Netnography for the production and analysis of contradictions in a banking activity

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Abstract

This study is based on the Activity Theory and observed a Brazilian bank, describing the contradictions raised by netnography in an activity system – one of the bank's employee online communication channels, called the Collaborative Forum. In this channel, employees exchange information, problems, and suggestions related to their activity. A specific topic for this investigation was created in the channel, and based on excerpts from the speeches, it was possible to identify tensions indicating contradictions, categorize them, and formulate contradiction hypotheses. This information supported a set of mirror data that provided initial empirical material for structuring this case. Netnography stands out as an innovative method in studies on formative intervention. Together with the theoretical-methodological foundations of the activity theory, netnography proved to be a potential tool for producing mirror data, providing opportunities for a preliminary survey of hypotheses that could help the interventionist researcher better understand an activity's contradictions as a whole.

Keywords: Cultural-Historical Activity Theory. Formative intervention. Netnography.

A netnografia para produção e análise de contradições em uma atividade bancária

Resumo

Este trabalho apresenta a netnografia como método que permite realizar o levantamento de hipóteses de contradições presentes numa atividade bancária. A netnografia foi utilizada num dos canais de comunicação virtual do banco, aqui denominado Fórum Colaborativo, no qual os sujeitos trocam informações, problemas e sugestões em torno de suas atividades. Um tópico específico para fins desta investigação foi criado no referido canal, e, com base em trechos dos discursos, foi possível identificar tensões indicativas de contradições, categorizá-las e formular hipóteses de contradições. Essas informações subsidiaram a formação de um conjunto de "dados-espelho" que propiciou ao pesquisador um material empírico inicial para a estruturação de uma intervenção formativa. Destaca-se a netnografia como inovação em método nos estudos sobre intervenção formativa. Aliada aos fundamentos teórico-metodológicos da teoria da atividade, ela demonstrou ser uma ferramenta potencial para produzir dados-espelho, permitindo um levantamento preliminar de hipóteses que puderam auxiliar o pesquisador intervencionista a compreender melhor as contradições de uma atividade.

Palavras-chave: Teoria da atividade histórico-cultural. Intervenção formativa. Netnografia.

La netnografía para producción y análisis de contradicciones en una actividad bancaria

Resumen

Este estudio se basa en la Teoría de la Actividad y observó un banco brasileño, describiendo las contradicciones evidenciadas a través de la netnografía en la actividad de un banco brasileño. La netnografía se utilizó en uno de los canales de comunicación virtual del banco, denominado, en este trabajo, Foro Colaborativo, en el que los sujetos intercambian información, problemas y sugerencias sobre su actividad. En el canal mencionado se creó un tema específico para los propósitos de esta investigación y a partir de fragmentos de los discursos se logró identificar tensiones indicativas de contradicciones, categorizarlas y formular hipótesis de contradicciones. Estas informaciones posibilitaron la formación de un conjunto de datos espejo que proporcionaron al investigador material empírico inicial para estructurar una intervención formativa. La netnografía se destaca como una innovación en el método de los estudios de intervención formativa. Aliada a los fundamentos teórico-metodológicos de la teoría de la actividad, la netnografía demostró ser una herramienta potencial para producir datos espejo, brindando oportunidades para la elaboración preliminar de hipótesis que ayudaran al investigador intervencionista a comprender mejor las contradicciones de una actividad.

Palabras clave: Teoría de la Actividad Histórico-Cultural. Intervención formativa. Netnografía.

INTRODUCTION

Activity theory (AT) is a theoretical-methodological tool. Its applicability for developing the organizational learning field has been progressively used in Brazil (e. g., Bulgacov, Camargo, Canopf, Matos, & Zdepski, 2014; Cassandre & Godoi, 2013; Cassandre, Querol, & Bulgacov, 2012; Lemos, Querol, & Almeida, 2013; Querol, Cassandre, & Bulgacov, 2014; Querol, Jackson-Filho, & Cassandre, 2011), grounded on works developed in other countries (Cole & Engeström, 2001; Davydov, 1999; Engeström, 1987, 1999, 2001). The concepts (Engeström, 1999; 2001; Engeström & Pyörälä, 2021), history (Davydov, 1999; Engeström, 1987; Engeström, Miettinen, & Punamäki, 1999) and the notion of three generations of the AT (Engeström, Virkkunen, Helle, Pihlaja, & Poikela, 1996; Ploettner & Tresseras, 2016; Sannino & Engeström, 2018) have been widespread in the last three decades.

The AT has assumptions that support interventionist methodologies of which the formative intervention method stands out. Its intention is to develop the learning of those who are inserted in an activity system (Engeström, 2000, 2007, 2008, 2010, 2011; Engeström et al., 1996; Miettinen, 2000; Querol et al., 2011; Picheth, Cassandre, & Thiollent, 2016; Virkkunen, 2004, 2009; Virkkunen & Newnham, 2015; Sannino & Engeström, 2018). For such learning to happen, it is necessary to identify the contradictions that generate tensions in the activity system, promote historical-dialectical interaction (Sannino & Engeström, 2018) and act formally with the subjects (Engeström & Sannino, 2010, 2011; Sannino, 2011).

Given the need to identify contradictions in a banking activity, one can question by what means this can be achieved. Studies already carried out show the preliminary ethnographic work done by interventionist researchers to collect data on a given activity in which they intended to intervene formally. This article presents the results of a research that sought, through the analysis of discursive manifestations of contradictions, to raise hypotheses of internal contradictions of an activity in a Brazilian bank, using netnography (Hine, 2000; Kozinets, 1998, 2002, 2010, 2015; Pinto et al., 2007) as a method of data production and analysis.

Netnography is a method that appropriates traditional ethnography research techniques, seeking to re-signify concepts or formulate others more appropriate to the virtual environment. Through computer-mediated technologies, netnography is important and applicable for research that contemplates the behavioral studies of information users in virtual environments (Pinto et al., 2007). Recent analysis show the diversified use of netnography as a research method – observing interactions of subjects in virtual communities, in studies on cultural identities (Cavalcanti, Souza-Leão, & Moura, 2021; Moura & Souza-Leão, 2020;), in social groups (Begnini, Santos, Sehnem, Carvalho, & Machado, 2019), in addition to the usual research on consumer relations of products and services, studying topics such as touristic, musical, sports preferences, among others (O. L. D. C. Fernandes, N. C. M. Fernandes, Paiva, Leão, & Costa, 2019; Mariani, Arruda, Silva, & Moreira, 2019; Moraes & Abreu, 2017).

Considering that change and learning, understood as distinct and non-complementary processes, stem from contradictions that arise from the subjects' reflections on their activity system in a formative intervention, a discussion opens up about the feasibility of using netnography as a method to suggest hypothesis of contradictions that may help the interventionist researcher to better understand the data which indicate the configuration of an activity and, therefore, the situations which need to be taken into account in cases of learning and change. These data, called mirror data, facilitate the understanding of the contradictions in an activity, and it is useful for reflections on sessions of a formative intervention.

This debate can contribute to studies which deal with the structuring of a formative intervention (Cassandre, Querol, & Senger, 2018) and how the hypothetical constructions of contradictions (Donatelli, Vilela, Querol, & Gemma, 2020) can help other organizational learning activities by looking at occurrences and their forms of manifestation to subsequently operationalize an intervention. In the context of banking activities, it is clear that people demand constant learning, and they do not always have spaces to learn collectively. This lack can be met by a formative intervention based on the assumptions of AT.

Regarding the structure of this article, in addition to this introduction, four other parts of discussion on the issue are presented. In the theoretical framework, the sub-items "interventionist methodologies: the formative aspect of intervention" and "concepts and assumptions of AT for a formative intervention" are addressed. Next, the research methodology is presented. Then, the results of the research and the debate which it has provided are shown with the following topics: "discursive manifestations indicating contradictions" and "analysis of contradictions' hypothesis in the activity system". The final considerations are the last part of the article.

THEORETICAL FRAMEWORK

Interventionist methodologies: the formative aspect of intervention

Regarding the studies published on interventionist methodologies, much has already been said about the intervenionist aspect of the method. Virkkunen (2004) writes about the emergence and development of intervention as a specific form of activity in the early twentieth century. The meaning and definition of this type of methodology have also been spread (Cassandre et al., 2012; Virkkunen & Newnham, 2015). Cassandre et al. (2012) present the premises that characterize interventionist methodologies, which seek to value the production of knowledge that favors the emergence of new actors in the research process and, in turn, are co-responsible for the conduction and the construction of collective knowledge (Cassandre & Godoi, 2013; Cassandre & Querol, 2014).

In this method, the role of the interventionist researcher – acting as a facilitator for understanding the experienced problems – is also commented by Picheth et al. (2016). The researcher, in this case, aims to help the participants resume their capacity as agents and transformers of the context in which they are inserted.

A different characterization of interventionist methods is made by Engeström (2011). The author characterizes the intervention method as formative and proposes a differentiation in 3 aspects between the intervention methodology and the linear view of traditional intervetion, incorporated by the idea of a controlled experiment. Such differentiation demonstrates the way both are conducted by the intervention process, recognizing that training provides the collective agency of the involved subjects and foster structures that can be used in other realities by adapting to them to generate new concepts.

In an interview by Ploettner and Tresseras (2016), Engeström state that the formative aspect refers to interventions that do not have predetermined final results, but are formative in the sense that what is generated in fact takes shape in the intervention itself. Sannino (2011) points out that they are formative because they encourage participants to assume a different type of thinking about their own work, which means thinking dialectically about their own activity.

According to the activity to be analyzed, the formative intervention may have specific methodological contours. However, there is a theoretical-methodological framework of its own, which distinguishes it from traditional forms of intervention. Therefore, it is important to know the assumptions that support what we call formative intervention in this article.

Concepts and assumptions of AT for a formative intervention

During the evolution of AT, studies formed a whole conceptual framework from which important issues can be highlighted. Development is perceived in relation to the notion of activity: its conceptualization (Leontiev, 1978), its hierarchy at systemic levels of human actions (Virkkunen & Newnham, 2015) and its knowledge that all activity is directed to its object (Engeström, 1987).

Also from the framework, two main assumptions for interventionist methodologies are inferred: the principles of double stimulation and ascension from the abstract to the concrete (Sannino, 2011). Double stimulation consists of the application of two stimuli. The first is a task to be performed or a problem to be solved; the second, the provision of a neutral object which has the potential to be used as a tool to solve the proposed task or problem (Vygotsky, 2007). Advances and applications of this principle can be observed in recent studies that analyze the potential of double stimulation to foster the transformative agency in activities (Sannino, 2015; Vänninen, Querol, & Engeström, 2021). The ascension from the abstract to the concrete leads the object to new types of theoretical concept, theoretical thought and theoretical consciousness (Cole & Engeström, 2001).

This principle aims to understand the development of the object based on an original contradictory relationship, a cell or an initial abstraction in its current, mature and complex forms (Miettinen, 2000). The ascension from the abstract to the concrete is the principle and the method of dialectics, and it is also epistemological and methodological central to the theory of cultural-historical activity (Engeström, 2020).

Miettinen (2000), observing the coherence and connection between the principle of ascending from the abstract to the concrete and the research cycle, presents a 3-step process, which allows the activity to transform, expand and stabilize the practice, leading to a qualitative change. The first step consists of outlining the activity to be studied, describing procedures and key work tools, and also performing the first characterization of visible problems in the work (ethnography). In the following, a historical analysis of the activity development and the development of its theoretical tools and current empirical analysis is carried out, that is, the problem analysis of the present activity in order to understand its contradictions (theoretical abstraction). Lastly, the conception of the system contradictions in dialectically concrete terms consists of practical application and testing the hypothesis of the new instruments generated to modify the activity (Miettinen, 2000).

These concepts and assumptions which guide the change and learning of subjects and their actitivies are consolidated in the method of formative intervention. It has already been put into practice and it has its results perceived in several interventionist studies, such as the use of the Change Laboratory (CL) method, considered to be a method of formative intervention (Engeström & Pyörälä, 2021; Engeström et al., 1996; Querol et al., 2011; Virkkunen & Newnham, 2015). The CL is derivated from an ethnographic work in which the researcher needs to open the critical conflict with a technique known as mirror data. This technique consists of collected materials that truly document problems or incidents that may be informative about the most intense difficulties the organization or the group face (Ploettner & Tresseras, 2016). This data serves to stimulate the involvement, analysis, and efforts of collaborative design among participants (Engeström, 2010). Thus, they guide formative interventions through existing contradictions and the historical possibilities of the activity environment in which they are conducted (Ploettner & Tresseras, 2016).

For AT, the unit of analysis and the fundamental unit of transformation is the Activity System (AS), object-oriented and culturally mediated by artifacts (Ploettner & Tresseras, 2016). Through the triangular graphic representation of Engeström (1987), the concept of activity is expanded, and the previous understanding of the second generation of AT represented by Leontiev is broaden (1978). Thus, Engeström demonstrated the basic relationships in mediation systems of a human activity, and proposed the AS as a basic unit of analysis which incorporates the unit for understanding human actions. Factors such as consumption, production, distribution, and exchange are counted in this model of human activity developed by Engeström (1987) with the goal of constituting the unit of analysis as a whole. In addition to demonstrating the circumstances in which the subjects act, the triangular representation of the AS is also an explanatory representation of the systemic and dynamic origin of human work (Sannino, 2011).

The AS(s) present contradictions which are structural tensions historically accumulated inside the system itself and among the AS(s). They generate disturbances and conflicts, providing innovations in order to change the activity (Engeström, 1992, 2001). According to Engeström (2011), historicity assumes that the activity systems transform over long periods of time and that their problems can only be understood through the evaluation af a series of occurencies in history itself. To understand this process, Engeström (1987) considers the theory of expansive learning when reconstructing the development of an activity structure and its internal contradictions. It is assumed that the historical development of the AS occurs in five qualitatively different phases, among which some diferent types (or levels) of contradictions move through it. These contradictions are classified as primary, secondary, tertiary or quaternary (Engeström, 1987), as demonstrated in the following figure.

Figure 1
Expansive Learning Cycle
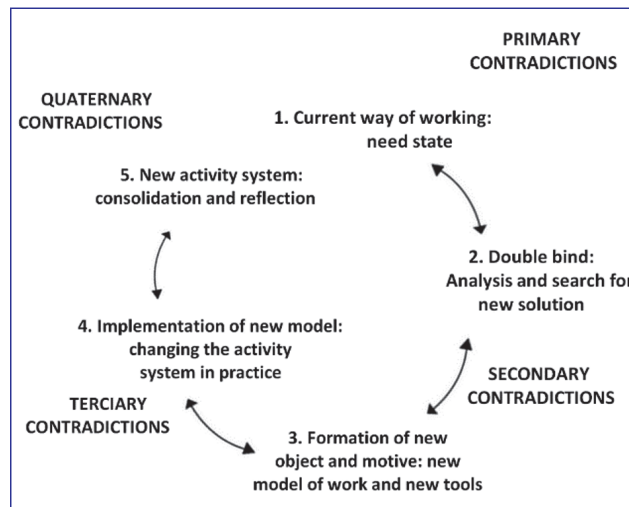
Source: Querol et al. (2011).

The first phase starts from an activity that is already consolidated; however, it begins to show problems, which is called the "need state". This is characterized by dissatisfaction with the current situation, a crisis state and an urgent need for change. The contradictions of this first phase appear in its basic form: primary. It is linked to the fact that in a capitalist system, the product of labor can be considered a commodity and, therefore, it has its use value and exchange value, which are considered contradictory intrinsic (Engeström, 1987).

The second phase is characterized by the intensification of problems that have already been experienced before (Engeström, 1987). The secondary contradictions found in this phase evolved and devoloped into tensions and mismatches between the elements of AS. The subjects perceive the impossibility of continuing to do things in the same way, but do not yet know what should be done to solve the problems.

For Engeström (1987) the cycle will be considered expansive when people challange the object/motive of the activity and redesign it, therefore creating a new object in a more expansive way. Then, the third phase is known as the formation of a new object and motive. In this phase, people collectively move changes to overcome a contradiction that is leading the activity to a crisis situation. This can motivate them to create new tools and other forms of social organization of work around this new object.

The fourth phase, which is called application and generalization, consists of implementing changes in the AS. People begin to put the plans into practice in order to conduct actions to transform the new object and, thus, produce a desired result. In this phase, there are mismatches between elements of the new, more expanded activity and those of the previous activity, which are called tertiary contradictions. Such mismatches may be caused by insufficient development of the new elements (Engeström, 1987).

In the last phase, Engeström (1987) indicates that in the implementation process, the new activity will probably be affected by the parallel activities which are still following the previous execution perspective. This fact may generate new tensions called quaternary contradictions. If practitioners can solve them, the activity will evolve to the consolidation its consolidation phase.

Another important issue regarding contradictions is that they cannot be observed directly, that is, they can be identified only through their manifestations - which are understood as manifestations of contradictions (Engëstron & Sannino, 2011). In their study, Engeström and Sannino (2011) theoretically define the discursive manifestations of contradictions, categorized as dilemmas, conflicts, critical conflicts and double binds. Box 1 shows the categories, its characteristics and its linguistic clues – words or expressions that can assist in the identification and categorization of a discourse.

Box 1
Types of discursive manifestations of contradictions and its linguistic clues

Manifestation	Characteristic	Linguistic clues
Dilemma	Expression or exchange of incompatible evaluations.	"On one hand [...] on the other hand"; "yes, but"; "I did not mean to say that"; "I meant to say [...]".
Conflict	Arguing, criticizing.	"No"; "I disagree"; "that is not the truth"; "yes"; "this I can accept".
Critical conflict	Facing contradictory motives in social interaction, feeling violated or guilty.	"Let's do it"; "We can make it". Personal, emotional, moral reports. narrative structure, metaphors lived by. "Now I realize that [...]".
Double Bind	Facing urgent and equally unacceptable alternatives in an activity system.	"We", "we must", "we have to [...]". Urgent rhetorical questions, expressions of helplessness.

Source: Adapted from Engeström and Sannino (2011, p. 375).

Engeström and Sannino explain the four discursive manifestation categories. For them, a dilemma refers to an "expression or exchange of incompatible evaluations, either between people or in the discourse of a single person" (Engeström & Sannino, 2011, p. 373), which can be recognized by identifying common reservations and hesitations from the "on one hand [...] on the other hand" and "yes, but [...]" types. A conflict occurs when an individual or group feels negatively affected by another individual or group, it may be identified by a divergence of interests or even because of incompatible behavior of others. Common expressions of conflict in discourse are "no," "I disagree," and "that is not the truth".

Critical conflicts are considered as a situation in which subjects face internal doubts that paralyze them, or when facing contradictory motivations insoluble by the subject himself. Finally, double binds indicate a deadlock, a pressing need to do something and, at the same time, a perceived impossibility of action. Usually expressed through rethorical questions, the double bind can only be identified in a situation where collective action is required to be resolved, which the urgent need is presented in expressions such as "we must", "we have to [...]", "let's do it" and "let's figure it out" (Engeström & Sannino, 2011).

The contradictions are not empirically understandable. It is possible to suggest hypotheses, but contradictions need a historical and careful analysis, using methodological tools so they are found (Sannino, 2011).

Subsequently, in the section intended to deal with the methodology, it is possible to understand how netnography was used to identify the discursive manifestations of contradictions in the Collaborative Forum and what results the analysis of these manifestations provided.

METHODOLOGY

This work is predominantly qualitative. The methods of netnography and content analysis were used to produce the primary data, and the method of documentary analysis was used to collect secondary data from the existant material produced by the Brazilian bank. The investigation's unit of analysis was the activity system of visiting legal entity customers, composed of a group of corporate banking relationship managers from a Brazilian bank's retail service.[1]

Four stages constituted the reasearch. In the first, the documentary analysis was carried out. It aimed to start an exploratory stage for the collection of secondary data to understand the activity system in question, enabling its design, through the identification, verification and appreciation of documents according to Moreira (2005). In the documentary analysis, an

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[1] The Brazilian bank subdivides the legal entity service into two axes: retail and wholesale. This division takes place according to some attributes such as Gross Annual Revenue range (GAR), costumer risk assessment, score of credit, among others.

information search was made in the database of the Brazilian Bank, such as normative instructions, courses, and news which could detail in the best way what is the activity of visiting the legal entity customer.

The second stage used netnography, along with the content analysis, as a method for producing primary data from the data produced in the Collaborative Forum. The Forum is one of the bank's communication tool that aims to foster interaction between employees, stimulating the exchange of information, doubts and suggestions on the main issues related to work, covering all the facilities of the institution. It is freely accessible, to the extent that its terms of use and privacy policy must be observed.

At this stage, the research subjects involved in the activity of visiting the legal entity customer were instigated to participate in the Collaborative Forum by posting opinions, criticisms, and suggestions on the new topic created in the forum - "*Visitas PJ: O que precisa ser mudado com esta atividade?*" ["Visiting the legal entity customer: what needs to be changed in this activity?"], exclusively for the purposes of this research. The way to motivate the subjects to participate in the Forum was through emails informing about the opening of this new topic and clarifying them about the ongoing investigation. The subjects were encouraged to participate by posting their opinions on what would need to be changed when visiting the legal entity customer. At the opening of the topic, the subjects were informed about the interest of this research and took notice that it was an analysis authorized by the Brazilian bank, as well as they knew that the posted comments would be kept confidential. They were also informed that the names of those involved would remain private. Then, the subjects began to post their comments which were collected after 15 days.

In order to carry out virtual research, through computer-mediated communication technologies, researchers used traditional research techniques and methods in an electronic environment, adapting these. In order to communicate this new knowledge and provide different experiences between individuals and their daily lives, the ideia of netnography proved to be important and appropriate for research that contemplates the behavioral studies of information users in these environments (Pinto et al., 2007).
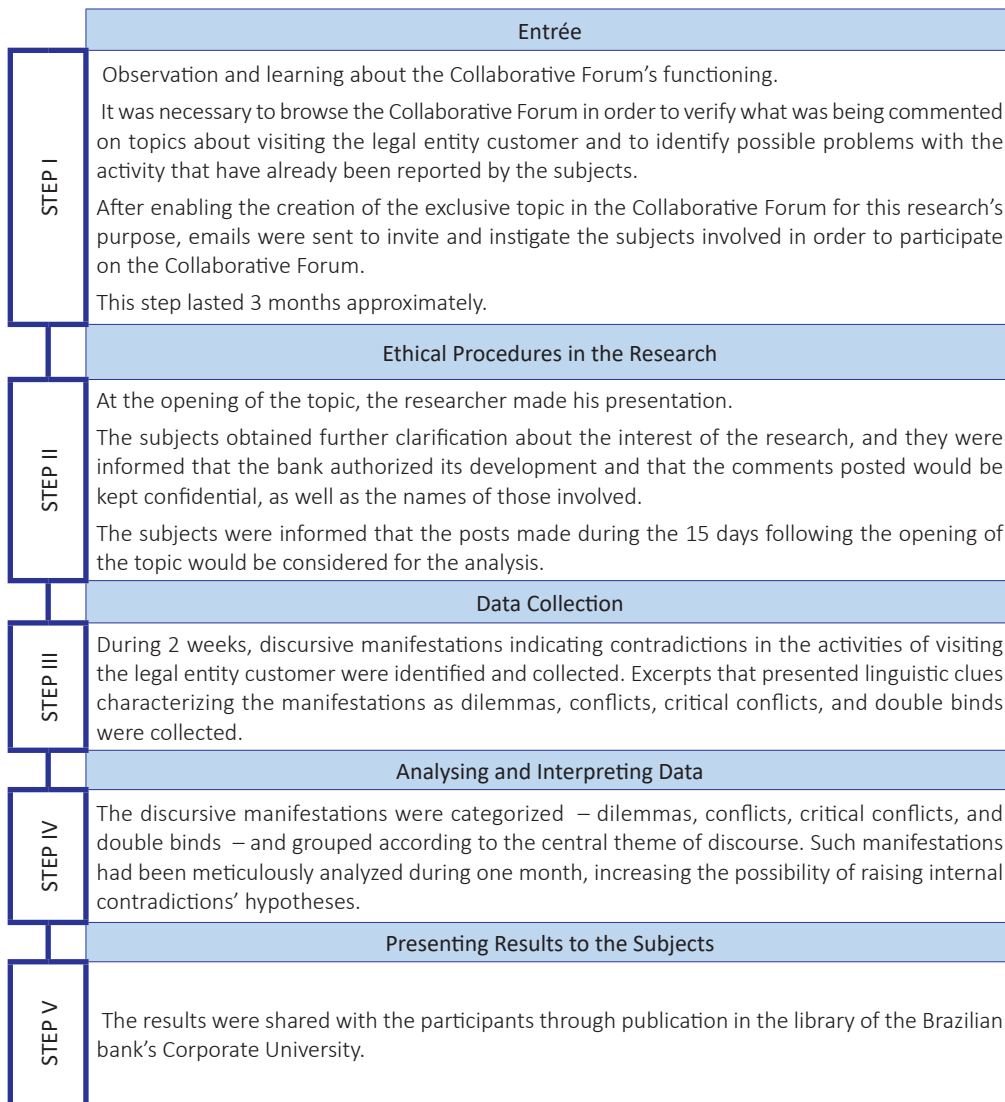
In order to understand netnography and its other designations, it is necessary to comprehend ethnography in the way it was coined for the study of cultures in the real or concrete territory, as well as some of its concepts that were similarly introduced in researches in the virtual environment (Rocha & Eckert, 1998). Ethnography consists in observing and understanding the particular characteristics of certain cultures structurally constituted. Thus, in this anthropological concept, possibilites of its application in the universe of new cultural expressions are envisaged, including those related to virtual communities. However, the concepts are usually resignified or others, which are more appropriate to new spaces, emerge such as netnography (Pinto et al., 2007).

As applied in screen research, netnography can be combined with other research techniques (Hine, 2000; Kozinets, 1998, 2002). Content analysis was useful to identify linguistic clues indicating the discursive manifestation categories expressed in the topic corpus. These linguistic clues can be categorized as discursive manifestations – dilemmas, conflicts, critical conflicts, and double binds – indicating contradictions in the activity of visiting the legal entity customer. Content analysis, which refers to a technique of human and social sciences aimed at investigating symbolic phenomena through various research techniques, is basically concerned with message analysis (Fonseca, 2009). It traditionally works with written textual materials, such as those produced in research based on, for example, interview transcripts and observation protocols or already existing materials, produced for other purposes, such as newspaper texts (Caregnato & Mutti, 2006).

Netnography has a body of procedures proposed by Kozinets (2002), which consists of five steps in which the author seeks to make certain adaptations in his method, in order to show some equivalences between ethnography and netnography. The first step would be the *entrée* (entry or admission), in which the researcher needs to be aware of the topic to be investigated in order to know who should be addressed to obtain information on that topic. The second step refers to data collection, which can be copied directly from the discourses held among the members of these communities. The third step consists of the analysis and interpretation of data which often begins along with the second step. The next step concerns research ethics, related to privacy, confidentiality, appropriation of other personal stories, and participants' consent. The last one consists of validation with the researched members (member checks). The final report is, then, presented so that some participants may evaluate the results and/or comment on them.

Similarly, Kozinets' (2002) steps were adapted to the specific terms of this research. Netnography was used in this research to observe and analyze the participants' comments in the Collaborative Forum, aiming to identify possible discursive manifestations indicating contradictions in the activity of visiting the legal entity costumer. The study was authorized by the competent areas of the Brazilian bank and the subjects who participated with comments on the topic "*Visitas PJ: O que precisa ser mudado com esta atividade?*", were informed about the interest of the research. It was stated that all information provided by the bank would be confidential, assuring that the collected information and achieved results were not going to be used on other ends. The subjects' names and the name of the bank were kept under strict secrecy. Procedures for netnography in the Collaborative Forum are presented in Box 2.

Box 2
Netnography steps for contradiction analysis

Entrée	
STEP I	Observation and learning about the Collaborative Forum's functioning. It was necessary to browse the Collaborative Forum in order to verify what was being commented on topics about visiting the legal entity customer and to identify possible problems with the activity that have already been reported by the subjects. After enabling the creation of the exclusive topic in the Collaborative Forum for this research's purpose, emails were sent to invite and instigate the subjects involved in order to participate on the Collaborative Forum. This step lasted 3 months approximately.
Ethical Procedures in the Research	
STEP II	At the opening of the topic, the researcher made his presentation. The subjects obtained further clarification about the interest of the research, and they were informed that the bank authorized its development and that the comments posted would be kept confidential, as well as the names of those involved. The subjects were informed that the posts made during the 15 days following the opening of the topic would be considered for the analysis.
Data Collection	
STEP III	During 2 weeks, discursive manifestations indicating contradictions in the activities of visiting the legal entity customer were identified and collected. Excerpts that presented linguistic clues characterizing the manifestations as dilemmas, conflicts, critical conflicts, and double binds were collected.
Analysing and Interpreting Data	
STEP IV	The discursive manifestations were categorized – dilemmas, conflicts, critical conflicts, and double binds – and grouped according to the central theme of discourse. Such manifestations had been meticulously analyzed during one month, increasing the possibility of raising internal contradictions' hypotheses.
Presenting Results to the Subjects	
STEP V	The results were shared with the participants through publication in the library of the Brazilian bank's Corporate University.

Source: Elaborated by the authors.

The third step allowed a triangular graphic representation design of the current activity system of visiting legal entity customers, in which the compositions of each system element were described at first. It was searched, from the researchers' point of view, to constitute the possible object of the activity of visiting legal entity customers. Still in this step, the AS was designed again, presenting the characteristic of each element. Hypotheses of contradictions in the AS were also constructed at this step. These hypotheses were formulated by the selection of discursive manifestations of recurrent central themes found in the new topic created in the Collaborative Forum.

The last step aimed to propose the structuring of a formative intervention for a reformulation of the AS which involves the visit to the legal entity customer. This reformulation may be applied in future research, so that it can be a model for this AS.

At first, the information gathered by the document analysis was important to understand the AS's structure, providing relevant information to outline its main elements. These were, then, presented in the triangular graphic representation of the visiting legal entity customer AS developed in the third stage of this research.

The step of analyzing and interpreting primary data collected through netnography was the most relevant for this research. It allowed the identification of discursive manifestations of contradictions and their categorization, in addition to raising hypotheses of contradictions generated by these manifestations and their possible impacts on the AS outlined in the triangular graphic (Engeström, 1987). For the purposes of this investigation, the results presented are up to the third stage of the research, considering the identification and categorization of discursive manifestations of contradictions through netnography, which made it possible to point out hypotheses of contradictions in the triangular graphic whose findings are presented below.

ANALYSIS AND DISCUSSION OF RESULTS

Discursive manifestations indicating contradictions

The identification of discursive manifestations occurred through the meeting of linguistic clues in the subjects' comments, which were extracted from the topic in the Collaborative Forum, inserted in an Excel spreadsheet and ordered in the same sequence in which they were posted. The "Find & Select" tool from Excel were useful to find the linguistic clues, which were related to each category on comments.

Even though the linguistic clues suggested by Engeström and Sannino (2011) were found, it was necessary a thorough reading of the discourses so that the categorization could be more assertive. In total, 131 excerpts were identified, analyzed, and distributed among the categories - dilemmas, conflicts, critical conflicts and double binds - conceptualized by Engeström and Sannino (2011), as shown in the Box below.

Box 3
Selection of discursive manifestations of contradictions

	Dilemmas	Conflicts	Critical conflicts	Double Binds
Excerpts	6	81	35	9

Source: Elaborated by the authors.

After the identification and categorization of the discursive manifestations indicating contradictions, it was possible to survey the hypotheses and frame them according to their corresponding level of contradiction and their possible impact on the AS of visiting legal entity customer practice, outlined by the researcher and analyzed below.

Hypotheses analysis of contradictions in the activity system

Considering that, central to the research based on activity theory, there are the Activy Systems and the contradictions between and within them (Engeström & Pyörälä, 2021). In this research, the levels of systemic contradictions in an AS, proposed by Engeström (1987), have been analyzed. The AS is not consolidated since many changes have occurred in recent years, which are still being assimilated by the subjects of the activity.

Based on the information collected and analyzed, it can be inferred that a new activity model is being implemented and causing internal historical contradictions in the elements of the AS (primary contradictions).

Other contradictions can be found in the form of tensions or mismatches between the elements of the AS (secondary contradictions), in which the arose disturbances may compromise the scope of the object. The previous model of activity might be contradicting the new. In many cases, the subjects discursively express that things cannot be done in the same way, but they are not able to solve the problems when a new or innovative element arises in the AS. For example, there were some imposed rules that were identified in the manifestations, which come from the external environment and are internalized in the activity, causing tension in the subjects, the objects and the tools.

Another hypothesis is that the object is expanding (new ways of generating profit), generating mismatches between the new more expanded object and the other elements (tertiary contradictions). The subjects cannot transform the new object and achieve the desired results because the other elements were not developed in the same way. It is also possible to hypothesize that parallel activities, which follow the previous logic of execution, are impacting the new AS banking model in question (quaternary contradictions). These contradictions, at all levels, need to be overcome for the consolidations of the new activity model.

The contradictions identified in the research are only hypothetical constructions. According to Sannino (2011), its validity should be tested and its nature more elaborated in extensive and versatile data analysis. This will be possible with the implementation of a training intervention. Keeping the hypotheses in mind, it is still possible to consider the implications of these possible contradictions in the AS.

The strengthening of these contradiction hypotheses – primary, secondary, tertiary and quaternary – can be obtained by analyzing the discursive manifestations, already identified in the Collaborative Forum. The understanding of such hypotheses is situated in the present time. Therefore, in accordance with Paniza, Cassandre, and Senger (2018), these are manifestations of historical contradictions that must be reflected under a dialectical logic. Studies such as Donatelli et al. (2020) reinforce this issue and the possibility of proposing hypothesis of condratictions, considering its levels and possible impacts in the activity system,

Among the hypotheses of this study (Figure 2), one of the discursive manifestations of one recurrent subject was used as an example: the "*Visitas PJ*" app [Visiting legal entity customers app]*,* an application used to carry out the activity included in the "tools" element of the AS.

In comment 1 regarding visiting legal entity customers, the subject speaks as follows: "As for the tools, I believe we have enough. The app itelsf is an excellent tool, but it could work offline, so we can fill in the data during the visit because in several locations here in the city we cannot get a signal". It is noticed that the subject questions the usability of the tool and wishes to maximize the use value, but he/she has problems with the internet.

The intrinsic primary tool contradiction occurs when the use value is affected by the exchange value - the cost for hiring and making available several internet operators would be more expensive for the bank. Feeling that the things cannot continue as they are and that something needs to be done so that the tool is useful for reaching the object, the subject suggest that the tool works offline, but bumps into the community bureaucracy which creates the tools or establishes the rules (secondary contradiction).

Figure 2

Hypotheses of primary contradiction in the "tools" element and secondary contradiction between "tools" versus "community"
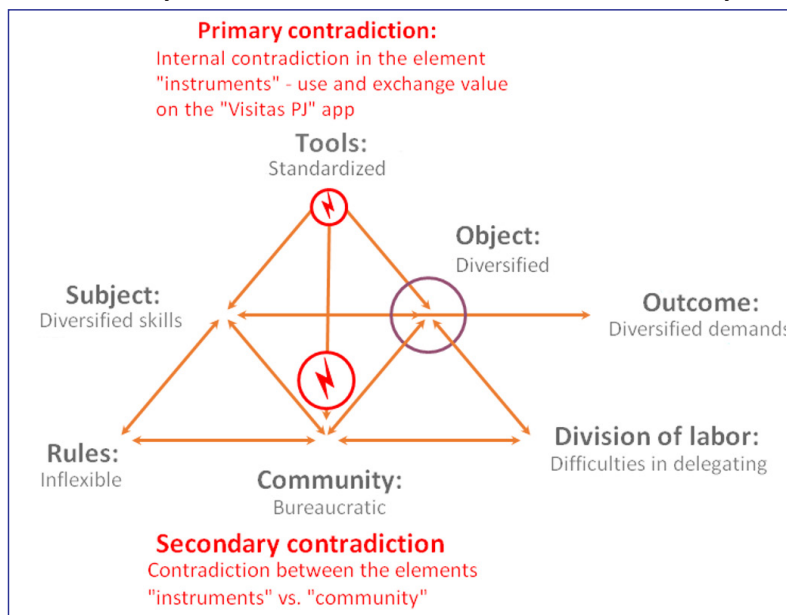
Source: Adapted from Engeström (1987).

Following the construction contradictions hypotheses, another excerpt of discourse that dealt with another recurring subject was analyzed - the displacement. He/she considers displacement in order to make the visits and to reimburse the recurring costs which were not covered by the participants.

Generally, the displacement theme is inserted in the "rules" element, through norms that define how the subjects can reimburse the costs of visits. The rules define which means of transport could be used, and the priority use order of means of transport must be observed (bus, taxi etc.).

With a total of 32 categorized discursive manifestations, the theme "displacement" was the most commented, providing strong indications of contradictions in the system activity in question, which hypotheses might be constructed based on some identified conflicts.

Today, the biggest obstacle in our city is the displacement. It is a small city and larger companies are located 7 or 10km away from the city center. There are no bus lines with compatible schedules, not even Uber. We do not think it is fair to pay the taxi and then ask for reimbursement, since each visit costs around R$50 reais. Therefore, this is our greatest difficulty in making the visits (Fórum Colaborativo, 2018).

The excerpt above was extracted from comment 1. This is an impasse that the subject has in relation to the rules established to full fund costs of displacement. The hypothesis here refers to a mismatch between the "subject" and "rules" in the AS (secondary contradiction - Figure 2). The discourse presents the subject's difficulty in knowing what to do to full fund the visits since they are mandatory. It is evident the need for learning and/or change in this regard because it can block the activity.

Strengthening this hypothesis of secondary contradiction, comment 6 presents the following excerpt: "[I work in] a city small and I have difficulty reimbursing visiting expenses because we do not have a taxi company, or Uber, and there are no bus lines to get to the companies' location/headquarters. In most cases, the expense burden is on the Relationship Manager" (Fórum Colaborativo, 2018).

In another comment, the subject claims the lack of clarity in rules and demonstrates that he/she faces difficulty regarding displacement. "The displacement time is also an issue when clients are distant. The budget issue for the displacement expense is not clear and generates a lot of doubt among colleagues as how to reimburse" (Fórum Colaborativo, 2018). Such discourse

also strengthens the hypothesis of secondary contradiction between "rules" and "subjects". In the forum, one of the subjects posts the comment 49, which supports the hypothesis of secondary contradiction:

Today, the issue of displacement and expense of fuels when making visits is too complicated. I have many customers in neighboring cities which are part of our metropolitan region and others that are not. In my opinion, visiting customers with my own vehicle is much more practical. When visiting in the city there are nearby points and distant points, you cannot keep taking a taxi and often the cost gets higher than by car. Make a card with a scaled limit for visits and make our day-to-day easier so that the visit is the focus and we don't worry about the accountability process that currently requires a time that we do not have given the current levels of demand (Fórum Colaborativo, 2018).

It is noticeable that the subject describes a report full of feeling, demonstrating a situation of impossibility to use the means of transportation determined by the bank in his/her location. The generated tension between the "subject" and the "rules" might be impairing the transformation of objects and the achievement of expected results. The graphic representation below shows the possible impact of this discursive manifestation.

Figure 3
Hypothesis of secondary contradiction between the "subjects" versus "rules"
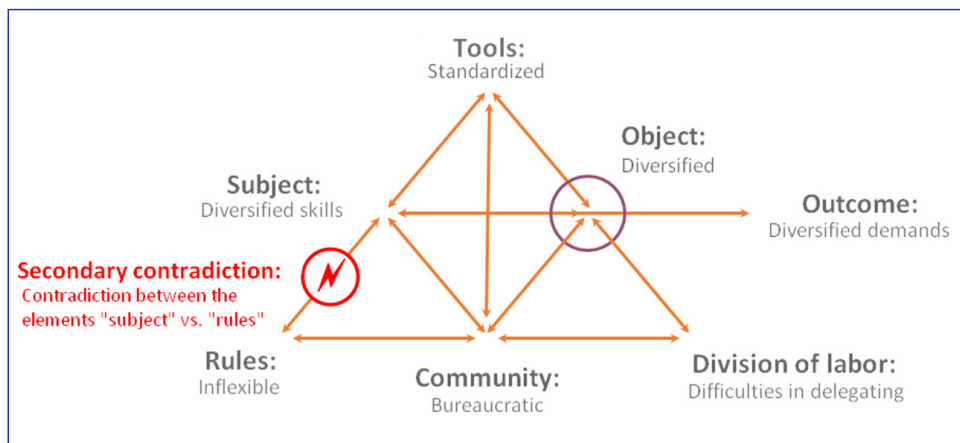
Source: Adapted from Engeström (1987).

Therefore, categories defined by Engeström and Sannino (2011) could be tested in this research and fostered the survey of other hypotheses of contradictions. Thus, the importance of obtaining ethnographic data from the activity environment in order to constitute a formative intervention is understood (Engeström, 2010). Thus, netnography – ethnography in a virtual environment – can be used in the preliminary phase to obtain information about the activity in question and it is a viable alternative for the beginning of a formative intervention that takes into account the phases of the expansive learning cycle, shown in Figure 1, raising hypotheses of contradictions which can be used as mirror data to structure and conduct the first sessions of a formative intervention.

Through netnography, in addition to the content analysis, two main results were achieved: identification and categorization of discursive manifestations indicating contradictions; survey of the hypotheses of contradictions and analysis of the outlined AS.

Netnography proved to be a potential tool, while it made it possible to identify discursive manifestations of contradictions, categorizing them as proposed by Engeström and Sannino (2011). In accordance with Miettinen (2000) who links the principles of asceding from the abstract to the concrete with the research cycle, it is clear that netnography falls within the first of three stages of the process proposed by the author: outline the activity to be studied, pointing out procedures and key work tools, as well as performing the first characterization of visible problems at work (ethnography) - in our case, through netnography.

FINAL CONSIDERATIONS

The research showed the possibility of identifying discursive manifestations of contradictions in a moving system. Netnography proved to be an important preliminary step for structuring a formative intervention, as it provided the survey of mirror data.

The exercise of netnography, combined with content analysis, provided the categories identification of discursive manifestations in the activity system of visiting the legal entity customer, which in turn, fostered analytical categories such as dilemmas, conflicts, critical conflicts and double binds. In addition to that, the investigation allowed a survey of hypotheses of contradictions which may be impacting the system of visits. This can help the interventionist researcher to better understand the mirror data and to be more assertive, so that he/she can take a better range of contradictions for the first sessions of formative intervention.

Netnography, when used for the collection of mirror data, enables the learning of all - researcher and participant-subjects – by the results of reflecting on the contradictions. It can be considered a learning space, in which the contradictions raised by the participants express a way of learning about what they do in the organization. The learning fostered through netnography allowed the subjects involved in the bank's activity to think and reflect on their contradictions.

Thus, the benefit that the research offers to the theories of organizational learning is an indication that the phase of researching historical development (historical contradictions) of an activity – as the methodologies provide for collecting mirror data of an intervention – occurs in a space of exchanges between people, on virtual channels of communications, as sources of data which can be fostered by netnography. It fulfills a role that had not yet been considered in CL works, as it is able to bring to light the contradictions present in a banking activity, in which the participating subjects exchanged messages giving opinions and expressing their views on the problem.

It is also a research method which has limited interaction, but it has advantages compared to an ethnography. According to Mesquita, Matos, Machado, Sena and Baptista (2018), with netnography, geographical distances can be shortened due to virtual proximity. However, the method has limitations due to the fact that the researcher does not have face-to-face contact with the subjects. The technique still needs advances to evaluate its reliability and validity criteria, as wel as the possibility (or impossibility) of triangulation are also relevant issues (Mesquita et al., 2018). The limitation was found with the participation of subjects from other hierarchical levels. Despite of the interest of this text, there was no considerable participation of members of the tactical and strategic levels of the organizatioin, even though they were constantly invited to participate.

The participation of the research subjects in situations in which the activity is, by its nature, remote, indicated the possibility of netnography also supplying a demand in scientific research in times of social isolation. The offered structure contributed to the knowledge of a research method which fostered the survey of contradictions in remote work environments, and brought out its limits and potential in order to subsidize the researcher in his universe of possibilities, even though there was no physical interaction between the participants.

For future research, it is suggested to expand the studies on the possibilities of using netnography, considering that the relationship between the subjects of some activities have been more and more virtual. Virtual meetings, blogs, forums, among other virtual communication channels, are increasingly common in organizations. Therefore, the study of a method that aligns with these new realities is necessary. In addition, it is demanded that other research discuss the benefits of raising hypotheses of contradictions based on virtual discursive manifestations, especially those based on Activity Theory.

REFERENCES

Begnini, S., Santos, S. S. S. D., Sehnem, S., Carvalho, C. E., & Machado, H. P. V. (2019). Capitalismo consciente: uma análise netnográfica em grupos da rede social LinkedIn. *Cadernos EBAPE.BR*, *17*(2), 277-293.

Bulgacov, Y. L. M., Camargo, D., Canopf, L., Matos, R. D., & Zdepski, F. B. (2014). Contribuições da teoria da atividade para o estudo das organizações. *Cadernos EBAPE.BR*, *12*(3), 648-662.

Caregnato, R. C. A., & Mutti, R. (2006). Pesquisa qualitativa: análise de discurso *versus* análise de conteúdo. *Texto & Contexto Enfermagem*, *15*(4), 679 684.

Cassandre, M. P., & Godoi, C. K. (2013). Metodologias intervencionistas da teoria da atividade histórico-cultural: abrindo possibilidades para os estudos organizacionais. *Revista Gestão Organizacional*, *6*(Special), 11-23.

Cassandre, M. P., Querol, M. A. P., & Bulgacov, Y. L. M. (2012). Metodologias intervencionistas: contribuição teórico-metodológica dos princípios vigotskyanos para pesquisa em aprendizagem organizacional. In *Anais do 26º Encontro da Associação Nacional de Pós-Graduação e Pesquisa em Administração*, Salvador, BA.

Cassandre, M. P., Querol, M. A. P., & Senger, C. M. (2018). Preparando uma intervenção do Laboratório de Mudança: a gestão dos resíduos de um hospital universitário. *Revista de Administração, Contabilidade e Economia*, *17*(1), 9-28.

Cavalcanti, R. C. T., Souza-Leão, A. L. M. D., & Moura, B. M. (2021). Afirmação fânica: aleturgia em um *fandom* de música *indie*. *Revista de Administração Contemporânea*, *25*(5), e190395.

Cole, M. & Engeström, Y. (2001). Cultural-Historical Approaches to Designing for Development. In J. Valsiner (Ed.), *The Cambridge Handbook of Sociocultural Psychology.* Cambridge, UK: Cambridge University Press.

Davydov, V. V. (1999). The content and unsolved problems of activity theory. *Perspectives on Activity Theory, 16*, 39-52.

Donatelli, S., Vilela, R. A. G., Querol, M. A. P., & Gemma, S. F. B. (2020). Contradições na produção de semijoias: uma perspectiva cultural. *Revista Laborativa*, *9*(2), 83-108.

Engeström, Y. (1987). *Learning by expanding: an activity-theoretical approach to developmental research*. Helsinki, Finland: Orienta-Konsultit Oy.

Engeström, Y. (1999). Activity theory and individual and social transformation. In Y. Engeström, R. Miettinen, & R. L. Punamäki (Eds.), *Perspectives on activity theory*. Cambridge, UK: University Press.

Engeström, Y. (2000). From individual action to collective activity and back: developmental work research as an interventionist methodology. In P. Luff, J. Hindmarsh, & C. Heath (Eds.), *Workplace studies* (pp. 150-166). Cambridge, UK: Cambridge University Press.

Engeström, Y. (2001). Expansive learning at work: toward an activity theoretical reconceptualization. *Journal of Education and Work*, *14*(1), 133-156.

Engeström, Y. (2007). Putting Vygotsky to work: the change laboratory as an application of double stimulation. In H. Daniels, M. Cole, & J. M.

Wertsch (Eds.), *The Cambridge companion to Vygotsky*. Cambridge, UK: Cambridge University Press.

Engeström, Y. (2008). *From teams to knots: activity-theoretical studies of collaboration and learning at work*. Cambridge, UK: Cambridge University Press.

Engeström, Y. (2010). Activity theory and learning at work. In M. Malloch (Eds.), *The Sage Handbook of Workplace Learning*. London, UK. Sage.

Engeström, Y. (2011). From design experiments to formative interventions. *Theory & Psychology*, *21*(5), 598-628.

Engeström, Y. (2020). Ascending from the abstract to the concrete as a principle of expansive learning. *Psychological Science and Education*, *25*(5), 31-43.

Engeström, Y., Miettinen, R., & Punamäki, R. (1999). *Perspectives on activity theory*. Cambridge, UK: Cambridge University Press.

Engeström, Y., & Pyörälä, E. (2021). Using activity theory to transform medical work and learning. *Medical Teacher*, *43*(1), 7-13.

Engeström, Y., & Sannino, A. (2010). Studies of expansive learning: foundations, findings and future challenges. *Educational Research Review*, *5*(1), 1-24.

Engeström, Y., Virkkunen, J., Helle, M., Pihlaja, J., & Poikela, R. (1996). The change laboratory as a tool for transforming work. *Lifelong Learning in Europe*, *1*(2), 10-17.

Fernandes, O. L. D. C., Fernandes, N. C. M., Paiva, F. G., Jr., Leão, ALMS, & Costa, MF (2019). Consumo simbólico e representação do *self*: um estudo de interações em uma comunidade virtual de usuários Ubuntu-Br. *Cadernos EBAPE.BR*, *17*(Especial), 717-731.

Fonseca, W.C.F., Jr. (2009). Análise de conteúdo. In J. Duarte, & A. Barros (Eds.), *Métodos e técnicas de pesquisa em comunicação* (2a ed., pp. 280-303). São Paulo, SP: Atlas.

Hine, C. (2000). *Virtual ethography*. London, UK. Sage.

Kozinets, R. V. (1998). On netnography: initial reflections on consumer research investigations of cyberculture. In J. Alba, & W. Hutchinson (Eds.), *Advances in consumer research.* Duluth, MN: Association for Consumer Research.

Kozinets, R. V. (2002). The Field Behind the Screen: Using Netnography For Marketing Research in Online Communities. *Journal of Marketing Research*, *39*, 61-72.

Kozinets, R. V. (2010). *Netnography: doing ethnographic research online*. Toronto, Canada Sage Publications.

Kozinets, R. V. (2015). *Netnography: redefined* (2nd ed.). London, UK. Sage.

Lemos, M., Querol, M. A. P., & Almeida, I. M. (2013). A teoria da atividade histórico-cultural e suas contribuições à educação, saúde e comunicação: entrevista com Yrjö Engeström. *Interface – Comunicação Saúde Educação*, *17*(46), 715-727.

Leontiev, A. N. (1978). *Activity, consciousness, and personality.* Englewood Cliffs, NJ: Prentice Hall.

Mariani, M. A. P., Arruda, D. O., Silva, M. B. D. O., & Moreira, M. C. S. (2019). La percepción del turista sobre los atributos de los hospedajes en Brasil: un análisis en base a los comentarios online. *Estudios y perspectivas en turismo*, *28*(4), 882-902.

Mesquita, R. F., Matos, F. R. N., Machado, D. Q., Sena, A. M. C., & Baptista, M. M. R. T. (2018). Do espaço ao ciberespaço: sobre etnografia e netnografia. *Perspectivas em Ciência da Informação*, *23*(2), 134-153.

Miettinen, R. (2000). *Ascending from the abstract you the concrete and constructing working hypothesis will be new practices: Evald Ilyenkov's philosophy revisited* (pp. 111-129). Helsinki, Finland: Kikimora Publications.

Moraes, T. A. D., & Abreu, N. R. D. (2017). Tribos de consumo: representações sociais em uma comunidade virtual de marca. *Organizações & Sociedade*, *24*(81), 325-342.

Moreira, S. V. (2005). Análise documental como método e como técnica. In J. Duarte, & A. Barros (Eds.), *Métodos e técnicas de pesquisa em comunicação* (pp. 269-279). São Paulo, SP: Atlas.

Moura, B. M., & Souza-Leão, AL (2020). Identidade cultural no consumo de fãs brasileiros da National Football League. *Cadernos EBAPE.BR*, *18*(3), 595-608.

Paniza, M. D. R., Cassandre, M. P., & Senger, C. M. (2018). Os conflitos sob a mediação do Laboratório de Mudança: uma aprendizagem expansiva. *Revista de Administração Contemporânea*, *22*(2), 271-290.

Picheth, S. F., Cassandre, M. P., & Thiollent, M. J. M. (2016). Analisando a pesquisa-ação à luz dos princípios intervencionistas: um olhar comparativo. *Educação*, *39*(Especial), s3-s13.

Pinto, V. B., Silva, C., Neto, Costa, M. F., Bezerra, F. M. P., Cavati, H., Sobrinho, & Cysne, M. R. F. (2007). Netnografia: uma abordagem para estudos de usuários no ciberespaço. In *Anais dos 9º do Congresso Nacional de Bibliotecários*, Ponta Delgada, Portugal.

Ploettner, J., & Tresseras, E. (2016). An interview with Yrjö Engeström and Annalisa Sannino on activity theory. *Bellaterra Journal of Teaching & Learning Language & Literature*, *9*(4), 87-98.

Querol, M. A. P., Cassandre, M. P., & Bulgacov, Y. L. M. (2014). Teoria da atividade: contribuições conceituais e metodológicas para o estudo da aprendizagem organizacional. *Gestão & Produção*, *21*(2), 405-416.

Querol, M. A. P., Jackson-Filho, L. M., & Cassandre, M. P. (2011). Change laboratory: uma proposta metodológica para pesquisa e desenvolvimento da aprendizagem organizacional. *Administração – Ensino e Pesquisa*, *12*(4), 609-640.

Rocha, A. L. C., & Eckert, C. (1998). A interioridade da experiência temporal do antropólogo como condição da produção etnografia. *Revista de Antropologia*, *41*(2), 107-136.

Sannino, A. (2011). Activity theory as an activist and interventionist theory. *Theory & Psychology*, *21*(5), 571-597.

Sannino, A., & Engeström, Y. (2018). Cultural-historical activity theory: founding insights and new challenges. *Cultural-Historical Psychology*, *14*(3), 43-56.

Vänninen, I., Querol, M. P., & Engeström, Y. (2021). Double stimulation for collaborative transformation of agricultural systems: the role of models for building agency. *Learning, Culture and Social Interaction*, *30*, 100541.

Virkkunen, J. (2004). Developmental interventions in work activities: an activity theoretical interpretation. In T. Kontinen (Ed.), *Development intervention. Actor and activity perspectives* (pp. 37-66). Helsinki, Finland: University of Helsinki.

Virkkunen, J. (2009). Two theories of organizational knowledge creation. In A. Sannino, H. Daniels, & K. D. Gutiérrez (Eds.), *Learning and Expanding with Activity Theory* (pp. 144-159). Cambridge, UK: Cambridge University Press.

Virkkunen, J., & Newnham, D. S. (2015). *O Laboratório de Mudança: uma ferramenta de desenvolvimento colaborativo para o trabalho e a educação*. Belo Horizonte, MG Fabrefactum.

Vygotsky, L. S. (2007). *A formação social da mente: o desenvolvimento dos processos psicológicos superiores* (7a ed.). São Paulo, SP: Martins Fontes.

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