

DIAGNOSTIC TOOL FOR WHATSAPP USE IN ORGANIZATIONAL ENVIRONMENTS

FERRAMENTA DE DIAGNÓSTICO DE USO DO *WHATSAPP* EM AMBIENTE ORGANIZACIONAL

HERRAMIENTA DE DIAGNÓSTICO PARA EL USO DE WHATSAPP EN EL ENTORNO ORGANIZACIONAL

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Introduction

The corporate universe has been undergoing profound changes. New concepts, forms of management and technologies determine other company set-ups, change market structures, consumer behavior and the relationship between capital and work, causing impacts on social life, values, politics and culture.

In this scenario, organizational communication became an essential strategic tool to establish dialogue between the company and its various audiences. It is linked to shared feelings, information, knowledge and interests. It also presents itself as a phenomenon that brings together complexity and convergence.

Understanding communication as an essential factor for organizations to exist, nowadays, is becoming more and more necessary.

ABSTRACT:

We present an excerpt of work in progress, whose objective is to develop a diagnostic tool for using WhatsApp in organizational environments. The project, oriented towards facing real situations, characterizes the initiative as applied research. The solution involves a data collection instrument, form categorization and an algorithm for basic exploratory analysis of group conversations identified among participants. Based on a theoretical framework that points to the changes resulting from digitalizing information circulation. The test application taking place at SEBRAE-MA, has shown effectiveness in identifying specific problems, thus enabling proposals regarding mitigation initiatives and better use.

Keywords: Organizational Communication. Contemporaneity. Digital Information and Communication Technologies

In the digitalized society, the organizational scenario is quite complex and requires a series of changes, adjustments and restructuring, which involve all aspects of an organization.

According to Corrêa (2016, p. 60):

[...] the leading role of the communicative organizational activities has been shown in proportion with the consolidation intensity regarding Digital Technologies of Information and Communication (ICTs) in contemporary society.

The adoption of digital tools by agents that belong to the organization causes internal and external impacts.

Understanding the repercussions that such changes generate is a fundamental factor to continue mapping the evolution of communication ecosystems in these environments. "The changing realities, increasingly present in the world of organizations and organizational subjects, in turn, necessarily imply a permanent (re)visiting of the conceptions of communication, organization and organizational subjects" (SCROFERNEKER, 2008, p.7).

This author's logic gives organizational communication an important and fundamental value to organizations. With regard to internal communication, innovations permeate its channels, instruments, practices and even policies with the internal audience. Regarding internal communication, Marchiori (2008, p. 21-216) states that:

Planned and evaluated internal communication is a strategic tool that encourages dialogue between leaders and employees. It provides opportunities for the exchange of information via communication, contributing to the construction of knowledge, which is expressed in people's attitudes. A process that encompasses administrative communication, flows, barriers, vehicles, formal and informal networks is essential. Therefore, it promotes social interaction and fosters credibility in order to keep an organization's identity alive.

The WhatsApp messaging app is an example of an internal communication tool, which, due to its popularity in the personal and organizational spheres, enables several interactions. It has the option of creating groups to extend communication to more people and leads the ranking of most used apps in the world, on IOS and Android systems. According to the most recent report by the analysis company App Annie, it also became the app that had the most active users and the most popular app in Brazil (ALVES, 2019).

It is necessary to plan new paths that enable a redefinition of the organizations' internal communication, with greater scope, considering the plurality, agility, familiarity

and initial interaction possibility, which, until then, was only informative, one-way, through newspaper murals, house-organs and handouts.

How to more effectively understand and implement technological innovations for organizational communication processes? In the specific case of WhatsApp, how is it being adopted? As a corporate, personal or hybrid tool? Do such forms require control? How can this use help or hinder the organization? These seem to be relevant questions and translate into one of the biggest challenges that organizations need to face nowadays: knowing how to structure their communication management model with employees, where tradition and innovation coexist, if necessary.

New tools for investigating change

The practice of internal organizational communication needs to be able to reconcile technological innovation, behavioral changes, new social contexts, new market demands, maintenance and traditional media improvement, which still work and are relevant to many companies and institutions.

To incorporate the entire digital media technological apparatus, this area needs to be strategically positioned, collaborating with digital competencies and changes in organizational culture. The communication channels with the internal audience must be complementary, that is, they can all convey the same information while considering their attributes and peculiarities, such as formats, content, distribution and frequency.

However, only with strategies involving digital media with unlimited operations, will employees have the opportunity to collaborate and engage in communications processes at the company where they work.

Callon (2010) defends the deep compatibility between innovation and tradition. The author articulates his ideas about technical, economic and sociological aspects of innovation and, in his approach, points out that innovation is a collective process, the result of a network formed by human and non-human elements. Innovation must be nurtured and enriched by tradition, not destroy it. "Nobody knows the end of the trip. We don't know where we're going, but we're going together: this is the beauty of innovation" (CALLON, 2010, p. 72).

According to Kunsch (2016, p. 149):

Organizational communication is the subject that studies how the communication phenomenon is processed within organizations in a global scope. It analyzes the system, functioning and communication process between the organization and its various audiences.

Therefore, it should be considered that new forms of internal communication in organizations are the result of a collective effort made up of the individual wills and interests of leaders and employees who jointly negotiate and gradually build and legitimize solutions and instruments. Nowadays, employees have greater access to an extensive information network and sophisticated channels regarding expression and communication with social networks. Internal organizational relationships are based on mediatized processes with new spaces for symbolic and more horizontal exchanges.

WhatsApp was launched in 2009 in the United States by Jan Koum and Brian Acton, both former Yahoo! employees, who, troubled by the ban on cell phone use at their university, created a solution for missed calls. The name derives from the English expression What's up? which translates into "What's up?" or "How are you?". It also incorporates several features such as sending and receiving animated pictures or images, emoticons (paralinguistic communication) and emojis, portable document files, webpages, audios, videos and pictures (HELENA, 2013).

In the organizational environment, the app proved to be useful for enhancing procedures, reducing costs, bringing consumers and companies closer together, increasing business and sales opportunities, providing immediate answers to people's needs and intensifying and bringing markets closer.

With more than 2 billion users worldwide in over 180 countries, WhatsApp is undoubtedly the most popular app on the planet. An estimated 120 million of these users are in Brazil. According to a survey conducted by the Federal Senate, at the end of 2019, 79% of Brazilians were using this app as their main source of information. In second and third place, respectively, the traditional information channels and social networks appear (BRAZIL 2019).

Launched in January 2018, the WhatsApp business version emerged as an initiative to enter the business communication market, allowing users to improve the way they interact with customers through automation and image classification tools.

According to data collected by the Brazilian Micro and Small Business Support Service (SEBRAE), in just one year of existence, WhatsApp Business has already reached the 5-million user mark and is used by 72% of Brazilian entrepreneurs (SEBRAE, 2019). Gabriel (2010, p. 73) points out that:

[...] it is undeniable that digital technologies have become increasingly present in all aspects of human life - social, professional and personal - impacting and affecting society, culture, the way we live and interact with the world.

Brum (2017) states that WhatsApp started to be used as a communication channel with internal audiences in two models: the traditional and the connectivity center. In the first model, the leader communicates with his team and in the second model, through a connectivity center, so that the company can communicate with all its internal public or employee groups.

Regarding the internal app and WhatsApp, it is important to consider that personal and professional lives are increasingly united and smartphones have become more used to communicate with the internal public. Obviously, the company trend to continue evolving in relation to the technologies offered by the market.

Although we know that it is a path of no return, it all depends on how open companies are to sharing important and strategic content, because, just as technology facilitates the information process, it also exposes its source (BRUM, 2017, p. 121).

An essential aspect in using this innovative tool, together with technology, is the use of a very well-defined methodology, planning and strategy. In this way, employees will have channels with faster dialogues, in addition to secure and official sources, thus creating a bond of trust with the organization. The space created for exchanging information, experiences and content is certainly one of the greatest benefits of internal social networks.

While some aspects of the issue are clear, others need to be investigated further. Organizations are not the same and WhatsApp also presents several variations in scale, use and impacts. Therefore, to initiate any type of strategic planning linked to generating increased WA effectiveness, it is first necessary to identify the peculiarities of adoption and identify potential problems in order to then propose measures adequate for more effective and synergistic use.

Diagnostic tool for organizational WA Use

The diagnostic tool presented here consists of a detailed process as follows:

Applying the data collection instrument on employees about the organization's current WA use situation. For this purpose, an online form, capable of being applied remotely, was created and whose audience could only be specific organizational sectors (ex. Communications) or even everybody involved with the organization.

1. Data analysis was initially collected in the previous step to characterize a usage matrix to be explained below.

2. Optionally, to hold a focus group to further explore issues raised by the data on the initial form.

3. Apply the usage matrix in order to generate a structured usage profile, therefore, enabling subsequent transformations, including automated ones, via algorithms.

4. Optionally, applying code to the basic exploratory conversational analysis in WA groups can generate insights about actors, relevance and methods of use. This code was developed by one of the authors, Professor Márcio Carneiro dos Santos and will soon be available on the LABCOM website (www.labcomdigital.com.br).

5. General analysis of the data collection followed by generating a report, characterizing the use, main problems identified and possible actions to correct or increase performance.

Methodology

For this exploratory study, a local organization was chosen, in this case, SEBRAE-MA, which, based on initial contacts, was interested in participating in the research.

This is a work in progress in which an initial form has only been applied in the group linked to the agency's communications office. This procedure was carried out as a test to qualify the set of questions itself and will now be extended to the entire staff.

The other occurrences, in this case, the utilization matrix and the algorithm for basic analysis of the group conversations have already been developed.

SEBRAE is a private, non-profit entity that promotes the competitiveness and sustainable development of micro and small enterprises – those with annual gross sales of up to 4.8 million.

The institution focuses on strengthening entrepreneurship and accelerating formalization of the economy through partnerships with the public and private sectors, training programs, guidance for accessing credit and innovation, encouraging associations and cooperatives, promotion of fairs, business roundtables and other actions to access and expand the market for Micro and Small Enterprises (MPE) in addition to fostering, with federal, state and municipal governments, to improve the legal environment for small local businesses, by reducing bureaucracy and including these enterprises in public purchases.

In Maranhão, SEBRAE's internal public is made up of collaborators/employees, trainees, interns, minor apprentices, outsourced workers, directors and advisers, totaling 275 people.

For the analysis, observation and gathering of information for this research, the universe chosen will be SEBRAE-MA and the eleven Regional Business Branches located in São Luís, Pinheiro, Lençóis Munim, Santa Inês, Bacabal, Chapadinha, Caxias, Presidente Dutra, Ferries, Açailândia and Empress.

The questionnaire, available on Google Forms in October 2020, was prepared based on topics about the study object, institutional WA use and the best practices in app use. Out of a grand total of 109 responses to 30 questions, 27 were closed questions and 3 were open. All Management employees collaborated and responded to the survey, anonymously and autonomously.

To prepare the questionnaire, the following topics were listed:

- How WA is being used by the institution's directors and employees;
- How WA application is inserted into the institution's internal communication processes;
- Whether the WA application is frequently included in the planning of the institution's internal campaigns;
- How many WA groups currently exist in the institution;
- Who manages the institution's WA groups;
- What are the perceived advantages WA use by the institution;
- Which message types are used in the institution's WA application groups;
- What is the communication flow in which the app is most used at the institution;
- What is the level of communication at which the application is most used in the institution;
- What are the best practices regarding WA app use at the institution
- There is a protocol for using the WA at the institution;
- WA app use was intensified due to the pandemic;
- The institution is adopting the business version of the app;
- If all employees have a corporate and mobile phone plan;
- What is the level of team engagement with the institutional WA.

As a result of this phase, based on adjustments, an instrument was created that was pre-tested and can also be used with the same structure in the next research stages which include collecting data from other internal audiences at SEBRAE - MA, as well as for entities that have the same institutional profile.

The population to be researched is the following: 159 collaborators/employees, 42 interns, 8 young apprentices, 27 outsourced workers, 3 directors and 36 advisers.

Utilization Matrix

The developed utilization matrix foresees the following variables or metrics for analysis:

- a) Dispersion – use index on an individual basis – the greater the dispersion, less corporate or formal use was identified;
- b) Size – is related to the number of identified users;
- c) Diversity/Homogeneity – in this aspect, user groups or clusters are analyzed, grouped by gender, hierarchy and other segments;
- e) Flow Direction – observes message meanings in a hierarchical and vertical perspective;
- f) Formality Level – assesses the group's level of institutionalism based on published texts;
- g) Schedules – check usage inside and outside the formal working period;
- h) Multimedia – observes the use of images, video and audio within the total usage.
- i) Visual identity – observes the use of visual elements linked to the organization.

In summary, analyzing the data obtained based on the Utilization Matrix, it is possible to visualize, through a table (Figure 1), the variables or metrics on a scale from 1 to 5, where 1 corresponds to a higher degree and 5, a lower degree.

Figure 1 – Utilization Matrix Table

	1	2	3	4	5
Dispersão	■	□	□	□	□
Tamanho	■	□	□	□	□
Diversidade / Homogeneidade	□	□	□	□	■
Direção do Fluxo	□	□	□	■	□
Nível de Formalidade	□	□	□	■	□
Horários	□	□	■	□	□
Multimedialidade	■	□	□	□	□
Identidade visual	□	■	□	□	□

Source: Authors(2021)

Algorithm for group analysis

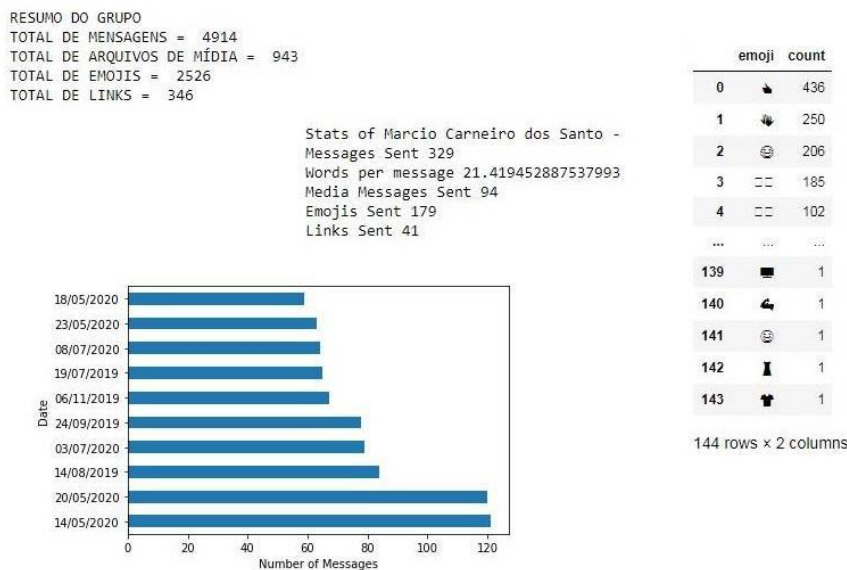
Developed by Professor Márcio Carneiro, LABCOM/UFMA coordinator, LWA (LABCOM *WHATSAPP*) is a tool based on group conversation archives that can be exported by the app itself, enabling simple exploratory analyses like centrality verification between group members, profile identification, emoticon use level, characterization of most frequently used periods among other metrics. The software will be available to registered researchers in the second semester of 2021 in test mode and can be accessed online via *Google Colab*. The following are screen images generated by LWA. In Figure 2 we have a dataset screenshot that organizes the date and time of a publication, authors, messages and several counts.

Figure 2 - Dataset extracted from conversation archives

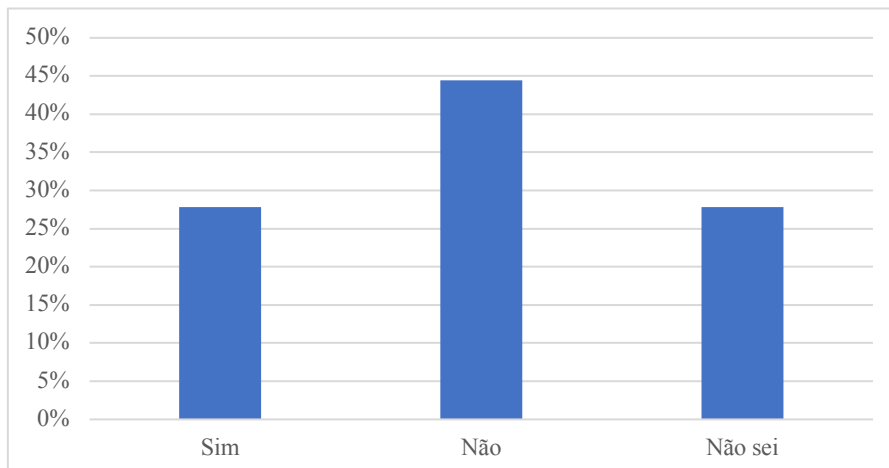
	Date	Time	Author	Message	emoji	urlcount	Letter_Count	Word_Count
1	10/06/2019	12:56		Com muita satisfação e alegria publicamos o li...	[]	1	377	57
2	10/06/2019	12:57) 🍷	[🍷]	0	39	6
3	10/06/2019	12:58		🍷🍷🍷🍷	[🍷, 🍷, 🍷, 🍷]	0	4	1
4	10/06/2019	12:59		🍷🍷🍷🍷	[🍷, 🍷, 🍷, 🍷]	0	6	1
5	10/06/2019	13:01		🍷🍷🍷🍷🍷🍷🍷🍷	[🍷, 🍷, 🍷, 🍷, 🍷, 🍷, 🍷, 🍷]	0	12	1
...
4913	08/07/2020	17:28		Repassa	[]	0	7	1
4914	08/07/2020	17:32		🍷	[🍷]	0	2	1
4915	08/07/2020	17:32		grata	[]	0	5	1
4918	08/07/2020	20:25		Perfeito! Depois vamos organizar a proposta da...	[👍]	0	88	14
4919	08/07/2020	20:27		Tá certo	[]	0	8	2

Source: LABCOM – UFMA (2021)

Figure 3 – Examples of extractable reports



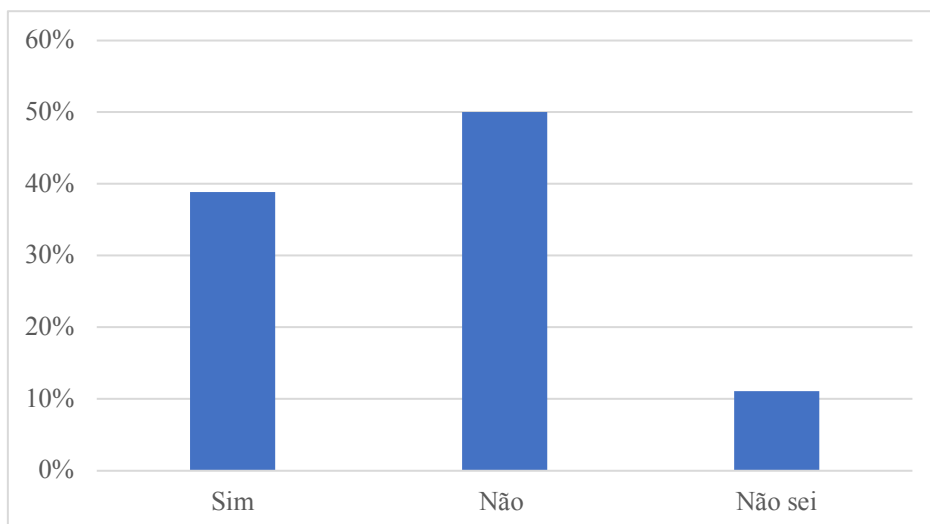
Source: LABCOM – UFMA (2021)



Source: Authors (2021)

SEBRAE-MA's Communication and Marketing Management gave their opinion on the existence of a protocol for using WhatsApp in the institution, with 44.5% of respondents believe that there is no such protocol, 27.8% think it exists and 27% replied that they do not know. This data shows signs of a WhatsApp usage protocol in the institution's internal communication which does not seem to represent reality.

Graph 2 – Does use only occur during working hours?

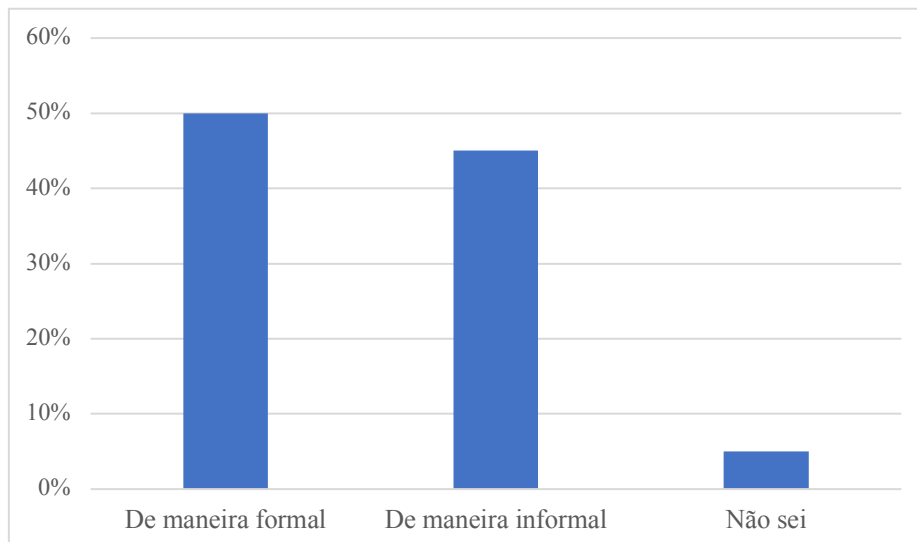


Source: Authors (2021)

The question represented in Graph 2 intended to investigate whether the Communication Management WhatsApp Group was only used on working days and hours. 50% of respondents said no, 38.9% said yes and 11% said they didn't

know. It has been noticed that most members of this team claim that Management uses Whatsapp use outside normal hours, which can be characterized as overtime.

Graph 3 – In your opinion, how is *WhatsApp* being used by directors, employees and staff at the institution?



Source: Authors (2021)

Identifying the perception of using the app as a communication tool contracted and required by the institution was also the object of field research. 50% answered that it is used informally, 44.4% consider it formal and 5.6% said they do not know. Most respondents pointed out that the messaging app is not part of the institution's communication structure.

According to Kunsch (2016, p. 82), formal and informal communications coexist simultaneously in organizations: "[...] the formal communication system of every organization - the set of channels and means of communication established consciously and deliberately". As for the informal communication system, it emerges from people's social relationships.

In the data interpretation from the field research carried out, it was noticed that there is no consensus among the employees of the SEBRAE-MA Communications and Marketing Management, nor an alignment regarding the apps as an internal communication instrument. Perhaps this is due to the fact that, in the department, 14 people are outsourced and only 4 are employees, who have more daily experiences. Based on these interpretations, at the end of all research cycles, interviews and focus groups with the institution's other internal audiences, it is also possible to include

The elements of this diagnostic methodology can also be adapted and used as needed, with more conceptual options such as the utilization matrix, as well as more pragmatic ones such as the LWA code, which allows for an initial exploratory analysis of group conversations.

The ability to identify important issues to be tackled by subsequent strategic planning specific to the topic shows that the diagnostic tool presented here offers users a flexible and efficient methodological path to start understanding a set of transformations that, as already pointed out rather, has been happening in an accelerated way within the informational ecosystems in organizations.

In the specific case used, SEBRAE-MA, even in the initial phase, the tool has already managed to point out important issues to be faced, such as the lack of informational homogeneity regarding rules on organizational use, also exposing potential problems such as after-hours use and probable excessive informal use by employees.

Among the suggestions for this specific case, already thought of from the initial diagnostic data, the following stand out: developing and disseminating a manual of good practices WA use, establishing formal usage rules and proposing rules for using and standardizing institutional publications. The answers also indicate and reinforce the relevance of the studied topic and point out the need for the proposed product.

References

ALVES, Paulo. **Whatsapp supera facebook e se torna app mais popular do mundo.**

Techtudo, 2019. Disponível em

<http://www.techtudo.com.br/noticias/2019/01/whatsapp-supera-facebook-e-e-o-aplicativo-mais-popular-do-mundo.ghtml>. Acesso em: 29 jan. 2019.

BRASIL.Senado Federal. **Mais de 80% dos brasileiros acreditam que redes sociais influenciam muito a opinião das pessoas.** 2019. Disponível em:

<https://www12.senado.leg.br/institucional/datasenado/publicacaodatasenado?id=mais-de-80-dos-brasileiros-acreditam-que-redes-sociais-influenciam-muito-a-opinioao-das-pessoas>, no final de 2019. Acesso em: 22 ago.2020.

BRUM, Analisa de Medeiros. **Endomarketing estratégico: como transformar líderes em comunicadores e empregados em seguidores**. São Paulo: Integrare, 2017.

CALLON, Michel. **Por uma nova abordagem da ciência, da inovação e do mercado: o papel das redes sociotécnicas**. In: PARENTE, André. *Tramas da rede: novas dimensões filosóficas, estéticas e políticas da comunicação*. Porto Alegre: Sulina, 2010.

CORRÊA, Elizabeth Saad. **A comunicação na sociedade digitalizada: desafios para as organizações contemporâneas**. In: KUNSCH, MargaridaM. Krohling (org). *Comunicação organizacional: aportes conceituais e aplicados*. São Paulo: Summus, 2016. v.

GABRIEL, Martha. **Marketing na era digital: conceitos, plataformas e estratégias**. São Paulo: Novatec, 2010.

HELENA, Denise. **Como funciona whatsapp, o famoso sistema de mensagem instantânea**. 2013. Disponível em: <https://br.www.whatsnew.com/2013/07/como-funciona-whatsapp-o-famoso-sistema-de-mensagem-instantanea/>. Acesso em: 21 ago.2020.

KUNSCH, Margarida Maria Krohling. **Planejamento de relações públicas na comunicação integrada**. 6.ed.rev., São Paulo: Summus, 2016.

MARCHIORI, Marlene. **Faces da cultura e da comunicação organizacional**. 2.ed. São Caetano do Sul, SP: Difusão Editora, 2008.

SERVIÇO BRASILEIRO DE APOIO ÀS MICRO E PEQUENAS EMPRESAS. **O que é *Whatsapp Business*? Veja dicas para o app comercial de mensagens**.2019. Disponível em: <https://www.techtudo.com.br/listas/2019/11/o-que-e-whatsapp-business-veja-dicas-para-o-app-comercial-de-mensagens.ghtml>. Acesso em: 22 ago. 2020.

SCROFERNEKER, Cleusa Maria Andrade (Org.). **O diálogo possível: comunicação organizacional e paradigma da complexidade**. Porto Alegre: EDIPUCRS, 2008.

ABSTRACT:

A work is presented, still in progress, whose objective is to develop a diagnostic tool for the use of WhatsApp in organizational environments. The project, oriented to face real situations, characterizes the initiative as an applied research. The solution involves a data collection instrument, a categorization of the forms of use and an algorithm for basic exploratory analysis of conversations in groups, identified among employees. Starting from a theoretical framework that looks at the changes resulting from the digitalization of the social processes of information circulation, the test takes place at SEBRAE-MA, having demonstrated effectiveness in identifying specific problems, thus allowing the proposition of mitigation initiatives and better use.

KEYWORDS:

Organizational communication;
Contemporaneity; Digital information
communication technologies.

RESUMEN:

Se presenta un recorte de la investigación en progreso, cuyo objetivo es desarrollar una herramienta de diagnóstico del uso de *WhatsApp* en ambientes organizacionales. El proyecto orientado para el enfrentamiento de situaciones reales caracteriza la iniciativa como investigación aplicada. La solución implica en la recogida de datos, una categorización de las formas de uso y un algoritmo para el análisis exploratorio básico de las conversaciones en grupos, identificados entre los colaboradores. A partir de un referencial teórico que mira a los cambios resultantes de la digitalización de los procesos sociales de circulación de información, la aplicación test ocurre en el SEBRAE-MA y ha demostrado efectividad en la identificación de problemas específicos lo

PALABRAS-CLAVES:

Comunicación
organizacional, Contemporaneidad,
Tecnologías digitales de información y
Comunicación.