The Effect of Educational Content Marketing on Facebook Brand Engagement

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ABSTRACT

This dissertation reviewed theoretic publications to understand the drivers of brand engagement through Facebook of B2B companies, in particular, to determine which elements explain why Facebook users "like" or "share" some contents and not others. Few studies were found about the efficacy of different elements in educational content spread through social media.

In view of this, the efficacy of two promising message elements – content novelty and use of statistical data -, was further tested through the performance of A/B tests. To this end, the content of posts on a Facebook fan page of a Colombian start-up, B2B service company was experimentally manipulated during the last trimester of 2015. Posts were randomly showed to groups of men and women targeted through Facebook, and post engagement assessed by measuring click-through rates, likes and shares, using data provided by Facebook Insights.

The performance of the experimental campaign was benchmarked against past campaign results from the same company, as well as industry and competition performance on similar campaigns. Results show that the experimental campaign generally performed better than the benchmarks considered. A/B test results show that content containing statistical data had a negative effect on the engagement rate of both genders, whereas content with a high level of novelty had a negative effect on men's, but a positive effect on women's, engagement rate. No statistically significant differences between mean engagement rates between A and B post versions were found aside those driven by gender differences, probably due to lack of statistical power.

SUMÁRIO

Esta dissertação reviu publicações teóricas com o intuito de compreender os drivers de brand engagement através de páginas de Facebook de empresas B2B, para determinar os elementos que explicam o porquê de as pessoas fazerem likes e partilhas em algumas publicações e noutras não. Poucos estudos foram encontrados sobre a eficácia de elementos da mensagem.

Assim, a eficácia de dois elementos da mensagem - novidade conteúdo e uso de dados estatísticos -, foi testada através do desempenho de testes A / B. Para este fim, o conteúdo das mensagens de uma página de fãs do Facebook, foi manipulado de forma experimental durante o último trimestre de 2015. As mensagens foram apresentadas aleatoriamente a grupos de homens e de mulheres onde o post engagement foi avaliado através da medição as taxas de click-through rates, likes e shares, utilizando dados fornecidos pelo Facebook Insights.

O desempenho da campanha experimental foi aferido em comparação com os resultados das campanhas anteriores da mesma empresa, a indústria e os seus competidores em campanhas semelhantes. Os resultados mostram que a campanha experimental geralmente tem um desempenho melhor do que os valores de referência considerados. Os resultados dos testes A / B mostram que o conteúdo que incluía dados estatísticos teve um efeito negativo sobre a taxa de engagement de ambos os sexos, enquanto que conteúdo com um elevado nível de novidade teve um efeito negativo nos homens mas, um efeito positivo sobre mulheres. Não foram encontradas diferenças estatisticamente significativas provavelmente devido à falta do poder estatístico.

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CHAPTER 1: INTRODUCTION

1.1 Background

Traditional marketing has been molded by new ways of communication. The digital era has introduced new channels and new actors into the scene. This has brought about distinctive means of interaction between business and consumers, between different consumers and in general between all kinds of stakeholders. In this new context, marketing is in great need of sharing and producing appealing and meaningful content from multiple platforms and sources that are far away from traditional advertising media, such as TV, Radio or Newspapers. The web and specially Social Media have forever changed the rules of marketing and advertising: it is not any more just about selling products, appealing to masses or pushing messages from the company to the consumers (Scott, 2007), it is about facilitating information exchange between users (Kaplan & Haenlein, 2010).

Social Media Sites are applications that enable users to connect with each other by creating personal information profiles, inviting friends and colleagues to have access to those profiles, and exchanging e-mails and instant messages with them (Kaplan & Haenlein, 2010). In particular, Social Networking Sites (SNS) have been defined as (1) web-based services that allow individuals to construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system (Boyd & Ellison, 2007). SNS have stimulated new ways of interacting, shaping the way in which people communicate, make decisions, socialize, collaborate, learn, entertain themselves, interact with each other, or even do their shopping (Sabate, Berbegal-Mirabent, Cañabate, & Lebherz, 2014)

Social media and SNS communications have turn into an opportunity and a challenge for marketers to develop brand awareness, engagement and word of mouth (WOM) (Sabate et al., 2014). They are the goldmine of social interaction, in which brands can listen to consumers' needs and demands, build loyalty and support, share information about products and services and finally increase sales (Brettel, Reich, Gavilanes & Flatten, 2015). More than 1.4 billion internet users' accessed social networks in 2012, and by August 2015, Facebook, the market leader, was the first social network to surpass 1 billion monthly active users (STATISTA, 2015). It has thus become imperative for brands to create a strong presence in these platforms, in such a way that they can excel between thousands of messages and images to which users are exposed every day. Companies need to come up with precise communications strategies

that stand out between the overwhelming amount of information that customers and social network users are exposed to.

1.2 Problem Statement

The emergence of social media (e.g., Facebook, YouTube, Pinterest) has created a context where massive amounts of image and text-based messages compete for consumer attention like never before (Hoffman, 2013). It has been observed that consumers share more than 600,000 pieces of content and create over 25,000 social media posts every sixty seconds (Bennett, 2012). In such an over-saturated environment, text and image elements must compete to get noticed at all. To overcome these circumstances, marketers must create effective marketing communication strategies that help them target their audiences, get involved and build a long term relationship that can be translated into sales, brand awareness and loyalty. For this purpose, marketers are using content marketing as a tool to reach their audiences and customers.

Content Marketing refers to the marketing technique of creating and distributing valuable, relevant and consistent content to attract and acquire a clearly defined audience – with the long-term objective of driving profitable customer action (Forbes, 2014). As brands publish pieces of content trying to address customers' motivations, and delivering interesting content for them when and where needed, this will hopefully stimulate their subsequent interaction with the brands and other prospects (Sabate et al., 2014).

Giving this background, brand managers and marketers need to make accurate and efficient decisions on social media content marketing. This implies deciding what type of content, style and information should be distributed to consumers through social media in order to achieve the marketing goals. In spite of this, there is a lack of understanding on how to design and disseminate branded social media content in order to maximize engagement and related marketing outcomes, like website traffic referrals, WOM or even sales (Stephen, Sciandra, & Inman, 2015). This absence of this type of insights is making marketers to lose money on fruitless digital campaigns.

1.3 Aim

The general aim of this dissertation is to determine the impact of content marketing on brand engagement in social media. Namely, we try to understand better how branded content should be designed in order to increase brand engagement.

To achieve this aim, the following research questions are addressed:

1. What design features should content marketing have in order to increase likes, and shares on Facebook?
2. Which type of message features of content marketing typically generate more likes and shares on Facebook?

1.4 Scope

The object of study of this dissertation is educational content marketing in social media, more specifically branded social media messages intended to teach a complex concept in an easy-to-digest manner to user/customer audiences (Harad, 2013). Therefore, other kind of marketing content with the aim to entertain, inform or sell was not considered. Facebook was chosen as the social media in which to contextualize the study, given that it is currently the leader in the SNS industry.

The response variable studied was Social Brand Engagement, understood here as all meaningful connections, creations and communications between the brand administering the Facebook page and page users or fans (Kozinets, 2014). Brand engagement was operationalised as the likes, shares and comments made by fans on the content posted organically by the company (i.e., unpaid posts). Posts did not include video or photos for reasons of feasibility. Other types of Facebook content (e.g., paid ads); user responses and metrics were thus not considered.

Publications on the social media strategy and tactics of start-ups and B2B companies, or of companies outside the US, are very scarce, so conducting a dissertation with such a company should yield novel and relevant contributions to both academy and practice. On the other hand, results might be of limited generalisation to other sectors, businesses and markets.

In order to conduct the empirical study of the effects of educational content features on Facebook brand engagement, collaboration with a Colombian start-up company active in the B2B service market was envisaged (Table 1).

Table 1 Green Loop Overview

Company Overview		
Green Loop is an architectural and engineering firm that provides professional consulting services for the green building industry, engineering field, construction, energy management, sustainable urban design and LEED consulting services (Green Loop). Currently the company is focused on four main services: LEED Consulting Services, Sustainable Architecture, Sustainable Consultancy and Energy Audits.		
Main Services	LEED Consulting Services	Leadership in Energy & Environmental Design (LEED) is a green building certification program that recognizes building that apply sustainable strategies in the design and construction of the building. Green Loop helps construction firms and architects to achieve LEED certification by suggesting sustainable strategies according to the budget and objectives of the company (Green Loop).
	Sustainable architecture	They are focused on developing new construction projects, remodeling and adjustments in buildings for residential, institutional, industrial or commercial use. All the projects are governed by the concept of green building, and international standards such as V3.0 LEED® (Leadership in Energy and Environmental Design). In this type of services, they also perform architectural and bioclimatic design that helps customers achieve sustainable strategies (Green Loop).
	Sustainable Engineering Consultancy	They perform building simulations and offer technical consultancy in lightning, HVAC, water efficiency and energy efficiency to deliver sustainable buildings with the right balance between environment, budget and overall satisfaction (Green Loop).
	Energy Audits	They perform an analysis in the company, to identify the best energy saving strategies along with the investment return. They implement a breakdown of energy consumption, data gathering process and finally saving and cost analysis or all practical measures (Green Loop)
Main Customers	Green Loop services are provided to architects, promoters, industrial groups and contractors aiming to provide energy efficient and environmentally responsible buildings (Green Loop).They have participated in more than 40 projects in Colombia, United States and Brazil.	
Employees	To support the sustainable and efficient development of projects, the company has a multidisciplinary team in which different related careers can be found: architecture, environmental engineering and civil engineering. They are qualified and certified professionals in LEED consultancy and energy audits according to the U.S.	

1.5 Research Method

Previous research on content marketing as essentially relied on quantitative behavioural (secondary) data. Berger and Milkman (2012), for instance, collected information about all the New York Times articles that appeared on the newspaper's home page between August 30 and November 30, 2008 (6956 articles), to discover what makes some content more viral than other (Berger & Milkman, 2012). In this dissertation, we also analysed quantitative behavioural data, but this was essentially primary data, collected through an A/B test based on an educational marketing content campaign developed purposefully for it.

In view of this, the efficacy of two promising message elements – content novelty and use of statistical data -, was further tested through the performance of A/B tests. To this end, the content of posts on a Facebook fan page of a Colombian start-up, B2B service company

(Green Loop) was experimentally manipulated during the last trimester of 2015. Posts were randomly showed to groups of men and women targeted through Facebook, and post engagement assessed by measuring click-through rates, likes and shares, using data provided by Facebook Insights. This tool is offered by Facebook to fan pages managers to analyse its audience and track their response to the different contents that are delivered through the fan page. It was selected among the different tools because it helps to address metrics regarding engaged users. It measures the number of engaged individuals who have clicked, liked, commented, shared , or engaged with it in any way (Campbell, 2013).

The performance of the experimental campaign was benchmarked against past campaign results from the same company, as well as industry and competition performance on similar campaigns. Results show that the experimental campaign generally performed better than the benchmarks considered.

1.6 Relevance

This topic is valuable for the digital marketing agendas of companies nowadays. This research should help marketers to develop effective social media content strategies that can lead to the engagement of their customers and therefore more sales and revenues. The State of Inbound Survey carried out by Hub Spot revealed that inbound marketing or not paid marketing strategies is being used as the answer for small companies for budget limitations. According to the study, 3 out of 4 marketers prioritize inbound approaches on their marketing strategies. Thus, marketers need to identify the best way to design compelling content over ads that can pull customers to engage with the brand (HubSpot, 2015). The research conducted in this dissertation is then helping marketing managers, especially in Start-up companies, with insights in content design that can help them to save money, time and optimize managerial decision regarding their inbound social media communication strategy.

Therefore, it is interesting to analyse and determine the effectiveness of social networking content so that managers can decide which one is more adequate according to the audience and the communication objectives. This would save time, money and could guarantee better results in terms of sales, loyalty, and e-WOM and in general terms engagement. This means that with the correct content on social networking, people would like to connect, create, share, enjoy, learn, trade and give with the brand.

This study sheds light onto the specific combinations of content in a brand communication strategy for educational purposes on Facebook that can lead to the engagement of the audience. It will explore the effect in the Colombian market, especially with start-up

companies that are getting away from traditional marketing plans and that are exploring new ways to interact and reach their customers. On the other hand, this type of research can also matter to social networking developers that can create new ways in which companies, advertisers, marketers and customers can communicate and create content in an effective way. On the academic field, this research will help to fill the gap in terms of content design marketing campaigns. Until now there are few researches showing and proving the reasons why some campaigns go viral or the effects of different content characteristics. However, none has focus on educational content marketing and in a B2B context. Therefore, this dissertation will contribute to enhance and provide additional support to the discussion around content marketing strategies and its effects.

1.7 Dissertation outline

Chapter 2 shows a literature review on Content Marketing, Social Media and Brand Engagement. Due to the novelty of this topic and the few researches, it would also include some reviews in viral marketing and e-WOM. Chapter 3 describes the research methods; it will describe the experiment that would be conducted, the data collection and analysis. Chapter 4 presents and explains the results of the experiment and the validity of the hypothesis. Finally Chapter 5 will close the dissertation with the main conclusions, limitations and final recommendations.

CHAPTER 2: LITERATURE REVIEW AND RESEARCH HYPOTHESES

This chapter presents a literature review on Content Marketing, Social Media and Brand Engagement in a B2B environment. First, digital content definition and main approaches will be presented. Second, extant studies on content marketing, its role in marketing communications and its effects on business performance will be reviewed. Third, relationships between content marketing and social media will be discussed. Fourth, findings about the effects of content marketing will be reviewed, from the view point of virality, e-WOM and engagement. Fifth, findings from recent studies on B2B digital content marketing will be presented. Finally, conclusions will be drawn and, based on them; research hypotheses will be put forward.

2.1 Digital Content

Internet and more specifically, the Web 2.0 created a new environment in which new forms of products and services have risen. Many sources of information became a referent in the market to support products, paradigms and ideas. Customers became more demanding of quality and new values such as immediacy, novelty, accessibility and proximity. Consequently, the Internet became a platform where companies could not only market their products, but also where digital content could be provided.

Digital Content can be defined as bit-based objects distributed through electronic channels (Koiso-Kanttila, 2004). For this author, digital content can be considered in the same way as a digital product. By addressing the different implications of the marketing mix variables (Product, Price, Place and Promotion), she was able to determine that information recombination, accessibility, navigation interaction, speed and essentially zero marginal costs are key characteristics of digital content (Table 2).

Table 2-Proposed Key Characteristics of Digital Content and their Definitions (Koiso-Kanttila, 2004).

Characteristic	Definition
Information Recombination	"Integration of different types of information in the same system; modularity and hypertext functionality".
Accessibility	"Electronic proximity of content offered through electronic channels".
Navigation interaction	"How the flow of activities proceeds in an electronic store and when consuming digital products".
Speed	"Time dimension of the process: fast transactions and the prospect of receiving content instantly".
Essentially zero marginal cost	"Potential for a near zero increase in spending resulting from an incremental transaction or customer".

Digital content is thus essentially an hybrid between a product and a service. Features such us intangibility, heterogeneity/standardization, separate production and consumption, and the possibility to store can be recognized in digital contents. Some digital content can be standardized and reproduced in many copies; however, it has to be customized in a continuous way according to the target audience and the digital channel. Also, is possible to store the different digital contents through data saving techniques. To conclude, digital content should be considered as an online product that resembles offline products features, but that should be treated with a different marketing approach in order to succeed (Koiso-Kanttila, 2004).

2.2 Content Marketing

Due to the emergence of digital content, new rules of marketing are needed for firms to adapt to new challenges. Traditional marketing is not as relevant and useful as it used to be. Customers are demanding more information, with accurate data that can lead them to a better understanding of products and services, and therefore better buying decisions. The failure of traditional advertising to capture customer attention, the evolution of word-of-mouth (WOM) and referrals, and the possibility to access information with just a click is taking marketers to the era of content marketing (Pulizzi & Barrett, 2008).

Holliman and Rowley (2014) have recently reviewed different studies, looking for answers to the question of what is content marketing (Table 2.2). Based on this, they developed an empirical definition of digital content marketing in a B2B context: *B2B digital content marketing involves creating, distributing and sharing relevant, compelling and timely content to engage customers at the appropriate point in their buying consideration processes, such that it encourages them to convert to a business building outcome* (Holliman & Rowley, 2014). Furthermore, they adapted the American Marketing Association definition as: *Digital content marketing is the activity associated with creating, communicating, distributing, and exchanging digital content that has value for customers, clients, partners, and the firm and its brands* (Holliman & Rowley, 2014).

Content marketing has also been defined as the art and science of regularly sharing information with your target audience, aligning it with and reinforcing the brand (Harad, 2013). Aligned with this, the three main objectives of content marketing are: to educate (teach a difficult topic), to editorialize (make a statement) and/or to entertain (make people have fun). Recent studies also consider content marketing as a form of marketing communication, in which brands produce and distribute content to consumers with the objective of generating interest, engage consumers and influence their behaviour (Stephen et al., 2015). Lastly, the

US Content Marketing Institute defines content marketing as a tactic for creating and distributing valuable, relevant and consistent content, in order to attract and acquire a clearly defined audience with the objective of driving profitable customer action (Forbes, 2014).

2.3 Content Marketing and Social Media

Companies can deliver content marketing through a variety of channels and platforms (Pulizzi and Barret, 2008):

- Printed media (e.g., magazines and newspapers);
- Personal contacts (e.g., road show or executive roundtable);
- Online (e.g., video, podcast, e-book, e-mail).

Within the online platform, marketing content is nowadays often delivered through social media interactions. Some of the most important brands and products, such as Coca-Cola, Nike or Red Bull, have millions of fans on their Facebook accounts (91.5 MM, 42.1MM, 43.2MM, respectively) (STATISTA, 2015). Therefore, managing content marketing in social media becomes in an important techniques for marketers to boost awareness and further engagement with the brand.

Social media content marketing can be defined as the content of the brand that is spread through the brands' social media channels, like Facebook, Twitter or Pinterest accounts (Stephen et al., 2015). This new communication channel gains relevance for marketers as customers are increasing their usage to interact with brands for different purposes (Sabate et al., 2014). According to a recent study, there are five motivational factors for customers to relate with brands on social media (Davis, Piven, & Breazeale, 2014). Customers may consider social media as a platform for functional purposes, like solving product-related problems, search information or get special offers. They may also interact with the brand on social media to for emotional motives, like being recognised as a loyal customer, feeling important and being appreciated. Moreover, feelings of self-actualization or support for one's lifestyle and personal goals may lead customers to engage with brands in a social media context. On the particular case of brand communities, such as Facebook Fan Pages, motivation is mainly driven by the possibility to exchange experiences, get attached to the community, building a network and interact socially. Finally, consumers may also want to interact with the brand in a more personal, customized and convenient way, as that enabled by social media, to enhance their brand experience (Davis et al., 2014).

Lee, Yen and Hsiao (2014) have recently explored the relationship between Facebook and Social Capital. Namely, they analysed the different dimensions of social capital related to

sharing information on SNS and how this translated into perceived customer value. Their results suggest that social networking users are motivated to share information on Facebook essentially due to psychological needs and whenever this yields feelings of trust in brand as well as experiential value. Transactional value seems to be the least important factor influencing attitudes toward becoming a user of a Facebook branded page (Lee, Yen, & Hsiao, 2014).

2.4 Elements of content marketing and its effects on business performance

Content marketing is quickly becoming the favourite and most preferred tool of marketers. Recent statistics revealed that 88% of B2B marketers in North-America use content marketing and that 67% of B2B buyers rely more on content research than other sources of information, to make purchase decisions (Gerard, 2015). Content marketing is believed to help marketers to engage customers and build a relationship with them, increase loyalty, share knowledge, create new customers, explain complicated topics, products or services, and, last but not least, increase sales (Pulizzi & Barrett 2008). However, many marketers wonder how to best structure their content (the elements and features that are present in the shared message), in order to increase positive outcomes according to their marketing objectives.

Most studies about the effectiveness of content marketing's message design features are quite recent and have looked at performance outcomes such as content virality, WOM amplification, sales and brand engagement. Berger and Milkman (2012) determined the emotional factors affecting content virality. By analysing a data set of 6,956 articles of the New York Times, they conclude that content that generates awe or anxiety/anger emotions is more viral, and that content that produces sadness is less viral, than emotionally-neutral content (Berger & Milkman, 2012).

Chu and Kim (2011) employed social network theory to study potential drivers of consumer engagement in e-WOM through social media platforms, using a network of 400 undergraduate students. They uncovered that the strength of ties and trust between users, as well as consumer susceptibility to interpersonal influence, were positively associated with engaging in e-WOM on social media, while homophily (the extent to which users formed ties with other similar versus dissimilar users) seemed to have a negative impact on this type of behaviour (Chu & Kim, 2011).

Hoffman and Daugherty (2013) studied how consumers attend to structural elements of marketing content and how this influences their ability to generate e-WOM on social media. To this end, they conducted a review of extant studies (Table 3) as well an experiment and

eye-tracking study. Based on this, they developed a complex model of how visual features, emotion of the message and brand type interacted to influence consumer attention on branded social media presences. Their findings suggest that while text-based content generally has more influence for luxury than non-luxury brands, image-based content lead to a higher generation of e-WOM through social media (Hoffman & Daugherty, 2013).

Table 3 Overview of the effects of the structural elements of advertisement (Hoffman & Daugherty, 2013).

Authors	Findings
Kroeber-Riel & Barton (1980)	"Locating text at the top of an ad leads to better information acquisition".
Rossiter, 1981; Singh, Lessig, Kim, Gupta, & Hocutt, 2000	"Relative superiority of images in evoking attention".
Garcia, Ponsada, & Estebaranz (2000)	"Image positioning matters, but only when pre-existing product involvement is low".
Pieters & Wedel (2004)	"Attention to pictorial elements of ads is superior to text-based elements, regardless of manipulations of size".

Few have studied the impact of branded content in social media. An analysis of 355 Facebook posts from 11 international brands was conducted by De Vires and colleagues (2012). They uncovered that vivid and interactive features on Facebook brand posts, as well as sharing comments, increase the number of likes of the post. Moreover, comments could be boosted both by adding questions features as well as by sharing negative and positive comments (De Vries, Gensler, & Leeflang, 2012). A more recent study revealed other factors influencing the popularity of brand posts on Facebook, namely the richness of the content and time-related variables (Sabate et al., 2014). This study analysed 164 Facebook posts of 5 travel agencies fan pages, showing that adding videos and images to posts increased likes, while posting images in an appropriate time frame incremented the number of comments. On the contrary, including links to the posts decreased likes and comments (Sabate et al., 2014). Lastly, Stephen, Sciandra and Inman (2015) studied the effects of content characteristic on brand engagement through Facebook. They found that content characteristic like relevance and clarity are drivers of positive engagement metrics in Facebook. On the other hand, strong uses of persuasive elements, like adopting an advertising tone, seem to create a negative effect. The use of elements that are considered as best practices in social media, like mentioning holidays (like mentioning thanksgiving or Christmas), using rich media elements or call to action phrases, seem to have limited impact on consumer engagement (Stephen et al., 2015).

On the other hand, regarding the performance of campaigns in terms of engagement they are evaluated in comparison to the performance of the industry in which the company operates. Rates vary in each industry due to the nature of the content, the size of the market, and the psychographic or demographic characteristics of the consumers. Therefore, there are different studies and industries benchmark reports that show the average or standard performance that companies should have in their Facebook campaigns in order to have good results. For instance, according to a study conducted by Social Bakers with 43,000 Facebook Pages of various sizes and industries, the engagement rate for the telecommunication industry is 0.23% or for the electronics industry is 0.24% (SocialBakers, 2014) like it is shown in figure 1.

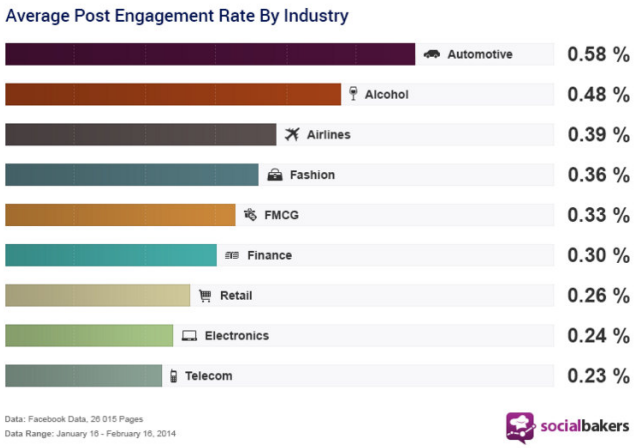


Figure 1 Social Bakers Benchmark - Source: (Social Bakers, 2014)

Regarding the CRT metric, another industry benchmark was found. According to the Facebook Ads Benchmark Report Developed by social.com, the industry with the higher CTR average is the telecommunications industry with 0.919% followed by the publishing industry. However, there were no comparable benchmarks in the industry in which Green Loop operates (Sales Force Marketing Cloud, 2013).

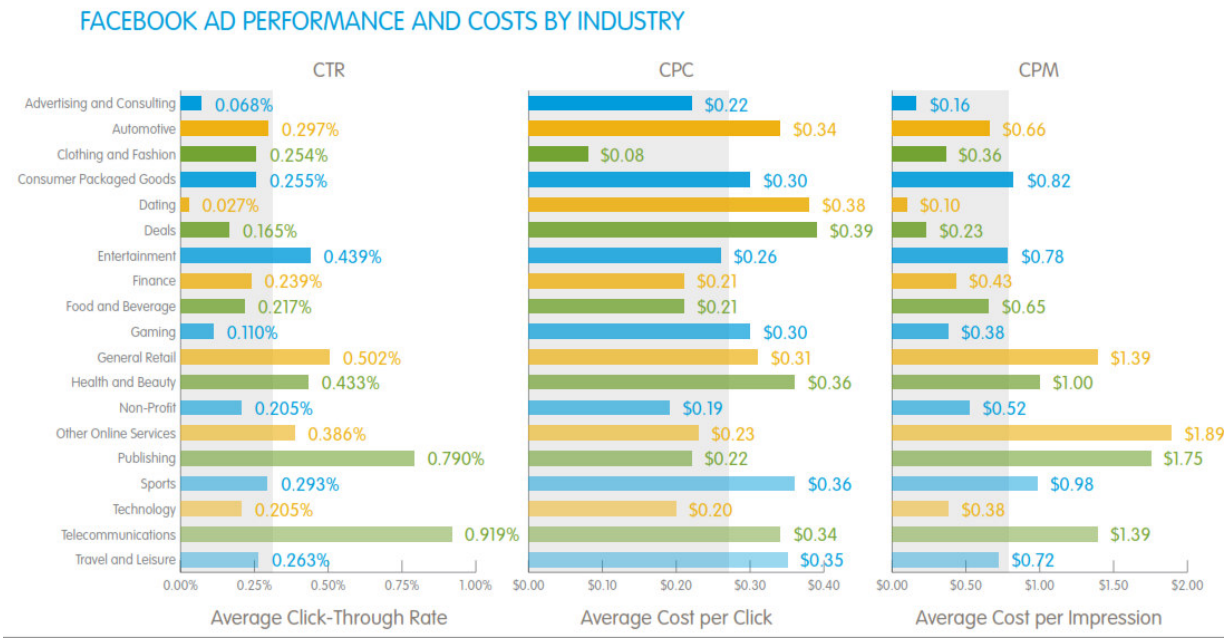


Figure 2 SaleforceSocial.com Facebook Ads Benchmark Report
Source: (Sales Force Marketing Cloud, 2013)

2.5 Social Media Content Marketing in B2B context

B2B market differs in many ways to the B2C market. First of all, the number of customers generally smaller but each customer accounts for a higher proportion of sales. Second, the decision making process is longer and involves more people to make a choice. Third, they have more strict product standards and requirements when looking for suppliers, due to the specific characteristics of the business. Finally, they rely and trust more on sales personal advice, given their needs on information of product characteristics and after sales support (Commons, 2012).

The B2B buying process also demands a more extensive approach than in the consumer market. Particularly in the process of seeking information about the products or services that solve their need, buyers consult many sources of information. Often they look online first, then consult trade magazines, blogs or industry experts and sometimes attend to webinars, to identify the most qualified suppliers. They typically look for information about reliable products and services, financial stability that can guarantee the offer in time, proximity and for past experiences of satisfied and non-satisfied customers (Commons, 2012).

The more direction, information and support a supplier provides to purchasing centres of the business, the more likely these buyers will engage on purchasing activities, especially on the internet (Deeter-Schmelz, Bizzari, Graham, & Howdyshell, 2001). Trust is paramount on B2B electronic markets, in order to build relationships in which the customer cooperates and

engage with the brand (Lancastre & Lages, 2006). “When customers trust the on-line supplier, they are much more likely to be committed, and cooperate by opening their communication with the supplier and sharing personal information” (Lancastre & Lages, 2006). This opens an opportunity for new electronic platforms such as social media in which B2B companies can build relationship with customers, provide information and get close to buyers in their searching process.

There are very few studies on the use of social media in B2B markets. Nevertheless, there is some evidence that B2B firms also take advantage of these media to deliver educational about their products and services, and in this increase engagement with their customers. For instance, there is evidence of B2B brands using SNS to create brand awareness, attract new customers and foster relationships with existing ones (Michaelidou, Siamagka, & Christodoulides, 2011). A recent, qualitative analysis of marketing managers’ perceptions of B2B digital content also revealed that, in order to create effective messages, marketers should focus more on customer’s needs, avoid repetitive selling messages, create value and generate interest among customers (Holliman & Rowley, 2014).

2.6 Conclusions and research hypotheses

To conclude, few relevant studies about social media content marketing in B2B environments have being done. Furthermore, findings regarding content design and features have being focus on B2C needs leaving aside the B2B market. Thus, there is an opportunity to identify insights, elements and content designs that are taken into account in B2B buying process to boost engagement through social media. For instance, testing elements that support business seeking information process or that help to generate confidence among decision makers; will help marketers to engage their B2B audiences on electronic platforms like Facebook.

B2B consumers are looking for useful, good, accurate, current and important information in the web about products and services that are offered in order to make better buying decisions (Holliman & Rowley, 2014). However, there are no studies that prove which elements in content design can be associated to the accuracy, currency or usefulness of the information. This suggests an opportunity to test which types of elements in content design are more valuable at the time of addressing different information needs in the B2B context.

Furthermore, there is space to study which elements in content design will support information about high product performance and quality features in order to get closer to buyers needs in their searching process on social networks (Holliman & Rowley, 2014). Moreover, identifying elements in content design that can boost trust in the online supplier

offers can increase engagement or cooperation between sellers and buyers in the B2B market (Lancastre & Lages, 2006). Thus, B2B users will engage more with brands that deliver high quality content information as it will solve one of the buying process stages. Therefore, is interesting to analyse the efficacy of message elements such as content novelty and statistical data which have not been addressed before and that can be associated to perceptions of relevance, trust, high quality, and useful information.

In view of this, and the research questions put forward in Chapter 1, the following research hypothesis were formulated:

HR1: N*ovelty information on posts content design generates higher number of likes and shares on Facebook than the absence of it.*

HR2: Using data in educational content design generates higher number of like and shares on Facebook than general information.

It is believed that in the B2B buying process the quality of the information that is found on the internet is very important to build a trust relationship that can lead purchases. The B2B buying process requires more precise information about products and services and companies rely more on confident sources of data and information when they have to make a purchase decision (Deeter-Schmelz et al., 2001). It is also believed that authority given by statistical information and the reputation of the source, is considered as an important factor when evaluating information on the web in the B2B market (Holliman & Rowley, 2014).

Thus, B2B consumers will always prefer statistical or novelty information as these elements can be associated to information quality features such us usefulness, goodness, accuracy, currency and importance (Holliman & Rowley, 2014). B2B consumers will engage more with novelty and data features because these elements can help them to understand in a more detailed way difficult subject about products and services or unknown characteristics about the product or service. More over these elements can be preferred in messages designs as they help B2B users to solve a functional need by identifying special advantages or benefits of the products and services which reduces time and efforts in the buying process (Davis et al., 2014).

CHAPTER 3: METHODOLOGY

This chapter presents the methodological approach undertaken for the collection and analysis of primary data, in order to test the hypotheses put forward in chapter 2, and answer in this way this dissertation's main research questions.

3.1 Research Approach

According to Saunders and colleagues (2009), there are three types of research approaches. Firstly, there is exploratory research, which is used to understand a problem that has not been addressed in-depth before. It identifies and generally describes a new issue by analysing primary data that is collected usually through qualitative research, like interviews and focus groups. Next, we have descriptive research, which aims to provide a detailed point of view of a problem or theory that has been evaluated previously. It allows to theory building by doing empirical generalizations of the relation between variables. This type of research is supported on secondary data that is collected through quantitative research. Finally, we have explanatory research, the goal of which is to establish a causal relationship between variables, that is, to test the causal relationships underlying a problem. Researchers use this approach when there are theoretical insights to formulate and test hypotheses, through quantitative research and primary data collection (Saunders, Lewis, & Thornhill, 2009).

As stated in Chapter 1, the main aim of this dissertation is to determine the impact of content marketing on brand engagement in social media, by analysing the effect of design features and type of educational content marketing on brand engagement in a B2B company's Facebook fan page. Therefore, this work is a descripto-explanatory study; this means it uses description as a precursor to explanation (Saunders et al., 2009). It has elements of explanatory research because a Facebook campaign will be design to explain the effect of different features of educational content marketing on likes and shares (engagement metrics). On the other side it has descriptive elements because it will illustrate a specific case of study and the interactions and behaviours of users with the Facebook posts.

3.2 Population and Sample

To the test the hypotheses presented on Chapter 2, a marketing activity based on the posting of educational content was launched on the Facebook page of a B2B company placed in Bogotá, Colombia. This was done in order to assess its impact on Facebook users' brand engagement. According to this, the population and the sample of the study were defined according to the followers of the company on their Facebook fan page.

3.2.2 Population

According to Facebook Insights (tool that Facebook makes available to track the most important key performance indicators of a fan page), Facebook users that are exposed to the firm's content can be divided into Fans (Facebook users that follow the firm's Facebook page) and Non-Fans (Facebook users that do not follow the firm's Facebook page, but who still are exposed to it and its posts). Taking this into account, population can be here defined as the number of Fans and Non-Fans the content posted in the firm's Facebook page is able to reach within a period of 28 days. By 15 November 2015, this population for the Green Loop page was composed of 5090 people, the majority of which were Colombian (80%) women (53%), aged between 25 and 34 years old (26%).

3.2.3 Sample

The sample, as a small and representative example of the population of interest, was defined in this experiment as the followers or fans of the company Facebook Fan Page. Even though non fans also interact with the page and posts, we consider only fans to control the size of the groups of the experiment. They are also already members of the community in Facebook and they have known the brand for a while. So it is expected that they have a higher motivation to engage with what the brand does. By November 16 2015, Green Loop's Facebook page had 217 fans, the majority of which were Colombian (87.5%) women (49%), aged between 25 and 34 years old (25%). This sample is representative of the population of interest in terms of all relevant demographic variables.

3.3 Data Collection

An A/B test was design to measure the effect of different elements of content design/message on likes, and shares. In an A/B test two groups are established (group A and group B), to compare different versions of a stimuli to determine which one performs better. One group works as an experimental group, this means they are exposed to the stimuli, and the other as the control group, which means it is not exposed to the intervention or manipulation of the stimuli (Saunders et al., 2009).

The data collected with the A/B tests was related to Facebook KPI (Key performance indicators) that can be considered as indicators of brand engagement through social media. Brand engagement through Facebook can be consider as a set of consumer-determined actions that demonstrate attitudes or behavioural intentions toward the content and the brand, like for example sharing, liking or making comments to the Facebook posts (Stephen et al., 2015).

Therefore, the data collection was focused on the number of likes and shares that were gathered through the campaign using Facebook Insights.

The experiment was structured according to the hypotheses that were presented; several posts were made in order to prove each one of them in a one month frame. All the posts where focused on educational content about sustainability projects of the company in which complex concepts where explained in an easy to digest way (Harad, 2013).

3.3.1 Experiment Design

To test H1 and H2 an experiment with a factorial design of 3x2 was performed. Three factors with two levels of stimuli were presented:

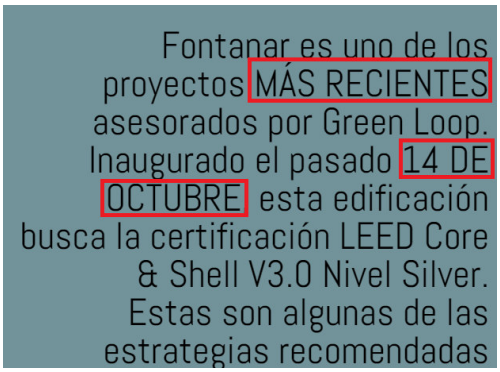
1. Gender: (Men, Women)
2. Novelty: (No New, New)
3. Data support: (Data, No Data)

This experimental campaign was further divided into two parts which 4 messages were posted (8 in total). This was done in order to create all the different combinations between the factors and the levels, and to adjust to Facebook optimization algorithm and targeting possibilities.

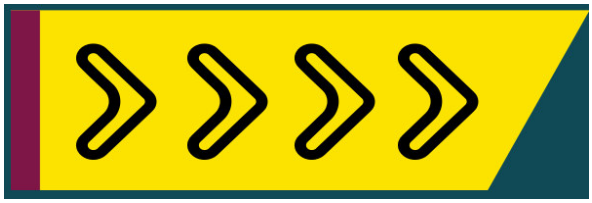
Part 1:

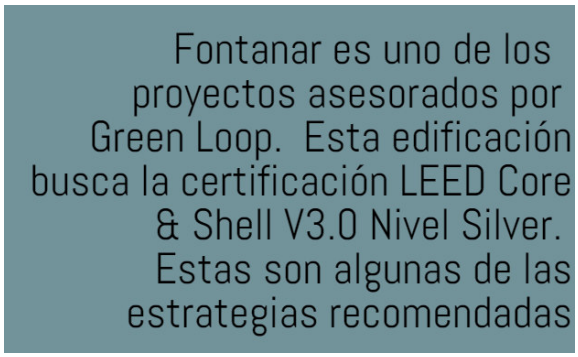
First, the results of a recent LEED Certification project were used to build the content. The novelty stimuli was determined by using a recent projects information and the presence or absence of words that indicates novelty, in this case the use of the word "New" (that in Spanish is "Nuevo") and the use of dates to indicate novelty (projects from October or November). Two levels of novelty were established, presence of the word new+date and absence of the word new+date.

- Presences of the stimuli of new+date:



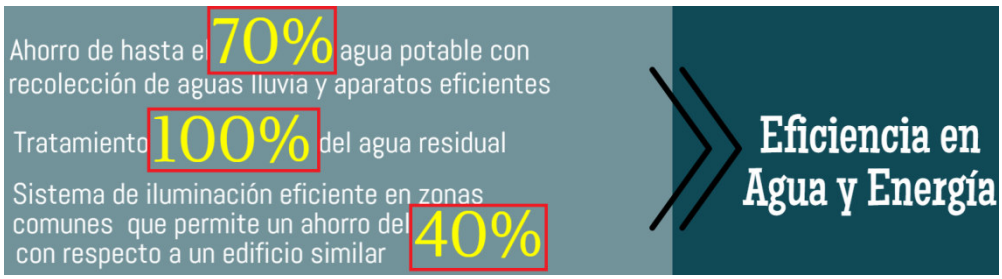
- Absence of the stimuli of new+date:



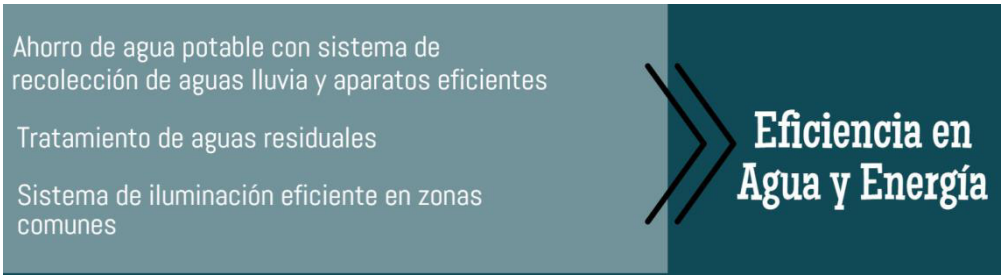


The provision of statistic and/or numerical information about projects or products of the company was also manipulated. Two levels of the variable were identified, presence of data and absence of data (this mean the use of general information).

- Presence of the data stimuli:



- Absence of the data stimuli:



To eliminate the alternative interactions or effects of other variables, for the different posts of the campaign the same colours, design, font letter, images and topic were selected as control variables. Therefore, the following posts were designed (Annex 1).

Table 4 Experiment Design- Part 1

	Experiment Design- Part 1	
WOMEN	New + Data	New + No Data
MEN	No New + No Data	No new + Data

Part 2

At this stage, information about a new product innovation developed by the company was used to build the content. The novelty stimulus was determined by the presence or absence of words that indicates novelty, in this case the use of the word "New".

- Presence of the stimuli of new:

- Absence of the stimuli of new:

The provision of statistic and/or numerical information about projects or products of the company was also manipulated. Two levels of the variable were identified, presence of numerical information (data) and absence of numerical information (this mean the use of general information).

- Presence of the stimuli of data:

- Absence of the stimuli of data:

To eliminate the alternative interactions or effects of other variables, for the different posts of the campaign the same colours, design, font letter, images and topic were selected as control variables. Therefore, the following posts were designed (Annex 2).

Table 5 Experiment Design- Part 2

	Experiment Design- Part 2	
WOMEN	No New + Data	No New + No Data
MEN	New + No Data	New + Data

3.3.2 Benchmarking Data Collection

The performance of the experimental campaign was benchmarked against past campaign results from the same company, as well as industry and competition performance on similar campaigns in order to evaluate it as a whole and determine its validity.

For Green Loop past campaigns data collection, using the output of Facebook Insights, different posts results were selected to calculate the average CTR and ER. The posts were selected by type (figure) and by date (recent, this means from the last six months). The content of the posts, this means educational content about recent projects, services or products of the company, was also taken into account for this selection.

Regarding the performance of the competition, the following are the main competitors of Green Loop: SUMAC; Setri, Green Factory and Terao Ingeniería en Construcción Sostenible. For the analysis only SUMAC and Green Factory where selected because Terao does not have Facebook Fan Page and Setri has no recent and comparable posts on its Facebook Fan Page. The posts were selected according to the type (figure) and date (last six months posts); it was also taken into account the content of the posts, this means educational content about recent projects, services or products of the company. Given the fact that is not possible to access to the Facebook Insights output of the competition, the results were analysed using the average reach of Green Loop past posts (reach=438.43) and the reach of the posts in the experiment (reach=561,38), to see how would the performance be if all the companies had the same reach.

Finally, to compare against the industry, is important to state there is no comparable benchmark for Green Loop industry. General Facebook campaign results were used to evaluate if there were significant differences between the ER of Green Loop and the industry. According to Michel Leander, a good Facebook engagement rate on a Facebook page would

be above 1%, between 0.5% and 0.99 is average and below 0.5% would need extra efforts to engage their audiences (MichaelLeander, n.d.). From a managerial point of view, Green Loop Facebook Fan Page was also evaluated through a benchmarking tool (Barometer), in which the average performance of the last 50 posts of the page was compared to the average performance of 9,164 pages included into the Barometer tool (Annex 3).

3.4 Data analysis

The results of the campaign were analysed using the output of Facebook Insights. This tool helped to identify interaction metrics such us, the number of people reached by the post, the number of people that click on the post and number of people that liked, shared or commented the post, among others. Two main metrics were used to measure the engagement of the posts: the CTR of the post, or click through rate of the post, and ER of the post, or the Engagement Rate of the post. The following formulas were used to calculate both metrics (Kalamdani, 2014):

$$CTR = \frac{Number\ of\ Clicks\ in\ the\ Post}{Total\ Impressions} \text{ x } 100$$

$$ER = \frac{Likes+Shares+Comments\ on\ a\ given\ day}{Total\ Reach\ of\ the\ Post\ on\ a\ given\ day} \text{ x } 100$$

Comments were not going to be taken into account because Green Loop's Facebook Fan Page don't keeps track of comments in previous campaigns done by the company. So it would not be possible to separate past comments from those generated by the experimental campaign.

In order to analyse the data and prove the hypothesis of this research different statistical tests were executed. Mainly independent sample T-tests were run, in order to prove if there were significant differences between the means of the two unrelated groups of the experiment in terms of CTR and ER. This same test was also used to evaluate if there was a significant effect of gender, novelty and data on the CTR and ER of the posts. The Mann-Whitney test as the equivalent of the independent sample T-test for non-parametric cases was also applied in all the study due to the limitations in data collection. So, both test were always compared.

Regarding the benchmark data analysis, the same tests were applied with some variations. The Mann-Whitney test along with a Kruskal-Wallis, with a p-value of 0.05%, were run in order to prove that the post of the experiment had a higher performance than the companies past campaigns. An independent sample T-test was ran in order to evaluate if there were significant differences among the ER of the different companies, however, a non-parametric test was also run due to limitations of the data set. Using an average engagement rate of 0, 5%

a one sample T-test and a non-parametric test were also run in order to prove if there were differences between the engagement rate of Green Loop and general Facebook campaigns.
To evaluate interactions between variables such as novelty, gender and data, a regression was also run.

CHAPTER 4: RESULTS AND DISCUSSION

In the following chapter main findings and the statistical analysis to test the research hypotheses put forward at the end of chapter 2 are presented and discussed.

4.1 Performance of the experiment relatively to the companies past campaigns industry and competition:

- *Performance of past company posts:*

Results show that the average CTR and ER of the posts of the experiment was higher than for past posts (Table 6 and Annex 4). As well, the non-parametric tests, demonstrate there is a significant difference only between the ER of the posts of the experiment and past company posts. Meaning the experiment performed in a better way in terms of likes and shares than past company campaigns (Annex 5).

Table 6 Mean of CTR and ER of Green Loop Experimented Posts and Past Company Posts and Mann-Whitney Test Results

	CTR	ER
Green Loop Experimented Posts	3,10	5,04
Green Loop Past Posts	2,87	2,85
Sig - Mann-Whitney Test	0.643	0.002
Sig – Kruskal-Wallis	0.643	0.001
Decision	Accept	Reject

- *Competition posts performance:*

The results shows Green Loop ER is always higher than competition posts performance (Table 7).Statistic results show there are significant differences between Green Loop and the competition ER. Specifically, Green Loop experiment posts performed better than Green Factory's posts when the reach of the experiment is used. In all cases, Green Loop experiment posts performed better in terms of engagement rate than SUMAC. (See Annex 6 for the SPSS results).

Table 7 Competition Engagement rate, Independent Sample T-test results and Mann-Whitney Test Results

Companies	ER	Sig. T-test	Sig. Mann-Whitney Test
Green Loop	5,04		
Green Factory	4.12		
- **With av. reach of past posts**		0.12	0.165
- **With av. reach of the**	3.22		

experiment posts		0.23	0.017
SUMAC			
- **With av. reach of past posts**	2.09	0.155	0.001
- **With av. reach of the experiment posts**	1.65	0.268	0.001

- *Industry Benchmark*

Results reveal that the posts of the experiment performed in a better way than the average of the industry. Table 8 shows the average likes, posts and comments of Green Loop experiment posts in comparison with the benchmark of companies with Facebook Fan Pages between 1 and 1000 fans (Quintly, 2015). The results show qualitatively that the posts of the experiment developed in Green Loop`s Facebook Fan Page outperform relatively to the average of fan pages with the same size. (To see complete results of Quintly go to Annex 7).

Table 8 Average Likes, Comments and Shares of Companies between 1-1k fans and Green Loop Experiment Posts

	Avg. No. of Likes	Av. No. of Comments	Av. No. of Shares
Green Loop	18.63	0	7
Benchmark 1-1k fans	4	0	1

Source: (Quintly, 2015)

From a managerial and again qualitative point of view, Green Loop Facebook Fan Page was also evaluated through a benchmarking tool (Barometer) described in chapter 3. The results in ER and CTR of Green Loop are above the average of the benchmark with and ER of 9.8% vs. 7.1% and CTR of 6.1% vs. 2.5% (Agorapulse, 2015) (See Annex 3). Thus, the performance of the last 50 posts of Green Loop's Fan Page (in which the posts of the experiment are included) performed better than similar fan pages with less than 1000 followers.

On the other hand, by comparing Green Loop experiment average ER (5.04%) with an average general Facebook Campaign ER (0.5%), the results of the t-test and a non-parametric test confirm that there are significant differences between the engagement rates (Sig. T-Test of 0.000 and Sig. Wilcoxon Test of 0.012) of Green Loop and the industry. Therefore the results confirm that Green Loop's performance is significantly better or above the average of general Facebook campaigns (Annex 8).

To conclude, the posts of the experiment performed better or above the average in comparison to past company posts, competitors and the general Facebook engagement rates.

Different underlying reasons may explain this behaviour. First, in comparison to past campaigns performance, before the experiment Green Loop didn`t have any marketing objective with previous posts. Specific consumer needs were not taken into account in the content design, so post were not relevant, valuable and compelling (Holliman & Rowley, 2014). Posts were made spontaneously according to what the company wanted to publish but no to what consumers were searching for in their buying process. Therefore, past posts didn't evoke any motivational reason for engagement such as emotional or functional reasons (Davis et al., 2014). Furthermore, content was design with a B2C approach and not with a B2B perspective.

Second, in comparison with competitor's performance, possible reasons that explain why the experiment performed better in terms of engagement may be related to the fact that elements in the B2B buying process were taking into account. First, interesting and valued content were selected in the design. All the posts helped to solve an information need for the specific project and product that the company offered. Second, the quality of the information presented, was intended to be useful, accurate, current and important so that users could consider it in the seeking information process (Holliman & Rowley, 2014). Third, the posts content was created taking into account the needs in terms of information that current Green Loop consumers had asked to the company, like past project results.

Finally, reasons regarding industry performance can be explained by the fact that the experiment was also designed taking into account results of previous studies described in Chapter 2 and that are not always used in the practice of many companies. For instance, the use of persuasive or advertisement tone were avoided as it creates a negative effect on engagement (Stephen et al., 2015). Images inside the post were also included as they create higher number of likes and text was located on the top of the posts so that consumers could search for information in a more efficient way (Hoffman & Daugherty, 2013).

4.2 The Effect of novelty on CTR an ER

The results of the independent T-test and Mann-Whitney test that were run show there is no significant effect of novelty content over the ER of the posts (Sig. T-test: 0.196 and Sig. Mann-Whitney: 0.773). In the case of CTR results of the T-test suggest that novelty elements explain in a significant way (sig. T-test: 0.001) the clicks on the posts (Annex 9). In view of this, research hypothesis 1 (novelty information on posts content design generates higher number of likes and shares on Facebook than the absence of it) cannot be accepted.

However, to better understand the effect of novelty, gender effects and trends in means of CTR and ER need to be considered. As total results demonstrate (Annex 10), there are strong differences in the behaviour of the two groups. There is a significant effect between men and women over the CTR (Sig.T-test: 0.001), meaning that men are more likely to click on the posts than women. Regarding the ER, there are no significant differences between the groups; however the ER media is higher for men (5.46%) than for women (4.62%), so their engagement level is higher.

The results of the regression that measure the interaction effect between gender and novelty content on CTR, show that there is a significant effect with a p-value of 0.005 (See Annex 11). This means that gender moderates the effect of novelty on the CTR. Furthermore, we can conclude that men click more on posts with not new content with an average CTR of 5,05% in comparison with an average CTR of 3,02% for posts with novelty content. While women, are indifferent between old or new content (Av. CTR of 2% vs Av. CTR of 2,05%).

In terms of engagement even though there are no significant effects, ER means (Annex 10) show that engagement in men decreases when there is new content (Av. ER New Content 5.2% vs Av. ER Not New Content 5.7%) but on the contrary, in the case of women, likes and shares increase when novelty elements are present. (Av. ER New Content 5.0% vs Av. ER Not New Content 4.2%)

To understand the reasons behind this results and the importance of the findings for this study, it is important to highlight that interaction of gender was determinant in this study. At the beginning of the experiment gender was treated as a variable to divide the control and experimental group, and the possible effects of gender were controlled by exposing all the groups to the same treatment. However, the results showed strong differences in the behaviour of both groups.

This effect can be explained by the fact that the information of the posts had technical data and very industry specific information in which men use to have more participation, males are predominant in the construction industry versus females (94,5% males vs.5,5% females) (Bonet, 2004) . This can also be explained by the fact that brand community engagement, brand community approach and attitudes toward Facebook ads depend on gender (Ulusu, 2010). Males are more brand community oriented on Facebook than females. This means that men spend more time on Facebook and join and interact with brand communities posts in a more significant way than women (Ulusu, 2010).

On the other side, the negative effect of novelty elements on ER and CTR can be explained by the fact that extra information is needed in order to believe that it is actually something new

and interesting. In the B2B buying process, the more direction, information and support a supplier provides to purchasing centres of the business, the more likely these buyers will engage on activities, especially on the internet (Deeter-Schmelz, Bizzari, Graham, & Howdyshell, 2001). As men spend more time on Facebook and are exposed to more information and different brand activities, their trust in novelty elements would need extra efforts. In the case of women, novelty elements will be more appealing as they are less exposed to brand engagement activities.

4.3 The effect of Data on CTR and ER

The results of the independent T-test (CTR p-value: 0.854 & ER p-value: 0.701) and the Mann-Whitney test (CTR p-value: 0.773 & ER p-value: 1.000) confirm there are no significant effect of data elements (like statistics or numerical information) on the clicks neither on the likes and shares of the post (Annex 12). Thus, research hypothesis 2 (using data in educational content design generates higher number of like and shares on Facebook than general information) cannot be accepted and it is not possible to conclude that the use of numerical or statistical information on content design explains the engagement of B2B consumers.

However, the trends can be analysed with the means of the ER and CTR. As results suggest (Annex 10), in both cases (men and women) the ER is higher when there is no presence of data (Men ER: 6.3%, Women ER: 4.8%). In terms of CTR, no large differences between the use of data or not were found.

Nevertheless, interactions between all variables (gender, novelty and data) show interesting findings. When posts have new elements, the use of data becomes important for men engagement. Hence, men will like and share posts with data elements only when novelty is also present. On women, when novelty elements are present the use of data is indifferent, it means it has no effect on the likes and shares that women give to the posts (Annex 13).

In general, looking at the results in clicks, likes and shares that were generated with the posts of the experiment, we can conclude that men experimented the highest engagement rate when the post had no new, and no data elements. Women experimented the lowest engagement rate when the post had no new and data elements. This means both groups will give more likes and shares to a post with fewer explanatory data.

The reason behind this finding can be explained by the motivations that people have to use and spend time on social networking. According to Ulusu, 2010, the main usage factors of Facebook are “Social networking”, “Writing on wall”, “Entertainment”, “Searching for

friends" and "Free time". With entertainment as the most used form of Facebook usage, meaning that people spent time on Facebook to watch videos, listen to music, and play games (Ulusu, 2010). Thus, posts with lot of explanatory information, statistics or numbers are not interesting for Facebook users and therefore are not explanatory drivers of engagement. However, the B2B buying process requires more precise information about products and services to make a purchase decision (Deeter-Schmelz et al., 2001).

Following the discussion above, our finding reveal that men will engage with data elements only when novelty elements are present to, this means that data is a valued element only when it complement or enhance information that is unknown by the buyer. It is also believed that authority given by statistical information and the reputation of the source, is considered as an important factor when evaluating information on the web in the B2B market (Holliman & Rowley, 2014). As it was said before, data will become the authority support that men need in order to believe that the novelty element is actually something new and accurate.

This means that educational content with these features will lead to higher engagement because users will consider and evaluate the information, as they identify content as compelling, valuable and relevant (Holliman & Rowley, 2014).

In comparison with results of previous researches presented in Chapter 2, this study show that the effect of different elements in the content design may depend on the target audience (gender effects). In this sense, engagement in fan pages is given by the different motivations that groups within the brand community have and the different perceptions around the content in each group. Additionally, results also demonstrate that in the B2B context consumers have a different buying dynamic that change the way in which consumers interact with SNS. So, in comparison with previous elements in content design that where proven (images, vivid features, links, questions, etc.), novelty and data should be used in a combine way to engage and target men.

CHAPTER 5: CONCLUSIONS AND LIMITATIONS

This chapter includes the main conclusions, limitations and further research of this dissertation.

5.2 Main findings and implications

SNS are nowadays new tools for companies to marketer their brands, products and services. In such a competitive environment, in which consumers and companies are getting more involved on platforms like Facebook to search for information and make purchase decisions, is imperative for brands to create a strong presence where their messages excel between thousands of information. In this sense, companies need to come up with precise communications strategies that stand out between the overwhelming amount of information that customers and social network users are exposed to.

Giving this background, brand managers and marketers need to make accurate and efficient decisions on social media content marketing. This implies deciding what type of content, style and information should be distributed to consumers through social media in order to achieve the marketing goals.

As it was previously discuss on this dissertation, there is no an exact formula for educational content marketing design that can lead higher engagement rates in Facebook for B2B companies. Therefore, the general aim of this dissertation was to determine the impact of content marketing on brand engagement in social media. Namely, this study tries to understand, what design features should content marketing have in order to increase likes, and shares on Facebook, and, which type of message features of content marketing typically generate more likes and shares on Facebook.

Reviewing previous researches, all research about content marketing elements have focused on B2C experiences and results have demonstrated that the use image based contents (Hoffman & Daugherty, 2013); vivid and interactive features on Facebook brand posts, as well as sharing comments, increase the number of likes of the post (De Vries, Gensler, & Leeflang, 2012). Moreover, adding videos and images to posts (Sabate et al., 2014) with content characteristic like relevance and clarity are drivers of positive engagement metrics in Facebook (Stephen et al., 2015).

However, few relevant studies about social media content marketing in B2B were found; showing an opportunity to test which types of elements in content design are more valuable in the B2B buying process. In view of this, the efficacy of two promising message elements – content novelty and use of statistical data, were tested through the performance of A/B tests. It

is believed that B2B consumers will always prefer statistical or novelty information as these elements can be associated to information quality features such us usefulness, goodness, accuracy, currency and importance (Holliman & Rowley, 2014). Also, they will engage more with novelty and data features as these elements help them to understand in a more detailed way unknown characteristics about products or services.

To this end, the content of posts on a Facebook fan page of a Colombian start-up, B2B service company was experimentally manipulated during the last trimester of 2015. Posts were randomly showed to groups of men and women targeted through Facebook, and post engagement assessed by measuring click-through rates, likes and shares, using data provided by Facebook Insights. The performance of the experimental campaign was benchmarked against past campaign results from the same company, as well as industry and competition performance on similar campaigns.

Even though, there was no statistical significance for novelty and data stimuli over the engagement rate and click through rate, the experiment show clear trends of what companies with small Facebook fan pages can expect.

First of all, men are likely to click on posts than women as they spend more time on Facebook and they are more brand oriented than females (Ulusu, 2010). This means, brands like Green Loop need to design posts with specific segmentation criteria. For instance, the study reveals that men will value novelty only when data elements are also present, while women are indifferent to it.

Second, men and women were more engaged when no data information is present. Simple and general information is more appealing for men and women as the main usage factors of Facebook are “Social networking”, “Writing on wall”, “Entertainment”, “Searching for friends” and “Free time” (Ulusu, 2010). However, B2B consumers demand more detailed information in the buying process, to support and feel confident about purchasing decisions. Hence, this research suggests a new field of study in which the right degree of simplicity and details of a post can be evaluated to engage consumers.

Third and last, the results of this experiment are unique and important as they make a contribution for B2B study field and market. They show in practice how consumers interact with brands in SNS and all the different limitations that managers need to overcome on a daily basis. Moreover, they show that designing content with specific marketing objectives that address B2B customer need will perform generally better than the industry, competence or past marketing experiences.

5.3 Managerial implications

This research presents a real and valid contribution to the study of social media marketing campaigns for B2B companies. Especially for start-ups that face budget restrictions for marketing initiatives, this study shows that inbound marketing campaigns are successful if they are design taking into account the different needs of the audiences.

Specifically, we found that men and women will react very different in terms of engagement; this means that posts should be design taking into account which elements are more appealing for men or for women. Furthermore, in the case of companies like Green Loop that are all the time working in new construction projects it is very important that this type of communications get complemented with data, otherwise, consumers (especially men) won't believe the novelty of the project and thus the engagement of the post will not be successful.

On the other hand, it is very important for this company to take into account that their audiences want less information; this means educational content should be easier to digest. It should be simple and with less details to simplify understanding. However, B2B consumers need detailed information to make purchase decisions, so the challenge for marketers would be to find the right combination between details that support decision and simplicity in content design.

5.4 Limitations and future research

As in all research experiences, this study had different limitations that need to be considered in the analysis.

First, regarding Green Loop's Facebook Fan Page the number of followers when the experiment started was very small (217) so data collection was limited to few number of interactions. Additionally, before the posts of the experiment were launched, small efforts were done on social media without guidance or marketing communication strategy, along with almost one year of stagnation in which there was no posting activities. This could had influenced the dynamic and behaviour of the fan page during the experiment.

Second, taking into account the experiment design, the definition of the experimental and control group influenced the results. In Facebook there are different variables in which a campaign can be segmented. It is possible to do it by gender, geographic location, language and interests. When the control and experimental groups were selected, the chosen variable was gender. This segmentation was the most homogeneous in terms of size and it avoided overlapping between groups. For the other variables there were huge differences in terms of size and in most of the cases it was possible that the same person could saw all the treatments.

Even though in the experiment gender effects were controlled by exposing the groups to all the possible combinations of factors, the results showed very pronounced gender effects that were determinant in the results.

Third, the study faced some information and secondary data limitations for the benchmark. There was no comparable benchmark of the industry in which Green Loop operates. The value used to compare Green Loop with general Facebook campaigns could present some biases as the engagement rates vary in terms of industry, fan page size and consumers behaviour. Furthermore, to compare the performance with competitors, it was not possible to get information about the reach of the posts in their Facebook fan page because this information comes directly from Facebook Insights. As well, the information collected from competitors was not very accurate taking into account that the posts done by this company were not 100% comparable to the objectives of the study.

Lastly, due to time restrictions of this study and the time each post had to get likes and shares (cycle of the posts in Green Loop's Facebook Fan Page), it was not possible to publish more posts to prove the hypothesis. This limitation generated a small data base in which most of the statistical tests that were executed were non-parametrical and most of the results didn't show significant effects.

For further researches, it would be very interesting to analyse elements with a different group criterias in which gender can actually be controlled. This approach would be interesting for marketers to determine other ways to segment campaigns and generate engagement.

In future researches, I believe it would be very interesting for B2B companies to evaluate the engagement rates with other type of elements in educational content, for instance the use videos, infographics, links and news formats. This will give a more complete understanding of what would be the best approach in the designs of posts to engage more audiences in the B2B environment.

It would also be very interesting to analyse other type of metrics such as virality, word of mouth and the likeability of the fan page. This approach will help B2B marketers to create more segmented posts according to the marketing objectives. Knowing which posts increase each type of metric more efficient campaigns can be done.

Regarding the content, in this study novelty and data were explored, however, taking into account the B2B decision making process it would also be very interesting to study in more detailed way the use of product information in a post, product recommendations by opinion leaders and sales people recommendations to see which one is more effective in the engagement of the consumers.

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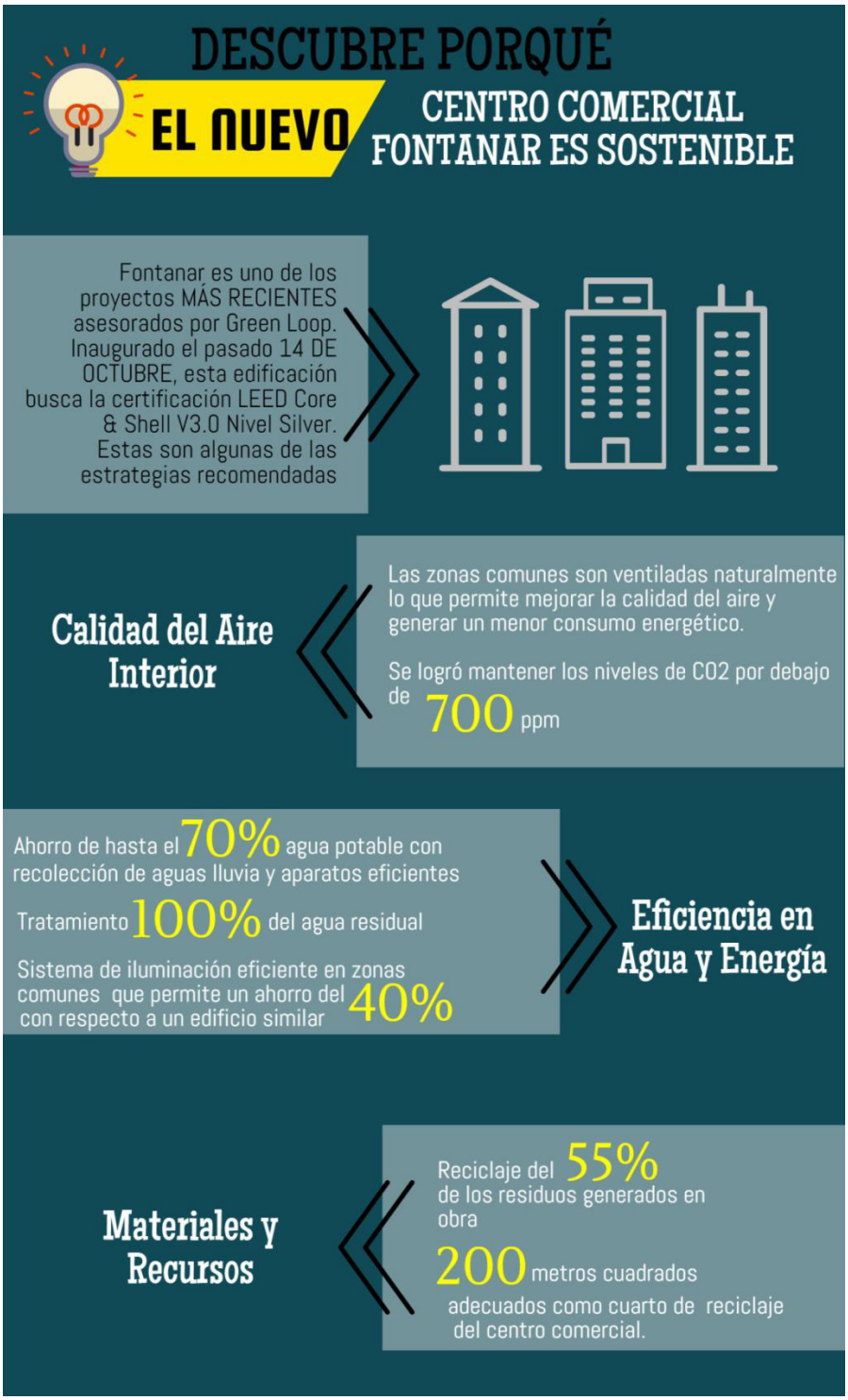
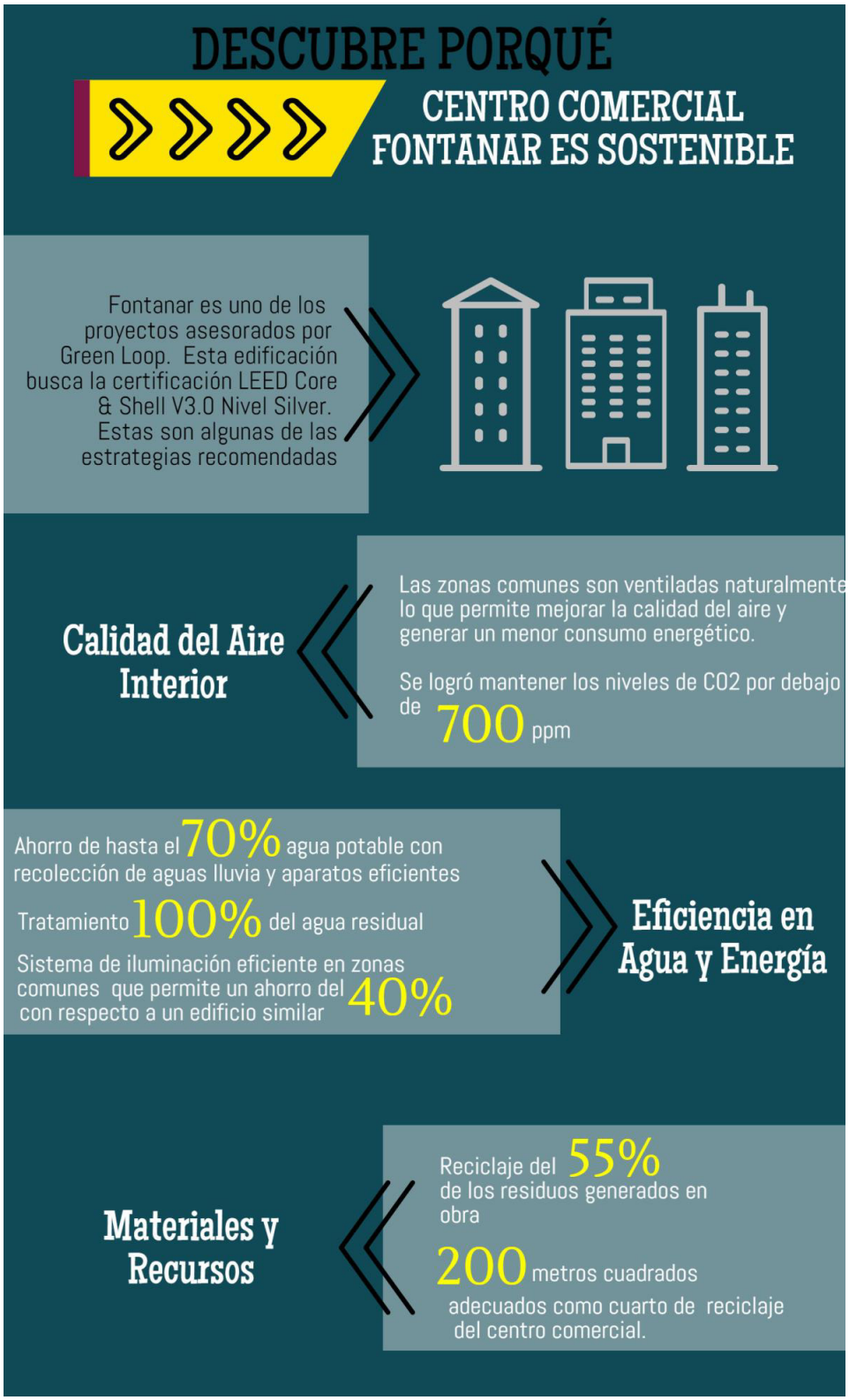
ANNEXES

ANNEX 1 POSTS EXPERIMENT PART 1

- **Women + New + Data**



- **Men + No New + Data**



- **Women + New + No Data**

- **Men+ No new + No Data**

ANNEX 2 - POSTS EXPERIMENT PART 2

- **Women+ No New + Data**

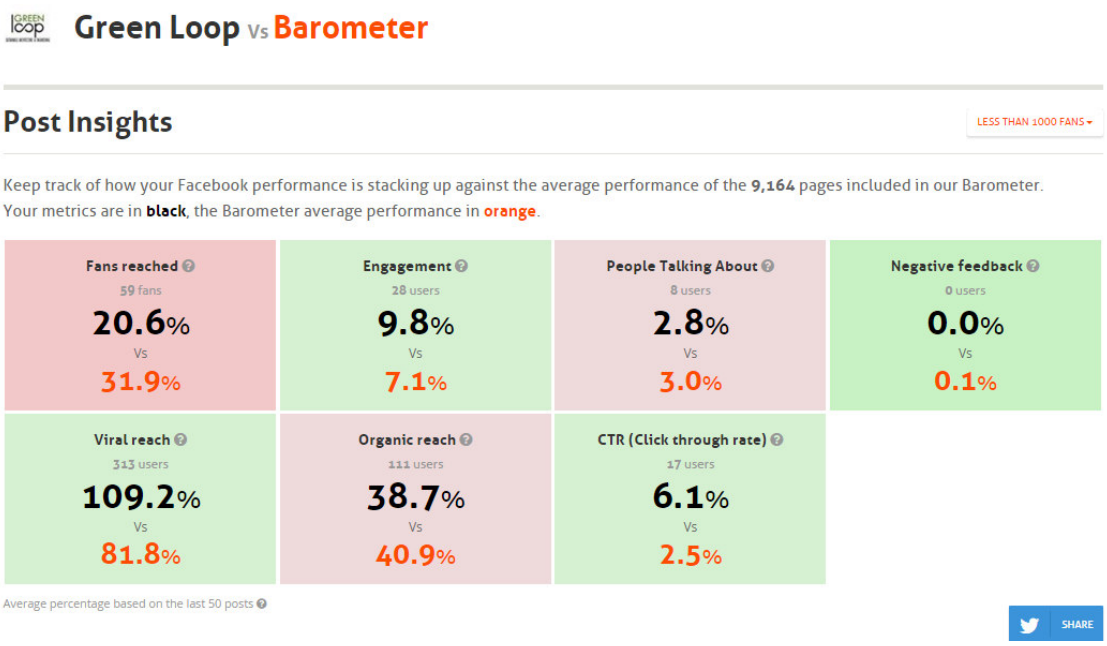
- **Men + New + No Data**

- **Women + No New + No Data**

- **Men + New + Data**


NEW
Es ÚNICA y NOVEDOSA
Obtuvo el tercer puesto en el "Premio Colombiano a la Innovación Tecnológica Empresarial para las Mipymes". INNOVA
Eco- Friendly
Es amigable con el medio ambiente:
Funciona con batería recargable por lo cual no genera emisiones de CO2.
Batería: SLA 48V
Tiempo de recarga: 3 horas
¿Porqué regalar una Ecomove en esta navidad?
Vehículo Anti- trancón
Es ideal para transportarse en ciudades con alta congestión vehicular.
Su velocidad permite utilizarla tanto en vías principales como en ciclo rutas.
Autonomía: 30 km en promedio
Velocidad máx: 40 km/h
Es un vehículo todo terreno, divertido y diferente.
Es fácil de usar y requiere el mismo mantenimiento de una bicicleta
Disponible en 2 colores: rojo y amarillo

ANNEX 3-BAROMETER TOOL



ANNEX 4 - GREEN LOOP PAST CAMPAIGNS PERFORMANCE

Date	Type	Lifetime Post Total Reach	Lifetime Post Total Impressions	Engagement (Unique users)		CTR	CTR%	ER	ER %
				likes	*shares*				
30/10/2015	Figure	417	734	9	2	0,045	4,496	0,026	2,638
23/10/2015	Figure	704	1147	18	4	0,035	3,487	0,031	3,125
21/10/2015	Figure	886	1580	28	4	0,041	4,114	0,036	3,612
02/10/2015	Figure	711	1243	17	3	0,043	4,264	0,028	2,813
25/09/2015	Figure	69	160	1	0	0,006	0,625	0,014	1,449
27/08/2015	Figure	138	290	2	2	0,014	1,379	0,029	2,899
26/08/2015	Figure	144	397	4	1	0,018	1,763	0,035	3,472
			Average	11	2	0,029	2,876	0,029	2,858

ANNEX 5- SPSS RESULTS OF PAST COMPANY POSTS BENCHMARK

Resumo de Teste de Hipótese

	Hipótese nula	Teste	Sig.	Decisão
1	A distribuição de COMPUTE CTR=Clicks / Impressions * 100 é a mesma entre as categorias de Who ran campaign for this post.	Teste de Kruskal-Wallis de Amostras Independentes	,643	Reter a hipótese nula.
2	A distribuição de COMPUTE ER=(Likes + Shares)/Reach*100; FOR COMPETITORS, REACH=438, 43=MEAN REACH PAST GREENLOOP é a mesma entre as categorias de Who ran campaign for this post.	Teste de Kruskal-Wallis de Amostras Independentes	,001	Rejeitar a hipótese nula.

São exibidas significâncias assintóticas. O nível de significância é ,05.

Postos

	Who ran campaign for this post	N	Posto Médio	Soma de Postos
COMPUTE ER=(Likes + Shares)/Reach*100	GreenLoop, Experimented posts	8	11.38	91.00
	GreenLoop, past posts	7	4.14	29.00
	Total	15		
COMPUTE CTR=Clicks / Impressions * 100	GreenLoop, Experimented posts	8	8.50	68.00
	GreenLoop, past posts	7	7.43	52.00
	Total	15		

Estatísticas de teste[a]

	COMPUTE ER=(Likes + Shares)/Reach*100;	COMPUTE CTR=Clicks / Impressions * 100
U de Mann-Whitney	1.000	24.000
Wilcoxon W	29.000	52.000
Z	-3.125	-.463
Significância Assint. (Bilateral)	.002	.643
Sig exata [2*(Sig. de unilateral)]	.001[b]	.694[b]

ANNEX 6- SPSS RESULTS OF COMPETITION BENCHMARK

Mann-Whitney Test for Green Loop and Green Factory

Postos

	Who ran campaign for this post	N	Posto Médio	Soma de Postos
COMPUTE ER=(Likes + Shares)/Reach*100	GreenLoop, experiment posts	8	12.75	102.00
	Green Factory	12	9.00	108.00
	Total	20		
COMPUTE ER=(Likes + Shares)/Reach*100	GreenLoop, experiment posts	8	14.38	115.00
	Green Factory	12	7.92	95.00
	Total	20		

Estatísticas de teste[a]

	COMPUTE ER=(Likes + Shares)/Reach*100	COMPUTE ER=(Likes + Shares)/Reach*100
U de Mann-Whitney	30.000	17.000
Wilcoxon W	108.000	95.000
Z	-1.390	-2.394
Significância Assint. (Bilateral)	.165	.017
Sig exata [2*(Sig. de unilateral)]	.181[b]	.016[b]

Mann-Whitney Test for Green Loop and SUMAC

Postos

	Who ran campaign for this post	N	Posto Médio	Soma de Postos
COMPUTE ER=(Likes + Shares)/Reach*100	GreenLoop, experiment posts	8	17.38	139.00
	SUMAC	14	8.14	114.00
	Total	22		
COMPUTE ER=(Likes + Shares)/Reach*100	Green Loop experiment posts	8	17.75	142.00
	SUMAC	14	7.93	111.00
	Total	22		

Estatísticas de teste[a]

	COMPUTE ER=(Likes + Shares)/Reach*100	COMPUTE ER=(Likes + Shares)/Reach*1
U de Mann-Whitney	9.000	6.000
Wilcoxon W	114.000	111.000
Z	-3.211	-3.416
Significância Assint. (Bilateral)	.001	.001
Sig exata [2*(Sig. de unilateral)]	.001[b]	.000[b]

ANNEX 7- SOCIAL MEDIA BENCHMARK STUDY Q2 2015

Interactions differ by the size of a page

This table displays the number of likes, comments and shares in the different sized page groups.

Every marketer is challenged by the decreasing organic reach and the increasingly crowded timelines. Thus, it is essential to know which results are good and what type of strategy will work best at a certain time.

When measuring performance, the own performance metrics should be allied to benchmarking against competitors, in order to create effective tactics to optimize results.

Page Size	Avg. Number of Likes per Post	Avg. Number of Comments per Post	Avg. Number of Shares per Post
1-1k Fans	4	0	1
1k-10k Fans	22	2	4
10k-100k Fans	105	11	20
100k-1m Fans	572	47	98
1m-10m Fans	3,741	147	402
10m+ Fans	23,033	596	1,898

Data Source: quintly analyzed over 120,000 Facebook profiles.
Data Period: June 2015

ANNEX 8 - SPSS RESULTS OF INDUSTRY BENCHMARK

One sample T-test for industry with ER of 0.05%

Estatísticas de uma amostra

	N	Média	Desvio Padrão	Erro Padrão da Média
COMPUTE ER=(Likes + Shares)/Reach*100; FOR COMPETITORS, REACH=438,43=MEAN REACH PAST GREENLOOP	8	5,0441	,75010	,26520

Teste de uma amostra

	Valor de Teste = 0.5					
	t	gl	Sig. (bilateral)	Diferença média	da Diferença Inferior	da Diferença Superior
COMPUTE ER=(Likes + Shares)/Reach*100; FOR COMPETITORS, REACH=438,43=MEAN REACH PAST GREENLOOP	17,134	7	,000	4,54406	3,9170	5,1712

Results of Wilcoxon Test for Industry Benchmark with ER of 0.05%

Resumo de Teste de Hipótese

	Hipótese nula	Teste	Sig.	Decisão
1	A mediana de COMPUTE ER=(Likes + Shares)/Reach*100; FOR COMPETITORS, REACH=438,43=MEAN REACH PAST GREENLOOP é igual a 1,000.	Teste dos postos sinalizados de Wilcoxon de uma amostra	,012	Rejeitar a hipótese nula.

São exibidas significâncias assintóticas. O nível de significância é ,05.

ANNEX 9 - SPSS RESULTS FOR NOVELTY

T-test and Mann-Whitney Test Results for Novelty

Estatísticas de grupo

	Post Content Novelty	N	Média	Desvio Padrão	Erro Padrão da Média
COMPUTE CTR=Clicks / Impressions * 100	No	4	35.351	171.318	.85659
	Yes	4	26.653	.69456	.34728
COMPUTE ER=(Likes + Shares)/Reach*100;	No	4	49.543	109.066	.54533
	Yes	4	51.338	.31910	.15955

Teste de amostras independentes

		Teste de Levene para igualdade de variâncias		teste-t para Igualdade de Médias						
		F	Sig.	t	gl	Sig. (bilateral)	Diferença média	Erro padrão da diferença	95% Intervalo de Confiança da Diferença	
									Inferior	Superior
COMPUTE CTR=Clicks / Impressions * 100	Variâncias iguais assumidas	45.825	.001	.941	6	.383	.86981	.92431	-139.189	313.151
	Variâncias iguais não assumidas			.941	3.960	.400	.86981	.92431	-170.667	344.629
COMPUTE ER=(Likes + Shares)/Reach*100; FOR COMPETITORS, REACH=438, 43=MEAN REACH PAST GREENLOOP	Variâncias iguais assumidas	2.116	.196	-.316	6	.763	-.17953	.56819	-156.984	121.078
	Variâncias iguais não assumidas			-.316	3.510	.770	-.17953	.56819	-184.788	148.881

Postos

	Post Content Novelty	N	Posto Médio	Soma de Postos
COMPUTE CTR=Clicks / Impressions * 100	No	4	5.00	20.00
	Yes	4	4.00	16.00
	Total	8		
COMPUTE ER=(Likes + Shares)/Reach*100;	No	4	4.25	17.00
	Yes	4	4.75	19.00
	Total	8		

Estatísticas de teste[a]

	COMPUTE CTR=Clicks / Impressions * 100	COMPUTE ER=(Likes + Shares)/Reach*100;
U de Mann-Whitney	6.000	7.000
Wilcoxon W	16.000	17.000
Z	-.577	-.289
Significância Assint. (Bilateral)	.564	.773
Sig exata [2*(Sig. de unilateral)]	.686[b]	.886[b]

ANNEX 10- TOTAL CAMPAIGNS RESULTS

CAMPAIGN RESULTS

3-factor, 2 levels	Type of Post	Likes	Shares	Reach	CTR%	AV. CTR	ER%	AV. ER
A1B1C1	*Men, No New, No Data*	11	3	224	5,1	5,05	6,3	5,70
A1B1C2	*Men, No New, Data*	9	2	214	5		5,1	
A1B2C1	*Men, New, No Data*	10	4	287	3,2	3,2	4,9	5,24
A1B2C2	*Men, New, Data*	5	2	125	3,2		5,6	
	Average Men	**8,75**	**2,75**	**212,5**	**4,1**		**5,47**	
A2B1C1	*Women, No New, No Data*	18	6	497	2,2	2,05	4,8	4,21
A2B1C2	*Women, No New, Data*	40	18	1612	1,9		3,6	
A2B2C1	*Women, New, No Data*	25	8	654	1,8	2,10	5,0	5,03
A2B2C2	*Women, New, Data*	31	13	878	2,4		5,0	
	Average Women	**28,5**	**11,25**	**910,25**	**2,07**		**4,62**	
	Totals/Means	149	56					
	Total Averages	18,6	7,0	561,4	3,1		5,0	

Factors:
1-Gender
2-Novelty
3-Stats

A1 Men
A2 Women
B1 Status Quo
B2 New Project
C1 No Stats data
C2 Stats Data

Metrics (organic campaign):
CTR
Engagement Rate

ANNEX 11-REGRESSION RESULTS

ANOVA[a]

Modelo		Soma dos Quadrados	gl	Quadrado Médio	F	Sig.
1	Regressão	11.546	3	3.849	70.182	.001[b]
	Resíduo	.219	4	.055		
	Total	11.765	7			

Coeficientes[a]

Modelo		Coeficientes não padronizados		Coeficientes padronizados	t	Sig.
		B	Erro Padrão	Beta		
1	(Constante)	11.590	.828		13.998	.000
	Gender	-4.790	.524	-1.975	-9.147	.001
	COMPUTE GenderXNovelty=Gender * ContentNovelty	1.830	.331	1.645	5.527	.005
	Post Content Novelty	-3.615	.524	-1.491	-6.905	.002

a. Variável Dependente: COMPUTE CTR=Clicks / Impressions * 100

ANNEX 12 - SPSS Results for Data

Independent Sample T-test

Estatísticas de grupo

Stats info in post		N	Média	Desvio Padrão	Erro Padrão da Média
COMPUTE CTR=Clicks / Impressions * 100	No	4	3,0744	1,46130	,73065
	Yes	4	3,1261	1,33588	,66794
COMPUTE ER=(Likes + Shares)/Reach*100	No	4	5,2507	,67263	,33631
	Yes	4	4,8374	,86402	,43201

Teste de amostras independentes

		igualdade de variâncias		teste-t para Igualdade de Médias						
		F	Sig.	t	gl	Sig. (bilateral)	Diferença média	Erro padrão da diferença	da Diferença Inferior	da Diferença Superior
COMPUTE CTR=Clicks / Impressions * 100	Variâncias iguais assumidas	,037	,854	-,052	6	,960	-,05164	,98995	-2,47396	2,37067
	Variâncias iguais não assumidas			-,052	5,952	,960	-,05164	,98995	-2,47867	2,37538
COMPUTE ER=(Likes + Shares)/Reach*100	Variâncias iguais assumidas	,163	,701	,755	6	,479	,41333	,54748	-,92632	1,75297
	Variâncias iguais não assumidas			,755	5,659	,480	,41333	,54748	-,94610	1,77276

Mann-Whitney Test

Postos

Stats info in post		N	Posto Médio	Soma de Postos
COMPUTE CTR=Clicks / Impressions * 100	No	4	4,25	17,00
	Yes	4	4,75	19,00
	Total	8		
COMPUTE ER=(Likes + Shares)/Reach* 100;	No	4	4,50	18,00
	Yes	4	4,50	18,00
	Total	8		

Estatísticas de teste[a]

	COMPUTE CTR=Clicks / Impressions * 100	COMPUTE ER=(Likes + Shares)/Reach*100
U de Mann-Whitney	7,000	8,000
Wilcoxon W	17,000	18,000
Z	-,289	0,000
Significância Assint. (Bilateral)	,773	1,000
Sig exata [2*(Sig. de unilateral)]	.886[b]	1.000[b]

ANNEX 13 INTERACTION EFFECTS BETWEEN GENDER, NOVELTY AND DATA

	CTR	ER
Men, No New, No Data	5,1%	6,3%
Men, No New, Data	5,0%	5,1%

	CTR	ER
Women, No New, No Data	2,2%	4,8%
Women, No New, Data	1,9%	3,6%

	CTR	ER
Men, New, No Data	3,2%	4,9%
Men, New, Data	3,2%	5,6%

	CTR	ER
Women, New, No Data	1,8%	5,0%
Women, New, Data	2,4%	5,0%