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DIGITAL VOLUNTEERING THROUGH SOCIAL INNOVATION: THE RIBON CASE STUDY

VOLUNTARIADO DIGITAL ATRAVÉS DA INOVAÇÃO SOCIAL: O ESTUDO DE CASO DA RIBON

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Abstract

The study had the objective to identify what leads to user's engagement with a social innovation (an application) that contribute to sustainable development. A qualitative, exploratory approach based on a case study was conducted. Multiple sources of evidence were used, which allowed data triangulation. Content analysis was conducted using the Iramuteq software. The DHC method was used to analyze the data and two dimensions, and four classes were obtained. The social application innovates by offering its users a more straightforward and casual way of doing volunteer work, what has a strong appeal among younger users.
Keywords: Social inovation. Gamification. Altruism. Volunteering. Credibility.

Resumo

O estudo teve como objetivo identificar o que leva ao engajamento do usuário com uma inovação social (um aplicativo) que contribua para o desenvolvimento sustentável. Foi realizada uma abordagem qualitativa, exploratória, baseada em um estudo de caso. Foram utilizadas múltiplas fontes de evidência, o que permitiu a triangulação dos dados. A análise de conteúdo foi realizada por meio do software Iramuteq. Para análise dos dados foi utilizado o método DHC e duas dimensões, obtendo-se quatro classes. O aplicativo social inova ao oferecer a seus usuários uma forma mais simples e descontraída de fazer trabalho voluntário, o que tem forte apelo entre os usuários mais jovens.
Palavras-chave: Inovação social. Gamificação. Altruísmo. Voluntariado. Credibilidade.

Introduction

Information and Communication Technology (ICT) is increasingly present in our daily lives. Technological revolution, especially the internet, is a reality with no return. ICTs are no longer a luxury for the few and become, an essential resource for political engagement and social participation (Boulianne, 2015).

In this context, one of the products that had a huge impact worldwide are smartphones, whose number of users has been growing at an accelerated rate due to their advanced computing capacity and data connectivity through wireless, 4G, and Wi-Fi services (Roy, 2017). Added to this is the wave of mobile apps (apps), configured as one of the fastest-growing sectors in the downloadable software market (Lee & Raghu, 2014; Roy, 2017).

In the application download platforms of the leading smartphone operating systems, an expressive number of apps are available. For example, in the third quarter of 2020, we reached the mark of 2.8 million applications in the Google Play virtual store and 1.9 million in the App Store (Statista, 2021).

The rise in the use of apps can be felt as they are being used for numerous functionalities, starting with educational use, going through health care, e-commerce, transportation, among other aspects (Liu et al., 2014; Roy, 2017). Such movement, according to the Continuous National Household Sample Survey, is leveraged by the widespread use of smartphones, which in Brazil is the primary means for the promotion of digital insertion, since 99.2% of Brazilians who own a cell phone use it to access the Internet (PNAD Continua, 2018).

In this scenario, the concept of social technology (ST) emerges, which, for Gartner (2021), is "… any technology that facilitates social interactions and is enabled by a communications capability, such as the Internet or a mobile device". Ten Bruggencate, Ruggencate, Luijkx and Sturm (2019) corroborate by stating that STs facilitate interaction between individuals and influence social processes, connecting people to other people, the community, and society. Therefore, they can also facilitate communication between organizations and people who carry out or who wish to carry out voluntary work, helping to solve problems that conventional business models have not been able to solve.

The social apps we refer are considered social technology tools and should not be confused with social relationship applications such as Instagram, Facebook, and LinkedIn. They have a focus on aspects related with socio-economic sustainability, and not on consumption, entertainment, and management like other apps (Moresi et al., 2017). The development of applications is a process based mainly on information and technology knowledge and has been an area characterized by continuous innovations, as defined by Crossan and Apaydin (2010) as: "production or adoption, assimilation, and exploitation of a value-added novelty in economic and social spheres; renewal and enlargement of products, services, and markets; development of new methods of production, and establishment of new management systems" (p. 1155).

Many social apps are innovations, and, in this context, several startups are born - a new business in which entrepreneurs combine ideas and resources to create products or services in a scenario of extreme uncertainty (Kim et al., 2018). Social entrepreneurship is based on a social business model that seeks not only the financial objective, but also a social objective, favoring a hybrid organizational phenomenon. In this type of business model, a company is only successful when it presents results that sustainably satisfy all stakeholders while solving its social problems in the long run (Mahfuz Ashraf et al., 2019). Social innovations are the generation and successful implementation of new ideas that meet one or more common goals (Praszkier & Nowak, 2011), and they can be an important source of competitive advantage for social enterprises.

Charity Miles and Ribon are social applications developed by companies based on this model and can be classified as social innovations. In Charity Miles, the volunteer donates from the calories spent on daily activities, being converted into their currency that can be donated to institutions chosen by the user (Charity Miles, 2021). With Ribon, object of study of this work, it is possible to carry out digital volunteering and donations. In this case, the user volunteers "offering his time by reading the news available in the application's feed and, in return, collects internal virtual coins that can be donated to institutions registered in the app (Ribon, 2021).

Based on the context presented, this article aims to identify, from the user and the company's point of view, what leads to engagement with social applications that contribute to sustainable development. The Ribon application's choice was due to its importance for a better understanding of the phenomenon in Brazilian context.

This work is justified since there is a continuous expansion of the use of technology in the world population's daily life, requiring studies that investigate how technologies can be used to benefit society.

Methodological Procedures

Research design

The present study was carried out using a qualitative approach. It is an exploratory research, based on the inductive approach for data collection (Jebb et al., 2017). The study was developed through a single case study of a Brazilian social application company that developed a business based on a social innovation (Gioia, 2019).

During data collection, multiple sources of evidence were used – comments (secondary data) from Ribon application users (1,403 users), semi-structured interviews (primary data) with employees and founders of the startup (4 interviews), as well as documents (secondary data) provided by the company (see Figure 1), allowing thus the data triangulation (Fairclough, 2005). Statistics were calculated for user's comments stores (available in google play store and app store). The documents and interviews with employees and founders were used for the case description and the interpretation of results.

In this sense, an analytical data structure was built by progressive abstraction starting with the first-order informant, and the dimensions were aggregated, seeking the convergence of data in triangulation. The interpretative assumption was possible from an inductive approach to understand organizational events (Köhler et al., 2022).

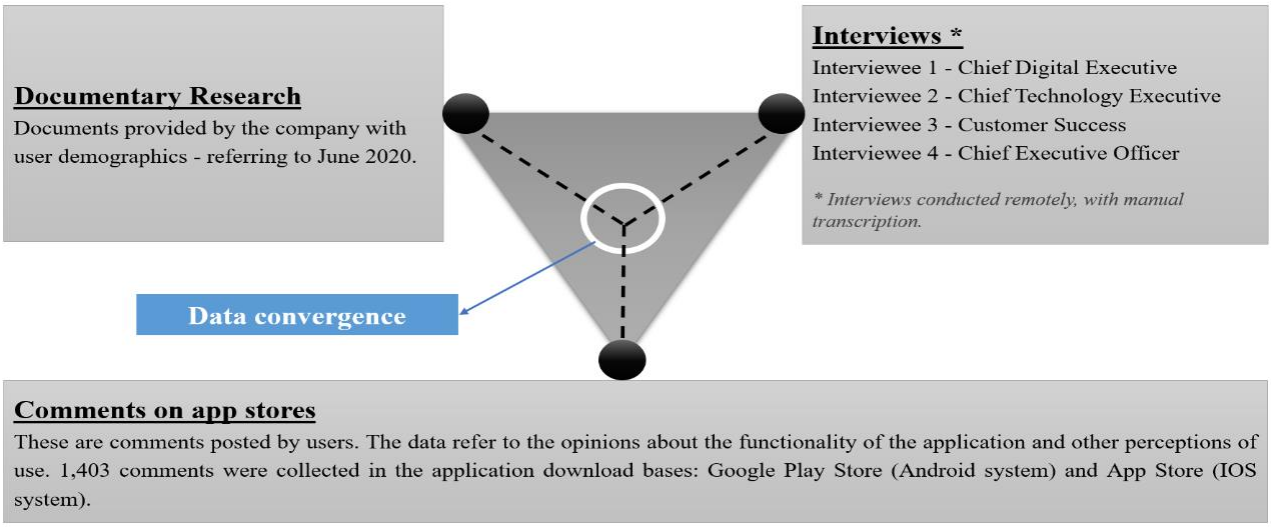

Figure 1: Research evidence sources

Procedures for data analysis

For the analysis of the collected data, content analysis technique was conducted with the support of a computer-aided data analysis software (CAQDAS - Computer-Assisted Quantitative Data Analysis Software). This type of software helps the coding and categorization of a large amount of data. In the case of this study, the software used was the Iramuteq (Interface for R for Les Multidimension Analyzes de Textes et de Questionnaires), version 0.7, alpha 2. The software in question uses the method of descending hierarchical classification (DHC), so it performs the material's lexical analysis. It splits the text into hierarchical classes (clusters) identified from segments that share the same vocabulary, using the content analysis technique (Miles et al., 2013).

Results and Discussions

The Ribon Case

Created in 2016 in Brasília (capital of Brazil), the startup is based on a social innovation model that seeks to positively impact the altruistic cause, configuring itself as a social business, in which the user can exercise digital volunteering and make donations – what can be characterized as online activism, which breaks with the idea that citizens act passively in the face of social phenomena (Comunello et al., 2018). It is important to note that Ribon does not describe itself as a fundraiser for NGOs but as a startup that encourages the habit of good deeds (Ribon, 2021). Due to Ribon characteristics, the volunteer can be anywhere globally but having their contribution mediated by ICTs (Park & Johnston, 2017). Figure 2 shows the app's interface.

Figure 2: Illustration of the Ribon application

(Source: App Store, 2021)

In the startup case, digital volunteers receive 'ribons' (the virtual currency of the application) in exchange for their time. The acquisition of the currency occurs when the person reads news, displayed on the main page, that are sponsored by companies or philanthropists. The content published in the app have social relevance content, such as sustainability, diversity, and innovations carried out worldwide, relating, in general, with social and environmental development. For each "good news" read, the volunteer collects 100 ribons.

Companies like Votorantim Cimentos, Bancorbrás, VISA, among others, are examples of sponsors. This type of action is important for sponsors images, as sponsors have their name and brand linked with a social application. Ribon converts 70% of the value negotiated with the sponsors into ribons, the remaining 30% is directed to finance Ribon's operation. Ribon seeks as sponsors companies that already have a structured area dedicated to social responsibility.

> **"Usually, the companies that we put in place have an area of social responsibility or they already have a social project. [...]** so we look for companies that have a "fit" with our users" (Interviewee 2, 2020, emphasis added).

The ribons collected by the digital volunteer can be sent to institutions chosen by him, considering that, among others, each destination has a different value for donating. This type of business model has a strong appeal among younger users, encouraging them to enter the universe of volunteering in a simple and practical way (Ebrashi, 2013). In the words of its founder,

> "[...] we think that giving and helping others make the person feels good, but lately, **because of the process, the experience is bad.** You are on Avenida Paulista, and you have to avoid people and feel bad about it or receive an invoice at home and **be compelled to donate** [...]" (Interviewee 4, 2020, emphasis added).

Thus, the expectation is that the volunteer can benefit from a subtler approach than those commonly employed in urban environments, which can be considered, comparatively, more aggressive, to the point that the individual feels coerced to donate due to the insistence of organizations. This tactic does not generally please the potential volunteers, creating resistance for a part of them, thus leading to a low conversion rate for effective volunteering. Thus, the application modifies the traditional fundraising flow for social causes and can be considered a social innovation as it offers its users a more straightforward and casual way for carrying out voluntary work.

Through the application, the participant does not necessarily need to use their own money to help humanitarian causes but only volunteer (remotely and digitally) their time to help those in need. Also, the accumulation of coins becomes something fun and challenging.

The app started with four basic destination options for donations. They are:

- Medicines: Schistosomiasis Control Initiative (SCI), which works to eradicate tropical diseases through the distribution of medicines.
- Drinking water: Evidence Action, which acts on the treatment and access to drinking water for consumption and hygiene.
- Food fortification: Project Healthy Children (PHC), which works to fight child malnutrition.
- Basic health: Living Goods, provides primary health care in Southeast Africa.

In 2020, with the Covid-19 pandemic situation, three more causes were added, totaling seven possible destinations for donations. The company intends to expand the number of institutions available for donation. The cause focused on helping Covid-19, which promotes the donation of tests for the disease to communities in Rio de Janeiro (Favela without Corona). Causes were added that promote food delivery to public school students (WFP - World Food Program) and another that helps in the early diagnosis of breast cancer (Américas Amigas). What is clear is that the company is willing to embrace new donation options with national and international coverage and intends to expand the number of institutions available for donation.

> "[...] **we really want to increase the number of NGOs a lot because**, like it or not, we can also increase the number of users who are related to each one of them [...]" (Interviewee 2, 2020, emphasis added)

The criterion used to select NGO options is to have good positions in platform rankings that evaluate the impact of institutions worldwide, such as Give Well and The Life You Can Save. The application publishes monthly proof of donations, with information as the number of drugs donated, water, and other initiatives can be consulted. Also, in the user's profile, it is possible to view the exact amount of ribons donated for each selected cause and the impact of the assistance provided.

Altogether, by 2020 more than 500 thousand donations have been made, which exceeds 1.2 billion ribons that have been converted into cash, and the application nowadays has about 40.3K of users. This audience is mostly female (69.8%) and young, aged 18-24 years, lives in São Paulo, followed by Brasília, the organization's place of origin (Ribon, 2021). In this way, Ribon believes that reaching generations Y and Z is a focal point for its development and the organization's success. Among the users, 60% were donating for the first time at Ribon.

> **"We believe that millennials and generation z are much more digital, as they are practically digital natives, and the way that donations occur is still very adapted for previous generations.** [...] in the research that we were seeing, generation Z is the most altruistic generation" (Interviewee 2, 2020, emphasis added)

It should be noted that unlike what occurs with older generations - before the 1980s - who have more difficulty with technologies because they are not part of their daily lives, the younger Y and Z generations have intense integration with the digital environment (Ten Bruggencate et al., 2019). Thus, the ease of using social apps to generate a positive impact with their actions becomes an attractive factor and makes this segment of the population more likely to engage in digital voluntary actions. It is important to note that Ribon does not describe itself as a fundraiser for NGOs but as a startup that encourages the habit of good deeds (Ribon, 2021).

Classic lexical statistics

The classic lexical analysis process consists of the reformulation of text units. The Iramuteq software searches vocabulary and reduces words based on their roots, a process called stemming, creating a dictionary of reduced forms, and identifying active and supplementary forms (Reinert, 2007). This analysis identified the general corpus of 1,403 texts (from the comments of 1,403 users), 21,256 words, 2,551 distinct forms, 1,373 words with frequency one (hapax), and an average frequency of 6.46% occurrences per text.

Descending hierarchical classification (DHC)

DHC is a method that classifies textual segments according to their respective vocabularies, in which the set is divided based on the frequency of stemmed words (reduced forms), resulting in classes that present vocabulary similar to each other. Moreover, simultaneously, different from other classes, the text segments are correlated to form a hierarchical scheme of classes (Ratinaud & Marchand, 2012). This procedure resulted in a textual corpus constituted of 1,403 texts and 1,434 text segments, with the utilization of 1,279 text segments - corresponding to 89.19%. As a result, 21,256 occurrences of words, forms, or vocables emerged, and 1,499 active forms were configured as the main words found in the corpus. The analysis and categorization of the textual body resulted in 4 clusters or classes, with the following text segment composition: Class 1 (41.83%, n=535), Class 2 (27.76%, n=355), Class 3 (13.37%, n=171) and Class 4 (17.04%, n=218).

Analysis of Classes

From the user's comments similarities, it was possible to obtain four classes, represented in the dendrogram (see Figure 3).

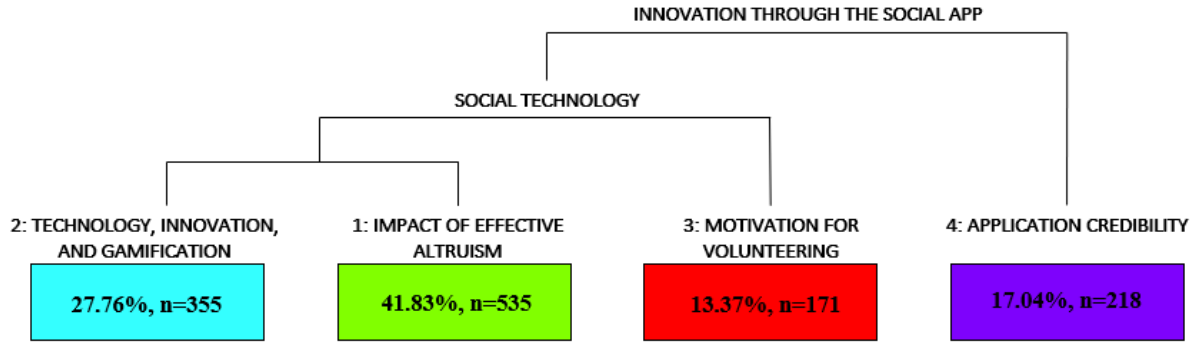

Figure 3: Dendrogram of the formed classes

(Source: output from the Iramuteq software)

Dimension: INNOVATION THROUGH THE SOCIAL APP

Dimension - SOCIAL TECHNOLOGY

After the classes' formation, it is noted that there is a connection between classes 1, 2, and 3, which constitutes a dimension, called "Social Technology". Social technology presupposes the use of technologies to solve social problems. That is, it implies a "[...] set of techniques, transformative methodologies, developed and/or applied in the interaction with the population and appropriated by it, which represent solutions for social inclusion and improvement of living conditions" (ITS Brasil, 2007). Concomitantly, as a connector and most prominent driver of the data, there is the dendrogram's total dimension, "Innovation through the Social Application". Thus, with the support of Iramuteq, the four classes that will be presented next emerged.

Class 1 - Impact of effective altruism

Regarding the possibility of measuring the positive impact on society through volunteering, there is the concept of effective altruism, which is characterized as a philosophical and social movement. Effective altruism aims to revolutionize how philanthropy is carried out, seeking to encourage individuals, to do the greatest good that can be done, for organizations that develop and perform better (Gabriel, 2017). In other words, it applies the concepts of "evidence and reason" to identify the most effective ways to develop positive changes in the world through the choice of causes that will have a tangible impact (Eikenberry & Mirabella, 2017), as can be observed in the following part of the interview:

> "[...] we had only four NGOs within the app, … **ranked both in The Life You Can Save and, in the Giving, Well as the most efficient large NGOs in the world, in order to promote effective altruism**, which is a movement that preaches precisely that the impact should be measured and that it reaches the largest number of people for the longest amount of time [...]" (Interviewee 2, 2020, emphasis added)

It is evident in the speech of Interviewee 2 a concern with "doing well by doing good" (Varadarajan & Kaul, 2018), the slogan of effective altruists (Eikenberry & Mirabella, 2017). After all, often only a small percentage of the donated money finds its way to the individuals who most need these donations, due to various reasons that hinder the effectiveness of donating (Gabriel, 2017; MacAskill, 2018).

The emerging format of volunteering, digitally and informally, has been better adapted to digitally native generations and allows the app to display the accountability for the donations made (Gabriel, 2017). The importance of attesting the effectiveness in forwarding the donation is also shown as a concern for users of the application:

> "The app promises to show the accountability of donations made, but what it does show is a simple email saying that the NGO is eager to receive the donations and that it will be possible to buy food, or water, etc. Nevertheless, **how is it possible to verify the real suitability of this initiative?**" (*u_6)
>
> "[...] everything is very incredible. However, **I just hope that these donations are made to needy people**, without any theft through the company, because playing with something serious leads to the spirit's death, not just the soul because the almighty is watching. When I see that, I think of the poverty that millions of people have." (*u_276)

With regard specifically to the profile of the volunteer, it is possible to identify three aspects: "Patchwork Volunteers" - they participate in different NGOs, in different stages of life; "Engagement Hoppers" - are active in some seasons, depending on demand and your availability; and "Crowd Volunteers" - perform small tasks virtually (Kapsammer et al., 2017). It is possible to fit users of the Ribon app to the latter category, while these individuals perform the act of donating their time when reading the news and collecting the virtual currency offered so that they can donate effectively:

> "We used to do a useful altruism framework, working with institutions that had the most significant possible social impact for money collected [...] **Because the donation is beneficial and the donation of a ribon is a micro-donation, we manage to make that money more valuable and report it to the user**". (Interviewee 3, 2020, emphasis added)
>
> "Excellent idea. One of the best apps I have ever known. **Every day he shows good news. When reading it, the user receives credits** (sponsored by large companies), which he can use to make donations of drinking water or medicines to those in need through serious organizations. **It costs nothing and is worth a lot. I recommend**." (*u_175, emphasis added)

The application has many regular users, however, there is the phenomenon of evasion among the user base, when the application is used for a certain period and, subsequently, this frequency starts to decrease until they stop using it. Sometimes this evasion can occur after the first access, because of the existence of many apps with the same purpose (Lee & Raghu, 2014).

> "[...] you use it, then you donate, then you forget about it for a while [...] like we are trying **to increase our retention."** (Interviewee 1, 2020, emphasis added)

To reverse this situation, Ribon uses the strategy of offering a higher number of ribons in a single day, different from the amount the user would typically receive. This strategy concerns the company, as it does not guarantee that the individual will become a regular app user.

Class 2 - Technology, innovation, and gamification

Social innovation is considered a vital resource to drive social change and enable different actors to deal with the challenges of living in a society in a state of social welfare retraction (Avelino et al. 2019). In this perspective, the object of the innovation is not, for example, a new product, but a social phenomenon, benefiting society and the innovative company (Varadarajan & Kaul, 2018).

The so-called social businesses, a hybrid model that combines characteristics of the private sector with third sector skills, seek to solve social issues by innovating and using market mechanisms to solve social problems (Ebrashi, 2013). It focuses more on causes than on profit, but it works to cover its operating costs, and its managers are entitled to recover their investment. Thus, these businesses can provide advances as they create possibilities for generating social and economic advances in addition to promoting social equity (Yunus et al., 2010).

Along these lines, the social innovation that Ribon brings pleases users, as it is a business model that brings a different and unexpected way of practicing volunteering and making donations, incurring in positive consequences for its users, the company, and the supported causes. From the feeling they experience; users expressed gratitude for the opportunity provided by Ribon.

> "I was invited to meet Ribon. When I read the purpose of the application, I was immediately interested because that **is exactly what humanity is very much in need of**, to know that there are, yes, good things happening and that we can always do something for the other. **I sent it to several of my WhatsApp contacts. I hope that this initiative will spread across our planet. Congratulations to the creators and directors of this beautiful attitude**" (*u_333, emphasis added)
>
> "In addition to helping you in your intellectual and emotional growth, it also helps others in a way that we cannot even imagine, for me it is a pleasure to be able to make these donations. **I always wanted to help somehow, but I did not see how, so the app helped me with that**. [...]" (*u_529, emphasis added)

Another point that draws users' attention is that it is light and aesthetically pleasing factors that also contribute to generating interest in downloading.

> "[...] it's **adorable**, Congratulations to the creators, the app is amazing [...] **the app is cool (and light).** Download it." (*u_331, emphasis added)

In this sense, a device that has been used in applications is the proposal of gamification of elements inherent to its operation. This concept has its origins in games, that is, in activities that provide entertainment and the desire among users to overcome challenges.

In this way, gamification can be defined as the use of facets of game design in scenarios not characteristic of games themselves, such as goods and services, increasing the value perceived by the consumer and encouraging consumption, loyalty, engagement, and, even, product advertising (Hofacker et al., 2016). Thus, this resource is considered a powerful engagement tool and is being used in several sectors (Lu & Ho, 2020). Regarding specifically social applications, the use of gamification is an important means of stimulating individuals' contribution to collective initiatives of common interest. That is why Ribon's choice for a gamified strategy to increase its target audience's engagement is justified, because it involves emotional experiences that holds the user's attention.

The most used resources in order to achieve this objective, according to (Brito et al., 2018), are badges, points, and leaderboards, which make up the famous triad called points, badges, and leaderboards (PBL), in addition to other elements such as challenges, achievements, levels and progress bars. According to the Ribon executive, the gamification part in the app is essential to guarantee the experience and permanence of its users:

> "[...] I **think we still have a lot to do in terms of gamification** because there is a lack of sense of urgency of the need of the APP to have a greater engagement [...]" (Interviewee 3, 2020, emphasis added)

In this way, the social innovation provided by the Ribon application brings, as a fundamental characteristic, the possibility of providing greater visibility and differentiation through the use of gamified elements in the user experience, which are viewed positively and promote engagement by the users.

Class 3 - Motivation for volunteering

Motivation is a complex psychological process that results from the interaction between the individual and the environment surrounding him, generating a set of forces that induce the individual to initiate a specific behavior (Hao et al., 2018). The understanding of motivating factors of volunteers is a very important element for organizations that use volunteer workers in order to perform its activities. (Wiehe & Isenhour, 1977) identified four categories of motivation among persons that offered to be volunteers. The most important was personal satisfaction, followed by self-improvement, altruism and demands from outside. Investigating volunteer motivation, (Clary et al., 1998) identified six different functions that volunteering can serve: expressing values; understanding the world; strengthening social relationships; gaining career-related experiences; helping to deal with negative feelings; and supporting enhancement.

These two models complement each other and illustrate that volunteer motivation is a complex phenomenon. Many times, volunteer behavior is the result of a myriad of factors, some with an altruistic nature, others with an egoistic nature. Altruism (helping other people with no apparent personal reward) appears to be the most associated with volunteer work and is highly valued in society, but a behavior that might appear to be purely altruistic, can at the same time, be satisfying motives of different nature. For example, in a study of (Mateiu-Vescan et al., 2020) volunteers state that, by volunteering, they developed skills and acquired knowledge, improving their well-being, and obtaining the opportunity to make new friends.

The feeling of "warm glow" – a model in which the agent gains utility from the act of donating, is an important concept for the understanding of volunteering behavior, as it is associated with good feelings triggered by altruistic behavior, combining again altruistic elements with egoistic elements (have good feelings).

The differentiation between the donation of money and donation of time generates a discussion about which one would the stronger effect on the feeling of "warm glow". (Brown et al., 2019) identified that it is higher when the individual donates his time, when compared with the same transfers in the form of money. Ribon structure is aligned with this result, as the user app volunteer first with time that is converted in a second step is converted into coins, so the person first donates time, and in a second moment, donates money.

> "We need to help social causes, and this app is one of the ways that we can do this. Moreover, without spending your own money. ... **My heart is even warm**" (*u_312, emphasis added)

Another factor that induces people to volunteer and make donations is faith. After all, philanthropic behavior, though, for example, volunteering, is encouraged in different religious beliefs (Holdsworth, 2010). Furthermore, the cultural context factor is relevant, since local culture influences the propensity to donate (Mateiu-Vescan et al., 2020).

> "Congratulations to those who invented it, brands that sponsor, people who donate for the initiative. This is really a wonderful world in just one click. **God bless you richly. It is exciting. Thank you, God, for giving us such spectacular people** [...]" (*u_368, emphasis added)

Besides motivation factors, there are other elements that can have a significant impact on the initiation and maintenance of volunteer behavior. For Interviewee 3, one of the prominent factors that favor the use of the application is the facility to interact with it.

> "Every time we ask, they talk about practicality, so, like, it costs nothing, is the least I can do and such [...] being easy from the point of view of users so **I can do a good thing very easily** [...]" (Interviewee 3, 2020, emphasis added)

The knowledge acquired when monitoring the user allows social business managers to understand what motivates users, realizing what they are looking for and designing a more effective strategy (Ebrashi, 2013).

In a broad sense, there is a feeling of satisfaction and gratitude for the effect that the application has and with its creators. In this way, Ribon app works to connect individuals who have the motivation and interest to volunteer and contribute to social causes, but do not find in the traditional forms of volunteering the means to do so, because many times they do not have the resources needed to make donations. As can be seen in the comments below:

> "It is amazing. **There are many good-hearted people who, unfortunately, do not have enough resources to help others. However, with this App, there are no more barriers**. [...] Among so many apps designed solely for its users, one aimed to real empathy. Thanks." (*u_242, emphasis added)

Through Ribon, the user can complete this selfless desire for free, which brings enormous satisfaction to those who use it, generating a feeling of "warm glow" (Brown et al., 2019).

Class 4 - Application credibility

When it comes to applications, factors such as usability and credibility are vital parts to attract attention and motivate the download of the app, and are crucial aspects as regards the intention to continue the use, encouraging the user's permanence and loyalty (Wu et al., 2020). In this scenario, corporate credibility (of the company that provides the app) influences how consumers evaluate the company's integrity and expertise (Goldsmith et al., 2000).

Trust can be understood as the willingness of one party to be vulnerable to the actions of the other party, based on certain expectations of how this second part, to which trust will be directed, will act in each situation (Mayer et al., 1995). The existence of trust when the user is in an online environment and, especially when using applications, is shown to be necessary.

In the case of Ribon, there is trust on the part of the user that the digital coins that are collected and donated in the application are reaching the final recipient, really helping the institutions involved (Morgan & Hunt, 1994).

It should be noted that this new way of volunteering and donating digitally, at first, tends to cause strangeness due to the lack of familiarity with this model, what makes trust in transactions a determinant for the decision to use the app and is an essential aspect to be observed by the company.

> "It does not accept registration with a Google account, only Facebook **(data sales)**. Besides that, **the app also seems a little out of the Brazilian reality** since there is no need to go far (Africa) to find major social problems. **It does not seem very palpable. Anyway, assuming that the app does what it promises, I hope it gets better over time.**" (*u_222, emphasis added)

In addition to placing trust in the application's operation, the volunteer also expects that his donation is generating favorable results to registered organizations. Trust in the application would also support a process of trust with the NGOs assisted. Ribon has the challenge of passing on this aspect of credibility to its users. Thus, for the donation to occur, there must be trust between this equation's three components: donor, beneficiary, and organization (Middleton & Lee, 2020).

> "[...] Ribon is designed so that you can quickly **access it daily in the palm of your hand**. It is a donation platform designed to donate every day for free. So, within our platform**, donors donate**, on average, **five times a week** [...], so the effort is less. From the moment **I create this habit, I strengthen the culture of giving**, and I will probably have more people in the medium to long-term donating [...]" (Interviewee 2, 2020, emphasis added)

Because of the growing offer of applications on the market, there is an increase in competitiveness in this niche, thus increasing the importance of maintaining high levels of visibility of the application, through the position occupied by the app in the ranking of virtual stores, which are made from user reviews.

There is an increase in competitiveness in this niche. In the case of Ribon, a differential of its application compared to others is based on the possibility of being classified in the emerging category called freemium (combination of "free" and "premium"). A model that is attractive due to the possibility of downloading the free version of the app. However, some users are expected to choose to upgrade to the paid version, which usually has more features available, no ads, additional services, among others (Liu et al., 2014).

To boost the number of donated ribons, the user can choose to pay R$ 4.90 per month (or 0.90 USD), which guarantees the monthly entry of a specific amount of the virtual currency, increasing donations that can be accomplished by the user. In the startup's view, the offer of a free version to users is positively associated with an increase in sales of the paid version.

"[...] we allow the user **to donate without spending money, so it is a great differentiator comparing with some competitors** [...] This allows us to enjoy a very cool acquisition channel, which is virality [...] and then the user base grows**, and then within those free users, some will become premium right? And they will sign and donate extra amounts, which consequently causes us to increase the donation to NGOs [...]**" (Interviewee 2, 2020, emphasis added)

"[...] **we want to increase the recurring paying user base.** We want to triple this base in a short time, the percentage of active users versus paying users [...]" (Interviewee 4, 2020, emphasis added)

Comments left in app stores are a primary source of information that helps potential users reduce uncertainty (Liu et al., 2014). Another critical factor is the design issue that attracts users due to its ease of use and aesthetic elements. However, in the case of the Ribon app, some factors need attention and correction in order to improve user experience and, thus, give an image of credibility regarding its use.

"[...] Congratulations on the idea. **I look forward to an update that allows more interaction between app users**, perhaps increasing visibility and movement within the network, allowing more interested brands to enter". (*u_302, emphasis added)

"[...] There is only one thing that bothers, which is the excess of bugs, for example: the application almost always closes on its own, sometimes it crashes and doesn't start [...] I hope these comments help them." (*u_316, emphasis added)

"[...] **Good look, excellent and innovative idea**. However, every time I access the application, he asks to authorize Facebook access. [...] **he could remember the login.** (*u_147, emphasis added)

What is evident is that users are concerned with the performance of the application, leaving suggestions for improvements. Quality updates can increase the survival rate of an application by up to 3 times (Lee & Raghu, 2014), which only highlights the importance of the startup investing in actions of this nature.

Conclusion

This study brought a better understanding when identifying, from the user and the company's point of view, what leads to engagement with a social innovation (application) that contribute to sustainable development. The analyzes, from an exploratory and inductive study, resulted in the emergence of the dimension "Innovation through the social app" and in the following classes: "Impact of effective altruism"; "Technology, innovation, and gamification"; "Motivation for volunteering" and "Application credibility".

The collected data demonstrate that the social innovation, Ribon application, meets the objectives it intends to accomplish. It is also shown to be largely beneficial to its users and, mainly, it causes a positive social impact through donations in a simple and effective way.

The class "Impact of effective altruism" was the one with the largest textual body among users' comments (41.83%, n=535) by the DHC method, as it relates to the altruistic motivation of the volunteers. As can be seen, effective altruism is a fundamental element in which volunteers' motivation is the desire to promote the well-being of others. Altruism is an essential characteristic of volunteering since it is highly valued by society.

Effective altruism seeks to find the most effective ways to develop positive changes in the world (Eikenberry & Mirabella, 2017). What can be observed at Ribon, when choosing which causes to incorporate in its application. The possibility of measuring the impact made by these NGOs is a determining factor for the startup and users of the app.

In the "Technology, innovation and gamification" class, concepts of social innovation, social application, and gamification support the findings, considering the scenario of startups together with a social technology bias. In this context, aspects like the app's design and how it works resulted in a positive opinion among some of the users.

Although the question of the gamification process involved in the app is so intrinsically connected to the development and flow of processes, users do not feel that they are participating in a game or do not have the need to comment, negatively or positively, about this process. Therefore, the app fulfills its role by bringing game characteristics to the user's reality, introducing elements in harmony with the real world experienced by the individual, an essential characteristic of gamification (Pechenkina et al., 2017).

The "Motivating for volunteering" class had the lowest textual body among users' comments (13.37%, n=171) using the DHC method. Users have had difficulty perceiving the app as a means for the practice of volunteering, perceiving it more as a tool to donate. Volunteer chooses to act triggered by a need, usually based on motives related with social responsibility principles, and without worrying about monetary rewards arising from this activity (Mateiu-Vescan et al., 2020). In this context, Ribon helps its users become involved with volunteering by providing the necessary conditions for this to happen in an easy and virtual way.

The feeling of "warm glow" is also an important aspect and it can be noticed by the users' comments. In Ribon case it was identified when users related positive feelings as a result of making the digital donations.

Finally, the class "Application credibility" addresses the trust users have in the application. Comments revealed that users have trust in Ribon and believe that donations reach the organizations chosen by the users. Aesthetic and content issues also stand out as something that users have valued. However, the app presents the need for adjustments to promote improvements in its performance, mainly considering issues raised by its users that, if not corrected, can lead to evasion, even if users recognize the importance of the proposal.

Organizations that develop social innovations are coming into the spotlight and can address problems that other actors have failed to solve - and this can be encompassed within the concept of "solidarity economy". The construction of this alternative economic paradigm requires that the organization's social and economic aspects are centered on the ethical principles of solidarity and reciprocity between people and the environment (Saguier & Brent, 2017). This concept presents itself as an alternative to the capitalist organization of production and distribution of goods and can have its effects amplified with the increase of use of "social technologies", and social applications are a valuable tool in this process.

This type of business has become an innovative alternative in the form of a chain that integrates users and organizations that benefit from donations. Therefore, it is possible to classify Ribon as a social business, which reinforces the app's importance in the market and its impact on society. Its innovative proposal provides a favorable positioning within the market in which it operates, nationally or internationally (Fleming et al., 2010).

In this way, the startup differentiates itself from the competition. According with the interviewees the organization presents a value proposition based on new volunteers' entry (donors), while most companies in this scenario act as donation managers (crowdfunding). The company reached revenues of R$ 400 thousand (73,126.60 USD) in 2019 (Gentil, 2020).

When analyzing the marketing implications of the business, it can be noticed that the companies involved in sponsoring the news, considered partners in the activity carried out by Ribon, receive in exchange for their financial support quotas for displays in the app, through banners and post publications. It results in positive publicity to their consumers, what could improve their image in the market and bring competitive advantage. It should be noted that it is not enough for a company to show interest in partnering with Ribon, it needs to go through a filtering process, when they need to prove that they are aligned with the startup business's purpose.

According to the CEO, the guiding reason for creating the application was the desire to help to create a donation habit in people, developing an easy and accessible tool for individuals to donate. Ribon offers an alternative way to volunteer and donate money at no cost. Besides, users also acquire information and knowledge as they need to read relevant news and facts to collects ribbons, that will be sent to an institution of their choice.

Regarding future strategies, the respondents signaled that the focus is on understanding users' behavior patterns and, consequently, increasing the paying base. The organization also plans to invest in gamification strategies, creating a culture of giving in a format that young people will engage and want to participate. Internationalization of the user base to open to foreign NGOs and philanthropists is also an objective for the future. The implementation of a blockchain system to keep the record of all donations unchanged is another longer-term goal.

It should be noted that the biggest beneficiaries of this initiative are those who receive aid through donations via the application: NGOs and institutions. Thus, the app positively impacts, among others, the supply of food, water, and medicines, contributing to alleviate social inequalities, in addition to contributing to sustainable development. What is aligned with the startup's dream to be an active player in the attempt to eradicate extreme poverty by 2030, one of the UN's sustainable development goals (ONU, 2021).

There are few companies in the market with a business model equivalent to what Ribon has, what makes difficult to compare the organization business model with its competitors. Thus, there is no way to generalize that all companies in this niche have similar engagement factors. Another critical point is that the rise of social applications is recent, requiring future studies to understand the phenomenon better. Since there is little literature available on the subject, this work is considered original, especially when it

manages to group several concepts into four classes within the perspective of an innovative business model represented by the company Ribon.

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