

A collage of various social media and technology-related images is positioned on the left side of the cover. It includes a blue LinkedIn logo, a hand holding a smartphone, a globe with blue hash symbols, a world map, and a Facebook logo. The background of the entire cover is a warm, golden-yellow color with a geometric, low-poly pattern.

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SOCIAL NETWORKS AND INSTITUTIONAL COMMUNICATION: THE CASE OF PORTUGUESE UNIVERSITIES

REDES SOCIALES Y COMUNICACIÓN INSTITUCIONAL: EL CASO DE LAS UNIVERSIDADES PORTUGUESAS

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ABSTRACT

The media ecosystem has evolved towards a hybrid ecology where social networks form (inter) active consumers who develop new practices and relationships with brands in a collaborative logic, which represents the era of Communication 3.0. Higher education institutions deal with these issues by addressing an audience that is permanently connected through social media. Social networks became part of their communication strategies, which seek to differentiate their offers in a competitive context. This article analyses both the presence in social media and the use of Facebook by Portuguese universities as a tool for institutional communication.

The results show that universities with fewer students can create network value through Facebook and LinkedIn as long as they have a high publication frequency. Institutions with more students achieve higher dynamic of publication and engagement, although smaller institutions attain greater amplification and more visibility.

KEYWORDS

Social networks; Portuguese universities; institutional communication; social media strategies

RESUMEN

El ecosistema de los medios ha evolucionado hacia una ecología híbrida donde las redes sociales forman consumidores (inter) activos que desarrollan nuevas prácticas y relaciones con marcas en una lógica colaborativa, propias de la era de Comunicación 3.0. Este nuevo escenario no es ajeno a las instituciones de enseñanza superior y ya lo están aplicando a la hora de dirigirse a su público, ya que, éstos en su mayoría, están permanentemente conectado a través de medios sociales. Las redes sociales se han convertido en una parte muy importante de sus estrategias de comunicación, a través de las cuales buscan diferenciar sus ofertas en un contexto competitivo. Este artículo analiza dos cuestiones por una parte qué uso están dando las universidades portuguesas a las redes sociales y por otra analiza la utilización de Facebook, como herramienta de comunicación institucional en las universidades portuguesas.

Los resultados muestran que las universidades con menos estudiantes pueden crear valor de marca a través de Facebook y LinkedIn, siempre y cuando tengan una alta frecuencia de publicación. Las instituciones con más estudiantes son las que tienen mayor dinámica de publicación y participación, aunque son las instituciones más pequeñas las que logran mayor amplificación y visibilidad.

PALABRAS CLAVE

Redes sociales; universidades portuguesas; comunicación institucional; estrategias de social media.

1. INTRODUCCIÓN

Brand communication on the Internet implies its capitalisation through commitment, recognition, reputation, loyalty and recommendation. In a digital environment, brand identity crosses content marketing and social networks. Commitments in social networks convey the voice of a brand: from state updates to the way a comment is answered. The activities on social networks are a form of awareness that can be used to shape brand identity. Understanding how the challenges of a brand and the wishes of the target audience relate is critical.

Social media and social networking sites have been the central key of institutional communication over the Internet (Kimmons, Veletsianos, & Woodward, 2017), adding new features to the concept of social networks. These platforms define networks through collective action and interaction based on practices promoted by social tools. Social media structures (e.g. Twitter, Instagram or YouTube) and social networking sites (e.g. Facebook or LinkedIn) are based on objects that generate distinct sociabilities (Carlson, Rahman, Voola, & De Vries, 2018). Higher education institutions address an audience that is permanently connected through social media. Communication 3.0 is precisely about addressing a user that became active, permanently connected, and part of a broader participatory culture (Kotler, Kartajaya, & Setiwan, 2011). Therefore, social networks sites such as Facebook became part of their communication strategies, which seek to differentiate their offers in an extremely competitive context that reflects the transformation of education into a product.

Higher Education (HE) in Portugal has grown and became widely accessible during the last quarter of the 20th century, after the collapse of the New State (Neave & Amaral, 2012). It was the global crisis that emerged around 2008 that violently impacted the sector. The country has a binary system with polytechnic and university education. Currently, the sector is, among other forces, constrained by decreasing financing from the State and a lowering birth rate (Lira, Gonçalves, & Marques, 2015). The higher education sector is increasingly competitive, especially since the turn of the millennium. Hence, recruitment of students has become more vital than ever. Therefore, the main goal of this article is to analyse the presence of higher education institutions in social media and its dynamics of the use of Facebook in institutional communication.

In order to answer the research question “«How do Higher Education Institutions use Facebook for institutional communication and digital branding?», an empirical study was developed to evaluate the activity and the visibility of the universities that compose the Council of Rectors of the Portuguese Universities.

The article begins by discussing the evolution of the consumption process in the digital era. The second and third sections deal with social networking sites, social media and content within the context of communication 3.0 and digital branding. The next section focuses on why and how Higher Education Institutions (HEI) use social media. The following sections present the research goals, methodology, along with the discussion of the results from the empirical study and conclusions..

1.1. FROM GOING ONLINE TO BEING ONLINE

The theory of the network society (Castells, 2000; Castells & Cardoso, 2006; Martínez & de Frutos, 2018) argues that the network logic translates nodes (individuals and groups) interconnected by many ties. Therefore, the network communication model results from a fusion between different “«techno-social» spheres that shape society (Cardoso, 2009). It can be argued that the social networks on the Internet derive from the appropriation of the technical tools, transforming them into channels of circulation of content and conversation. The relationship between self-media, social media, social networking sites and the notion of content refers to a set of elements that form social spaces and networks that populate the Internet and are continually changing. The concepts of “«user-generated content»¹ and “«user-generated media»² make it possible to maximise the notion of participation on the Internet. Through the formation of social networks of contents that are constantly changing, social representations on the Internet are decontextualized, disaggregated and consumed collectively.

The digital media ecosystem has evolved into a hybrid ecology where convergence enables a collaborative perspective promoted by the Internet that encourages the shared consumption of content. Jenkins (2006b) argues this idea of consumption as a collective process, centred on social media and the networks empowered by them. In this sense, there is also an increase in the distribution of content through alternative media by so-called *prosumers* (Toffler, 1980; Castells, 2003; Tapscott & Williams, 2006; Dusi, 2018) or *producers* as labelled by Bruns (2007).

At a time when the notion of “«consumption» is changing with the transition from *going online* to *being online*, and digital discourse is a social-communicational reality in contemporary social change, the argument that consumption collectively reflects a systematic mutation of contexts becomes more consistent. It follows the idea that the tools of social communication on the Internet reformulate the way the receiver interacts with brands and others, promoting an active and participative consumer.

Going online has been replaced by *being online*, which illustrates the shift from Web 1.0 to Web 2.0 as the shift from an interactive network approach to a view of the Internet as a participatory and community space. In this regard, Olsson summarises the transition process:

The shift from the notion of the ecology of interactivity to the notion of the ecology of participation has been given special attention in theoretical conceptualizations that connect the Internet to concepts such as participatory culture and/or convergence culture. Both concepts have in common the fact that they stress the importance of more interactive web technology in creating the cultural infrastructure necessary for users' active participation in various forms of co-production (...) and social networking (through applications such as Facebook) on the Internet (2010, p. 99).

¹ The concept refers to the widespread practice of producing and publishing content on digital media by ordinary users, independent of routines and professional practices.

² “«User-generated media» is a concept that is directly related to the production and distribution of non-professional content as information to the community (Amaral, 2016a).

Jenkins (2006b) assumes the new media ecology and sustains that there is a paradigm shift from communication to a triangular structure in which changes are operated through convergence, participatory culture, and collective intelligence. In this perspective, the author argues

By convergence, I mean the flow of content across multiple media platforms, the cooperation between multiple media industries, and the migratory behaviour of media audiences who will go almost anywhere in search of the kinds of entertainment experiences they want (Jenkins, 2006b, p. 2).

It follows from this argument that the collective consumption process is interspersed with a participatory production logic, which evidences an (inter) active audience (Amaral, 2012). This idea can be explained by the fact that “«new technologies are enabling average consumers to archive, annotate, appropriate, and recirculate media content» (Jenkins, 2006a, p.1). Jenkins, Ford and Green began to use the term “«spreadability» as a key concept to understand this context. According to the authors, “«spreadability refers to the potential - both technical and cultural - for audiences to share content for their own purposes» (2013, p. 3).

The Internet has become dynamic:

The new collaborative creativity promotes collective action and prosumers - consumers as creators/producers. Platforms such as social media, social media, and self-media sites allow non-specialists to publish content to an audience that can potentially be global, as territorial boundaries blur. (Amaral, 2012, p. 132)

Anchored to a social perspective of technology, Jenkins argues that “«rather than talking about interactive technologies, we should document the interactions that occur among media consumers, between media consumers and media texts, and between media consumers and media producers» (2006a, p. 135).

Framed in a reality of collective sharing and collaborative logic, the intersection and convergence of media perspectives an evolution of Marketing that converges in the era of Communication 3.0, in which content is assumed as a consumer engagement tool (Amaral, 2018). As Zeller and Capriotti explain, the use of social networks “«has increased in recent times, to the point that it has become a key communication tool for companies. The ability to relate directly and generate enriching experiences with the public» (2017, p. 146).

1.2. SOCIAL NETWORKING SITES, SOCIAL MEDIA AND CONTENT

Social networking sites can be defined as a “«hybrid communications format that offers devoted individual pages, various interaction media, interest and activity groups, and communities made available to users through selective linkages, a potential site of online community and culture» (Kozinets, 2010, p. 193). The operationalization of the concept of a social network in the digital context derives from the technology:

The distinction between social and social media sites can be operationalised by the purpose of the communication tools, which does not invalidate that their appropriation adapts the characteristics that define the support to the users' purposes. Thus, if social networking sites focus on a link structure, there is nothing to prevent them from becoming social media. The same is true for social media sites, which have the purpose of publis-

hing and social sharing of content, but that may be appropriate to define social networks (Amaral, 2016a, p. 139).

Recuero considers that “«the difference between social networking sites and other forms of computer-mediated communication is how it allows the visibility and articulation of social networks» (2009, p. 102). In the author's perspective, supported by boyd and Ellison's (2007) theory, there are social networking sites that have user-oriented network exposure structures and other media whose tools are appropriate for that purpose. Therefore, through new social practices that derive from the technical tools and objects available on platforms, new social relations based on collective intelligence are created. In this sense, the Internet connectivity introduces sociability patterns that are different from traditional ones, resulting from a process of mutual adaptation between technical and social practices (Graham & Dutton, 2019). Objects and tools are based on “«metadata» of users that allow the structuring of networks of interests, with ties that are different from the traditional ones.

The platforms are networked, promote content and collaboration communities, and explore new business models based on the aggregation and convergence of media and content generated by users. Therefore, the production of information has been simplified and massified with the increasing access to the Internet (broadband and mobile devices), the low cost of consumer digital equipment and the proliferation of basic use editing software (often free or at reduced prices).

Distribution has become global and immediate with numerous platforms for publishing, but also with applications based on RSS feeds that allow aggregating content and maximising it in different spaces. This convergence of content created a non-professionalised cross-media production in multiplatform channels (Jenkins, 2006b), allowing for the formation of content communities based on multifaceted technological applications.

The professional side coexists in the digital landscape with active and participative consumers and *prosumers*, who live in an era of image and instantaneity in a permanent mobile logic, enhancing collective consumption and streaming in different distribution channels. New forms of Marketing arise in this regard, and hence new social relationships with brands (Cano-Tenorio & Paniagua-Rojano, 2017).

Content marketing is a strategy used to deliver relevant and appropriate content to various users, helping them to decide if a particular product and/or service may be a solution. Therefore, content marketing is a way to engage with the target audience and grow the network of customers and potential customers by creating relevant and credible content, attracting, engaging and engendering value to people, in order to create a positive perception of the brand and generate more sales. Furthermore, the presence on social networks must be geared towards promoting brands, services and products on a global scale and in permanent interaction with the consumer. The management of social networks implies effective management of the brand and its reputation, which are so important to HEI. Then, a clear social media marketing strategy may boost the brand and strengthen its image on social networks through content.

Holliman and Rowley point out that the content is “«a key component of inbound marketing techniques, and hence an understanding of how content can be used in marketing, or more specifically, in engaging customers, is central to the development of an effective inbound marketing approach» (2014, p. 270). Pulizzi and Barrett define content marketing as “«the creation and

distribution of educational and/or compelling content in multiple formats to attract and/or retain customers» (2008, p. 8). In this same line of reasoning, Rose and Pulizzi argue that “«content marketing is a strategy focused on the creation of a valuable experience» (2011, p. 12).

The Internet offers opportunities and spaces for people to create, interact and share content. In the context of digital communication, these issues are evident with the massive participation of consumers and influencers. Sánchez-González and Paniagua-Rojano argue that “«a brand, a company or institution, and its product or service have become social objects and, as such, must communicate through the social web» (2013, p. 30).

1.3. COMMUNICATION 3.0 AND DIGITAL BRANDING

The digital context of the interactive marketing approach is directly related to the change of the communication model: from the consumer to the prosumer (Amaral, 2012). However, the digital paradigm does not nullify the previous ones but rather coexists with them in the same way that it complements them. It follows that digital marketing in its phase 3.0 requires combining the new context with the previous paradigms of communication and knowing the reality of the user experience (Amaral, 2018).

Kotler, Kartajaya and Setiwan (2011) argue that marketing is an organisational function that refers to a set of projects that relate to the creation, communication and delivery of value to customers. The evolution from Communication 1.0 to Communication 3.0 reflects the relevance of the role of technologies in Communication and the transition from Marketing 1.0 to 3.0. The paradigm shift and the new communication models transform the passive user of the 1.0 era into an active, participatory consumer. In the first phase, Marketing and Communication were product-centric. The goal was to sell products at reasonable prices. Interaction with consumers was accomplished from a “«one-to-many» transaction. The transition from Web 1.0 to the 2.0 format summarises a change in the structure of the Internet: a static model of the traditional network to a dynamic Web, social and conversational, where the relationship is based on the “«one-to-one».

Kotler, Kartajaya and Setiwan (2011) define three pillars of Communication 3.0: collaboration, culture and spirituality. Consequently, the Marketing 3.0 model focuses on values and understands the consumer as a human being. According to the authors, Marketing 3.0 is the axis between “«the era of participation, the era of the paradox of globalisation and the era of the creative society» (2011, p. 19). Therefore, Marketing 3.0 assumes itself as “«collaborative, cultural and spiritual marketing» (2011, p. 19). Thus, the era of participation is associated with collaborative marketing, the era of the paradox of globalisation relates to cultural marketing, and the era of creative society corresponds to the marketing of the human spirit. As Kotler, Kartajaya and Setiwan point out,

The era of Marketing 3.0 is the era in which marketing practices are largely influenced by changes in consumer behaviour and posture. It is a more sophisticated form of the consumer-centric era in which it requires more collaborative, cultural, and spiritual marketing approaches (2011, p. 35).

The current reality of Marketing is the Internet as a mass consumer market and the mass dissemination of communication. The traditional marketing approach was centred on elements such as average and anonymous consumers, standard product, mass distribution, one-way communica-

tion, market share and customer acquisition. These elements have been replaced by new ones in an interactive marketing approach: individual consumer; consumer profile; offerings tailored to the consumer; customisation of production; two-way communication; share of customers; and maintenance of customers (Dionísio, Rodrigues, Faria, Canhoto, & Nunes, 2009).

The reality of the Internet is social and translates into collective behaviour. Therefore, its logic is social and circular. It follows that social media marketing and digital marketing tools focus on promoting brands, services and products through social media platforms and social networking sites on a worldwide scale (Gomez-Suarez, Alonso & Campo, 2016). Thus, convergent topics can be identified: active and participatory consumers; *prosumers*; collective and streaming consumption; mobile era; image and instantaneity; distribution channels; new marketing practices; new social relations with brands.

The new brand management paradigm assumes that the approach is focused on the consumer experience. In this sense, brands need points of convergence between their values, identity and personality with the consumer. The visibility of a brand in digital is focused on the dimension of its exposure. Hence, it is relevant to equate two elements: 1). Contact points (all the contact points that the target audience is exposed concerning the brand in the digital space - e.g. brand site, online search results, social networks); 2). Search engine optimization (a critical part of visibility is the result of searches on a search engine. When a brand is listed on top of so-called "«organic results», it conveys to the public that the brand itself is aware of the brand's needs. Besides, consumers see the brand with a high degree of credibility).

There is a symbolic reference around brands, which results directly from its management in an articulated way with the consumer. Different people have different perceptions of the same brand. This question refers to the existence of different degrees of brand loyalty, mainly because the brand goes far beyond the products and/or services of the companies. Therefore, the experience of consumption in the digital environment is broader and is associated with a strong emotional component.

"«Digital Branding» is the identity, visibility and credibility among consumers who discover and interact with a brand on digital platforms. For digital branding to be effective, it must be different from traditional branding ideas. Digital branding is oriented to user goals and business objectives. Shows the long-term brand, creates values, emotion, strategy. According to Monteiro,

In this new context, brand management is driven by the interaction and potential of the emergent technologies that shape how the brands themselves communicate, position and deliver their value proposition. It is, therefore, a new multichannel environment, multi-sensory, with aims to promote conversion actions, recognition (awareness), interaction (engagement), the notoriety (top of mind) or the recommendation and sharing (share of voice), among others. (2016, p. 65)

The credibility of the brand may take a long time to build, even if digital suggests immediacy. A brand needs to receive feedback, and it is through the contact points created in the digital space that the brand can do it. The digital experience of the consumer stems from the way the brand relates to this, but also from the vectors of brand building (Ollins, 2008; Monteiro, 2016): communication; environment; product/service; behaviours.

The focus must be on the purpose of digital communication, always assuming that “«a brand can be distinguished in different ways: as a product, as an organisation, as a person or as a symbol» (Cano-Tenorio & Paniagua-Rojano, 2017, p. 105). For content to generate value for the brand or company, it should mention the brand, referring to its attributes and values, and be oriented to the conversation, sharing and call-to-action.

It is precisely in this context that HEI can be analysed. Prospective students do not choose a degree like a tangible product. They rely on the university’s brand, reputation, and on the symbolic value of the degree. HEI has been using social media as part of an interactive marketing approach that addresses these issues.

1.4. COMMUNICATE TO THRIVE: WHY DO HEI USE SOCIAL MEDIA

Efficacy became the keyword for HE management. For quite some time, governments have been permanently concerned with wastefulness and inefficacy of the education sector (Tooley, 2001, p. 11). New Public Management found its way into the public sector precisely to tackle the idea that public management was not sufficiently cost-effective. There were goals to be met. Globally, scientific management tools were adopted based on the assumption that it can deal with any area and deliver greater efficacy (Pacheco, 2016, p. 37). Hence, the development of educational politics around the world has become a hostage of quantitative instruments. However, as Teodoro argues, this form of management based on numbers does not favour democratic values nor innovative responses (2016, p. 41). It favours results, as education has become a business - a global business. There is a Global Education Industry characterised by a rising “«idea of education as a sector for investment and profit-making» (Verger, Lubienski, & Steiner-Khamsi, 2016, p. 3). The commodification of education is a global phenomenon (Ball, 2014), a shift from being considered a public good. “«Considering HE as a market addressing consumer ‘needs’ (rather than a public good addressing learners’ needs), we turn our attention away from discussions of ‘good’ teaching and towards analysis of consumer culture» (Molesworth, Nixon, & Scullion, 2009, p. 279). That implied that students became consumers, and HEI were forced to manage their brands to attract them (Berger & Wallingford, 1996, p. 62; Chapleo & O’Sullivan, 2017; Uncles, 2018). Branding became an ever-present topic in everyday’s life of HEI (Temple, 2006). The investment in marketing also rose. Advertisement in American higher education institutions can be found back in the early 1900s (Bok, 2003). It is not a new thing. It is the scale that changed, especially since knowledge became the defining word for the development of society. Knowledge became a trading good, a symbol of status, and an indicator of human development.

Choosing an HEI may not be easy. It is a relatively durable commitment, and it will probably happen once. Institutions know that the process is complex as consumers choose a specific degree both for symbolic and pragmatic motives. Therefore, education is a service. It is an “«abstract, intangible, non-material and relational experience» (Furedi, 2011, p. 2). It is considered an investment on a brand and the subject’s future competencies. As Haywood, Jenkins and Molesworth explain, “«a (future) career is intangible, therefore various imaginative resources are required to create images and impressions of it» (2011, p. 188). That is where social platforms as marketing tools become relevant - because they can engage, create proximity and personalise what otherwise could seem unreachable and abstract.

Today, the Internet is recognised as a “key source of information for prospective students» (Simões & Soares, 2010, p. 384). However, since social media platforms started to become ubiquitous, there is a clear interest in knowing how HEI are using them³. Earlier studies like the ones from Leng (2012), Rekhter (2012), Constantinides and Stago (2011, 2012), and Fagerstrøm and Ghinea (2013) show a promising but still callow use of the medium. More recent studies are bringing concrete implications, especially for management and communication strategies. Rutter, Roper and Lettice (2016) found that “«Twitter followers are a proxy for the brand strength or the reputation of the university brand» and that “«universities that interact more with their followers achieve better student recruitment performance than universities that fail to interact» (2016, pp. 6-7). Clark, Fine and Scheuer’s study (2017, p. 12) suggests that HEI “«should invest resources in social media communications if they intend to form high-quality relationships». Moreover, Brech, Messer, Schee, Rauschnabel and Bjoern suggest that “«the number of fans on Facebook is not a good indicator of effectiveness» (2017, p. 13) because it can impact interactivity. Interaction, engagement and reputation are key topics in today’s research.

2. RESEARCH DESIGN AND METHOD

This article aims to analyse both the presence and the dynamics of the use of digital tools for institutional communication and branding of Portuguese HEI. As such, this paper departs from the following research question: “«How do HEI use Facebook for institutional communication and digital branding?»». The overall objective is to analyse the presence of HEI in social media and particularly its dynamics of Facebook use in institutional communication. Moreover, the specific objectives of this empirical study are i). Assess the presence of HEI in social media; ii). Evaluate whether HEI uses social media and Facebook to create visibility around the brand; iii). Analyse the dynamics of Facebook's use in institutional communication; iv). Examine whether HEI’s activity on Facebook generates message amplification.

The empirical study analyses the HEI ($N = 15$) that compose the Council of Rectors of the Portuguese Universities and the Portuguese Catholic University (UCP). The universities⁴ analysed were New University of Lisbon (UNL), Open University (UAB), University Institute of Lisbon (ISCTE), University of Açores (UAC), University of Algarve (UALG), University of Aveiro (UA), University of Beira Interior (UBI), University of Coimbra (UC), University of Évora (UE), University of Lisbon (UL), University of Porto (UP), University of Madeira (UMA), University of Minho (UM), University of Trás-os-Montes and Alto Douro (UTAD) and UCP. This article analyses 1). the presence of HEI on social media, namely Facebook, Instagram, LinkedIn, YouTube, Twitter, Google + and Flickr; 2). the use of Facebook by Portuguese universities as a tool for institutional communication. The objective is to understand how social media and social networks sites are used for institutional communication for academic purposes.

On the first phase, website analysis was conducted and the presence in different social media was identified and quantified.

³ The use of scientific digital social networks (Campos-Freire & Rúas-Araújo, 2016) is not considered in this article.

⁴ Abbreviations reflect the Portuguese designations.

On a second phase, from the “«device-centric» perspective, datasets were extracted from university pages on Facebook within 6 months (April - September 2018). The empirical study is supported in the framework of digital methods within the medium-specific approach (Rogers, 2013). The methodological approach used to analyse social media presence and institutional communication on Facebook was content analysis using content, visibility and interactivity metrics. Assuming the assumption of media's “«affordances» (Bucher & Helmond, 2017) and “«moulding forces» on social practices (Hepp, 2013), computational methods were used for extracting data. The datasets were extracted⁵ through the Netvizz application.

3. DATA ANALYSIS

The presence on social network sites and social media was evaluated from the analysis of activity and visibility metrics. The communication strategies of universities on social networks were analysed on Facebook through content, visibility and interactivity metrics and the respective indicators⁶:

Table 1. Indicators

| Content | Visibility | Interactivity |
|----------------|-------------------|----------------------|
| Activity | Number of fans | Engagement |
| Content format | Applause | Amplification |

Source: own elaboration

The study of the different indicators is carried out independently. However, some of them can be included in more than one metric, such as actions that are measured in both the engagement parameter and the visibility or frequency of publications that measure content effectiveness and visibility.

The indicators for measuring the ‘content’ metric are the frequency of publication (‘activity’) and the format of the published content (photo, video, link, status). The ‘visibility’ metric allows assessing, which are the most relevant and essential elements to reach a more significant presence online. It is possible to relate the visibility and influence that the number of fans exerts for a brand on online social networks. The indicators ‘number of fans’ and ‘applause’ (measuring likes⁷ in content and commenting on content) allow understanding the visibility. ‘Interactivity’ is related to the ‘content’ and ‘visibility’ metrics. One of the main variables that help to analyse this issue is the loyalty of the user to the brand through ‘engagement’ (Cvijikj & Michahelles, 2013). The ‘amplification’ enables the evaluation of the propagation of posts published through the shares of the users, making it possible to understand network value (Remondes, 2016).

⁵ The data was extracted on February 22 and March 2, 2019.

⁶ Adapted from Huertas, Seto, & Miguez, 2014; Rodriguez, Rodriguez, & Martinez, 2015; Remondes, 2016.

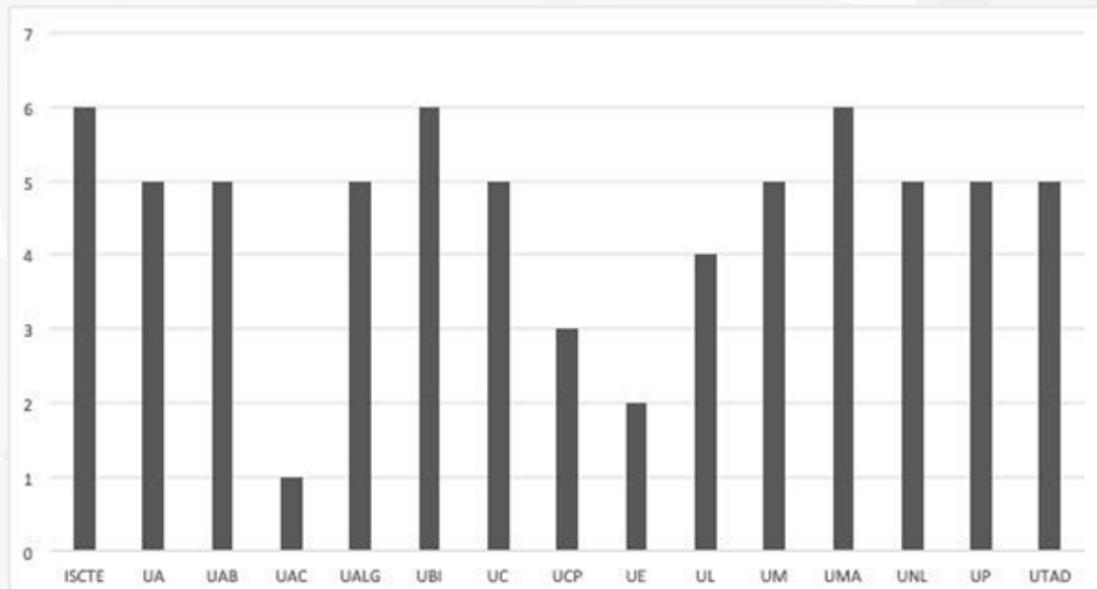
⁷ In this study, we considered all the likes, which means that this includes all reactions.

4. RESULTS

4.1. PRESENCE ON SOCIAL MEDIA AND SOCIAL NETWORKING SITES

The results show that 80% of HEI are in four or more social media and social networking sites (Figure 1).

Figure 1. Social media presence per HEI



Source: own elaboration

Facebook is the social networking site where all HEI are present, followed by YouTube ($n = 13$) and LinkedIn ($n = 12$), as shown in Table 1. Twitter and Instagram also have high levels of adoption.

The network value allows identifying the potential for interaction with a brand by a community (Remondes, 2016). Comparing the current number of students and followers in social network and social media sites, data shows that HEI with the highest network value are University Institute of Lisbon, University of Algarve, University of Aveiro, University of Coimbra, University of Porto, University of Madeira, University of Minho and University of Trás-os-Montes and Alto Douro.

As Table 1 demonstrates, the numbers of social networking sites Facebook and LinkedIn exponentially increase the value of the universities' network. The University of Coimbra and the University of Porto reveal a robust presence on the platforms where they are present if comparing followers and the current number of students.

The Open University and the Catholic University of Portugal have a significant potential to increase their network when comparing the numbers of current students and followers on Facebook and LinkedIn. The New University of Lisbon has a significant network on LinkedIn but does not follow the trend in networking platforms. The University of the Açores is only present on Facebook.

Table 1. Followers on social media

| | Students | Facebook | Instagram | LinkedIn | YouTube | Twitter | Google + | Flickr |
|-------|--------------|---------------|--------------|--------------|-------------|--------------|-----------|------------|
| 1 | 20077 | 21255 | --- | 57603 | 718 | 2563 | 625 | --- |
| UAB | 7000 | 131496 | --- | 11833 | 546 | 881 | 595 | --- |
| ISCTE | 8868 | 49455 | 4245 | 13699 | 883 | 3333 | --- | 253 |
| UAC | 2696 | 3183 | --- | --- | --- | --- | --- | --- |
| UALG | 9708 | 39888 | 4755 | 17546 | 1292 | 8298 | --- | --- |
| UA | 13675 | 86838 | 15400 | 54724 | 1327 | 11300 | --- | --- |
| UBI | 7262 | 52304 | 3832 | 17591 | 473 | 2921 | 498 | --- |
| UC | 23799 | 136149 | 22200 | 67717 | 5561 | 4686 | --- | --- |
| UCP | 14081 | 15873 | --- | 52103 | 178 | --- | --- | --- |
| UE | 6893 | 26511 | --- | --- | --- | 1022 | --- | --- |
| UL | 49769 | 39933 | 13800 | 64463 | 1347 | --- | --- | --- |
| UP | 29718 | 145528 | 28800 | 85408 | 4599 | 82700 | --- | --- |
| UMA | 3389 | 7446 | 1050 | 2038 | 107 | 1387 | 19 | --- |
| UM | 18600 | 87521 | 13600 | --- | 1401 | 1543 | --- | --- |
| UTAD | 6651 | 28317 | 2371 | 17157 | 649 | 474 | --- | --- |

Source: own elaboration

As Table 2 shows, when analysing the presence on LinkedIn considering the alumni, it is verified that almost all HEI that have a presence in this site of social network has a network superior to the old students. The exceptions are University of Algarve and University of Trás-os-Montes e Alto Douro.

The number of YouTube fans is reduced on all HEI. However, it appears that the number of views is much higher, which means that the presence on YouTube is very significant for all HEI. The institutions that stand out in this platform are University of Coimbra (983772 views versus 5561 followers), University of Porto (716161 views versus 4599 followers) and University of Algarve (558455 views versus 1292 followers).

Most institutions have fewer followers than posts on Twitter (ISCTE, UA, UBI, UC, UE, UM, UTAD). In the cases of the remaining HEI, their presence is consistent when compared to activity (posts) and visibility (followers).

Table 2. Presence on LinkedIn, YouTube, Twitter

| | LinkedIn | | YouTube | | Twitter | |
|-------|--------------|--------------|-------------|---------------|--------------|-------------|
| | Followers | Alumni | Followers | Views | Followers | Posts |
| UNL | 57603 | 38857 | 718 | 227369 | 2563 | 2337 |
| UAB | 11833 | 6957 | 546 | --- | 881 | 1718 |
| ISCTE | 13699 | N/A | 883 | 221020 | 3333 | 3575 |
| UAC | --- | ... | --- | --- | --- | --- |
| UALG | 17546 | 23270 | 1292 | 558455 | 8298 | 9810 |
| UA | 54724 | 32750 | 1327 | 201833 | 11300 | 7494 |
| UBI | 17591 | 14540 | 473 | 67045 | 2921 | 3381 |
| UC | 67717 | 51391 | 5561 | 983772 | 4686 | 6728 |
| UCP | 52103 | 42337 | 178 | 28128 | --- | --- |
| UE | --- | --- | --- | --- | 1022 | 3452 |
| UL | 64463 | 39322 | 1347 | 174956 | --- | --- |
| UP | 85408 | 39028 | 4599 | 716161 | 82700 | 8626 |
| UMA | 2038 | N/A | 107 | 22440 | 1387 | 4070 |
| UM | --- | --- | 1401 | 177200 | 1543 | 1044 |
| UTAD | 17157 | 13881 | 649 | 198228 | 474 | 5969 |

Source: own elaboration

4.2. PORTUGUESE UNIVERSITIES ON FACEBOOK

Content

The indicators for measuring the 'content' metric are activity and content format. The activity is analysed from the frequency of posting and content format during the period of analysis (182 days). As shown in Table 3, nine of the analysed universities have an average of more than one post per day. ISCTE and UAC stand out with a low average publication (0,32 and 0,36, respectively).

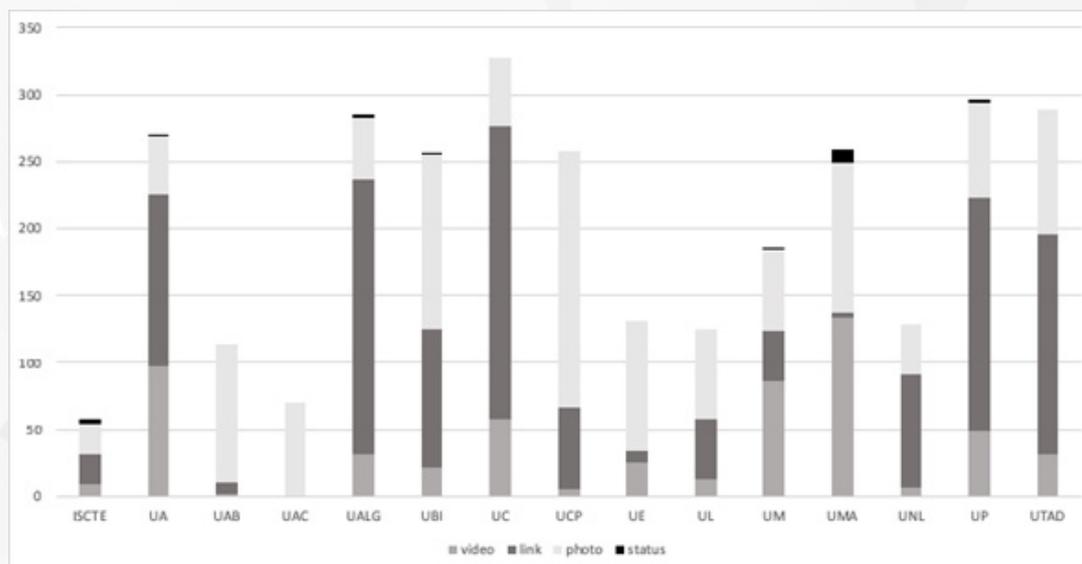
Table 3. Publication frequency

| | UNL | UAB | ISCTE | UAC | UALG | UA | UBI | UC | UCP | UE | UL | UP | UMA | UM | UTAD |
|------|-----|------|-------|------|-------------|-------------|-------------|------------|-------------|------|------|-------------|-------------|-------------|-------------|
| N | 128 | 114 | 58 | 65 | 285 | 270 | 256 | 328 | 258 | 131 | 125 | 296 | 259 | 186 | 289 |
| Avg. | 0,7 | 0,63 | 0,32 | 0,36 | 1,57 | 1,48 | 1,41 | 1,8 | 1,42 | 0,72 | 0,69 | 1,63 | 1,42 | 1,02 | 1,59 |

Source: own elaboration

As Figure 2 shows, posts with links (41.46%) and photos (39.14%) are the most common formats. 18.7% of the posts have videos. The status publication is residual. It is verified that the photos and videos represent 57.84% of the posts. It is important to emphasise the relevance of the posts with images (static or dynamic) since it generally does not require a significant investment of time and effort. Therefore, the visibility of the image is more significant, as well as the interactivity generated (Cárcamo Ulloa & Marcos, 2014).

Figure 2. Publication frequency by format



Source: own elaboration

Visibility

The number of fans on Facebook pages allows understanding the visibility beyond their offline community. Larger⁸ universities, like UP (roughly 30000 students) and UC (nearly 24000), tend to have more fans. However, UL (with nearly 50000) has a number of fans considerably smaller when compared to universities. UALG has less than 10000 students. Insular institutions that have fewer students (UMA has less than 4000 and UAC less than 3000) also have fewer fans (Table 4).

⁸ Considering the number of students currently enrolled.

Table 4. Number of page likes (fans)

| | Students enrolled | Facebook fans |
|-------|-------------------|---------------|
| UNL | 20077 | 21255 |
| UAB | 7000 | 131496 |
| ISCTE | 8868 | 49455 |
| UAC | 2696 | 3183 |
| UALG | 9708 | 39888 |
| UA | 13675 | 86838 |
| UBI | 7262 | 52304 |
| UC | 23799 | 136149 |
| UCP | 14081 | 15873 |
| UE | 6893 | 26511 |
| UL | 49769 | 39933 |
| UP | 29718 | 145528 |
| UMA | 3389 | 7446 |
| UM | 18600 | 87521 |
| UTAD | 6651 | 28317 |

Source: own elaboration

The number of fans on Facebook pages allows understanding the visibility beyond their offline community. The measure of 'applause' (Table 5) shows, despite some variations, that HEI with fewer fans has lower results. UAB, the highest-ranked HEI for applause, has nearly ten times the result of the second HEI. As Table 5 shows, Facebook pages with more posts published do not correspond to a high 'applause' level. Only four universities have a high level of applause: UAB (1595,32), UBI (106,51), UMA (189,8) and UP (166,21). The gaps between other positions are not impressive.

Table 5. Applause measure

| | Posts (N) | Likes and Comments average |
|-------|------------|----------------------------|
| UNL | 128 | 19,7 |
| UAB | 114 | 1595,3 |
| ISCTE | 58 | 52,4 |
| UAC | 65 | 35,6 |
| UALG | 285 | 32,5 |
| UA | 270 | 106,5 |
| UBI | 256 | 63,7 |
| UC | 328 | 74,3 |
| UCP | 258 | 7,6 |
| UE | 131 | 40,9 |
| UL | 125 | 38,2 |
| UP | 296 | 189,9 |
| UMA | 259 | 7,3 |
| UM | 186 | 166,3 |
| UTAD | 289 | 21 |

Source: own elaboration

Interactivity

The evaluation of public engagement with published content translates to conversion (Remondes, 2016). The engagement results from interactions (likes, comments and shares) divided by the total number of fans, multiplied by 100 (Remondes, 2016). The assessment of the level of engagement (Table 6) shows smaller universities with good results, like UAC and UAB, and larger HEI with lower scores, like UC and UL.

Table 6. Engagement level

| | Engagement | Fans | Posts (N) |
|-------|-------------|--------------|-----------|
| UNL | 16% | 21255 | 128 |
| UAB | 140% | 131496 | 114 |
| ISCTE | 8% | 49455 | 58 |
| UAC | 110% | 3183 | 70 |
| UALG | 38% | 39888 | 285 |
| UA | 48% | 86838 | 270 |
| UBI | 42% | 52304 | 256 |
| UC | 25% | 136149 | 328 |
| UCP | 15% | 15873 | 258 |
| UE | 28% | 26511 | 131 |
| UL | 16% | 39933 | 125 |
| UP | 49% | 145528 | 296 |
| UMA | 36% | 7446 | 259 |
| UM | 45% | 87521 | 186 |
| UTAD | 31% | 28317 | 289 |

Source: own elaboration

Amplification

The 'amplification' allows evaluating the propagation of published posts through the shares of the users. As shown in Table 7, Facebook pages with more posts generate greater 'amplification' (UA, UC, UP). It should be noted that UALG, UC and UP have average levels of 'amplification', given that they have a high frequency of publication. It is also worth noting that UTAD has a low level of 'amplification' when compared to the frequency of publication.

Table 7. Shares average

| | Posts (<i>N</i>) | Shares (<i>n</i>) | Shares (avg.) |
|-------|--------------------|---------------------|---------------|
| ISCTE | 58 | 711 | 3,95 |
| UA | 270 | 1731 | 9,45 |
| UAB | 114 | 753 | 4,30 |
| UAC | 65 | 325 | 1,77 |
| UALG | 285 | 4875 | 26,63 |
| UBI | 256 | 10699 | 58,46 |
| UC | 328 | 4643 | 25,65 |
| UCP | 258 | 7704 | 42,32 |
| UE | 131 | 314 | 1,75 |
| UL | 125 | 1677 | 9,26 |
| UM | 186 | 1162 | 6,38 |
| UMA | 259 | 8736 | 47,73 |
| UNL | 128 | 668 | 3,67 |
| UP | 296 | 5845 | 31,93 |
| UTAD | 289 | 2345 | 12,88 |

Source: own elaboration

HEI that have a publishing frequency of less than one post per day are also the ones that have the most considerable difficulty in propagating messages. Furthermore, pages with the highest levels of 'amplification' are those that also have the highest capacity to enhance the value of the network through the users.

5. DISCUSSION AND CONCLUSIONS

Despite the interest that brands have on how to engage younger audiences through social media, there is still a number of gaps on this topic (Cartagena, 2017). This paper aimed to analyse the presence and dynamics of the use of digital tools for institutional communication and branding of Portuguese HEI, in order to answer the research question: How do HEI use Facebook for institutional communication and digital branding?

This study shows the centrality of Facebook in the communication strategies of HEI. The number of followers on Facebook and LinkedIn substantially increases network value. The results allow

concluding that universities with fewer students can create network value through Facebook and LinkedIn as long as they have a high publication frequency.

A consistent presence in the different platforms enables increasing visibility of the brand. However, presence on all platforms is not synonymous with visibility. The results suggest that presence needs to be consistent with activity so that there can be higher visibility.

Concerning content, the frequency of publication suggests that higher activity is related to higher visibility of the brand. The most common publications have images (posts with photos and videos = 57.84%), following studies that demonstrate that the image mobilises more interactivity and generates more visibility.

HEI with more visibility can be those with a number of fans consistent with the level of 'applause'. However, not all HEI with higher activity have more fans or 'applause'. The 'visibility' metric must also be evaluated in a way that is interconnected with interactivity and activity. Therefore, the HEI with higher visibility is the University of Beira Interior (activity = 256 posts [1,41 per day]; fans = 52304; 'applause' = 63,7; engagement = 42%; 'amplification' = 58,46). Despite not having the highest scores, this institution is the most consistent in the indicators' activity, fans, 'applause', engagement and 'amplification'. The most interesting aspect about this result is that the university has a small dimension concerning the number of students (N = 7262).

The results show that universities promote their brand through an intense activity of publication on Facebook. However, when these data are confronted with the propagation of the message, only three HEI have high levels of 'amplification' (UBI = 63.7, UMA = 47.73, UCP = 42.32). With regard to brand engagement, four HEI achieve good scores: UA = 48%, UP = 49%, UM = 45%, UBI = 42%. It should be noted that only UBI is a smaller university. There are also two HEI with high levels of engagement (UAB = 140%, UAC = 110%) that do not correspond to any other indicator, which may suggest that the results are not organic.

The HEI from this study use Facebook for institutional communication and digital branding primarily through the activity, which does not demonstrate consistency in 'visibility' and 'interactivity' metrics. Most institutions with larger dimensions also have greater activity, 'applause' and engagement. However, they fail to achieve good levels of 'amplification' of the message. Moreover, the institutions with fewer students are those that can achieve consistency in all metrics, showing greater visibility and engagement in their institutional communication and high amplification of the brand.

The main limitations of this study are related to quantitative analysis. In future studies, it will be interesting to analyse the posts through qualitative content analysis and to evaluate visibility and interactivity by content format. However, despite these limitations, our study can have implications for management by emphasizing the importance of having a consistent presence on social media rather than merely investing in publication frequency.

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