

Content Analysis of Communication Used by the Pharmaceutical Companies on Facebook

Zuzana Schlosserová

(Department of Mass Media Communication and Advertisement, Univerzita Konštantína Filozofa v Nitre, Slovak Republic)

Abstract: This article deals with the issue of online communication of the pharmaceutical companies in Slovakia and their customer communication on Facebook. We used content analysis as our method of investigation and we applied it on the posts from spring 2017. We consider our results to be beneficial and useful mainly for the communication of these companies on Facebook as we have not seen a similar research in our country.

Key words: content analysis, social network, pharmaceutical companies, post, posting, Facebook

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1. Introduction

Our paper is aimed at the pharmaceutical companies operating on the Slovak market, their communication strategies on Facebook and their specifics. The issue was intriguing to us mainly because we have not seen similar research in our geographic area (Slovak Republic). In the theoretical part, the article briefly introduces the pharmaceutical industry, online communication and social media. Furthermore, it details the research problem and aim, as well as the method of analysis and selection of the data set of investigated subjects, and presents the results.

2. Pharmaceutical Industry

Companies are increasingly relying on technological innovation because they are trying to win and maintain a competitive advantage. The trends such as globalization, acceleration of the production cycle, greater competition, compartmentalization of products into individual commodities and technological fusions have also become characteristic of the pharmaceutical companies (Cardinal, 2001). The pharmaceutical industry operates in the field of pharmacy. Pharmacy specializes in testing the medicinal products, placing the medicinal products and medical aids on the market and putting medical devices into operation, production of medicines, wholesale distribution of medicinal products, provision of pharmaceutical care, quality assurance and control, control of effectiveness and safety of medicinal products and devices, whereby most of these are carried out by pharmaceutical companies (Collection of Laws of the Slovak Republic cited on 10/1/2018).

Zuzana Schlosserová, Mgr., Constantine the Philosopher University in Nitra, research areas/interests: marketing communication and CSR. E-mail: zuzkasschlosserova@gmail.com.

3. Online Communication

The Internet has become a popular medium for connecting the people with specific applications in the area of online communication. Online communication has become crucial for modern businesses. The traditional advertising channels are still a strong means of communication, but they are slowly losing their momentum as a result of the ever-increasing importance of online communication platforms such as websites, social media and mobile applications. This new and challenging scenario made the companies and their marketing departments adapt their communication strategies to the new consumer habits, allowing for a greater engagement of the target audience, and maintaining the production of interesting, modern and inspirational content (Fernández-Cavia, 2017; Roy et al., 2017).

4. Social Media

The definitions of social media are usually relating to the concept of social media and digital technology with emphasis on content or interaction of the users. The social media are often defined by the channels, whether it comes to the identification of message routing, or use of specific tools such as Facebook and Twitter, as an illustration of the possible ways of interaction. Although several definitions of the social media are available, we are lacking a formal, concise and mutually agreed definition especially across the different disciplines. Some of the existing definitions are fairly simple, with emphasis on the nature of how the posts/write-ups are rendered on social media. For example, we can define social media as those that facilitate online communication, interaction or cooperation (Carr & Hayes, 2015; Effing et. al., 2011; Russo et. al., 2008).

5. Research Problem and Research Question

We are currently witnessing a growing trend in the use of online media by the companies for promotion purposes, which increases their competitiveness. In the pharmaceutical industry, however, we can still see the more traditional forms of ads, be it printed or audiovisual. The pharmacies are the most frequent sponsors of online ads in the pharmaceutical industry. Therefore, we decided to analyze the promotion and advertisement strategies of pharmaceutical companies, i.e. the actual manufacturers of the medicinal products, on Facebook.

The above research problem resulted in defining the following research question:

What are the specifics of online communication of the pharmaceutical companies on Facebook?

The aim of our research is to answer the research question as accurately as possible.

6. Method

A variety of content analysis measurement techniques are currently available to carry out content analysis in the context of various disciplines. The researchers in the field of communication rely heavily on the content analysis of humans and computers (Krippendorff, 2004). We decided to use content analysis on the published posts. Content analysis is a method used to create reproducible or valid conclusions from text, which can contain both text and visual media and objects. Content analysis is most commonly performed using a quantitative approach, especially by counting the occurrence of specific categories, which are defined by the researchers at the beginning of research (Hsieh & Shannon, 2005).

7. Research Categories

In our research, we decided to define the following categories for analysis.

- **Communication content:** promotion of the company, product, event, sharing the posts from other user profiles, information about diseases, information about healthy living, other communication methods.
- **Form of the posts:** posts with text, posts with images, posts with video
- **Response to the posts:** for each category of posts based on the content and form: likes, sharing, comments, video views in posts with video.

8. Description of the Sample

When selecting the subjects for analysis, we were confronted by the following problem: the pharmaceutical companies have their Facebook pages under the respective multinational corporations. Therefore, we decided to use non-probability sampling. Non-probability sampling is characterized by the fact that the members of the representative sample are selected on the basis of our judgment, knowledge and facts, which we set out in the theoretical part, as well as owing to the fact that the pharmaceutical industry is specific and the number of representative companies is rather limited. This made us include some but not other units into our sample. Our research falls into the category of homogeneous sampling because we are dealing with a specific subset, i.e., the companies in pharmaceutical industry. The accuracy of results, however, cannot be determined based on mathematical statistics (Kotler, 2007; Palys, 2008). After studying the list of pharmaceutical companies available at the webpage of Ministry of Health of the Slovak Republic, we decided to select the following companies for our analysis: TEVA Pharmaceuticals Slovakia s.r.o., GSK Slovakia s.r.o., KRKA Slovensko s.r.o., Boehringer Ingelheim RCV GmbH & Co KG.

9. Research Results and Discussion

The research data were obtained by counting and analyzing the Facebook profiles of the said four pharmaceutical companies with their subsidiary branches in Slovakia, and monitoring their posts in the period from February to March 2017. We investigated the form of this type of communication and the individual subcategories of followers' responses to the published posts at each page.

9.1 Content of Online Communication

This category, in which we subsequently defined seven subcategories, was dedicated to the content of online communication. The Company Promotion subcategory was the most represented subcategory with a total of 40 posts, which is more than 1/3 of the total amount of materials examined, followed by the Event Promotion subcategory with 26 posts and Disease Information subcategory with 22 posts. The "Other" subcategory was represented by fourteen posts. The pharmaceutical companies also published posts with a content component, in which they shared the posts from other profiles, with a total of nine posts, and posts about healthy lifestyle, which were only represented by six published posts. It is interesting that the Product Promotion subgroup contained no posts in the analyzed profiles. The results indicate that the pharmaceutical companies mainly publish the posts to promote their company or events attended or about to be attended by the company. Another specificity is the fact that the companies also publish numerous posts with information on the diseases, particularly those targeted by their products. The results are presented in the following table.

Table 1 Content of Online Communication

Content of online communication						
Company Promotion	Product Promotion	Event Promotion	Sharing of Other Posts	Information on Diseases	Information on Healthy Lifestyle	Other
40	0	26	9	22	6	14
TOTAL: 117						

9.2 Forms of Online Posts

The forms of online posts on social networks are also very important. In our research, the posts were divided into three subcategories as follows: posts with text; posts with images and posts with video. The analyzed posts were mostly represented by posts with photos with a total of 53 posts. Just below came the posts with video with 42 posts. The least represented posts were the purely textual posts with only 8 items. The pharmaceutical companies mostly communicate with their followers on social networks through the posts with images, especially the ones that include a visual element as indicated by our results, with the aim to win their attention more effectively. The results are presented in the following table.

Table 2 Forms of Online Communication

Forms of online posts		
Posts with text	Posts with images	Posts with video
8	53	42
TOTAL: 103		

9.3 Forms of Responses to Online Posts

It is self-evident that the posts are published on the social networks with the intention to solicit feedback from the followers. In our research, we have chosen the following subgroups of responses: likes, comments, shares and video views (number of views). The most numerous category was the number of views, which was represented by 1,525,288 follower's responses, i.e., 98% of all the analyzed followers' responses to the posts. This subcategory was followed by likes with 21,426 responses. In terms of the number of responses, the third subcategory was sharing with 3,755 responses. The least represented subcategory was comments with only 578 items. According to our findings, the followers of pharmaceutical companies most usually respond to the posts passively by watching the videos or liking the posts. They are less involved in the active processes such as sharing, let alone commenting. The data are shown in the following table.

Table 3 Forms of Followers' Responses to Online Communication

Forms of responses to the posts			
Likes	Comments	Shares	Video Views
21,426	578	3,755	1,525,288
TOTAL: 1,551,047			

9.4 Detailed Specifications of Individual Subcategories of Online Communication

9.4.1 Company Promotion

The posts promoting the company were subsequently divided into posts with text, posts with images and posts with video. We also assigned likes, comments, shares and video views to all of the above subcategories. As mentioned above, posts with images (17 instances) and posts with video (17 instances) are the most numerous

types in the Company Promotion category. Posts with text only were used just six times. Video watching was the most frequent form of response, represented by more than 379 000 instances. Likes dominated in the posts with text and images. Comments were the least represented form of response. In the Company Promotion posts, the companies active in the pharmaceutical industry most frequently used visual components, with video viewing being the most frequent response type. The data are presented in the following tables by each post type separately. This approach will also be used in the remaining categories.

Table 4 Posts with Text in the Company Promotion Category

Posts with text (6)		
Likes	Comments	Shares
486	44	78
TOTAL: 608		

Table 5 Posts with Images in the Company Promotion Category

Posts with images (17)		
Likes	Comments	Shares
2,673	46	389
TOTAL: 3,108		

Table 6 Posts with Video in the Company Promotion Category

Posts with video (17)			
Likes	Comments	Shares	Video Views
7,889	276	1,573	379,303
TOTAL: 389,041			

9.4.2 Product Promotion

The posts advertising products were subsequently divided into posts with text, posts with images and posts with video. We also assigned likes, comments, shares and video views to all of the above subcategories. We noticed an interesting phenomenon in this subcategory: the pharmaceutical companies analyzed in this category did not produce a single post.

9.4.3 Event Promotion

Similarly to the previous cases, this category was divided into posts with text, posts with images and posts with video. We also assigned likes, comments, shares and video views to all of the above subcategories. In this case, the companies promoted events, which they attended or planned to attend. To a large extent, these events included conferences or events associated with special “disease days”. Even in this category, the companies mostly published posts with images, specifically with photos (represented by nineteen cases), posts with video (six cases) and posts with text (only once). Similarly to the previous category, the most frequent response was passive watching of videos, followed by a passive “like”, with active sharing and comments in the background. Even in this case, the pharmaceutical companies mostly published posts with images, but this time photographic. The followers were mostly passive, as evidenced by the number of responses and views and likes. The data are presented in the following tables.

Table 7 Posts with text in the Event Promotion Category

Posts with text (1)		
Likes	Comments	Shares
40	0	2
TOTAL: 42		

Table 8 Posts with Photos in the Event Promotion Category

Posts with images (19)		
Likes	Comments	Shares
3,412	81	449
TOTAL: 3,942		

Table 9 Posts with Video in the Event Promotion Category

Posts with video (6)			
Likes	Comments	Shares	Video Views
990	47	87	418,610
TOTAL: 419,734			

9.4.4 Sharing of Posts From Other Profiles

The category of sharing of posts from other profiles was divided into posts with text, posts with images and posts with video. We also assigned likes, comments, shares and video views to all of the above subcategories. This was the first category with zero text-only posts. The companies bet on the tactics of posting the write-ups with visual elements: in the case of posts with photos, the number totaled 6 and in the case of posts with video, the number totaled 3. Since the number of posts was lower compared to the previous categories, even the numbers of responses decreased, with the exception of posts with videos, which was still quite high. As in the previous categories, even here the followers preferred the passive form of response in the following order: video watching, liking, sharing and active response — commenting. Even in these categories, the profiles of pharmaceutical companies used posts with a visual component and the most frequent form of response remained: watching a post with video. The results are presented in the following tables. Since there were no text-only posts, this table is not presented.

Table 10 Posts with Images in the Sharing from Other Profiles Category

Posts with images (6)		
Likes	Comments	Shares
773	18	77
TOTAL: 791		

Table 11 Posts with Video in the Sharing from Other Profiles Category

Posts with video (3)			
Likes	Comments	Shares	Video Views
1,046	3	184	219,232
TOTAL: 220,465			

9.4.5 Information on Diseases

Just like in the previous cases, the specific category of Information on Diseases was divided into posts with

text, posts with images and posts with video. We also assigned likes, comments, shares and video views to all of the above subcategories. The posts with a visual component also prevailed in this category, with 14 published posts in the posts with video category. Posts with photos were recorded seven times and posts with a purely textual content only once. In this category, we observed the same phenomenon as in the previous cases: the followers preferred passive responses, with videos, likes, shares and comments as the most represented responses. Even in this category, the companies active in the pharmaceutical industry mostly used the posts with a visual component, and the follower's responses were mostly represented by passive responses such as watching a video. The data are presented in the following tables.

Table 12 Posts with Text in the Information on Diseases Category

Posts with text (1)		
Likes	Comments	Shares
7	0	0
TOTAL: 7		

Table 13 Posts with Photos in the Information on Diseases Category

Posts with images (7)		
Likes	Comments	Shares
1,117	13	413
TOTAL: 1,543		

Tab. 14 Posts with video in the Information on Diseases Category

Posts with video (14)			
Likes	Comments	Shares	Video Views
1,701	42	395	495,743
TOTAL: 497,881			

9.4.6 Information on a Healthy Lifestyle

Similarly to all previous subcategories, the last observed category — posts about a healthy lifestyle — which fall within the category of information on a healthy lifestyle, were split into posts with text, posts with video and posts with photos. We also assigned likes, comments, shares and video views to all of the above subcategories. As in the previous categories, the companies used the posts with visual elements, however, the posts with photos (4 items) were the most frequent, followed by the posts with video. There were no text-only posts. Even with the relatively small number of posts in this category, the most frequent follower response was video watching (124 000), followed by likes, sharing and active commenting. Even in this category, the pharmaceutical companies mostly used posts with a visual component on their social network profiles. The followers' reactions continued to be passive and they were mostly represented by watching the posts with video. The results are presented in the respective tables. Since there were no text-only posts, this table is not presented.

Table 15 Posts with Photos in the Information on Healthy Lifestyle Category

Posts with images (4)		
Likes	Comments	Shares
372	2	30
TOTAL: 404		

Table 16 Posts with Video in the Information on Healthy Lifestyle Category

Posts with video (2)			
Likes	Comments	Shares	Video Views
921	47	78	124,000
TOTAL: 220,465			

After completing the results and accepting the fact that there was no similar research conducted in our geographic area (Slovak Republic), we decided to discuss the answer to the research question we formulated earlier: *What are the specifics of online communication of the pharmaceutical companies on Facebook?*

As can be seen in everyday life, human and corporate communication is increasingly moving into the online world. Communication through social networks allows the companies to improve their competitive advantage over the competition and their position on the market. Thanks to the data we received we take the liberty to argue that the pharmaceutical companies prefer to use the Facebook posts in which they present their company or event they participated in. Upon closer examination of the various content categories, we found that the pharmaceutical companies mostly publish posts with a visual component, i.e., a photograph, which supports our claim that they are trying to differentiate as much as possible, and, as asserted by Dickov & Kuzman (2011), that is exactly what photographs as a visual component allow them to do. However, the followers of these companies, i.e., their potential customers, mostly respond passively to the published posts, e.g., by watching a video, or using the “like” functionality, which is also passive. The social media managers in these companies should publish content to facilitate the activation of the followers on their profile page and help share their posts and divulge their thoughts even outside their fan-base.

10. Conclusion

We hold that our results presented in detail in the previous section of our work will be beneficial to the social media specialists who deal with corporate promotion on social media. The specialists may mainly benefit from being able to provide advice to their clients, help them differentiate and improve their competitiveness in today’s markets. We would like to add that the objective of our research has been met and answered in the previous section dealing with the research question.

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