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Benchmarking analysis of social media strategies in the Higher Education Sector

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Abstract

The adoption of social media networks by organizations has been increasing, mainly by using more social networks but also by constantly increasing on the number of messages and received comments posted on these channels. Interestingly, this process apparently has not been accompanied by a carefully planned and strategically design process to provide the essential alignment with organizational goals. This study is framed in the tertiary sector, the Higher Education Sector (HES), which despite its peculiarities, is no exception to the above limitations, and is facing an increased competitive environment.

In this paper we present a sector benchmarking process, and the respective analysis, to provide insights on the sector's tendency, as well as a threefold classification of the sector's social media strategies being pursued. The analysis builds upon a regulatory communication framework and respective editorial model. We describe the results of our automatic text-mining and categorization information system, specifically developed to address and analyze the seven categories of HES' social media messages.

Our results show that social media strategies have been focusing essentially on mediatization and building/maintaining the organizational image/reputation as well as on advertising educational services, but completely neglecting the dialogical dimension intrinsically linked to social media environments.

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1. Introduction

The undeniable growth of social media environments has been introducing profound changes in society and in the communication management landscape. Though social media impacts are still subject of research in a wide variety of fields, in what organizations are concerned, two main aspects are consistently revealed throughout literature: the new empowered role of millions of social media users, co-creators, active voices and active influencers, which organizations fail to understand and engage with, and the fact that organizations are still “reluctant or unable to develop strategies and allocate resources to engage effectively”¹ in these environments, thus ignoring or mismanaging “the opportunities and challenges presented by creative consumers” and by social networks in general.

In fact, organizations are rushing into social media networks following the worldwide trend to create a social presence in multiple channels, reaching for and aiming at mediatization², without previously defining a clear strategic approach, which should, for instance, be built upon clear insights on their target audience and an editorial plan/calendar, that can foster the achievement of the overall business objectives. Nevertheless, when adopting social media, organizations are, in fact, allocating time, effort, skills, human resources and technology³ and this raises the constant need to measure the return on these investments (ROI) and legitimize them in the context of organizational development.

However, how can organizations attempt to measure the efficiency and return on investments on a social media approach that has not been strategically designed/aligned and is a set of unarticulated processes and situational messages? The lack of a clear social media strategy is posing real challenges for companies trying to measure their social media communication intervention/efforts and the ROI allocated to these environments, so two other questions need to be answered: what is it that the organization wants to accomplish on social networks (setting goals) and will those goals be able to foster the organizations overall performance and mission (determining efficiency)?

In order to answer these questions it is necessary to understand, as Lardi⁴ states, that there is a fundamental difference between a social media strategy and a marketing social media strategy, in terms of overall business achievement. While a marketing strategy focuses mainly in targeting customers and promoting brands, products or services, a social media strategy is framed in a holistic managerial perspective, revealing and boosting the organizational goals in a set of pre-identified business valuable areas.

On top of the absence of a strategic alignment between social media approaches and organizational goals/performance, organizations are also lacking continuous monitoring supported on well sustained benchmarking processes. Assessing their own performance on social media against competitors in the most relevant business areas is a key priority for organizations aiming at turning social networks into true business assets. The social media analytics provided by the thousands of free or paid web based applications are able to provide some interesting and valuable insights, but fail to support a relevant and insightful benchmarking process, namely because they lack the strategic benchmark assessment.

As a result, on the first section of this paper we propose a social media regulatory communication framework, aimed at supporting the strategic communication management within organizations, as well as an editorial model in which we have included the most relevant editorial areas for Higher Education Institutions (HEI), which are the focus of our study. We also present a persistent motorization and a well suited benchmarking methodology, built upon the editorial areas which we believe to retain the most potential to foster the organizational performance of HEI. On the following sections of this paper we provide the current HEIs’ social media adoption rates, followed by a sector benchmark analysis where we explain the text-mining and categorization methodology that allowed us to reveal the current sector’s investments’ allocation in editorial areas and a three-fold overall classification of social media approaches being pursued by HEI.

2. A social media regulatory communication framework for HEI

The previous definition of social media strategy is of particular relevance to the alignment of a consistent communication strategy, in pursuing public tertiary education sector’s organizational goals. Having stated the social media marketing strategy would lead to a narrower focus on transactional objectives, it is important to understand the utter relevance this orientation plays in the context of public educational service providers. Although government

subsidized, public HEIs can't be treated as non-profit organizations, nor can they be understood as typical tertiary sector service providers.

The HES has been, in fact, becoming a global competitive environment, where the decreasing number of student enrolments and reduced budgets, due to a decreasing government support, drive these organizations to seek for additional financial funding, in order to ensure their survival and competitive potential.

Also, HEI's role in society is much broader in terms of Corporate Social Responsibility (CSR) compared to traditional tertiary service providers, where customer satisfaction depends mainly on the organization's performance towards the customer and on the quality of the purchased service. In fact, the quality of the educational service depends on a whole different diversity of factors such as: faculty members' expertise and pedagogical competence, quality of the facilities, student commitment, involvement and motivation, and proneness to innovation, research and technology investment and transfer, citizenship and societal intervention, orientation towards employability and student market placement, among others.

According to this conception, HEIs' social media strategies are lacking research and must be aimed at a great diversity of stakeholders' expectations and built upon their service distinctiveness, their societal expected intervention and the corresponding external pressure.

In our perspective, the concept of social media strategy proposed by Lardi⁴, needs to be aligned with and framed in the holistic organizational communication management model proposed by Kunsch⁵. According to Moss and DeSanto⁶ a "well-articulated communication strategy should provide a clear indication of the overall direction, purpose and intended outcome" of the communication function, expressed "in terms of a unifying big idea that will run through and help integrate all communication activities", and like all other functional strategies, it needs to be aligned with and to support the higher organizational strategic management, as proposed in Fig. 1.

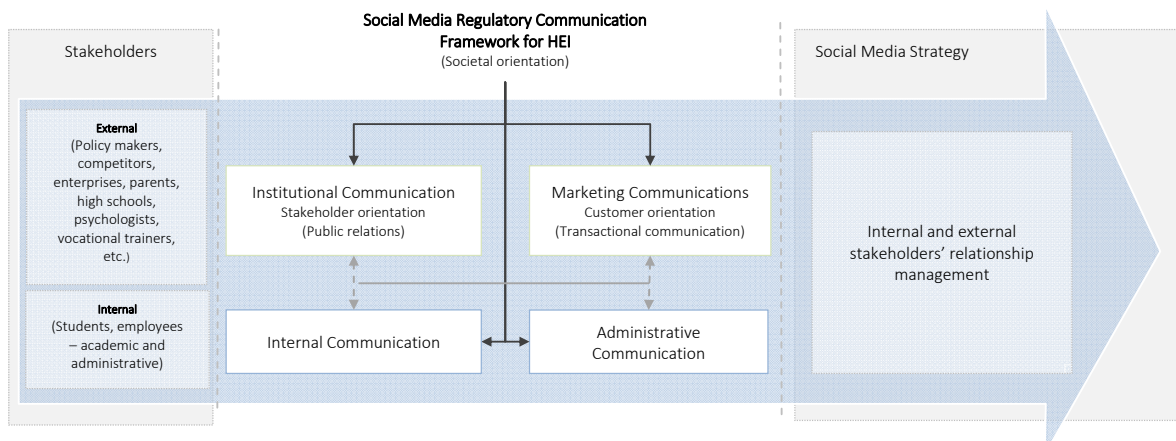


Fig. 1 Proposed Social Media Regulatory Communication Framework for HEI

The inclusion of the most relevant HEI stakeholders and the incorporation of all the communication dimensions in a convergence philosophy, allows for synergistic exchanges between the different organizational communication areas: institutional, transactional, internal and administrative communication, used to approach all stakeholders needs and expectations towards HEI, which can be extended into social media, according to the goals the organization wishes to accomplish.

2.1. An editorial model for the design of social media strategies for HEI

The design of a social media strategy should be built upon the following set of guiding principles: the HEI's mission towards society and the great diversity of organizational stakeholders; the specifics of the educational service; a multi-channel wide holistic approach to communication management; the need to balance between

organizations' institutional and transactional needs in order to ensure their competitiveness and financial survival; and the dialogical nature that is intrinsically linked to social media environments.

In order to address these principles, we designed an editorial model, which include the seven main editorial areas that we believe to have higher impact on organizational performance, as shown in Table 1. Therefore, the design of a social media strategy should be as balanced as possible, though aimed at the specific publics of each of the social media networks the organization chooses to engage in.

Table 1: Proposed editorial model for the design of social media strategies for HEI

Education	Research	Society	Identity	Administration	Relationship	Information
- Promotes higher education courses (educational offer) - Promotes complementary training (internal or external)	- Informs on and / or calls for participation in: congresses, seminars and other scientific meetings - Promotes / informs on internal and external research results / awards - Promotes / informs on internal and external publications (papers, articles, books, proceedings, etc.)	- Promotes / informs on organizational partnerships and contracts and patents, knowledge / technology transfer - Promotes employability, streaming placement offers and career opportunities - Promotes other organizations' initiatives / performance - Promotes demonstrations, exhibitions and showcases, conducted by students or faculty	- Institutional events (celebrations, awards and tributes, graduation ceremonies, etc.) - Students, faculty and staff honorable mentions - Institutional promotion, advertising (identity, image, reputation) - CSR initiatives - Institutional clipping - Participation / representation in fairs and exhibitions	- Informs on deadlines and administrative processes - Informs on procedures and admissions - Promotes and informs on support services (goals, contacts, working hours, etc.)	- Fosters conversation - Requires opinions - Introduces current internal, external, societal or academic issues propelling audience involvement - Boosts emotional connection between organization and publics (greetings, humor, sympathy, motivation, etc.)	- Streams external relevant information, news and regulations related to academic areas, political and societal issues (economic and social impact) - Informs on recreational and cultural initiatives with no particular connection to schools' scientific areas (concerts, sports events, etc.)

It is not our intent to discuss the role of the social media manager in this paper, though it is relevant to highlight that this function has been assigned either to marketing or to public relations (PR) professionals⁷, sometimes referring to disruptions between these communication areas and failures on attempts to implement an integrated organizational communication approach. Within the proposed framework, we adopt Cornelissen⁸ partial overlapping view of the marketing and PR functions, according to which either through marketing techniques (mainly advertising) and/or PR techniques, the main goal is to create and maintain a favorable image of the organization and of the services provided, ensuring its survival and the accomplishment of the overall organizational goals.

3. Research scope: agents and social media channels

Research was conducted on the total population of Higher Polytechnic Portuguese Education Institutions (HPPEI), using a quantitative methodology. The full list of institutions was retrieved from the DGES – Direção Geral de Ensino Superior (General Higher Educational Management service) website. A total of 137 agents was initially considered, which included polytechnic schools integrated into polytechnic institutes and polytechnic schools integrated into universities. The number of agents was then reduced to 94 in order to include only the schools providing educational services, disregarding the polytechnic institutes and universities (managing entities).

The scope definition also included the measurement of HPPEI's social media networks adoption rates, in order to include the most relevant channels, and only those that had been in use at least since the 1st of September 2013, with the intent of extending the analysis to a full school year. In order to support the research in reliable sources, the study considered only the social media websites mentioned on the HPPEI's official websites. This method aimed to ensure that the social media websites under analysis were actually managed by the HPPEI, instead of other internal or external stakeholders, such as students, employees (administrative or faculty) or alumni on their own. According to this criteria, 43 agents were included in the study and Facebook proved to be the most representative social media website, with an adoption rate of 64%, as illustrated in Fig 2.

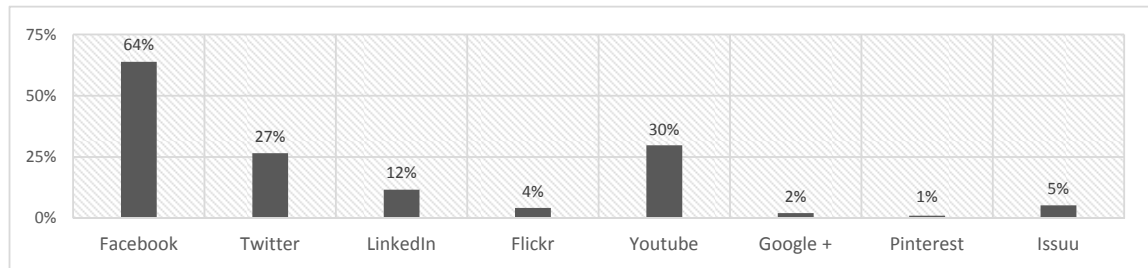


Fig. 2: HEI social media adoption rates

In Fig. 2 also it is also possible to observe the total diversity of social media tools used by HPPEI. After analyzing each one of these channels it was possible to verify that, though 30% of the agents have Youtube accounts, they are mostly used for video storage and publication, but not for interaction with users. The same applies to Issuu, Pinterest and Flickr. Twitter accounts register very low levels of tweets, most of which include the exact same content that is publish on Facebook pages, which leads us to conclude that this network is either still in early adoption stages or its potential is still being assessed by HEI.

4. Retrieval and categorization of messages

The following stage consisted of retrieving and classifying all messages posted by HPPEI on Facebook. We used two methods: an in-house made system, specially built for the purpose using the available Facebook API and third-party software for collecting information from Social Networks. From an initial list of the relevant agent Page Id's, the two systems accessed the posts retrieving the following fields: *PostId*, *Message*, *Link*, *Name*, *Description*, *Caption*, *#Likes*, *#Comments* and *#Shares*. The two systems retrieved the same number of posts (15.409), during the entire school year, consolidating the confidence about the returning set.

Our next step was to perform the classification of the 15.409 posts according to our editorial model, listed in Table 1. Clearly, this was a far too heavy endeavor to be made by hand. Therefore, we applied automatic classification techniques to the posts. Although several text classifiers have been proposed over the last decades, nowadays this is again a very hot research area due to the special properties of text posted in social networks (e.g. very short texts, abundance of smileys, inclusion of links, many punctuation signs, etc.). These special characteristics make text classification, again, a very difficult task. Nevertheless, research has been incorporating these new features and creating consistently better classification models, especially for classification under supervised training.

For this step we decided to use six of the most promising, and prominent, classifiers: Support Vector Machines, Random Forests, LogiBoost, K-Nearest Neighbours, MultiLayer Perceptrons and Deep Neural Networks. First, we presented to classifiers a set of 350 manually classified posts, for training, and then computed the respective accuracy of the automatic classification. The result of using a 10-fold cross-validation proved the techniques achieve results above the 68% of accuracy. As a second step, we gave the classifiers a bigger set of 512 manually classified posts for retraining, and recomputed the new accuracy. As the accuracy of the classification only improved 3%, on average, for the 6 techniques, we didn't feel in the need to classify more posts manually.

We then run the whole set of 15.409 posts on our 6 trained classifiers to obtain predicted category for each post, by each technique. Finally, we used the mode of these six techniques as the final result, i.e., we used the prevailing category of the six-set as the final predictive category.

5. HPPEI sector benchmark analysis

The previous classification allowed us to obtain a firm insight of the proposed editorial areas in which HPPEI have been investing, in relation to each agent's total communication effort (i.e., total number of Facebook messages). This classification also allows us to perform a sector analysis, based on benchmarking methods⁹, as one of the most efficient ways to determine what is the sector tendency and to identify potential best practices and/or low performance, providing helpful understandings for adjusting/improving an organization's social media strategy.

In this analysis we focus on revealing the sector tendency in terms of prevailing editorial areas (Fig. 3) and the overall classification of the social media strategies in three main types – centralized, decentralized and hybrid. Examples of decentralized strategies are shown in Fig 3, as being the type of strategy mainly identified in the sector.

The sector tendency analysis reveals that HPPEI invest heavily on communicating their identity, in order to create and manage a positive internal and external image (Fig. 3). In fact, this is particularly relevant in the HES. The projection of the organizational identity is key to maintain and protect a strong reputation, particularly for organizations dealing with different expectations and demands from stakeholders, since it determines its distinctiveness. HPPEI's (and HEI in general) reputation is one of the main factors impacting students' and parents' choice of the educational service provider, being able to provide HEI with a "first-choice" status⁸. The organizational reputation also serves as an indicator for the underlying quality of the services provided and of its performance, thus being extremely relevant for the development of (commercial and institutional) partnerships' and to the extension of its societal intervention.

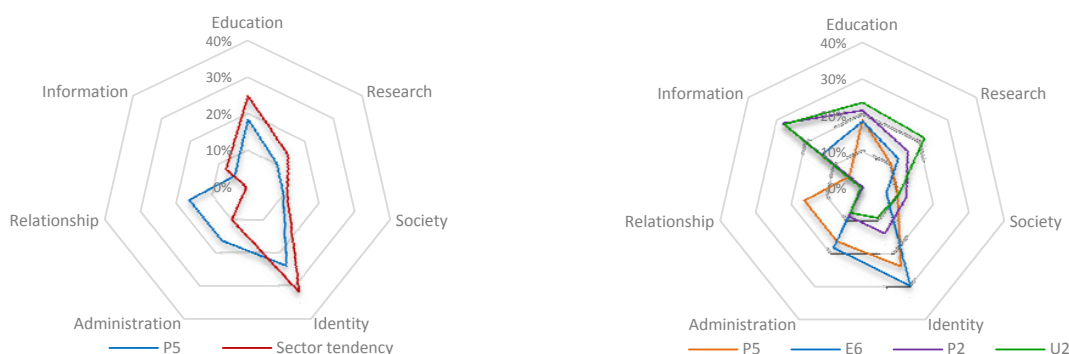


Fig. 3. (a) sector tendency; (b) decentralized strategies

The second most relevant editorial area in HPPEI's social media strategies is "Education", which consists on advertising and providing information on the educational service: higher education courses and complementary training (internal or external). Whilst "Identity" serves the institutional dimension of organizational communication, "Education" serves the transactional needs supported by the marketing communications dimension. This area is intimately connected to the organization's instrumental survival (profit), since no HEI can survive without students enrolling their courses.

Communication related to "Research", "Society", "Information" and "Administration" is not as relevant as "Identity" and "Education" in the overall social media strategies being implemented. This may be an indicator of the, previously identified, growing competitive environment these organizations have been facing, leading them to focus mainly on reputation management and ensuring economic survival. For their implicit contribution to the construction of a broader reputation, communication focused on "Research" and "Society" appears to be an opportunity to invest in, since it may help organizations to increase their direct intervention in industry, fostering entrepreneurship and generating profit.

However, it is the dialogical communication focused on the building of relationships that appears completely neglected in the sector. Since two-way symmetrical communication and dialogue are one of the most popular promises of social media environments, we believe that either HPPEI are failing in taking advantage of its full potential or, in fact, these environments are failing to fulfill these promises, as Kent¹⁰ refers. Cultural issues, lack of technological and/or communication competencies, unavailable human resources or teams dedicated to social media management could also represent some of the reasons for this failure.

Among the 43 agents considered in the study, only one of the agents (P5) has been investing in the development of relationships with stakeholders, as show in Fig. 3. Though generically pursuing the sector tendency in the most representative areas of focus (“Identity” and “Education”), agent P5’s investments in “Relationship” and “Administration” communication reveals a social media strategy that includes the satisfaction of broader range of stakeholder expectations, particularly in that of high relevance in these environments. For this reason, it would be relevant to monitor this agent, examining engagement strategies and withdrawing good practices.

5.1. Classification of social media strategies

Analyzing the highest and lowest standard deviations among each agents’ focus areas allowed us to identify the 3 main types of strategies being pursued in social media, as illustrated in Figs. 3 and 4:

- Decentralized strategies (Fig. 3-b) focus on several editorial areas with approximate amounts of investment in each one, presenting lower standard deviations.
- Centralized strategies present higher standard deviations, revealing investments in one or two editorial areas, neglecting all the remaining ones (Fig. 4-a);
- Hybrid strategies invest disproportionally in more than one editorial area, with very high investments in two or three areas and low investments in the remaining ones, as illustrated in Fig. 4-a.

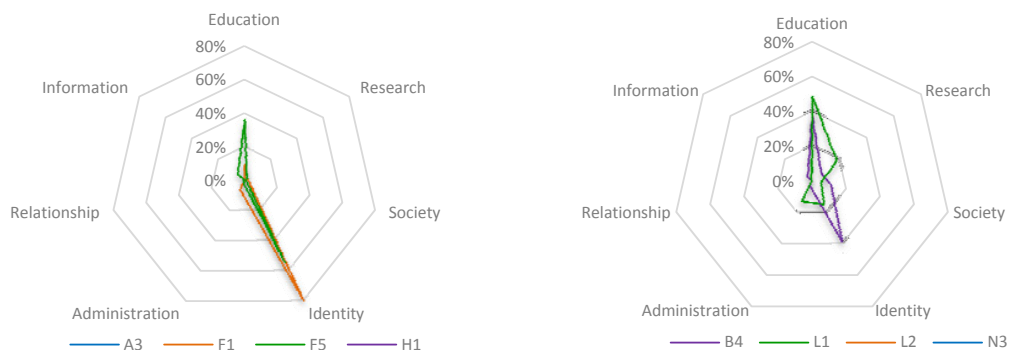


Fig. 4. (a) centralized strategies; (b) hybrid strategies

This classification is not aimed at determining which type of social media strategy best suits HPPEI as a one-size-fits-all solution. We do not aim at such a narrow understanding. In fact, it wouldn’t be totally accurate to state that decentralized strategies would result in more efficient social media strategies, though the need to address a broad range of stakeholder’s expectations would lead us to believe that this is the approach with the most potential. We must not neglect that, ultimately, the social media strategy needs to be aligned with the overall organizational goals, which should also serve as an efficiency measurement indicator. Therefore, the hybrid strategies disproportional communication investments may, in fact, reveal diversified balances of fundamental sets of areas of focus being pursued in social media, providing valuable insights.

According to this perspective, centralized social media strategies could denote that, either these agents have assigned a very narrow and specific objective to their strategy (which is, hopefully, integrated into an overall communication strategy), or they are still unable to perceive the existence of other possible editorial areas, stakeholders expectations and/or social media networks functions/potential.

In any case, it is possible to withdraw examples and good practice among the editorial areas, even from agents pursuing centralized strategies. For instance, agent A3 (Fig. 4-a) focuses only on “Society”. Monitoring this agent could be relevant for agents presenting communication deficits in this area and aiming at improving it. This is to say that a sector benchmarking analysis and corresponding withdrawal of comparison outputs and good practice needs to be built upon a previous assessment of each HEI current social media approach, in order to identify possible weakness and strengths to be corrected/fostered.

6. Conclusions

In this paper we presented both a regulatory communication framework for the design and management of HPPEI’s social media strategies and a methodology that allowed to obtain clear insights on the sector’s social media usage rates, prevailing editorial areas and types of social media strategies being pursued.

The HPPEI sector benchmark analysis revealed a high deficit of investment in two-way symmetrical communication and dialogue with organizational stakeholders, failing the largely announced essence of social media environments. This leads us to believe that these organizations are mainly aiming at mediatization but failing in mediation, since major communication investments rely on creating and managing organizational image and reputation, as well as in advertising higher education courses (“Identity” and “Education” areas).

The sector analysis also allowed us to identify three main types of strategies being pursued, shedding lights on different social media overall approaches and facilitating the identification of monitoring agents which can provide valuable insights and good practices for other agents.

However, the measurement of the efficiency of these three different approaches is deeply supported by the specific goals of the strategically designed social media strategy (that we don’t believe to exist) and by the corresponding stakeholders’ response rate to social media messages. In fact, the levels of responsiveness could be further incorporated into the methodology as an indicator for the relevance of each strategy and type of strategies’ efficiency.

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