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A MODEL FOR THE PORTUGUESE ONLINE RETAILERS ADOPTION OF WEB2.0 TOOLS

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Abstract

The Internet has become a major sales platform, assuming a growing importance in increasing the economic growth of a company. Therefore it is of great importance to analyse the incorporation of Web 2.0 tools and their relation to the website success and its design.

Through a systematic exploration of the 36 most visited Portuguese e-commerce websites, according to the ranking published by Marktest, information was gathered about the adoption of Web 2.0 tools by these online retailers.

Results indicate that the most frequently implemented tools are social networking, Rich Internet Application (RIA), mashups and Really Simple Syndication (RSS feeds). The least often adopted were semantic search, wikis and blogs. Based on these results and those in additional studies, an optimized model of Web 2.0 tools implementation is proposed for online retailers operating in Portugal. In the short term, it is suggested that the retailer should implement easier features which bring quicker success in terms of return on investments, such as social networking, mashups, RSS feeds and tagging, each one of which leads to a specific business benefit. In the medium-to-long term, it is suggested that retailers should adopt RIA-based features and podcasts/vodcasts. The adoption of these Web tools must be based on a complete and differentiated set tools.

Keywords: Web2.0; Design; Portuguese retail; e-commerce.

1 INTRODUCTION

At the beginning of the e-commerce period, the opportunity to *buy online* was innovative for customers and gave companies an advantage over competitors; currently, the number of companies and brands investing in a model of online sales, with the goal of increasing sales and ensuring customer loyalty and satisfaction, has grown exponentially (Constantinides et al., 2009).

The real competitive pressure experienced throughout the world has led companies to focus more on clients in the search for competitive advantage (Lynn, 2005). For this reason, companies count on the aid of new technologies like Web 2.0 tools (W2.0), which have enabled easier and faster communication between retailer and customer, changing the way they relate to each other. With these new technologies, the speed of business has dramatically increased (Dickie and Trailer, 2007), as well as the stimulus for the creation of new products. In addition, a large proportion of the tools can be adopted free of charge or at relatively low prices for the company (Levy, 2007).

One important question is if the Portuguese retail e-commerce websites are or not being successful, and how to improve their success, and this study aims at providing answers for that through the explaining:

- what are the W2.0 tools adopted by most online retailers (ORs) operating in Portugal;
- differences between online exclusive retailers (OERs) and nonexclusive online retailers (NORs) on the adoption of W2.0 tools;
- features provided by the ORs to present their products and adjust their websites to new technologies like mobile phones and tablets.

It is the purpose of this research to explore several concepts around the term W2.0, showing some of the most important tools, and realizing its importance as a source of competitive advantage for the OR. Based on the information collected, supplemented with studies of Infosys (Jain and Ganesh, 2007a) and Mazurek (2009), comes the final objective of building an adoption model of W2.0 tools, optimized for the ORs that wish to operate in Portugal.

2 LITERATURE REVIEW

2.1 Web 2.0 and Web 2.0 tools

W2.0 has evolved from W1.0 in a way that in place of a "traditional centralized platform" (Kim, 2009) in which the "transmission of content on the site was one-way" (Chen, 2009) comes a "decentralized platform" (Kim, 2009), W2.0, where the interaction is "bidirectional" (Chen, 2009), proposing greater participation and trust in the content by users and richer user interfaces.

In order to be called a W2.0 tool, the application must, in addition to other features, "promote the active participation of users", "be a service of continued development" (Levy, 2007), present specific technologies that enable interaction between users, have an attractive layout, according to the type of user, and enable the creation of content by the user in various formats (text, photos or videos) (Cormode and Krishnamurthy, 2008).

The adoption of features of W2.0 can provide organizations with important advantages, including most importantly "the right to get faster to a new market or target audience", reduction of investment risks, "the possibility of more dynamic interaction with customers", "access to real-time data to facilitate decision making", "increased responsiveness to the customer" (Musser and O'Reilly, 2006), "improving internal and external communication by the company" (Mazurek, 2009), and access to a new advertising model that explores the content present on the Internet for commercial purposes (Clarke, 2008).

In this way, W2.0 has great potential in business innovation increasing a company's orientation to the market, to customer concerns and to development of products/services (Nath, 2010), and consumers see a strengthening of their role with the retailers desire to gather and promote their opinions through the sharing and publishing of contents (Urban, 2003).

The W2.0 tools have had an important impact on the relationship between customer and retailer, providing facilities to the user for smarter, more discerning and faster purchasing, for sharing their views about the product and for making suggestions.

Although most companies use at least one W2.0 tool in their business (Levy, 2007), there are relatively few that presented a strategic approach of implementing these tools; to Lynch (2007) the main reason is the difficulty of companies in understanding the business value of W2.0 tools. However, according to the study by McKinsey (2007), 61 per cent of companies interviewed about W2.0 applications were satisfied or very satisfied with the return on the investment made in this area.

Of the various W2.0 tools available, the following stand out in this study: RIA (Rich Internet Applications); Semantic Search; Live Agent Chat; Blog; Wiki; Tagging; Social Bookmarking; Podcast/ Vodcast; RSS feeds; Mashup; Social Networks.

2.2 Online retailers and Web 2.0

With W2.0 comes a new sales model, "sales 2.0". This is "characterized by the use of innovative practices based on the concept W2.0" with the objective of improving corporate results and thus creating value for the buyer and the seller (Holloway, 2010). For business it becomes "a practical resource that provides essential tools to compete and prosper in the world of emerging business" (Musser and O'Reilly, 2006) and a stimulus to the creation of new business models and new opportunities to differentiate companies from their competitors (O'Reilly, 2007).

The interaction between consumer and retailer has developed with the rising of W2.0, the consumer became an important business partner (Brojeni, 2008), making a contribution in the creation of new products and in the improvement of existing ones (Musser and O'Reilly, 2006).

However, according to research by Mazurek (2009), their implementation of W2.0 tools exposes companies to various risks, such as loss of control over communication with the customers, increasing their negotiating power, and the exposure of valuable information to competitors (Parise and Guinan, 2008). These risks have made organizations reluctant to implement these tools.

The existing studies are not in agreement concerning the W2.0 tools most widely adopted by companies: in the study by Mazurek (2009) the most widely adopted are the RSS feeds and tagging; on the other hand, for Reid and Gray (2008) the most widely adopted are the RSS, blogs and wikis.

There are three different formats that the OR can use to display their products or services to users: text, photo and video. For many users the "detailed description of the products" by text used to be the principal form of incentive for making purchases without leaving the retailer's site (Bearn, 2007); however, thanks to the remarkable technological advances, video has become a widely used format by online retailers being the one which arouses a greater interest among costumers (Karpinski, 2007).

Today it is increasingly valued the compliance of the e-commerce sites to new technologies with limited accessibility like mobile phones, PDAs among others. (Rodriguez-Martinez et al., 2010).

According to Mazumder (2008) retailers should opt for a well-thought-out online strategy that combines a mix of W2.0 tools, targeted according to the profile of the consumer of the product or the user of the site (Repsher, 2006). However, the OR should be aware that his "mere presence on the Internet does not mean a guarantee of success", and that he needs to implement strategies to ensure that the contents of the site reach the user in an active form. (Constantinides, 2002).

Below are presented two relevant studies about the subject.

2.2.1 Mazurek's study (2009)

This study took place between January and February 2009, being partly based on a content analysis of the websites of 339 companies belonging to the Warsaw Stock Exchange. The information evaluated was part of a set of factors defined by the author to confirm the presence or absence of W2.0 tools on these sites. In general, less than a third (101 of 339) of organizations have implemented at least one or more W2.0 tools"- a very low number for the amount of organizations. Among the most widely adopted tools were the RSS feeds (29.8%), instant messaging (13.3%) and tags (13.3%). Despite their general use by society, "podcasts (6.8%), blogs (6.8%) and wikis (3.5%) still don't have the same acceptance in the business world (Mazurek, 2009).

2.2.2 Study of Infosys¹ (Jain and Ganesh, 2007a)

This study conducted in 2007 examined about one hundred e-commerce websites. These sites were analysed according to three parameters that define the essence of W2.0, "Content", "Collaboration" and "Trade", and were given a score according to a Likert scale of 1-5 to measure their readiness to implement the W2.0 concept (Jain and Ganesh, 2007a).

The research has shown that "even the most successful e-commerce sites have a long way to go in incorporating the principles of W2.0" (Jain and Ganesh, 2007a). In the "content" parameter the adoption of the interfaces based on RIA by the NORs was small compared to the OERs. The most prominent retailers have adopted the RSS tool for announcing the launch of new products and promotions, while others are still trying to understand the advantages of this tool. Only a very restricted group of retailers with specific business areas have adopted podcasts or vodcasts on their website. None of the sites in the study used the semantic search as a tool. (Jain and Ganesh, 2007a).

In the "Collaboration" parameter, the use of collective intelligence tools (e.g. blogs, wikis, discussion forums, user comments and tagging) is a reality in very successful sites, in contrast in sites with a lower number of visitors these technologies have not yet been adopted (Jain and Ganesh, 2007a).

For the "Trade" parameter, the personalization of the product by the end user is only available from a few retailers and specific business areas. Very few retailers offer help online in real time (Live Agent Chat) on their website (Jain and Ganesh, 2007a).

At the conclusion of their study, Jain and Ganesh (2007b) reported that the choice of tools to be adopted by the OR should be based on their specific needs to achieve long-term benefits. "The benefits to the OR of the adoption of W2.0 are classified into four categories, namely 'expand the target audience', 'differentiate your Website', 'increase the use of interactive technologies' and 'promote customer loyalty'. Because of the benefits they wish to achieve and the implementation time required for each tool (short - less than 3 months; medium - 3 to 6 months; long - more than 6 months), the OR must adopt specific tools and features (Jain and Ganesh, 2007b).

In the initial phase the retailer must choose "simple-to-implement resources" such as blogs, wikis, comments, RSS feeds and mashups. These resources have a "great technological maturity while involving little investment". At this stage the retailer must engage in "attracting a user community". In the medium term retailers can begin to develop and launch resources based on RIA and mashups. The final implementation phase aims at a "closer interaction with the consumer and the user community". Therefore it should be implemented tools that allows costumers the creation and customization of products, podcasts/vodcasts that clarify the use/possibilities of products and real-time help and semantic search. All "these resources may have a much more difficult implementation, as their return is yet not clearly defined" (Jain and Ganesh, 2007b).

3 RESEARCH METHOD

Despite the broad knowledge of W2.0 tools and their implementation in global e-commerce websites, the extent of their adoption by Portuguese online retailers and the differences in their adoption between online exclusive retailers and nonexclusive online retailers are still unclear. Nor do we know the preferred format of product communication used by Portuguese online retailers and their websites' compliance with new technologies (e.g. mobile phones and tablets).

¹ An organization that provides consulting services in business and technology. In 2009 it was considered one of the 50 most respected organizations in the world.

The goal of this study was to evaluate, in a systematic manner, a range of e-commerce websites with a significant success in Portugal. To achieve this purpose, a set of parameters indicative of their readiness to join the W2.0 concept was analysed.

The study used a sample of 36 of the most frequently visited websites in Portugal. These were selected from the ACEP (*Associação de Comércio Electrónico Portuguesa – Portuguese e-commerce association*) Ranking of E-commerce websites (Netpanel study).

The observation guide was arranged as a checklist of several parameters, which were selected from an extended review of the literature. The presence of each parameter in the website was observed, and then the results were compared with the results of studies already published in this area.

After the observation, all the data were analysed with SPSS 17 statistics software.

3.1 Observation guide

The following table presents all the parameters belonging to the observation guide, as well as all the items analysed and the reason for their inclusion.

Researched parameters	Observed items	Goal of the observation	Reason for inclusion
1 – W2.0 tools	RIA; Semantic search; Live agent chat; Blogs; Wikis; Tagging; Social bookmarking; Podcast/ Vodcast; RSS feeds; Mashups; Social networking; Product customization	Presence of specific W2.0 tools in Portuguese e-commerce web sites	<ul style="list-style-type: none"> • Increased importance of online sales • Increased incorporation of W2.0 tools in e-commerce websites
2 – Presence of Social networking in the e-commerce websites	<i>Facebook; Twitter;</i> Others Number of Facebook flowers; Number of Twitter followers	Adoption of social networking by online retailers and users. The number of followers/connections registered on the observation day.	<ul style="list-style-type: none"> • Mass utilization of social networking in Portugal: 1. 4 million people frequently access social networking Web pages. • Facebook is the most widely used social networking service in Portugal (Markttest, 2009).
3 – Product/services format	Text; Video; Photography	The formats by which the retailers present their products/services.	<ul style="list-style-type: none"> • Text – the most common format for presenting products and services and “encouraging customers to make a purchase decision without leaving the websites” (Bearne, 2007) • Video – increased popularity of this format to catch customers’ attention (Karpinski, 2007).
4 – Websites compliance with specific technologies (mobile phones, Tablets)	Compliance	Compliance of the online retailers’ websites with specific technologies like mobile phones, PDAs, Tablets.	<ul style="list-style-type: none"> • Online retailers’ websites must present a high level of accessibility to specific technologies (Rodriguez-Martinez et al., 2010).
5 – Information quality and questions addressed by users to the online retailer in the website or social	1- Questions about products and services; Questions about the purchasing procedure; Information about the products/ services usage; 2 - Recommendations/ Suggestions/ Complains; 3 - Questions about technical	Type of information and most frequently asked questions posed by users to the online retailer in the website or social networking pages	<ul style="list-style-type: none"> • Interaction and dynamism between the user and the online retailer; • Necessity of the user to approach the online retailer with comments and questions

networking pages	assistance; 4 - Questions about marketing campaigns		
6 – Information provided at the social networking pages of the online retailers	Information about the company; Information about the product/services; Information about marketing campaigns; Information about technical assistance and after sale services	Scope of the information provided by online retailers	<ul style="list-style-type: none"> • Ability to provide different kinds of information in the social networking pages.

Table 1. Research parameters of the observation guide

4 RESULTS ANALYSIS AND DISCUSSION

This research investigated 41 e-commerce websites present in the Marktest ranking. However, only 36 websites were analyzed (87,8% of the total sample) since 5 websites did not present features to permit a suitable analysis. Of the analyzed sample (n=36), 63,9% (n=23) were NORs, and the other 36,1% (n=13) were OERs.

The majority of the ORs had already integrated W2.0 tools in their web pages. Of the sample, 53% provided two or three W2.0 tools in their web pages, with only one that did not provide any tools. These results are opposite to the ones expressed in the study by Mazurek (2009), where only a third of the sample adopted one or more W2.0 tools.

Regarding the kind of tools adopted, it should be highlighted that 80,6% of the ORs analysed had a social networking website, 61,1% had adopted RIA, 41,7% mashups, and 33,3% RSS feeds. On the other hand there were tools with little or even no relevance like wikis (0%), semantic search (0%), live agent chats (5,6%), and blogs (8,3%).

Using the Spearman model, the correlation between the adoptions of two different tools shows that a website which has adopted tagging has a tendency to adopt a social bookmarking tool (p-value=0<0,01; r=0,558). There are similarities between these two tools and they are frequently adopted together. Also, there is a tendency for an online retailer who adopts podcasts/vodcasts to be present also in a social networking site such as YouTube (p-value=0<0,01; r= 0,926). This may be explained by the ability of YouTube to act as a preferential channel by which users can follow and comment on the online retailers' vodcasts.

When this study is compared to the Infosys study (Jain and Ganesh, 2007b), which did not include social networking in the observed parameters, it is plain that RIA is, in both studies, one of the most widely adopted W2.0 tools, in contrast to semantic search, blogs, wikis, live agent chat and product customization, which have little or no significance (Jain and Ganesh, 2007b).

Among the social networking websites analysed, Facebook (77,8%) is the most often adopted, followed by Twitter (58,3%), with only a small percentage (22,2%) of the online retailers joining other social websites. There is a substantial probability that an online retailer who has a Facebook web page has also adopted Twitter (p-value= 0,002<0,01; r=0,497). This integrated presence allows the retailer to manage both networks at the same time. In this way an active presence in one ensures an active presence in the other so that the retailer reaches a large number of followers.

The majority of online retailers (72,2%) had information about marketing campaigns or answered questions about them. It is important to point out that many online retailers use these networks to give information about their company (61,1%), or to offer products/services (63,9%), especially new ones. By contrast, only 47,2% of the retailers took advantage of social networking to answer technical assistance issues.

There is an important percentage of retailers (72,2%) who have recommendations, suggestions or comments left by customers in their social networking web pages, about marketing

campaigns (61,1%) and their experience of products/services (61,1%). Also, most of the time, social web pages act as a preferential channel for making complaints.

Text and photography, being the most common formats for presenting products, are also the most often adopted (97,2%) by online retailers. In contrast, video, being a modern format, is still the least used, by only 13,9% of retailers. This contradicts Karpinski's (2007) idea that video has proliferated in the last few years.

The compliance of websites to new technologies presented some relevance with 27.8% of the retailers offering this service in their websites.

The statistical normality of the data was tested by the Kolmogorov-Smirnov test for variables. However, given the size of the sample (36: >30) it was possible to apply the Central Limit Theorem. As a measure of the internal consistency and reliability, Cronbach's Alpha coefficient was used; it attained 0.858 ($\alpha \sim 1$), which indicates good internal consistency.

Another aim of this research was to understand the statistical inference between all the analysed parameters and the OERs and the NORs. To fulfil this purpose the hypothesis of equality of variances was tested. The hypothesis was accepted with the exception of item "video format" with a p-value=0.018<0.05, using the Parametric t-Test for independent samples. As a result, there were no statistically significant differences between exclusive online retailers and nonexclusive, besides the item "video format".

Adopted W2.0 tools	N° online retailers	% online retailers
Blog	3	8,3%
Wikis	0	0%
Tagging	8	22,2%
Social Bookmarking	5	13,9%
Podcast/ Vodcast	9	25%
RSS feeds	12	33,3%
Mashups	15	41,7%
Social networking	29	80,6%
RIA	22	61,1%
Semantic search	0	0%
Live Agent Chat	2	5,6%
Product customization	4	11,1%

Table 2. W2.0 tools adopted by Portuguese online retailers (study results)

5 PROPOSED MODEL

The goal of this section is to suggest a W2.0 tools model optimized for the ORs that intend to operate in Portugal, using the results of this research and studies by other authors. The construction of the model is based on the previously presented statistics and an additional analysis of two clusters (K-means Cluster) by SPSS. The first cluster (the dominant cluster) includes 26 retailers, and the second cluster includes the remaining 10 retailers. The first cluster, with a higher number of retailers presenting similar characteristics, comprises the five most frequently visited e-commerce sites in Portugal in the third quarter of 2010, allowing us to consider the characteristics of this cluster as the most important ones. This cluster is characterized by the adoption of social networks and RIA, in particular Facebook and Twitter.

The adoption of W2.0 tools by the retailers must be rationalized according to their benefits to the business and the implementation terms for each one of them (Jain and Ganesh, 2007b). Each W2.0 tool has some particular characteristics that provide specific benefits, such as "target audience expansion", "website differentiation", "presence of interactive technologies in websites" and "consumer loyalty promotion", according to Jain and Ganesh (2007b). The adoption of these tools has different implementation terms, according to their "technological

maturity”, and the necessary investment to break even (Jain and Ganesh, 2007b). In the model, two terms are considered: short term (less than 3 months) and medium-to-long term (more than 3 months).

In view of the massive use of social networks by the ORs in the sample, these must be considered in the short term, being a resource of easy implementation. The implementation of social networks allows the retailer to promote consumer loyalty and expand its target audience, since they have characteristics that promote interactivity among users and between users and the retailer. Among these, Facebook and Twitter set themselves apart as the ones that have more interest to an e-commerce website. The information present on the social network page must focus on a brief company presentation, its products and services, its marketing campaigns, and technical assistance information.

Interactive interfaces like the RIA, because of their complexity and absence of an immediate return, are suited to long-term implementation. These allow the retailer to differentiate his website (Jain and Ganesh, 2007b).

The RSS feeds and the mashups set themselves apart in this study by their strong presence in the sample ORs. The RSS feeds are of easy implementation and allow the retailer to expand his target audience. On the other hand, the implementation of mashups allows the retailer to distinguish his website and can be implemented over the short term (Jain and Ganesh, 2007b).

The podcasts or vodcasts, because of their technical demands, need a period of medium- and long-term adaptation and allow the retailer essentially to distinguish his website and expand the target audience. This is the opposite of what happens with tagging, which allows the retailer to promote consumer loyalty and make his website more interactive, and may be adopted in the short term (Jain and Ganesh, 2007b).

Given the low presence of tools like wikis, blogs, semantic search, live agent chat and personalization of products in the Portuguese e-commerce websites, the preferential adoption of these tools is not suggested, although they can be implemented if a clear benefit is identified, taking into account the business and client types.

In implementing the tools present in this model, an OR must be conscious of the goals it intends to achieve, and must periodically assess their implementation. As Mazumder (2008) argues, the suggested model also favors the implementation of a set of tools. This model intends to make suggestions in the light of the results of the research undertaken and does not exclude the adoption of any tool not listed. In the creation of the model, a generalization by business areas was made. It therefore does not take into account particular characteristics that may lead to the preferential adoption of specific tools.

Term	W2.0 tools	Business improvement
Short term	Social Networks	Promote consumer loyalty
		Expand its target audience
	Mashups	Differentiate the website
	RSS	Expand its target audience
	Tagging	Promote consumer loyalty
Increase the use of interactive technologies		
Medium-Long term	RIA	Increase the use of interactive technologies
		Differentiate the website
	Podcast / Vodcast	Differentiate the website
		Expand its target audience

Table 3. W2.0 tools model for Portugal

6 CONCLUSION

This study allowed important conclusions to be drawn about W2.0 tools and their connection with online retailers. The comparison of OERs and NORs in the adoption of W2.0 tools showed

that there are no significant differences in the type of tools used by these two types of retailers. The ORs usually present their products in their websites in picture and text formats, and not in video format. This choice is essentially based on the technical and economic demands of the video format. There has always been concern among ORs about adapting their e-commerce sites to technologies with a specific capacity; mobile technologies have been increasingly adopted in the last years.

The research allows us to understand the growing importance of social networks in the relationship between the user and the OR. These tools present a set of differentiating characteristics as well as global characteristics that make it a global tool. Among them, Facebook and Twitter are preferentially used.

Besides the social networks, the other three tools most adopted by the ORs are the RIA, the mashups and the RSS feeds. The presence of RIA in the ORs' sites makes them more interactive and dynamic, which strengthens the relationship with the user. The mashups allow the ORs to enrich their websites and make them more dynamic through the use of different format applications. The RSS allows the retailer to advertise his updates, new products or marketing campaigns to the user in a direct way, even if the user does not visit the website.

W2.0 tools like wikis, blogs and semantic search are little used by ORs in Portugal, the first two because of the similar and more complete characteristics of more recent tools, and the semantic search because of its recent appearance and its consequent weak development.

Given the existing differences between the tools adopted by the ORs, it became relevant to construct a W2.0 tools model optimized for retailers that want to operate in Portugal. According to the model created, and in the opinion of Mazumder (2008), an OR must adopt a well-developed online strategy that combines a set of W2.0 tools. In order to adopt any of the tools in the model, the retailer must be aware of the benefits that they bring to his business and their respective implementation terms.

The number of tools adopted on average by an OR in Portugal (2 to 3 tools) is still far from the goal of global application of W2.0 principles, and, as in the conclusions of the study from Infosys (Jain and Ganesh, 2007b), "Even the most successful e-commerce websites have a long way to go in the incorporation of W2.0 principles."

This research, besides the results it has presented, makes it possible to test the adoption of W2.0 tools not incorporated in equivalent studies.

The results of this study of ORs in Portugal may be extrapolated to other countries, as long as they are adapted to account for the results obtained by the studies made in those countries.

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References

- Bearne, S. (2007). 'Video Is Preferred Form Of Web 2.0 Content For Third Of Retailers. *New Media Age*.
- Brojeni, R. A. (2008). *Using Web 2.0 Aspect For Designing A New Model In Business Incubation*.
- Chen, T. F. (2009). 'Building A Platform Of Business Model 2.0 To Create Real Business Value With Web 2.0 For Web Information Services Industry'. *International Journal Of Electronic Business Management*, 7, 168-180.

- Clarke, R. (2008). 'Web 2.0 As Syndication'. *Journal Of Theoretical And Applied Electronic Commerce Research*, 3, 30-43.
- Constantinides, E. (2002). 'The 4S Web-Marketing Mix Model'. *Electronic Commerce Research And Applications*, 1, 57-76.
- Constantinides, E., Romero, C. L., & Boria, M. A. G. (2009). 'Social Media: A New Frontier For Retailers?' In Swoboda, B., Morschett, D., Rudolph, T., Schnedlitz, P. & Schramm-Klein, H. (Eds.) *European Retail Research*. Gabler.
- Cormode, G., & Krishnamurthy, B. (2008). 'Key Differences Between Web 1.0 And Web 2.0'. *AT&T Labs-Research*.
- Dickie, J., & Trailer, B. (2007). Sales 2.0 Whitepaper: Part II. *Landslide Technologies, Inc.*, 1-19.
- Faria, A. C. D., Cunha, I. D., & Felipe, Y. X. (2008). *Manual Prático Para A Elaboração De Monografias - Trabalhos De Conclusão De Curso, Dissertação E Tese*. São Paulo: Editora Vozes.
- Holloway, B. (2010). 'Sales 2.0: It's A Need To Have'. *Executive Excellence Publishing*.
- Jain, A., & Ganesh, J. (2007a). Part I: An Overview Of Web 2.0 Adoption In Retail. Editor by: *White Paper*.
- Jain, A., & Ganesh, J. (2007b). Part II: An Implementation Roadmap For Retailers Editor by: *White Paper*.
- Karpinski, R. (2007). 'Web 2.0 Catching On Quickly With B-To-B Marketers'. *B To B*, 92, 1-45.
- Kim, D. J. Y., Hall, S. P., and Gates, T. (2009). 'Global Diffusion Of The Internet XV: Web 2.0 Technologies, Principles, And Applications: A Conceptual Framework From Technology Push And Demand Pull Perspective.' *Communications Of The Association For Information Systems*, 24, Article 38.
- Levy, M. (2007). 'Web 2.0 Implications For Knowledge Management'. *Journal Of Knowledge Management*, 13, 120-134.
- Lynch, C. G. (2007). 'Forrester Report: Cio's Value In Web 2.0'. Available from http://www.cio.com/article/138450/forrester_report_cio_s_value_in_web_2_0 [Accessed 20 February 2012].
- Lynn, M. (2005). 'Organizational Buffering: Managing Boundaries And Cores'. *Organization*, 26, 37-61.
- Mazumder, S. (2008). 'A Web 2.0 Adoption Model For Enterprises'. *White Paper*.
- Mazurek, G. (2009). 'Web 2.0 Implications For Marketing'. *Management Of Organizations: Systematic Research*, 69-82.
- McKinsey. (2007). 'How Companies Are Marketing Online'. *The McKinsey Quarterly* [Online]. Available from < <http://www.mckinseyquarterly.com> > [Accessed 20 February 2012].
- Musser, J., & O'Reilly, T. (2006). 'Web 2.0: Principles And Best Practices', Edited by RADAR, O. R.
- Nath, A. K. (2010). 'Web 2.0: Capabilities, Business Value And Strategic Practice'. *Journal Of Information Science & Technology*, 7, 22-39.
- O'Reilly, T. (2007). 'What Is Web 2.0? Design Patterns And Business Models For The Next Generation Of Software'. *Munich Personal Archive*, 65, 17- 37.
- Parise, S., & Guinan, P. J. (2008). 'Marketing Using Web 2.0', in Proceedings Of The 41st Annual International Conference On System Sciences, Hawaii, , 7-10 Jan. 2008, 281-281.
- Pedrosa, A. C., & Gama, S. M. A. (2007). *Introdução Computacional À Probabilidade E Estatística*, Editor by Porto Editora.
- Reid, M., & Gray, C. (2008). 'Online Social Networks, Virtual Communities, Enterprises And Information Professionals'. Editor by *Livelinks*
- Repsher, G. W. (2006). 'Go Configure: Web Tools Boost Sales'. *Automotive News*, 80, 46-46.
- Rodriguez-Martinez, R., Codina, L., & Pedraza-Jimenez, R. (2010). 'Cibermedios Y Web 2.0: Modelo De Analisis Y Resultados De Aplicacion' (Spanish). *El Profesional De La Informacion*, 19, 35-44.
- Urban, G. L. (2003). 'Customer Advocacy: Is It For You?' *MIT Sloan School Of Management, Center For E-Business*, Paper 175.