the tendency toward miserly processing (McPhetres, 2018).

Answers of our respondents in the survey, the Section B "Cognitive processing" (Appendix B) resulted in several tables (table 4.11; table 4.12).

CRT score	0	1	2	3	4	5	6	7	Average score
Men	1,5%	3,9%	12,7%	13,1%	15,6%	12,2%	7,3%	2,0%	4.1
Women	2,4%	7,3%	8,3%	16,0%	7,8%	5,4%	3,9%	4,8%	3.5

Table 4.11. CRT average scores and gender factor. Source: Own elaboration.

This result ties well with previous studies where gender results varied for men and women. To be clear, men had average CRT scores that were higher (4 out of 7) than women (3 out of 7). On the other hand, Table 4.12. shows the average results obtained by students according to their age. More mature students of age 26+ showed the highest scores (3.9). Meanwhile, teenagers average score is the lowest (3.2) among these 3 groups.

CRT score	Average score
Group1 (18-19 age)	3,2
Group2 (20-25 years)	3.6
Group3 (26-30 years)	3,9

Table 4.12. CRT scores among three types of respondents. Source: Own elaboration.

The result now provides evidence to obtain good results with this simple method to examine relationship between experience on social media Zhong et al (2011) and frequency of media usage with an additional dimension - intelligence (cognitive reflection test/CRT) (Papacharissi & Rubin, 2000).

We adopted the procedure proposed by Papacharissi & Rubin (2000) to measure information seeking, frequency, and IQ. It holds significance to correctly interpret the results where the rationality of decision making is not the principal factor. Experiments on cognitive reflection and behavior performed on the Twitter platform in 2020 by a group of researchers (Mosleh et al, 2021) indicate that the phenomenon when people who scored lower in cognitive reflection tended to avoid the accounts of high cognitive scored users. The correlation between rationality and social ties is worth noting because they create “echo chamber” following rather by the same cognitive type of people.

Zhong et al (2011) measured high cognitive processing in SNS to state “*analytical thinking may be associated with less social networking among young people*”. This result is of great importance in underatnding the connection social media experience and cognitivism: high CRT men revealed the lower interest on social media activity. Our results also demonstrate this (Figure 4.2.)

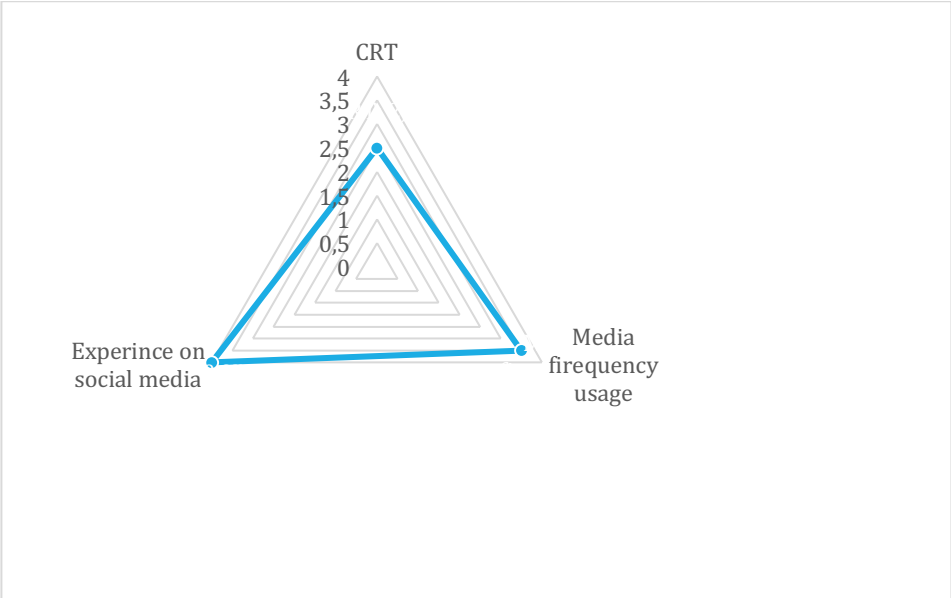


Figure 4.2. Correlation analysis experience, intelligence and frequency of media usage. Source: Own elaboration.

It is worth discussing these interesting facts revealed by the results of constructing a radar diagram. Experience (4.0 scores out of 4.0) revealed more influencing power than IQ (CRT) (2.5 scores). Remarkably, this correlation is related to the frequency of media platform usage (3.5 scores out of 4) and activities online, which create experience because one action creates another outcome as experience (4.0 scores out of 4.0). This underlines just how significant is is to study the relationship between the frequency of social media use and participation in Facebook (Junco, 2012), Instagram (Pittman&Reich, 2016), or Twitter (Mosleh et al, 2021) activities in the academic experience of HEI.

4.4. Normality Analysis

Descriptive statistics are designed to provide information about the distributions of variables. Since descriptive statistics presents data in a more manageable form, we can commence the profound analysis. Furthermore, one of the main conditions for applying SEM analysis is to verify the normality of the variables. Test of Normality in SPSS aims to answer the question of whether the data is normally distributed on not. The Kolmogorov-Smirnov test usually allows to verify the null hypothesis presuming that data comes from a normal distribution at a 0.05 level of significance. We have delivered two tests Kolmogorov-Smirnov and Shapiro-Wilk (Table 4.13.). However, the latter is more

relevant to research with N<50. The “Sig” column shows the p-value which is 0.001, that is <0.05, namely, alpha level is under 5%. It means we might reject the null hypothesis that data is normally distributed.

Items	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	Df	Sig	Statistic	Df	Sig
PR1	,787	205	,001	,923	205	,001
PR2	,754	205	,001	,879	205	,001
PR3	,646	205	,001	,934	205	,001
PR4	,639	205	,001	,914	205	,001
ISMD1	,225	205	,001	,912	205	,001
ISMD2	,179	205	,001	,937	205	,001
ISMD3	,175	205	,001	,932	205	,001
PI1	,181	205	,001	,909	205	,001
PI2	,187	205	,001	,922	205	,001
PI3	,174	205	,001	,941	205	,001
FNK1	,220	205	,001	,883	205	,001
FNK2	,216	205	,001	,894	205	,001
FNK3	,225	205	,001	,868	205	,001
FNK4	,221	205	,001	,882	205	,001
FNK5	,201	205	,001	,905	205	,001
FNA1	,135	205	,001	,950	205	,001
FNA2	,159	205	,001	,919	205	,001
FNA3	,177	205	,001	,932	205	,001
FNAB2	,152	205	,001	,931	205	,001
FNAB1	,208	205	,001	,863	205	,001
FNAB3	,224	205	,001	,836	205	,001

Table. 4.13. Test results of Kolmogorov-Smirnov and Shapiro-Wilk. Source: Own elaboration.

Another approach for checking the normal distribution is skewness, which might measure a symmetry or asymmetry. A basic moment is the estimation of the distribution around the mean. Knowing skewness value of normal distribution is 0. In practice, skewness usually falls between − 3 and + 3, and kurtosis is appropriate from a range of − 7 to + 7 when utilizing SEM (Brown & Moore, 2012). The coefficient of kurtosis is more about the shape and size of the distribution. Two numerical measures of shape, Skewness and Kurtosis, are calculated using the mean, median and standard deviation, and size of sample.

Both examinations confirmed the underlying assumption of normal distribution of data set. Normality tests for descriptive analysis are a normal practice before applying any statistical method.

4.5. Exploratory factor analysis

Another test prior to the SEM analysis is the Exploratory Factor Analysis. EFA analysis allowts to identify underlying factors to explain the correlations within a set of observed variables. This analysis can give us a first sign of the constructs we can use in the model. That is, it grants us to refine the scales, and to see how the original variables are grouped all together to create a new construct. Constructs consist of a number of variables – dependent and independent (Table 4.14.):

Construct name	Independent variables	Dependent variables	Moderator
Perceived richness	X		
Social Media Dependency	X		
Para-social interaction	X		
Fake news knowledge			X
Fake news attitude		X	
Fake news acceptance behavior		X	

Table. 4.14. Constructs and their role. Source: Own elaboration.

We are interested in discovering the relationship between constructs as well as testing their nature – direct or indirect, positive or negative, to confirm suggested hypotheses (Chapter2). Each hypothesis was underpinned by theory (Chapter 2.5; 2.11). At the same time, constructs choice was conceptually defined to provide us with the structural research model (Chapter 2.11).

All of them suppose a normal distribution. In accordance with the recommendations Ladhari (2010) the scale was studied to extract the items with a loading of 0.50 and more. After the overall descriptive univariate analysis, this study focused on discussing the analysis results for each latent variable of the model, using values such as mean, AVE,

standard deviation, and the other indices.

On the other hand, the validity and reliability of measurement scales are necessary conditions for any multivariate statistical analysis. To assess both indicators, various statistical tests are employed including the KMO test, the Crombach's Alpha Coefficient.

In particular, the Kaiser-Meyer-Olkin (KMO) test is a measure of the adequacy of the data for factor analysis. The test estimates the sampling adequacy for each variable in the model and for the entire model. The statistic serves as a gauge of the proportion of variance between variables that could be common variance. The lower the proportion, the more suitable the data is for factor analysis. Following the requirements to communalities, where all items are above 0.5, we can accept for further analysis.

The Kaiser-Meyer-Oklin values (Table 4.15) reflects the strength of partial correlation and it is used in factor analysis. Its value exceeds the threshold of 0.6 (Kaiser, 1974) to determine the sampling adequacy of data.

Kaiser-Meyer-Oklin measure of sampling adequacy		,735
Barlett's test of sphericity	Approx. Chi-Square	1816,478
	df	205
	Sig	,000

Table 4.15. KMO. Source: Own elaboration.

All above, you can see KMO = 0.735, which means it is much higher than minimum level. Barlett's test of sphericity was 1816,49 (df 205) with a significance 0.000. These results affirmed (Table 4.15) a linear dependency between variables. In exploratory factor analysis the Varimax rotation was applied to grant us an easier matching of each item with a single factor.

Table 4.16. also shows the Alpha coefficient. The measurement of coefficient alpha is the mostly wide applied index estimating the internal consistency. Interpreting Cronbach alpha (Tavakol &Dennick, 2011), the general accepted rule states it can range of score from 0,70 and above to show reliability of your measurement.

Items	Factors					
	Perceived Richness	Social Media Dependency	Para-social Interaction	Fake News Knowledge	Fake News attitude	Fake news acceptance behavior
PR4	,787					
PR2	,754					
PR1	,646					
PR3	,639					

ISMD1 ISMD2 ISMD3		,843 ,757 ,686				
PI2 PI3 PI1			,845 ,840 ,590			
FNK4 FNK3 FNK5 FNK2 FNK1				,797 ,753 ,700 ,643 ,604		
FNA3 FNA2 FNA1					,826 ,755 ,688	
FNAB2 FNAB1 FNAB3						,804 ,763 ,688
Eigenvalue	5,125	3,378	1,837	1,342	1,247	1,194
Variance (%)	23,297	38,650	47,001	53,099	58,769	64,194
Alpha Crombach	0,765	0,805	0,743	0,772	0,777	0,724

Table 4.16. Rotated component matrix. Source: Own elaboration.

These constructs are fully compliant with specific variables to group them up in six factors (Figure 4.3.):

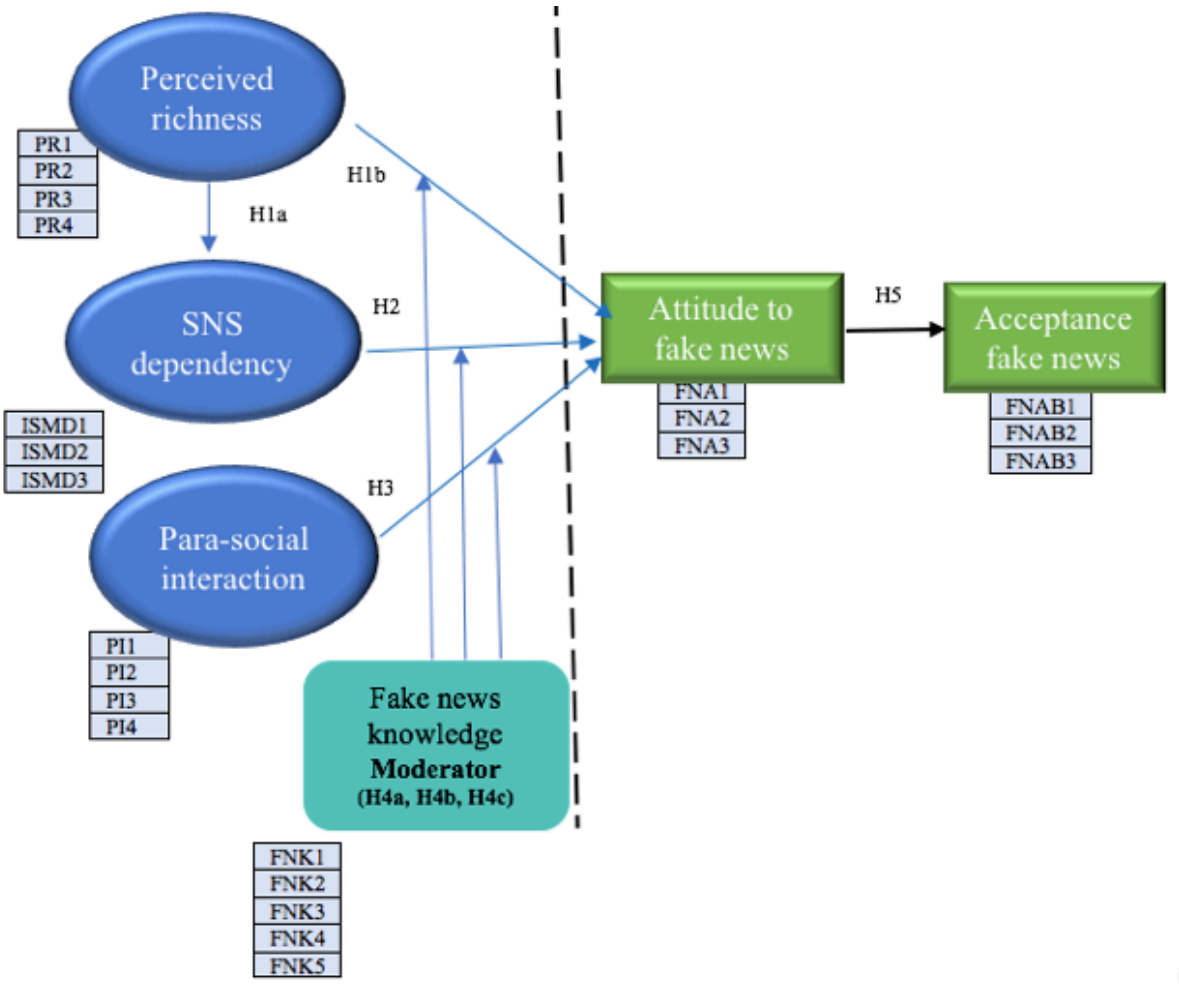


Figure 4.3. Measurement model. Source: Own elaboration.

~~A~~According to the results obtained, three elements of human behavior can be identified. When examining the first element of human behavior measurement, para-social interaction (as a part of the GROUP Influencing metrics), four key items were used to measure the social-emotional connection among media users (Table 4.17):

- Being guided by public figures (public guiding)
- Highly respecting celebrities' opinion (respect opinion)
- Seeking navigation from public person (long term perspective)
- Convenience familiarity with celebrities' experience (regular experience)

Question	**Code**	**Median**	**Standard deviation**	**Factor loading**
I have no problem using the information about a chosen university, shared by someone in social media, who I admire and respect	PI1	5,010	1,4	0,590
I think highly of the public figure, who I admire and respect, to obtain information related to a chosen institute	PI2	4,299	1,6	0,838
I seek direction from the public figure, who I admire and respect, related to a chosen institute	PI3.	3,79	1,6	0,841
I normally relate my ideas with information about higher education obtained on her/his social media pages	PI4	3,436	1,7	n/a

Table 4.17. Measurement of construct "Para-social interaction". Source: Own elaboration.

In the sample, the highest median is associated with seeking celebrity advice in higher education, while the lowest one goes to original daily behavior experience (3.436), followed by social media connection. In certain industries, such as beauty and cosmetics, the advice of public speakers is incredibly valuable in shaping audience opinion. The same way, "*participants reported feelings of knowing and familiarity with speakers*" (Rasmussen, 2018), creating para-social interaction.

Analyzing the second element of the human behaviour scale, namely, media richness perception, demonstrates interest and interaction with social media information (as a part of the INDIVIDUAL Influencing metrics). Four components were studied in order: variety of information, diversified internet friends, quick response in social media, and social

media service to share information between multiple users (Table 4.18).

Question	Code	Median	Standard deviation	Factor loading
Social media provides variety of information according to my requirements related to a chosen university	PR1	4,431	1,45	0,631
Social media is an internet-based form of communication with a huge number of diversified users, having different opinions about a chosen university	PR2	5,338	1,36	0,755
In social media I get quick response, comments, and feedback from others on my shared content about a chosen university	PIR.	4,461	1,47	0,637
With the help of social media, I can share all kinds of information and content about a chosen university with multiple users at a time	PR4	4,975	1,48	0,796

Table 4.18. Measurement of construct “Perceived richness”. Source: Own elaboration.

The perception information from celebrities without any detection about any specific university is rather median (5.95), but quite low comparing in comparison to others. All the other values hover around 0,8. The last item (PI4) is not reported, having very llittle data, and, it is excluded from further examination.

Moving to the product experience, which is the third element of the human behaviour scale, includes key components in order: obtaining information, using online information and updating information from social media (Table 4.19).

Question	Code	Median	Standard deviation	Factor loading
I frequently obtain information about a chosen institute (where I am currently studying) through social media	ISMD1	4,07	1,81	0,853
I make use of the information related to a chosen institute found on social media	ISMD2	4,17	1,49	0,767
I immediately update information about a chosen institute received from social media	ISMD3	3,44	1,61	0,676

Table 4.19. Measurement of construct “SNS dependency”. Source: Own elaboration.

Of the previous three components, all of them median is about 4, except for the last one (3.44). The other two components exhibit very similar values. Whereas, ISMD3 demonstrates the lowest factor loading (0,676) among other three.

4.6. Confirmatory factor analysis (CFA)

In the analysis, six factors with eigenvalues above 1 were identified, as shown in the Scree plot. To illustrate this outcome, this graph is placed below. Regrettably, only seven components out of 22 proceed for further confirmatory factor analysis.

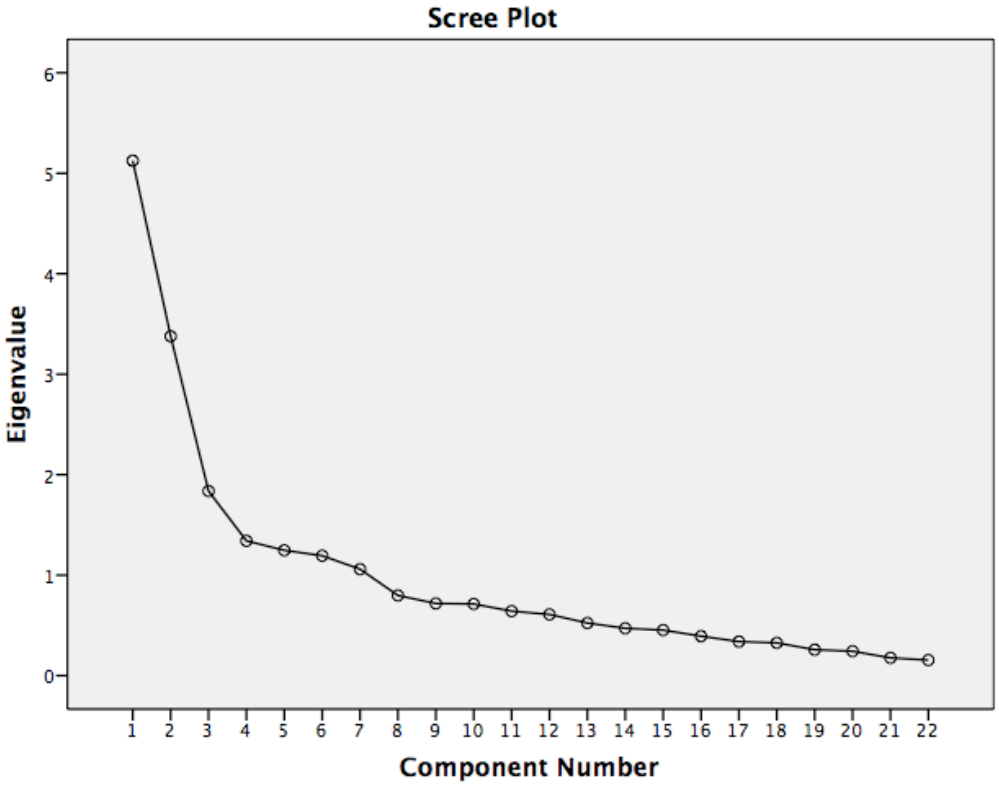


Figure 4.4. Measurement of model. Screen plot of component numbers. Source: Own elaboration.

This table with principal component analysis justifies in figures why seven components might be forwarded for further examination. Their accumulative share is 64%, that means, it explains only 64% of variance (Figure 4.4.).

And the first construct has 23,29% of Initial Eigenvalues, that is the largest group of variances. The second major group of variances has 15,35% of Initial Eigenvalues. Another point is the seventh group with the smallest figures – 5,4%

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.125	23.297	23.297	5.125	23.297	23.297
2	3.378	15.353	38.650	3.378	15.353	38.650
3	1.837	8.350	47.001	1.837	8.350	47.001
4	1.342	6.099	53.099	1.342	6.099	53.099
5	1.247	5.669	58.769	1.247	5.669	58.769
6	1.194	5.425	64.194	1.194	5.425	64.194
7	.798	5.315	72.560			
8	.718	5.296	72.636			
9	.713	3.053	75.908			
10	.642	3.242	79.802			
11	.609	2.993	82.095			
12	.524	2.769	84.134			
13	.471	2.380	87.071			
14	.453	2.141	89.791			
15	.543	2.058	91.947			
16	.393	1.732	93.960			
17	.339	1.539	94.923			
18	.336	1.482	96.769			
19	.258	1.172	97.419			
20	.243	1.104	98.940			
21	.177	.803	99.296			
22	.155	.704	100.000			

Table 4.20. Total variance explained. Source: Own elaboration.

Having removed items with factor loadings less than .5, and communality lower than .6, we follow the next step of analysis (Table 4.20).

As Chin declared (1998), the individual validity of the item is measured through the loadings. Later on, in the study Falk and Miller (1992), a minimum value was estimated in the threshold 0.50 for the loads between indicators and latent variables.

4.7. Assessment of the measurement model: validity and reliability

The measurement model was estimated using the ROBUST maximum likelihood method on EQS 6.1. software.

Items	Standardized loading	t-value (>1.96)
PI1	0,690	5,40
PI2	0,838	
PI3	0,841	

PI4	ELIMINATE	
PR1	ELIMINATE	6,56
PR2	0,755	
PR3	0,637	
PR4	0,796	
ISMD1	0,853	11,71
ISMD2	0,767	
ISMD3	0,676	
FNK1	ELIMINATE	7,38
FNK2	ELIMINATE	
FNK3	0,753	
FNK4	0,797	
FNK5	0.700	
FNA1	0,703	5,25
FNA2	0,760	
FNA3	0,821	
FNAB1	0,758	6,94
FNAB2	0,798	
FNAB3	ELIMINATE	

Table 4.21. Standardized loading. Source: Own elaboration.

In the table 4.21, the most indicators have values above 0.7, which proves the statement that more than 50% of the observed variables are shared by the construct. Nevertheless, some indicators could not keep above 0.7 (but having above the 0.50 threshold). That grants us to carry out tests and have a look at the first data. If the results are not acceptable, we intend to eliminate them and repeat the analysis advance in the fit of the model.

You might notice that composite reliability (if CR>0.7) is in line with or above the needed parameter. Regarding the average variance extracted (AVE (>0,5)), only one PI showed less than 0,5. Convergent validity exists if AVE >0,5 , and if factor loading >0.5.

Factor		Factor loading (>0.5)	Cronbach's alpha	CR Composite reliability (>0.7)	AVE Average variance extracted (>0,5)
Parasocial interaction	PI1	0,690	0,743	0,876	0,588
	PI2	0,838			
	PI3	0,841			
Perceived richness	PR2	0,755	0,765	0,837	0,565
	PR3	0,637			
	PR4	0,796			
Fake news knowledge	FNK3	0,753	0,772	0,806	0,581
	FNK4	0,797			
	FNK5	0.700			
SNS dependency	ISMD1	0,853	0,805	0,811	0,590
	ISMD2	0,767			
	ISMD3	0,676			
	FNA1	0,703	0,777	0,806	0,582

Fake news attitude	FNA2	0,760			
	FNA3	0,821			
Fake news acceptance behaviour	FNAB1	0,758	0,724	0,804	0,579
	FNAB2	0,798			

Table 4.21. Measurement of validity. Source: Own elaboration.

In the current study (Table 4.21), the sub-scales have a great internal consistency with a Cronbach's alpha coefficient reported at .724 (Fake news acceptance behavior), .743 (Para-social interaction), .765 (Perceived richness), .772 (Fake news knowledge), .777 (Fake news attitude) and .805 (SNS dependency), fulfilling the minimum value of Cronbach's alpha coefficient as all are more than 0.7.

The principal thresholds for validity

Factor loading has to be above 0,5 to be validated for processing. To guarantee greater reliability of these items, Carmines and Zéller (1979) proposed that Cronbach's alpha has to be valued above 0.7, as well as Composite reliability (CR) has to be greater than 0.7.

According to the indications the average variance extracted (AVE) value should be equal to or greater than 0.5. In the table below, you can see the inter-construct correlation of constructs where the square root of the average variance extracted has to be higher than the corresponding correlation of the construct and the remaining constructs (Chin, 1998). Thus, Table 4.23. shows that all values are lower than 0.90, and it means the discriminant validity is supported.

If square root of AVE > inter-construct correlation

Constructs	PR	SNS dependency	PI	FNA	FNAB	FNK
Perceived richness	0,752					
SNS dependency	0,455***	0,768				
Parasocial interaction	0,372***	0,463***	0,766			
Fake news	0,377***	0,626***	0,411***	0,763		

attitude						
Fake news acceptance behaviour	0,286***	0,569***	0,217***	0,549***	0,762	
Fake news knowledge	0,453***	0,092***	0,148***	0,084***	0,080***	0,761

Significant at ***P < 0.001. #In the main diagonal is the square of AVE that shows correlation estimated between the factors

Table 4.23. Discriminant validity. Source: Own elaboration.

Goodness of fit summary

Recommended values	X2/d.f (<3)	RMSEA (<0.08)	CFI (>0.9)	AGFI (>0.8)	GFI (>0.8)	MFI (>0.8)
Model values	2,51	0,083	0,9	0,832	0,904	0,80

Table 4.24. Fit indices of the structural model. Own elaboration

GOODNESS OF FIT SUMMARY FOR METHOD = ROBUST (Table 4.23)

Robust Independence model CHI-SQUARE is 151,51on 60 degrees of freedom

4.8. Standardized solution of the causal model

SEM analysis and model testing

Hypothesis testing is a very important part of the project. Beta (β) refers to the probability of Type II error. In this content, Beta (β) is the principal coefficient to inspect our data.

Hypotheses	Relationship	Standardized structural Coefficient (β)	C.R. (t-value)	R^2	Hypothesis results
H1a	"Perceived richness" → "SNS dependency"	0,331	4.03***		Supported
H1b	"Perceived richness" → "Fake news attitude"	-0,204	-2,18**		Supported
H2	"SNS dependency" → "Fake news attitude"	0,556	6,49***		Supported
H3	"Para-social interaction"→	0,186	1,895***		Supported

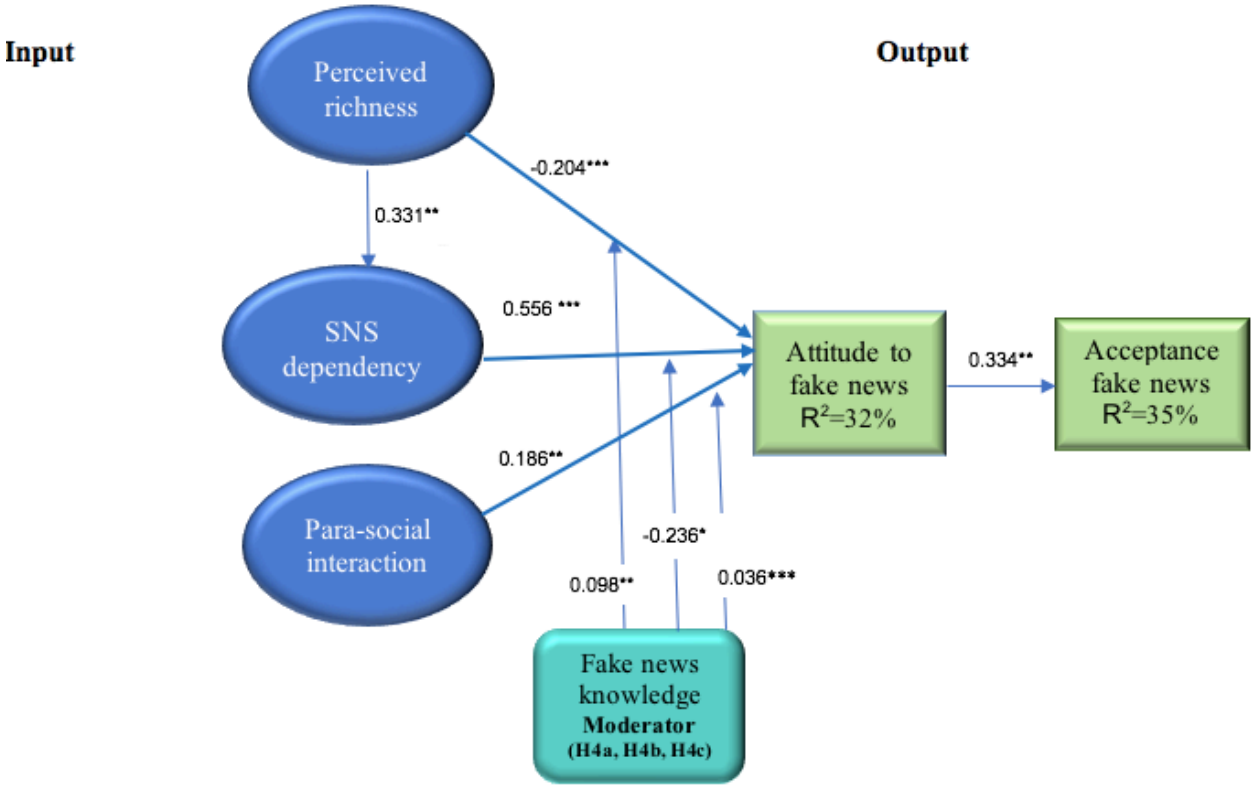
	Fake news attitude”				
H4a	“Fake news knowledge” → “perceived richness”	0,098	3,03***		Rejected
H4b	“Fake news knowledge” → “SNS dependency”	-0,236	-1,96***		Supported
H4c	“Fake news knowledge” → “Para-social interaction”	0,036	1,023**		Rejected
H5	“Fake news attitude” → “Fake news acceptance”	0,334	0,264***	0,35	Supported

Significant at *P < 0.05, **P < 0.01, ***P < 0.001.

Table 4.25. Structural model results. Source: Own elaboration.

The correlation between social media factors (independent variable) and behavior in accepting fake information (dependent variable) was examined using Pearson correlation. First of all, the results (Table 4.25) exposed that there was a positive correlation between the social factors and Fake news attitude [r=.320, n = 205, p<.001), with a medium level of SNS dependency associated with greater attitude to accept fake news. The result supported H2. To assess the contribution of each dimension of the independent variable to the dependent variable, the regression analysis was delivered. According to Table 4.24, the results demonstrated that the dimensions explained 35% of the variance [F(5, 205)=9.073, p<.001].

Therefore, SNS dependency has a positive and significant effect [β=.556, p<.001], as well as Para-social interaction [β=.186, p<.001 to fake news attitude. On the top, Perceived richness showed significant positive correlation to SNS dependency [β=.331, p<.001], representing inter-variables correlation. Next, this construct (Perceived richness) reveals direct significant contribution to Fake news attitude [β=-.204, p>.005]. Another hypothesis about Fake news knowledge moderating role shows only one significant contribution [β= -.236, p>.001] on SNS dependency. As a consequence, H4a, H4c were rejected, at the same time, H1a, H1b, H2, H3, H4b, and H5 were supported (Figure 4.5.).



(Significant at *p<0.05; if β Beta higher than 0.15)

Figure 4.5. Structural model results. Source: Own elaboration

Here, direct effects of the hypothesized variables on fake news influence and its acceptance has been reflected. As a rule, how researchers prefer to accept the result, if β is higher than 0.15 .

CORRELATIONS AMONG INDEPENDENT VARIABLES

To evaluate statistically the strength of relations and find correlation between them, correlation analysis was conducted. Correlation analysis evaluates strength and direction of the relationship between two variables. Correlation coefficient is valued between -1 and +1. The closer it is to -1, the more negative. When it shows the outcome around +1, that interprets as a strong relationship of two variables. To do so, we have to verify the correlation among variable “Perceived richness and “SNS dependency”. As a result, SNS dependency revealed a mediating effect (Figure 4.5.)

Causal model

R-square value tells us how much variation is explained by our model. Thus, 0.35 R-square means that our model explains 35% of variation by the data. In a rule, the greater R-square, the better the model. Our model explains 35% of the variance in students' intention to accept fake news.

4.9. Qualitative analysis: How quality of information influence on decision making?

This research, anchored on the Use and Gratification theory of mass communication, is examined by qualitative study also. This step was followed by a planed interview. The set of questions was asked by mail to verify whether the clear asymmetry of private and public universities. All of them answered the open questions. The questionnaire was administered to 21 students to form the sample size.

A huge advantage of such methodology is to get interviewees' personal experience with elements of emotions. The following questions were detected (Leach et al, 2018) to advance the findings of qualitative research:

- What factors influence student choice?
- What is the role of misinformation in student's decision-making?
- How do students make decisions?
- Is there a difference for applicants between private and public universities?
- What is the impact of false information via social media on the student's way to apply on university?

Int1:

"I believe that the studying process at business schools is much more efficient for students who seek to understand the real meaning of business rather than just memorizing theories. Business schools are simply institutions that offer degrees in business related aspects such as business administration and management. These schools specialize in all the steps needed within the business world".

[Majed, 20-year old man, business school]

Interviewee 1 underlines that the practice can definitely contribute the studying process of tertiary education. A number of other people interviewed had experienced a similar opinion to highlight the advantage of business school vs public universities.

Int2

"I think that in universities and similar educational institutions, students receive a more academic basis of knowledge. At the same time, business school students graduate more prepared to work with a certain store of knowledge that will be needed, at work. Thus, business school graduates have better prepared than university graduates".

[Assol, 21-year old female, business school]

As with majority of respondents interviewed, the issue of practical skills was emphasized above. Interviewee 2 is capable of emphasizing the employment as one of essential factors for decision.

Int3:

"Universities offer courses that specialize in various courses and subject in different areas. After finishing the program, the university gives the student the space to further specialize in master's degrees, but only business school is able to suggest studying process close to real business. For this reason, I get used to read posts on LinkedIn". [Aldana, 22-year old, female, business school]

Data on the decision-making of male and female were similar. Both types of students are interested in digital sources for getting of information. In turn, the findings on the role of media and social media are poor so that most of the students declared little effect.

Int4:

"The average student of a business school has enormous ambitions and more or less understands in which direction she/he wants to develop. For us, a high position at the international company is the real goal".

[Yan, 26-year old, male, business school]

We interviewed 'Yan' (aged 26) who had 'dropped out' of university. He had previously left an 'humanity studies', refusing to take financial support from government which

offered a grant so that he has to study and work to cover his studying at the moment. It is directly connected with salary: better education – higher incentive.

Int 5:

> *"Students profiles in business schools are usually Entrepreneurs which mostly have same goals, and it is to open and start new innovative businesses. They are ambitious and usually are very good at math. They all have same mindsets and use the business language and thinking method. Most students who attend business schools are always seeking the opportunity to achieve degrees which will help them in the future when they decide on opening their own businesses based on their own ideas and aims"*
> *[Nico, 24-year old, male, business school]*

Interviewee#5 as many other students was concerned about the inevitability of choice in specialization for future career and how they might succeed in it having entrepreneurship focus. This innovative mindset and business thinking afford advantage in tendency to be creative and wish to work for yourself in your own ventures.

Because these questions fixated mainly the transition to tertiary education, these answers report that decisions leading to higher education rather motivated by salary and career development. The student "Nico" stressed that "graduators of business schools are more competent as well as skilled".

4.10. Summary of the section

In the results chapter, the findings of the project were presented. As long as the model was applied, six out of eight hypotheses were confirmed. Also, the structural model demonstrated the goodness of model fit which is one of the core questions in structural equation modeling (SEM). In fact, criteria of indices were fully acceptable – GFI, CFI, RMSEA, AGFI, MFI, X2.

The model reflected the goodness of the Perceived Richness (Wang et al, 2021), Para-social Interaction (Apuke&Omar, 2020) scale to measure students' attitude to fake news and analyze their behavior in accepting this sort of information. Additionally, the analyzed model also unveiled that role of moderator Fake news knowledge (Tejedor et al, 2021) was partly significant (Table 4.25), only in moderating Perceived richness.

Hypotheses	Relationship	Standardized structural Coefficient (β)	C.R. (t-value)	R^2	Hypothesis results
H1a	"Perceived richness" → "SNS dependency"	0,331	4,03***		Supported
H1b	"Perceived richness" →"fake news attitude"	-0,204	2,18**		Supported
H2	"SNS dependency"→ "fake news attitude"	0,556	6,49***		Supported
H3	"Para-social interaction"→ "fake news attitude"	0,186	1.895***		Supported
H4a	"fake news knowledge" → "perceived richness"	0,098	3,03***		Rejected
H4b	"fake news knowledge" →"SNS dependency"	-0,236	-1,96***		Supported
H4c	"fake news knowledge" → "para-social interaction"	0,036	1,023**		Rejected
H5	"Fake news attitude" → "Fake news acceptance"	0,334	0,264***	0,35	Supported

Significant at *P < 0.05, **P < 0.01, ***P < 0.001.

Table 4.25. Hypothesis results. Source: Own elaboration.

5. Conclusion

5.1. Introduction

The interest in the determination of new external factors (Tess, 2013) that has a significant impact on management education (Wright & Shore, 2017) appeared from the period of the first commerce management schools on the market. In line with that, throughout of industrialization and era of discovery, the attitude and value of business education (Arranz et al, 2019) are notably altering to shift the gradient towards practical outcome (Nicolletti et al, 2016). In this scope, the value of particular forces driving the system explicitly is persuasive topic for research.

To identify the explicit factors, scholars studied mostly the political, social, and economic conditions (Ortiz, 2004; Allcott & Gentzkow, 2017; Pennycook&Rand, 2019) last but not at least. The causes are veiled under the circumstances of national and local market issues (Gerasimenko & Molchanova , 2017). To be more specific, the 21t century is enriched by the financial crisis else which is reasonably speculated in framework of key drivers to the present education system for preparing a new formation of entrepreneurs (Kailer, 2009; Arranz et al, 2019). Even so, plenty of publications (Choundaha, 2013; Chandra et al, 2017; Johnston & State, 2010; Erkan&Evans, 2016) contribute the valuable result of business education for graduating the future leaders and entrepreneurs (Kailer, 2009) in order to encompass the topic technology (Whitaker et al, 2016) and globalization effect (Arranz et al, 2019) that is prudent. Thus, it was identified the shortage of findings analyzing the exogenous factors that influence youngers' choice of higher education, such as fake news on social media.

5.2. Customer decision making journey in education industry: a new competitive battleground

The results of this study plan to support the idea that HEI should consider media trends to be in line with their customer-students' expectations (Allcott &Gentzkow, 2017). Inaccurate information (Di Domenico et al, 2021) is flooding on social media and becoming a global problem (Shu et al, 2020). Previous studies have corroborated the existence of a relationship between the use of heuristics (Pennycook & Rand, 2019), and an increased acceptance of fake news on the Internet (Tandoc et al, 2016; Thompson & Oppenheimer, 2016). Therefore, media literacy is necessary for young people (Tejedor et al, 2021; Malik et al, 2020) to be able to discern whether a news item is false of true

and (Eger et al, 2020), thus, contributing to the fight against deliberate misinformation. Regarding this last point, and on an basis of an in-depth analysis of the literature (Table 2.5; Table 2.6), this paper points out and analyses the existence of a set of precedents (Ngai et al, 2021) to determine their influence on attitudes towards fake news and their willingness to accept it. So far, individual and group social network activity (Tejedor et al, 2021) online were considered together to shed new light on the effect of misinformation use on social media. Fundamental benchmarking has been figured out with the utilization of the previous studies (Wang et al, 2021; Apuke&Omar, 2020; Tejedor et al, 2021; Pennycook&Rand, 2019; Thompson&Oppenheimer, 2016; Toplak et al, 2016; Ng et al, 2021; Eger et al, 2020; Ngai et al, 2014) and upgraded towards suggested experiment.
What is more, our mixed methodological approach allowed to facilitate the expression new ideas, yielding fruitful outcome. Samples of research questions for group interviewing:

- Where have you found information about your university?
- Classify social media platforms where you got helpful information about the chosen university?
- What is the difference between the studying process at private universities and business schools?
- How would you define “fake news and role of social media in spreading it”?

Though many participants recognized that they don’t systematically verify online information, rather follow their “intuition, common sense and unreality of content”. The matter of information literacy is related to the perception of the quality of content and critical thinking. This study presents the results of qualitative and quantitative approaches.

Aforementioned literature (Leung et al, 2021; Tejedor et al, 2021; Perera et al, 2020; Toplak et al, 2016; Foroudi et al, 2020) suggests that new technologies changes human skills and process. Phenomenon of “Who and What influences” (Johnston& Murray, 2010) students’ choice of Higher education is regularly discussed apart from their perception of numerous gossips and stereotypes. The findings exhibit the fact that respondents overestimated the competency (Tejedor et al, 2021) to evaluate text without any apparatus and methods. Correspondingly, students have to be trained to spot false information flooding on the Internet. From this perspective, youngers engage with online news in average a few times a week.

5.3. Overall assessment: student's choice of university and fake news influence

The number of studies that address student behaviors widely employed the U&G theory (Apuke & Omar, 2020; Wang et al, 2021) to explain the student choice of social media interaction and information consumption (Papacharissi &Rubin, 2000). The method of this study is a lens to predict news determinants to enlarge this field. It is interesting that users of digital platforms generate content (Kaplan & Haenlein, 2010) as well as consume it; therefore, in the project, both individual and group activities were assessed on social media. Much work on the potential essence of fake news has been carried out in line with the Theory of Reasoned Action (TRA) (Erkan & Evans, 2016; Chang et al, 2021), while attitude to false information is antecedent of its acceptance behaviour. We extended prior studies (Apuke & Omar, 2020; Wang et al, 2021; Tejedor et al, 2021; Thompson & Oppenheimer, 2016; Pennycook & Rand, 2018), and incorporated other theories such as SNS dependency, Social Cognitive theory (SCT), Para-Social Interaction (PSI) Theory and Dual System Theory. That being a case of established factors that better explain how student's perceive fake news spreading on digital platforms such as Facebook, Twitter, Instagram, YouTube, LinkedIn, Snapchat, and TikTok. This research has significant essence as it modelled the factors leading the misinformation on students' way as a customer of higher education.

This section is about the hypothesized relationship between the independent variables and dependent variables. During the data analysis six hypothesis were supported and only two – rejected. This section will provide an in-depth interpretation the possible reasons for accepting or discarding suggested relationships.

5.3.1. Customer perception of content media richness

As Table 4.25 shows, that most of the hypotheses related to students' habit on social media were found significant. The first element to review is the effect of media richness and its role to achieve essential influence on students' decision making via fake news headlines. Where H1a is about the direct relation between perceived richness (PR) of a medium and social media dependency (ISMD). The results obtained indicate that perceived richness significantly influences (Beta 0,331) on SNS dependency. In other words, possessing higher information flow on social platforms generates stronger ties with social media platforms. These results are coincident with outcomes of study Apuke

et al (2022). Thus, the results of this research are aligned with Chen et al (2020) statement, and perceived information richness reduces consumer risk to fall in false information. Results obtained in the model allow the validation of H1b (Beta -0,204) where higher “perceived richness” will be associated with a lower attitude towards fake news. Apuke & Omar (2021) affirmed that “perceived media richness” is significantly associated with the quality of content, becoming one of motivational factors in the study.

Students, apart from communication motivation, search the Internet to gain information (Wang et al, 2021). Social Network Theory (SNT) justifies the information and ideas sharing (Shang et al, 2017) among younger people online to quantify one cluster around another one. Going further, information flow quality in terms of media facilities is one of the antecedents of fake news attitude.

5.3.2. Personal dependence on social media

Taken as a whole, our results show SNS dependency essentially affects fake news attitude (Beta coefficient 0,556). According to Patwardhan &Yang (2003), media dependency is connected with students’ “need for orientation” to select a university. Social media platforms likely are intermediators between media users and content. Findings confirm a theory of media power (SNS dependency) (Ball-Rokeach & DeFleur, 1976) describing a model of mass-media effect. That research opens the gateway for further study on false credibility of internet resources. Improve their critical reading skills to cross-examine source and re-post news online. While a focus group interview was integrated into the project, we measured the intensity of the dependency relation on a weekly basis. This research has demonstrated that social networking site dependency has a key role in the fake news attitude among other variables.

The findings of this study reinforce the point of view on media dependency and show its high impact on customer attitude (Patwardhan&Yang, 2003) and behavior. Even so, underlining that students’ online experience of chatting, communicating, and sharing information might result in media dependency as an advantage to satisfy customer expectations (Apuke et al, 2022).

5.3.3. Effect of para-social interaction

Our results about para-social interaction have similarity with Apuke&Omar (2020) findings, namely, para-social interaction (Wang et al, 2021) on social media predicts misinformation acceptance among social media users. Previous research assumes that para-social contact might promote a change in attitudes because (Zang et al, 2021) the drivers are the attractiveness and expertise of media figures. The obtained results have shown that the para-social relationship scale created by Apuke & Omar (2021) is also a successful to measure students' emotional bonds (Handarkho et al, 2020) in the education industry. The above-mentioned fact supports our findings, as students check their social media account minimum a few times a week. As Giles (2002) postulated above, it is about the "gratification of needs for social interaction". In a recent study of Zhang et al (2021), the connection between para-social interactions and purchase intentions within fake news content was endorsed. In line with multiple authors (Zang et al, 2021; Apuke et al, 2022; Wang et al, 2021; Handarkho et al, 2020) and our analyzed model, this research demonstrated (Beta 0,186) the significance of consumer-celebrity relations. Also, these results mean that the association between consumption of fake news and its perceived impact on university brand can generate a purchase intention. Para-social interactions are more of an experience (Colliander&Dahiel, 2011) for online audience to communicate directly with others as friends, and not impersonal figures. Nevertheless, creating social networks or ties is normal behavior on digital platforms that can be based on common interests (Wang et al, 2021), hobby, employment (Weiss et al, 2020), and other factors.

5.3.4. Testing the "Fake news knowledge" moderation

It is interesting to note that almost half of the publications on social media used either moderators (55,7%) or mediators (49,7%) (Leung et al, 2021) for research models. Whereas all studies require antecedents and outcomes, here we shall discourse their connection and FNK role in our model. Additionally, the study provides us with examination of the specific combination of factors under the power of moderator "fake news knowledge" in the structural model. In this sense, we looked into the model's predictive relevance of the fake news knowledge moderating effect on three constructs – perceived richness, SNS dependency, and para-social interaction. This consumer-related moderator can serve as a basis for knowledge development (Ngai et al, 2014) around deliberate selection of information. With the advent of strict information censor and control

(Maida, 2021), this project tested the moderating role of fake news knowledge in reducing the tendency to accept misinformation. Syam & Nurrahmi (2020) research results indicated a lack of media literacy skills among students. The current study found a similar outcome in that students used to rely on “common sense, logic, or coordination”.

Showing a practical understanding of fake news, students can be at the center stage (Apuke et al, 2022) in dealing with false information. By Torres et al (2020), adequate fake news knowledge refers to the statement that “*individuals become aware that news items from a particular source and media may be misleading, at best they may perceive that source to be incompetent, and may begin to question the integrity of the source or media”.* Our model, being in line with Hypothesis H4b, displayed that this FNK moderator significantly moderates the relationship SNS dependency and fake news attitude.

H4a	Fake news knowledge will moderate relationship between “perceived richness” and “fake news attitude” such that, the effect of fake news will be stronger for individuals with low fake news knowledge	Rejected
H4c	Fake news knowledge will moderate relationship between “para-social interaction” and “fake news attitude” such that the effect of fake news will be stronger for individuals with low fake news knowledge	Rejected

Table.5.1. Rejected hypotheses

Hence, contrary to Apuke&Omar (2020), this study revealed that there is not significant moderating impact of fake news competence on the relationship between media dependency and human attitude to fake information. Apparently, the study (Apuke et al, 2022) on the information literacy concept demonstrated that in the field of perceived realism of fake news and media connectedness, students with higher knowledge of fake news were more accurate with information consumption and sharing. That recognizes the importance of deeper studying about cognitive ability and the impact of false information, as long as human skills belong to cognitive processing. One possible reason could be, as Tejedor et al (2021) pointed out, that “*most of students prefer online media as a primary source of information*”, which entails greater chances of mistakes. It appears, the online shopping process is much more sophisticated action than the customer journey through five stages (McKinsey, 2017).

Even so, the relationship between para-social interaction and fake news attitude was not significantly moderated (See figure 4.5.). In this view, there is a higher likelihood of effect to fall prevalence of false information among individuals with low fake news knowledge.

One of the essential questions that comes out of this research is how to identify fake news to defend against it in the future and avoid being misled? Due to extremely intensive usage of digital platforms, users often don't verify the authenticity and quality of information content.

5.3.5. Customer intention and social media usage behavior

The current study detected that while doing "shopping" online to select universities for further education, students demonstrate individual and group activities. Our hypothesis postulates that a higher attitude towards fake news results in a higher level of acceptance of fake news, and evidence supporting this was found to support previous studies about intention-behavior. As Erkan & Evans (2016) reported, for students, the most significant issues are usefulness, social communication, engagement, and practicability.

The degree to which individuals express attitudes effect their behaviors within information consumption action (TRA theory). The standardized coefficients of direct relationships in Table 4.25 reveal a direct significant relationship between FNA and FNAB (0.334***), thus supporting Hypothesis H5. Fake news attitude (FNA) is the immediate predictor of student's usage behavior (FNAB) concerning the acceptance fake information, reposting or retweeting information. This persuades that more youngsters consider false information as real.

5.3.6. Causal-chain scheme framework of social media behavior

Referring to the social media research conducted by Ngai et al (2014), emergence of such exploration is emphasized by the context of future organization. Every aspect of customer intention and behaviour, particularly among younger generation, comes from social media usage (Feroz, & Zulfiqar, 2021). As we discoursed in Chapter 2.10, some basic questions have to be clarified, for instance, how specific variables on social media affect and what is the moderating role of fake news knowledge. The suggested framework by Mohamed et al (2010) and Ngai et al (2014) was adapted for this project as an input-moderator-outcome scheme. Therefore, "SNS dependency", "Perceived richness" and "Para-social interaction" (social online ties with public figures or celebrities) were antecedents (input) that lead to outcomes - "acceptance of fake news"; fake news

knowledge moderating relationships between the three independent variables and one a dependent variables (FNA). In this regard, falsehood and students' behaviour appeared in different literature before (Chen et al, 2020; Nunkoo et al, 2020), but here we grouped variables to focus on selected social media and investigated the youngsters' purchase intention towards universities under the influence of pseudo-news. Even so, in contrast to Leung et al (2021) who drew a general framework of the causal-chain model, we did not touch on mediators as well as organization attributes, but concentrated only on several factors and one moderator.

Although some authors in the literature discovered a strong moderating effect of fake news literacy (Apuke & Omar, 2020; Apuke et al, 2022), this research has not shown such results. At the same time, matter of concern is that these findings might not be generalized to whole student audience, as the representative sample was not enough for that.

5.4. Academic conclusion

Moving on to the academic results of this research based on the initial objectives, at the beginning of this research, some objectives were set up, and thanks to the obtained results, it is time to assess their completion and answer the research question.

The first objective that was set was to understand what defines the student influencing factors on their way to select university for Higher education, as a part of the customer journey. This research has reflected that fake news influence is the mixture of several factors:

- Perceived richness (PR) expresses the importance of media content on the customer perceptions (Chen et al, 2022) when making choices in the product (Klaus, 2015) like a university
- Para-social interaction (PSI) reflects the key role of group social activity in consumer behavior online
- SNS dependency showed the highest significance as an exogenous variable of our structural model
- Human attitude and behavior responses evoked by identity, packaging, communications, and environments.

- Furthermore, we can report a positive relationship between fake news attitude and fake news behavior related to fake news acceptance (Di Domenico et al, 2021)
- Modelling the antecedent factors of effecting on acceptance misinformation shows the significant moderating impact “fake news knowledge” on the relationship between “SNS dependency and fake news attitude (Apuke &Omar, 2020).

The second objective was about understanding what dictates the students’ attitude towards fabricated information on social media in the education industry. PR speaks (Chen et al, 2021) about the importance of media content on the customer perceptions, and our findings highlight the essence of media education. By Tejedor et al (2021), news literacy *“can be defined a series of competencies related to news*”. Our findings stress the encourage of critical thinking because the quality of social media content often needs verification and digital competencies.

The third objective was about identifying and measuring correlation between attitude and students’ intention to consume misinformation: the higher attitude to fake news, the higher its acceptance. The present results confirm the hypotheses that there is a strong association between them (R2=35%). That is in line (Record et al, 2020; Chang et al, 2021) with idea of Theory Reasoned Action (Ajzen & Fishbein, 1977).

Finally, **the fourth objective** was to inspect how the fabricated news can influence the students’ decision making in the content of rationality or intuition of the process. Therefore, it showed that students with high rational thinking score use social media less and more skeptical to the quality of social media content.

All in all, the research questions of this research (“How does the false information impact the students’ choice of university?”) have the following answer: the combination of external factors and users’ characteristics drives decision making through the social networking. Obviously, thanks to a high level of media and fake literacy (fake news knowledge), students might avoid being misled and not to fall for inaccurate stories.

5.5. Business conclusion

Based on this research there are some key conclusions that both academics and practitioners should consider:

- In parallel with that highly competitive industries such as the Higher education Industry, with fierce competition and a maturing market, it is crucial for companies

to be well-presented on social media to differentiate themselves from one another and to iengage students in long-term relationships.

- The obtained results in this study display the significance of media competency for customers, specially students, to be better armed against pseudo-news or misinformation.
- For marketers in the education industry, the role of SNS is not going to stop growing and needed further research, especially, in such a dynamic market.
- As Chandra et al (2017) pointed out, companies with strong brands get better results than companies without them. Universities that are well-presented on social media have more probability of “student’s recruitment”
- Fake news attitude encompasses the entire social and media experience, including both the group and individual factors

6. Limitations, managerial and academic implications

Throughout the forecasting, the prospective of global growth, directly equating to the development of software, innovation, and social media networking (Hoag et al, 2017) is more than vital in order to capture a sustainable customer audience with high influence on it. Simultaneously, the fast-growing business unveils the demand of a new formation of entrepreneurs (Ruiz-Alba et al, 2018). And that underlines the essence of studying the sensitivity of the masses to misinformation evaluating their level of analytical capability (Campitelli & Labollita, 2010). For that reason, this study explored individuals' and groups' reaction to the impact of media on the decision-making process in the higher education industry (Allcott & Gentzkow, 2017). Having reviewed the conclusions of the research, it is time to move on to the implications and further research.

6.1. Procedure limitations

There are important limitations in this research. The question could have been articulated better in terms of the certain phrasing and layout.

- A more in- depth examination of the emotional component and the intuitive decision process
- Separating external and internal influencers, possibly because they come out from different origins to be spotted separately
- A closer investigation of cognitive determinants, especially since it has been shown to affect human behavior, although there is weak evidence of influence that needs verification
- Extending the research to include a larger number of participants to obtain more representative and valuable results

For simplicity, we disregard the dependence of findings on suggested online methods. One more concern is that individual and class discussions may not accurately represent the real situation due to the limited life and work experience or even absence of that among participants. To verify the validity of the rational thinking (Allcott & Gentzkow, 2017) in higher education, we plan to conduct several experiments on cognitive processing in the future. For now, it seems a brief trial study is more applicable to obtain

pre-search data. We can proceed analogously to participative observation during group interview to gain some emotional insights.

At the same time, there are several possible limitations which might lead to bias (Toplak et al, 2011), namely: study does not consider the students' prior experience; research is conducted on international students in business schools in Spain; lastly, personal traits are not part of this study. One of the main limitations is that the sampling process is not probabilistic. That means that our conclusions cannot be extrapolated.

- The first one is that this research focuses on the higher education Industry, which means that discussed results can be directly applied to this business sector.
- The next aim is to investigate the education industry in the EU, primarily in Spain. In other words, the obtained results are applicable in the Spanish higher institutes Industry and can be adopted in a different state.
- Regarding the methodology, the principal measurements had self-reported scales with some limitations due to the suggested survey framework.
- The most sensitive issues are the sampling, which is non-probabilistic and can't be generalized to the entire audience and education industry. As well, it was done by convenience, which can lead to bias in the sample.
- Finally, this opens the door for future research where some other industries, including multilingual articles, can be studied. To end with, there are multiple open questions, for instance, how misinformation influences a young audience, and vice versa, for a long-term perspective which can also be an arena for future research.

6.2. Academic implication

The result of this doctoral thesis is expected to generate a series of academic implications related to the gap in the literature proposed in this study. That is, to understand how and why fake news is accepted by young students and, furthermore, its contaminating effect on the process of searching for information on social networks about possible universities or business schools where to study a postgraduate degree. We advanced the theoretical background on social media research by employing a combination of theories - Social Cognitive Theory (Bandura, 2002; Wang et al, 2021), Media Dependency Theory (Ball-Rokeach & DeFleur, 1976), Para-Social Interaction (Zhang et al, 2021; Apuke&Omar, 2020) to predict the result of misinformation consumption for students' audience.

A study on the use of social media by Talwar et al. (2019) drew attention to the dangers

of social media, reflecting its “dark side” like fake news dissemination. Information seeking (Riggiero, 2000) and sharing behavior (Talwar et al, 2019, Wang et al, 2021) are in line with concepts of Social Cognitive Theory of mass communication (Chaffee & Metzger, 2001). At the core of this research, there is a need for all of us to be aware of threats like misinformation with manipulative impact to prevent its negative and destructive influence.

6.3. Managerial implication

Our study also aims to shed light on the use of digital platforms, which generally have a positive approach, showing the advantages and opportunities for disseminating news and interacting with younger generations, by showing the dark side of them. This research could provide practical information for university and business school managers to formulate their communication policies and actions to counteract the spread of fake news.

The most common category of research outcome in social media is business implications. We are moving ahead prior studies (Leung et al, 2013; Tejedor et. Al, 2021; Lee et al, 2017; Altbach, 2016; Ng et al, 2020; Malik et al, 2020) to combine student fake news perceptions, academic interpretation of that phenomenon which struggles with global forces in higher education (Leung et al, 2021). Dramatical changes in social media platforms and their power enforce practitioners to model the antecedent factors with various moderators (Apuke&Omar, 2020). Thinking about social-ethical implications, it is important to keep in mind that this research addresses the concern to our personal lifestyle and encourage our family and friends to promote their own information health. The core is in changing individual behavior in such a way that makes it possible to prevent the consumption of fake news because of harmful outcomes on society’s «health".

In conclusion, I declare that I have followed all procedure and rules of the Universitat Oberta de Catalunya (UOC) in its ethical code, The UOC's Code of Good Practice in Research and Innovation[1].

[1] *Universitat Oberta de Catalunya (UOC). (n.d.). The UOC's Code of Good Practice in Research and Innovation (CBPRI). Retrieved May 08, 2018, from https://research.uoc.edu/portal/_resources/CA/documents/recerca/kit_etica/Juliol_2016/kit_angles_20160712/1_Code_Good_Practices_2014_EN.pdf*

Respondents of this research have participated on a voluntary basis, and they were informed about goals, scope, and research process. More, they were also guaranteed personal anonymity and the confidentiality of the provided information.

Finally, I state that I followed all the indications set by the Universitat Oberta de Catalunya (UOC) in its ethical code, The UOC's Code of Good Practice in Research and Innovation[2].

6.4. Future research direction

Supporting the obtained findings, there are several steps to follow-up:

- This research on the role of fake news in the students' choices for higher education could be conducted on different continents outside the EU. To find out if the results obtained can be generalized to the whole education industry, the customer purchasing journey has to be explored on a higher and more diversified groud of respondents.
- The unexpected finding around SNS dependency signals the need for additional studies to delve deeper into social media addiction and the influence of fabricated information among students.
- This same research could also be conducted in other EU countries or around the world to avoid the bias of data. Furthermore, it might be better to study multicultural questions.

[2] *Universitat Oberta de Catalunya (UOC). (n.d.). The UOC's Code of Good Practice in Research and Innovation (CBPRI). Retrieved May 08, 2018, from https://research.uoc.edu/portal/_resources/CA/documents/recerca/kit_etica/Juliol_2016/kit_angles_20160712/1_Code_Good_Practices_2014_EN.pdf*

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Appendix A

Cognitive processing by cognitive reflection test (CRT)

In order to assess the student's intelligence and numeracy skills, they were invited to complete an additional test, with 7 items. Proposed by Thompson and Oppenheimer (2016), this test is rather known as "bat and ball problem".

The questions proposed were the next one:

1. A bat and a ball cost £1.10 in total. The bat costs £1.00 more than the ball. How much does the ball cost? (Correct answer - £0.10)

2. If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets (Correct answer - 5min)

3. In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake? (Correct answer - 47 days)

4.If 3 elves can wrap 3 toys in 1 hour, how many elves are needed to wrap 6 toys in 2 hours? (Correct answer - 3 elves)

5. Jerry received both the 15th highest and the 15th lowest mark in the class. How many students are there in the class? (Correct answer - 29 students)

6. In an athletics team all members are three times as likely to win a medal than short members. This year the team has won 60 medals so far. How many of these have been won by short athletes? (Correct answer -15)

7. How many cubic feet of dirt are there in a hole that is 3' deep x 3' wide x 3' long? (0 cubic feet, it is a hole)

Appendix B
Survey Questionnaire

How fake news distributed on social media influences university choice: fake news effects on the students' decision making

Section A. Demographic characteristics
Please tick your answer for the questions below

1. **Sex**
   Male ☐ Female ☐

2. **Age**
   18-19 years old ☐ **20-25 years old** ☐ **26-30 years old** ☐

3. **Highest academic degree**

-high school graduate ☐

-some college, no degree (includes some community college) ☐.

-four-years college or university degree/Bachelor's degree (e.g., BS, BA, AB) ☐

-postgraduate or professional degree, including master's, doctorate (MA, MS, PhD, JD) ☐

4. **Culture**
   West Asian culture ☐ European culture ☐ East Asian culture ☐
   West African culture ☐ Central Asian culture ☐ Indian/subcontinent culture ☐

5. **Average annual family income**
   ≤ 19,999 Euro ☐
   20,000 – 39,999 Euro ☐
   40,000 – 59,999 Euro ☐
   60,000 – 79,999 Euro ☐
   ≥ 80,000 Euro ☐

Section B. Cognitive processing (Frederick, 2005/Thomson& Oppenheimer, 2016)
Answer correctly on the following questions:

1. A bat and a ball cost £1.10 in total. The bat costs £1.00 more than the ball. How much does the ball cost? _____pounds

2. If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets ? _____minutes

3. In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake?_____days

4.If you are running a race and you pass the person in second place, what place are you in?
_____position

5. A farmer had 15 sheep and all but 8 died. How many are left? _____sheep

6.Emily's father has three daughters. The first two are named April and May. What is the third daughter's name? name is _____

7. How many cubic feet of dirt are there in a hole that is 3' deep x 3' wide x 3' long? _____cubic feet

Section C. Nature of misinformation and its influence
Below are the statements on the nature of content for informational website.
Please tick/circle the appropriate number using the offered scale

1. Range all of the social networking sites with specific extent (scale 1-5) where you got most of information about your chosen university/business school (*where you're currently studying*):

	1-never	2-very rarely	3-rarely	4-occasionally	5 frequently
FB	1	2	3	4	5
Twitter	1	2	3	4	5
Youtube	1	2	3	4	5
SnapChat	1	2	3	4	5
LinkenIn	1	2	3	4	5
TikTok	1	2	3	4	5
Instagram	1	2	3	4	5

2.How often do you discuss the news on social media with your friends and family?

Every day	A few times a week	Once a week	sometimes	rarely

3. How long have you been using social media?

<1year	1-3 years	4-6 years	7-9 years	>10 years

	Please tick (√) the relevant box						
2.Survey questions	1 Strongly disagree	2 Disagree	3 Slightly disagree	4 Neither agree nor disagree	5 Slightly agree	6 Agree	7 Strongly agree
Para-social interaction (PI) (Apuke&Omar, 2020)	1 Strongly disagree	2 Disagree	3 Slightly disagree	4 Neither agree nor disagree	5 Slightly agree	6 Agree	7 Strongly agree
PI1. I have no problem using information shared on social media about my chosen university it was shared by someone I admired and respect	1	2	3	4	5	6	7
PI2. I consider the opinion about my chosen university of a public figure whom I admire and respect	1	2	3	4	5	6	7
PI3. I seek the opinion of a public figure whom I admired, and respect related to my chosen university	1	2	3	4	5	6	7
PI4. I usually base my ideas on information about a chosen university obtained from its social media pages	1	2	3	4	5	6	7
Individual social media dependency (ISMD) (Apuke&Omar,2020)	1 Strongly disagree	2 Disagree	3 Slightly disagree	4 Neither agree nor disagree	5 Slightly agree	6 Agree	7 Strongly agree
ISMD.1 I frequently obtain information about a chosen institute through social media	1	2	3	4	5	6	7

ISMD2. I make use of the information related to a chosen institute found on social media	1	2	3	4	5	6	7
ISMD3. I immediately update information about a chosen institute received from social media	1	2	3	4	5	6	7
Fake news sharing attitude (FNA) (Wang et al., 2021)	1 Strongly disagree	2 Disagree	3 Slightly disagree	4 Neither agree nor disagree	5 Slightly agree	6 Agree	7 Strongly agree
FNA1. I think the social media is the most convenient way for sharing information and contents about a chosen university	1	2	3	4	5	6	7
FNA 2.I like to share pictures, videos and information about a chosen university via social media platforms	1	2	3	4	5	6	7
FNA3.I have positive attitude towards content about a chosen university sharing on social media in the future	1	2	3	4	5	6	7
Fake news acceptance behavior (FNAB) (Wang et al., 2021)	1 Strongly disagree	2 Disagree	3 Slightly disagree	4 Neither agree nor disagree	5 Slightly agree	6 Agree	7 Strongly agree
FNAB1. I regularly use social media as a source of communication about a chosen university and sharing information with others	1	2	3	4	5	6	7
FNAB2. From time to time I involve in group discussions on social media about a chosen university	1	2	3	4	5	6	7
FNAB3. Most of the time on my social media account I upload useful documents and files about a chosen university to share with others	1	2	3	4	5	6	7
FNAB4.If social media introduces any new application for smooth exchange of content about a chosen university, I will use it, definitely.	1	2	3	4	5	6	7
Perceived Richness (RI) (Wang et al, 2021)	1 Strongly disagree	2 Disagree	3 Slightly disagree	4 Neither agree nor disagree	5 Slightly agree	6 Agree	7 Strongly agree
PR1. Social media provides variety of information according to my requirements related to a chosen university	1	2	3	4	5	6	7
PR2. Social media is an internet-based form of communication with a huge number of diversified users, having different opinions about a chosen university	1	2	3	4	5	6	7
PR3. In social media I get quick response, comments, and feedback from others on my shared content about a chosen university.	1	2	3	4	5	6	7
PR4. With the help of social media, I can share all kinds of information and content about a chosen university with multiple users at a time	1	2	3	4	5	6	7

3. Fake news knowledge FNK (by Tejedor et al, 2021)
Fake news knowledge /Identification of fake news
How can you spot fake news?

	1 Strongly disagree	2 Disagree	3 Slightly disagree	4 Neither agree nor disagree	5 Slightly agree	6 Agree	7 Strongly agree
FNK1. Headlines what are too alarmist, ridiculous or unlikely	1	2	3	4	5	6	7
FNK 2. The medium in which it is published	1	2	3	4	5	6	7
FNK 3. Common sense/logic/coordination	1	2	3	4	5	6	7
FNK 4. The unreality of the content	1	2	3	4	5	6	7
FNK 5. Sources of information are cited	1	2	3	4	5	6	7
FNK 6. Author checked/verifies information in the text	1	2	3	4	5	6	7
FNK 7. Other reasons	1	2	3	4	5	6	7

Appendix D

Questions of personal interview

1. What is the fake information? (definition)
2. What is the role of social media in it?
3. What type of false information are cycling on social media?
4. What is the impact of implausible headlines on student's choice of the last destination/ university?
5. How did you choose private university instead of public?
6. How did you know about your business school?
7. Where did you check information about it?
8. Pros/cons of private vs public?
9. How do students spot misinformation? How do you go about vetting information to determine its credibility?
10. Do you consider yourself susceptible to fake news?
11. How often do you encounter fake news on social media?
12. How does fake information effect on you as a student?
13. The issue of fake news is important to me (Yes/No) Why?