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USE OF THE CONTENT ANALYSIS TO HELP IN THE CHARACTERIZATION OF SEMIURBAN ROAD PASSENGER TRANSPORT IN BRAZIL: A SYSTEMIC AND INTERDISCIPLINARY VIEWPOINT

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ABSTRACT

In Brazil, the National Land Transportation Agency (ANTT in Portuguese) Resolution 16/02 defines semiurban road passenger transport as journeys with urban transport characteristics that are as long as 75km (or less) and that cross the State, Federal District or Territory border. Even though this type of service is regulated, Decree 2.521/98 does not present a specific approach for this service, which may jeopardize its regulatory policy and service planning. Besides, the lack of a specific approach allows for user expectations to remain unfulfilled. Thus, regarding land passenger transport, the main problem we spotted was the lack of knowledge on semiurban road passenger transport. To consider the perceptions of users, planners and operators involved in semiurban transport is essential to understand how it works and, subsequently, to characterize it. From this point of view, Content Analysis comes to light as a specific technique that aims to describe content objectively, systematically, qualitatively and quantitatively in order to build a System of Synthetic Categories for each actor in semiurban transport. This study aims to demonstrate how Content Analysis techniques

can contribute to characterize semiurban road passenger transport from the system of categories of user perception in the Brazilian Federal District and surrounding areas.

INTRODUCTION

The movements among locations that make up a modern urban complex are made by one or more transport systems, currently characterized and classified principally according to the geographic level of action. These geographic levels refer to movement of short, medium or long distance and in accordance with the rules of the political and administrative division of the national territory. Thus there is urban transport, interurban transport, interstate transport, international transport, interstate *semiurban* transport and international *semiurban* transport (Menezes, 2004).

In the specific case of semiurban road passenger transport, this is defined as travel which being less than or equal to 75 kilometers, has all the characteristics of urban transport and which crosses the border of the State, the Federal District or of the Territory. The definition of semiurban passenger transport, as found in Resolution no. 1602 and in Decree 2,521/98, do not contain the specifics necessary to identify the elements which define its characteristics, “what is” and “what is not” semiurban transport, or “when” and “how” this type of transport occurs.

In this context, it is understood that the development of a characterization is the beginning point for the understanding of semiurban passenger transport, principally from the perspective of the actors involved (user, planner, service provider). This definition must provide information which permits an understanding of the dynamics of semiurban transport, in order to contribute to its planning.

Analyzed in this way, Content Analysis suggests itself as a specific technique which has as its objective a systematic qualitative and quantitative description of the content manifest, which is the basis for constructing a Category List for each actor involved with the transport service. The Category System, in this study, was used specifically to identify the perception of the user that utilizes semiurban passenger transport, permitting the identification of elements which are important to the comprehension of the form and help in its definition.

This study has as its objective to demonstrate how the technique of Content Analysis can contribute to the characterization of semiurban transport using a system of categories which refer to the perceptions of users of the Federal District and surrounding areas, the area where the Brazilian capital is located.

In order to attain the objective of the work there is an initial description of semiurban road passenger transport. Afterwards the technique of Content Analysis is presented, and uses to construct a system of categories specific to semiurban transport. Then a system of categories for semiurban transport from the user’s viewpoint is elaborated, and lastly final considerations are presented.

SEMIURBAN ROAD PASSENGER TRANSPORT

In Brazil, the public transport service for passengers is classified principally as a function of the geographic level of operation. Those geographic levels refer to short, medium, or long distance travel and to the situation of political-administrative divisions of the national territory.

Among the types of public passenger transport existing in Brazil, semiurban road transport stands out, and is defined by Resolution no. 16/02 of the National Land Transport Agency (ANTT) as that which travels a distance of less than or equal to 75 kilometers, has characteristics of urban transport and crosses the limits of the State, the Federal District or of a Territory.

Although the semiurban road passenger transport is regulated in Brazil by Decree 2.521/98, this policy does not present a specific discussion of semiurban transport, which could compromise the planning of the service and not correspond to the expectations of the user. That is due to the classification's being based on the transposition of political and administrative limits and on the distance traveled, which might not be sufficient to determine the fundamental elements necessary for the knowledge of this type of transport.

Based on existing data, it was observed that semiurban road passenger transport has unique characteristics that, at times, it is similar to long-distance transport and, at other times, it is similar to urban transport. Differentiations of the characteristics of service among the regions of occurrence of this transport within the country were identified. It is considered that the elements of the transport environment determine the characteristics of the system of transport in each region of occurrence, as well as being influenced by the elements of the systems themselves.

CHARACTERIZATION FOR DEVELOPMENT OF REGULATORY POLICY FOR TRANSPORT

The definition is a fundamental step for the development of a regulatory transport policy, since it provides the current state of the object (transport). In this case, identifying the perception of the actors involved is important, since the act as planners who modify the state of the object in accordance with their necessities (Matus, 1984). From this point of view it is correct to affirm that the perception of the actors should be considered in the development of a regulatory transport policy. The process of development of a regulatory policy is made up of the elaboration of a basic model for the transport system, which in turn is made up of four distinct elements: a functional model, a management model, a model for delegation and for remuneration. Figure 1 presents an example of the aspects related to transport which are implied by the necessities of one of the actors, in this case the users.

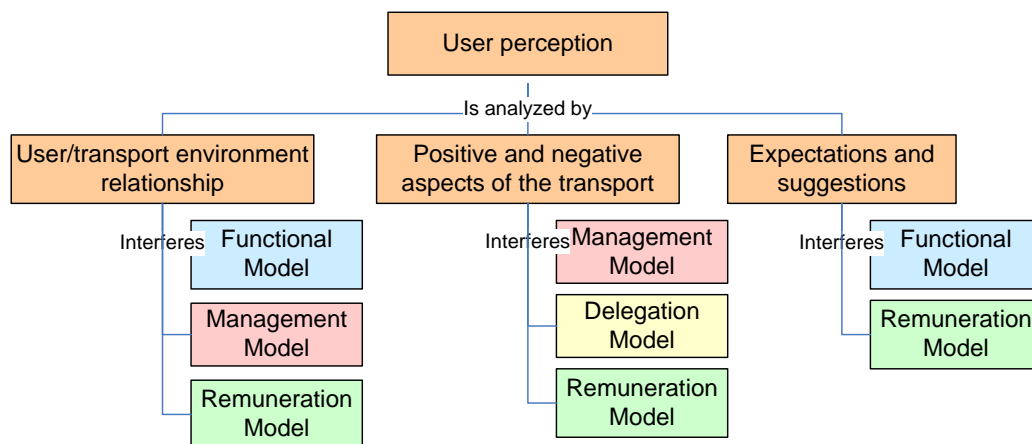


Figure 1: Relationships among the perception of users and the basic model of a transport system

The basic model of a transport system reflects the characteristics and the concepts built around this system, with the intention of providing the elements necessary for the comprehension of its function on the part of the parties who are interested in participating in the bidding process and, afterwards, offering the service to the population (Ceftru, 2006). For the development of the basic model it is necessary to define the transport system which it is intended to regulate, contemplating among other aspects, those related to the supply and demand for the development of the conceptual aspects of the regulatory strategy, of the functional model, of the administrative model and of delegation and remuneration.

The Functional Model defines the aspects of planning of transport, the services offered, the type of integration, the vehicular technology necessary according to the type of service, the network of lines sufficient for each type of service, the itinerary, the frequency and the fleet, the plan for the physical infrastructure which considers the corridors, the terminals, the stops, among others covering the concepts of infrastructure and system operations (Ceftru, 2006).

The Administrative Model corresponds to the control of aspects relating to the providing of transport service, which characterize themselves as factors that determine the success of the system, thus influencing the quality of the product produced (Ceftru, 2006). This model has as its objective the definition of the structure and the activities necessary for the administration of the service delegated by the Public Agencies and to establish the attributes of the administrative organ in relation to the various aspects of the system.

The Delegation Model defines the relationship between the Administrative Agency and the service provider, and strives for transparency and balance in the bidding process (Ceftru, 2006). This model includes, defines and formalizes the following aspects of the system: the object of the concession; the conditions for entrance into the market; the conditions for operation in the market and the conditions for getting out of the market.

The Delegation Model, the Remuneration and Readjustment Model define the process of Remuneration of the operators of the system, as well as the rules and parameters necessary for the readjustment of the valor for the operators, which is the fundamental element of the contract (Ceftru, 2006).

In this context the bio-ecological model proposed by Bronfenbrenner offers the approach necessary for the development of a definition of semiurban transport which considers the environment and the perception of the actors involved for the development of regulatory policy.

BIO-ECOLOGICAL MODEL PROPOSED BY BRONFENBRENNER

This study is oriented by the bio-ecological model proposed by Bronfenbrenner (1977, 1979/1996, 1986, 1988, 1992, 1994,1999). Thus, it contemplates the specifics and similarities in the characteristics of the evolution of the individual and his environment. Understanding this requires a systemic and interactive perspective for the phenomenon under study, TRISUP. However, in order to understand complex phenomena such as TRISUP, the author considers four important dimensions which are in constant interaction: i) person; ii) process; iii) context; and iv) time – PPCT.

In this approach, the person is the nucleus of the process, but is in constant bi-directional interaction with influences from and on the environment, both of these being agents of development from this interrelationship. Thus it is important to consider the person through his or her activities and roles, together with his or her bio-psychological characteristics. For

example, the worker for a certain company makes himself a participant of the process of a system of transport through the function he represents, which is to be the user of a particular form of transport, in the same way as the father of a family who is the driver of the vehicle. In other words, the actors involved with semiurban passenger transport (users, controllers, planners e service providers) participate actively in the process and, in this way, influence this transport and are influenced by it, causing progressive changes.

The process related to the diverse activities of Semiurban Transport, will provide mechanisms that operate to make these activities happen. From this perspective, the product, that is, the occurrence of the activities, represents a continual and dynamic process. It is through this process that information is acquired about the elements and structures made operational by the actors. Thus, the vision of the process is essentially realized in the bio-ecological approach (Bronfenbrenner, 1992, 1994; Bronfembrenner e Ceci, 1994; Bronfembrenner e Moris, 1998).

The context must be understood, since it represents the environment that is being studied and in which these inter-relationships take place. Within this context are found systems that are interrelated and which influence each other bi-directionally, from the micro level (corresponding to the immediate environment of the actors) to the macro level (culture, beliefs, values, form of government). This model describes the context in four spheres: micro-systems, meso-system, exo-system and macro-system understood as “topologically like an organization of concentric structures, in which each one is contained in the following one” (Bronfenbrenner, 1986).

In this way, each environment generates activities, roles, standards of relationships and specific expectations for each person in each context (a person assumes the role of father at home and of chauffeur at work, for example). In all, the diverse environments in which an individual operates, also have an effect, making it necessary to obtain information about the diverse environments of the person for the comprehension of a specific context. For example, obtaining information about the reason for a users trip on the TRISUP is fundamental for an understanding of this transport helping also in the planning of the execution of this service (the student uses the transport to get to the university).

Time is considered as fundamental to the comprehension of happenings, making them dynamic. Thus, the events and transformations occur as time passes. It is worth mentioning that time refers as much to micro aspects, in which processes of the daily life of the subject are involve, in his immediate environment, as to macro aspects, in the historic sense, such as socio-economic and cultural changes.

In short, the process that is important to semiurban transport, to be understood in its totality, must consider the structural elements and actors immersed in a physical/bio/psycho/social/historic and cultural context. In that sense, it is possible to identify past activities in order to understand the present and resolve problems using future expectations.

During his theoretical construction, Bronfenbrenner discusses some methodological questions that are important for an adequate investigation of the bio-ecological model. Among various questions some important aspects should be pointed out. The author recognizes that for a true understanding of the phenomenon studied it is necessary to carry out research on site, in natural situations. To investigate the phenomenon in its smallest detail, the immediate environment, would make it possible to obtain a panorama of the current situation and expectations in relation to a particular context.

Thus, he suggests a multi-methodological and interdisciplinary study is suggested in order to put together complementary information for the understanding of the whole. Still, the author points out the necessity for qualitative research to contribute to the description of the daily progress of research *in loco*. Finally he alerts us to the importance of bio-ecological studies which might result in informing the elaboration of public policy in the light of development, that is, the progressive changes of human beings and their environment. In this sense, the obtaining of the opinion of the actors involved was planned to be collected through interviews which use semi-structured routines and to adopt Content Analysis for the systematization of the perceptions of the users interviewed.

CONTENT ANALYSIS (AC) – TECHNIQUE FOR THE ANALYSIS OF QUANTITATIVE DATA

The Content Analysis is an empirical method used amply in the Social Sciences as a form of analysis of content of any communication which can be transferred into text in order to understand its significance. Bardin, 1977; Bauer, 2002; Berg, 1998). Bardin, 1977 defines Content Analysis (AC) as:

“... a group of techniques of analysis which intends to obtain, through systematic procedures and objectives of the content of messages, indicators (quantitative or not) which permit the inference of knowledge relative to the conditions of production/reception (variables inferred) of these messages”.

Thus, according to the author, AC allows one to classify different elements in the text into categories that make sense of the content. In an AC using categories, starting from the objectives of the study, the categories may be defined theoretically or empirically. The first regards the categories previously constructed by the researcher and in the second the categories suggest themselves from the texts for analysis (Souza Filho 1996). This technique is not only about the analysis of form but also about the duration of the form, being, at the same time, qualitative and quantitative (Berg, 1998).

The AC can be used for different ends that go beyond the units of text, such as verification of tendencies and standards of changes, to make comparisons and trace profiles, construct indexes and map knowledge. Used in this way, AC can be used in studies of purely descriptive outlines, in normative analyses (comparison with standards), trans-sectionals (empiric comparisons) and longitudinal comparisons (understanding of a context for a longer time) (Krippendoff, *apud* Bauer 2002). Ademaïs, Bauer, 2002 affirms that this analysis could substitute opinion polls.

Procedures for the Carrying out of Content Analysis for a Group of Actors

The categories developed by AC are organized by a System of Category-Synthesis in order to identify meaning in the content manifest. Thus, from the Category System (CS) it is possible to make inferences and interpretations in the light of the objective of the study. In general, AC requires specific procedures in order to take place.

To construct a particular system of Category-Synthesis of a group of actors, it is necessary to go through three steps: analysis per interview; analysis per group interviewed, inference; and interpretation (see Figure 2). In the first step, the researcher develops four activities: i) pre-analysis; ii) codification; iii) categorization; and iv) validation of the categories. In the second

step, the categories are reorganized for the formation of one: i) system of category-synthesis of the group and ii) the data is tabulated. In the last step, the inferences and interpretations are made.

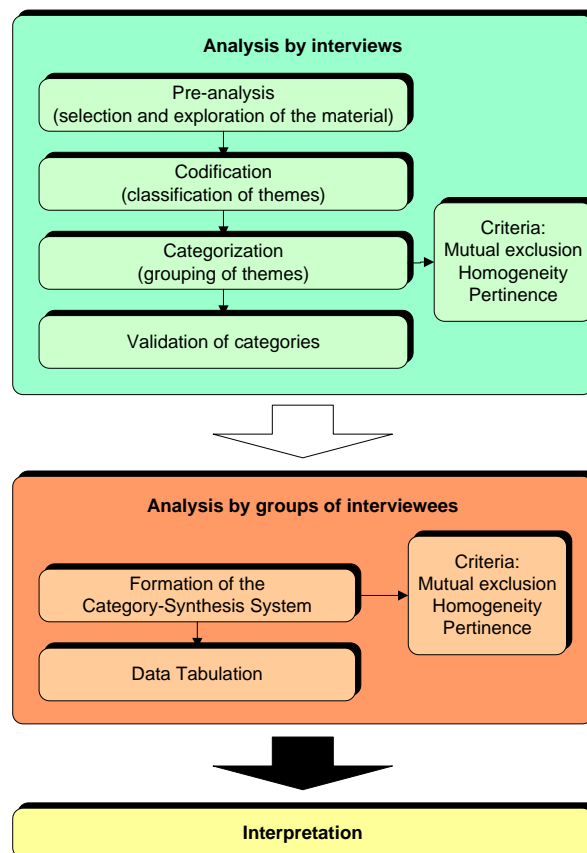


Figure 2: Steps in the Analysis of Content for a group of actors

Pre-analysis (Selection and use of Material)

The pre-analysis is the organizational phase of the material. Its purpose is to develop a precise and flexible plane of analysis. This planning requires the systematization of the initial ideas so that the process of successive operations is developed in a precise form. Moreover, aside from precision, the plan must be flexible so that new procedures may be introduced as the analysis unfolds.

Firstly, the document should be examined using a quick read (Bardin, 1977). This reading consists of obtaining a first contact with the material to be analyzed, permitting an overall vision of the document. Thus it is possible to obtain first impressions and perceive the organization of the text. Next, the reading becomes more focused in relation to the objective of the study and the theoretical knowledge of the researcher. The focused reading should evolve into an exhaustive reading of the material, looking for a common thread in the content of the group of actors.

Codification (Classification of Themes)

The phase of codification is about the choice of classification of the unit of registration (word, theme, happening or person). Bauer 2002 calls attention to the importance of training the codifier and of his involvement with the objectives of the research. If there is more than one

codifier, this process needs to be in a group at some point so that there is uniformity in the data not only in its choice but also in its classification.

One sentence can contain more than one register of information. For example, if the choice was by theme, the codifier must identify all of the themes, different and similar, found in the transcript of the interview. The classification of these themes should obey the objectives and the orientation of the research. The names of the themes should be related to the content of the theme. Normally, terms encountered in the response of the interviewee are used so that the maximum proximity to the suggested themes is guaranteed.

Categorization (Grouping of Themes)

Categorization represents the grouping of the units of analysis. For example, all themes that have aspects in common are grouped and thus, the grouping results in a category. The themes in each category must be studied and selected using the following criteria: a) mutual exclusion; b) homogeneity; and c) pertinence.

Validation of Categories

It is important to identify at what level the categories are representative of the test, or its context, in a satisfactory way. For this, the codifier must be alert and be meticulous in the organization of the themes and classification of the categories, so that they are adequate to the objective of the study, contemplating the theory of the raw data of the text. Aside from this caution, it is necessary that there be an analysis of judges in order to improve the codification process, making it still more objective.

This analysis requires a second person, specialized in content analysis and involved with the subject of the research to repeat the procedures above for the same interview analyzed by the codifier. After that, the analyses are compared and the level of agreement for each category is verified.

Formation of the System of Category Synthesis

The construction of a System of Category-Synthesis is a simplified representation of the raw data of all of the components of the same group. That procedure implies that it is necessary to take all the interviews analyzed by each interviewer and repeat the above procedure once again. In that way, all the themes encountered in all the interviews, reorganized and reclassified, will be reunited, so that all the themes in common will be regrouped and their categories will be coherent. After that procedure, it is important to have a new validation of the categories.

Tabulation of Data, Inference and Interpretation

Once the construction of the System of Category-Synthesis is finished, all of the responses of each theme are accounted for according to their frequency in the categories, permitting a statistical description of the results. Finally, the evaluation and discussion of the data obtained are realized based on the objective of the research and the literature.

APPLICATION OF AC IN THE IDENTIFICATION OF PERCEPTION OF USERS OF SEMIURBAN ROAD PASSENGER TRANSPORT

In the research on characterization of semiurban transport, for the qualitative data of the perception of the actors, it was decided to opt for the utilization of a technique called Content Analysis to analyze the semi-structured interviews. As mentioned earlier, the use of such a technique has as its goal the objective, systematic and quantitative description of the content. From these categories a System of Category-Synthesis will be built for each group of actor involved with semiurban road passenger transport (users, service provider, and planner). The systems of Category-Synthesis are here used to help in the characterization of semiurban passenger transport, allowing identification of qualitative elements important to the comprehension of this system.

For a better comprehension of the technique, an example will be presented which analyzed interviews with 70 users of semiurban road passenger transport (60 males and 40 females), residents of three cities in the region of the Federal District, being: Luziânia, Águas Lindas and Planaltina de Goiás.

Before developing the System of Category-Synthesis of the perception of the users of semiurban transport, some basic activities took place, namely: Construction of the interview routine, and transcription and analysis of the data.

Construction of the Interview Routine

A routine for interviewing of the semi-structured type was developed from the objective of the study. It contained seven questions: i) what is the reason for your trip?; ii) Why don't you try to find this service in your city?; iii) Why did you choose this service/type of transportation?; iv) In your opinion, what are the principal negative points of this service?; v) In your opinion, what are the principal positive points of this service?; vi) Aside from the principal reason, are there any other reasons why you use this service? What are they?; and vii) Would you like to make any other comments?;

The intention of this routine was to identify information in regard to the reason for travel of the passenger of semiurban transport, as well as his evaluation of the service of this transport. The project opted for semi-open questions so that it would be possible to collect a maximum of information about the subjects referred to.

Use of Interviewing Routine

For the interviewing routine the field researchers were trained in its content and collection procedure. In this way the users, when approached, were informed by the researchers about the objective of the study, the importance of their participation, the fact that their responses would be secret with the analysis of the data only divulged in broad terms. The user permitted the interview by signing a written consent form that had been drawn up.

Pre-analysis

At the end of the taking of the interviews, they were transcribed in detail by a team of specialists and later analyzed. All together 3 hours and 2 minutes of interviews, the shortest lasting 1 minute and 7 seconds and the longest 9 minutes and 52 seconds, were analyzed. Three codifiers carried out the analysis. First there was a scanning of all the material to familiarize everyone with the contents of the interviews.

Codification

After the pre-analysis step, each interview was read and re-read meticulously. In this way, the first themes of each interview were separated and classified. Next an example of initial separation of themes through codification is presented:

Example:

Interviewer: What are the principal negative aspects of this service?

User: Various.

Interviewer: Could you be more specific?

User: It's too full, there is too long a time between one bus and the other. Where I live there are times when it is late. It's a monopoly ...only one company provides this service in the city. You catch your bus, there are days when it stays in the garage and doesn't go to the commercial sector, then you have to wait another hour in order to catch another bus. If only there were another company to compete it would be better.

Table 2: Initial separation of themes collected interviews with the users of semiurban road passenger transport.

Verbalization	Theme
<i>"It's too full"</i>	Vehicle totally occupied
<i>"...there is too long a time between one bus and the other"</i>	Infrequent service
<i>"Where I live there are times when it is late, you know ?"</i>	Delays
<i>"...It's a monopoly... only one company provides this service in the city"</i>	Monopoly
<i>"You catch your bus, there are days when it stays in the garage and doesn't go to the commercial sector, then you have to wait another hour in order to catch another bus".</i>	Deviation from route
<i>"If only there were another company to compete it would be better."</i>	Competition between companies

Categorization

After all of the interview were read and separated according to their themes, the grouping of the themes into categories was carried out, taking care to observe the rules of mutual exclusion, homogeneity and pertinence for each interview. After this activity the codifiers met to discuss the themes which had emerged and the pre-grouping was done for each one of them.

Following this, the first version of the System of Categories was systematized, where the themes were grouped and the categories constructed. Thus, for each item different themes were identified; and the various 'reorganized' themes composed the categories, sub-categories, themes and sub-themes (Table 3).

Table 3: Categories, sub-categories, themes and sub-themes

Category	Subcategory	Theme	Verbalization
Reason for choosing semi-urban transport	It is the only option (for..)	Means of transport	<i>"Because I don't have any other way to get to work"</i>

Reason for choosing semi-urban transport	It is the only option (for..)	Timetable	<i>“Because this is the only option at this time of day to get home a little earlier”</i>
Negative Aspects	Vehicle/Fleet	Overloading	<i>“It’s too full”</i>
Negative Aspects	Vehicle/Fleet	Breakdown during journey	<i>“[the bus] often breaks down on the way”.</i>
Negative	Timetable	Long interval between buses	<i>“...there is too long a time between one bus and the other”</i>
Negative	Timetable	Behind schedule	<i>““Where I live there are times when it arrives late, you know ?”</i>
Negative Aspects	Company	Monopoly/No competition	<i>“... it’s a monopoly of the only company that runs this kind of service in this town</i>
Negative Aspects	Company	Monopoly/No competition	<i>“Here we only have this company operating. There is no competition so they make their own timetable querem.</i>
Desired Situation	Company	More companies/competition	<i>“If there was another company to compete it would be better”</i>
Desired Situation	Line	Increase number of lines	<i>“It should pass several times a day”</i>

Formation of a System of Category-Synthesis of the Perceptions of Users of Semiurban Road Passenger Transport

Finally, after the validation of this system and the tabulation of the data, the final version of the system of Category-Synthesis for the users of semiurban transport was presented.

Categories were created from the verbal reports of the participants, in other words, groupings of verbal responses (n=482) which had similar themes and which permitted the setting up of a panorama of the relationship user/ transport environment (n=238), of the evaluation of semiurban road passenger transport (n=199), and of the expectations and suggestion of users of this service (n=45).

This panorama is structured in the form of a System of Category-Synthesis. Figure 3 presents the categories of the relationship transport user/environment after the Content Analysis. One observes in Figure 3 that the number of verbal reports of these categories is 238, making up about 50% of the total of verbal reports analyzed. The category “Reason for Traveling” is slightly more numerous (n=69) than the other four categories, with about 30% of the verbal reports about the relationship user/transport environment.

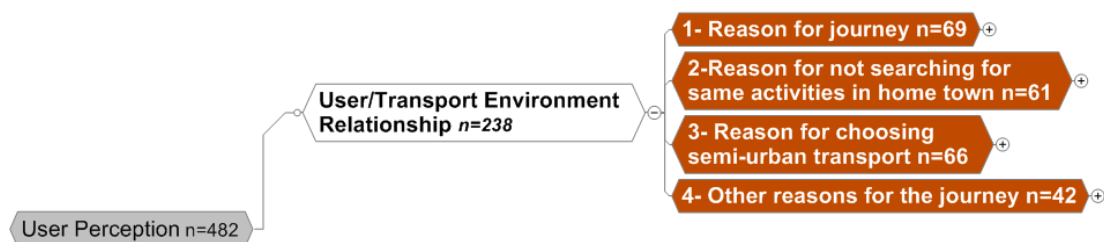


Figure 3: Relationship User/Environment for semi-urban Transport

In the same way, Figure 4 shows the evaluation of semiurban road passenger transport according to the evaluation of semiurban transport with 41% of all responses, is divided into two categories: “Negative Aspects” and “Positive Aspects”, with the first classified as 80% of the 199 responses in reference to the evaluation of semiurban transport.

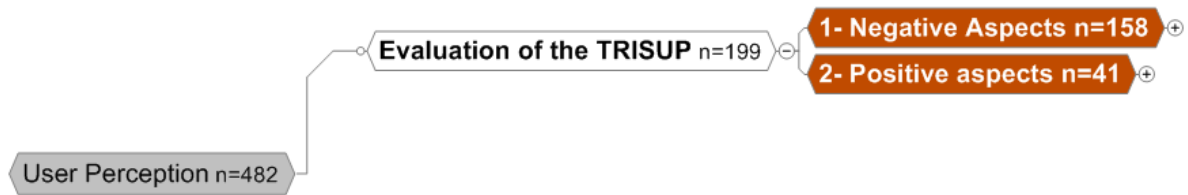


Figure 4: Perception of users of the evaluation of semi-urban passenger transport

Finally, Figure 5 presents categories of Expectations and Suggestions of the users interviewed of semiurban transport, with 9% of the total responses. It can be seen that 93% of the responses were classified in category Suggestions for semiurban transport.

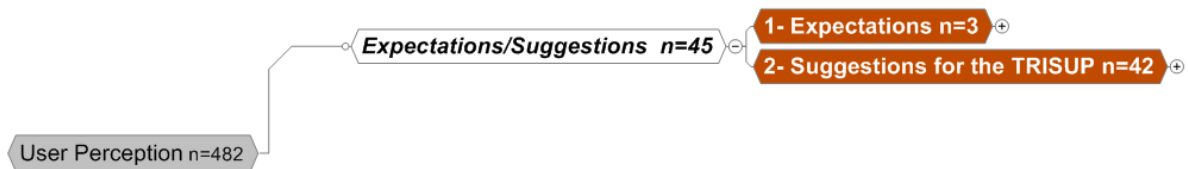


Figure 5: Perception of users in relation to their ‘Expectations/Suggestions’

This then makes up a System of Category-Synthesis for the users of semiurban transport for passengers. However, the categories in and of themselves only characterize in a superficial way the perception of the user in relation to this type of transport. It’s necessary, according to the technique of Content Analysis, to better define the object of study in order to obtain a characterization of greater quality. In this way, each category is composed of subcategories, themes, and sub-themes which explain and exemplify the categories to which they belong.

Tabulation of the Data, Inference and Interpretation

As an example of the structure of qualitative information, the panorama of the relationship User/Transport Environment is represented in the form of categories, subcategories (these represent the topics of analysis), Themes and sub-themes (which seek to exemplify the particularities of the topics mentioned).

Following the structure of analysis, the category “Motive for not looking in your city the activities obtained” shows the reason why the user has to leave the city where he lives to find what he is looking for. It is subdivided in subcategories and themes, as shown in Figure 6:

Within the seven subcategories presented in Figure 6, the one which provoked more responses was the subcategory “Emprego ”(jib), with 49, making up 80% of the responses of the category. It was classified in four themes and the one that had the most responses classified was “Difficulty in finding/getting work”, where answers appear like: *Where I live there is no work, so I have to come here;* and *Since there it is more difficult, I have to find it here.*

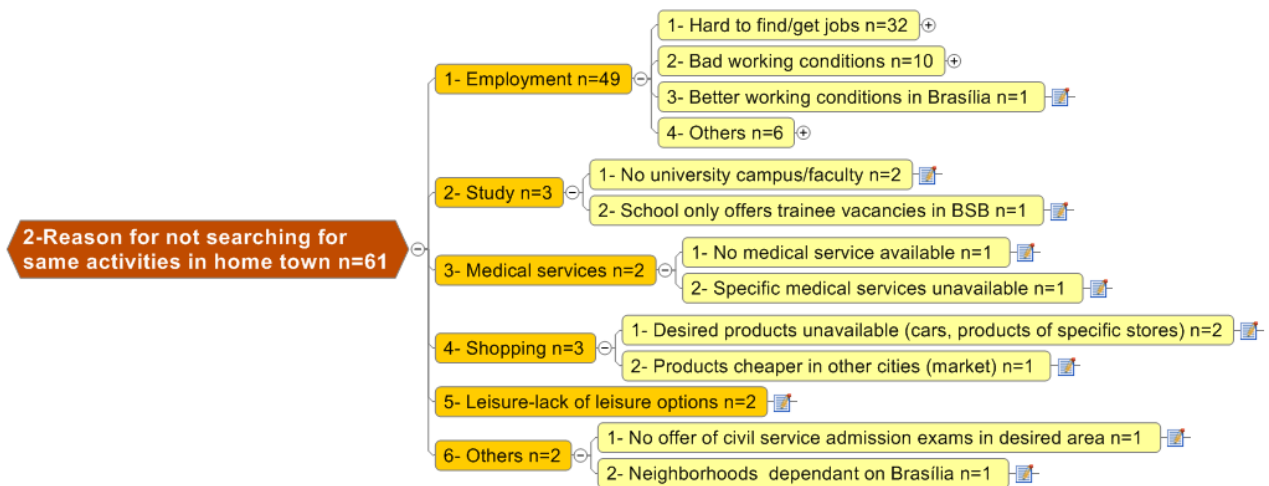


Figure 6: Subcategories and themes of “Motive for not looking in your city for the activities carried out” from the user about semiurban transport

Table 4: Themes and sub-themes for the subcategory “Work”

Themes	Sub-themes	n*
Hard to find/get jobs	No work/Work opportunities	26
	Because where I live there is no user-provided service	1
	Because there is little alternative	3
	Failed to explain the difficulty	2
	Subtotal	32
Bad working conditions	Lack formal employment	1
	Low salary/great salaries in Brasília	9
	Subtotal	10
Better working conditions in Brasília	Works with father in another city	1
	Is satisfied with current employment	1
	It takes less time to get to work	1
Others	Boost income	1
	There is no branch in that city	1
	Meet work requirements	1
	Subtotal	6
Total		49

The theme “Difficulty in finding/getting a job”, as well as other themes of the subcategory “Work”, is subdivided into sub-themes, as shown in Table 3.?

As shown in Table 4 four sub-themes were classified for the theme “Difficulty in finding/getting a job”, and we see that the sub-theme “because of lack of jobs/work opportunity” (n=32) makes up about 80% of the responses for this theme.

Thus through the explaining and exemplification of categories, subcategories, themes, and sub-themes it is possible to have an idea of the structure of the System if Category-Syntheses developed from the perception of the users of semiurban transport for passengers and the importance of the for the identification of a system of transport which, until now, has not been studied in such a profound way.

CONCLUSIONS

Planning always has an object over which it is propose to act. The delimiting of the object is essential to planning, since it is from there that the actors are identified, and clearer notions of the limits of intervention over this object are obtained and the necessary knowledge for an adequate approach is identified (Magalhães e Yamashita, 2009).

When one thinks of semiurban transport as an object of planning, one must think of it and its limits and it is necessary to understand “what is” and “what isn’t” semiurban transport. This definition can only be refined by an ample description of the object under study.

In the specific case of semiurban passenger transport, being an object to be investigated, the development of a definition is considered a fundamental activity to be carried, in this way it will be possible to know the current state of this system and its dynamics. On the other hand, the development of a definition for the knowledge of the object itself is considered pertinent if the perception of the actors involved in the use and operation of this type of transport is identified, as indicated in the studies developed by Bronfenbrenner in 1992. In this case, the Content Analysis presented itself as an adequate technique to be used for the identification of the perception of the actors (user, planner, service provider) involved in semiurban transport.

For this study it was possible to apply the technique of AC for the construction of a system of categories for semiurban road transport for passengers in Brazil. This technique proved itself to be satisfactory in terms of results, which made it possible to identify the perception of the user of semiurban road passenger transport, contributing to a greater comprehension of this kind of transport, which in turn helped in the development of the characterization and planning of the service.

It is important to point out that, in this study, the application of AC was carried out only on one of the three actors, the user, making it necessary to expand for the others, which will make possible an ample and accurate understanding of the characteristics inherent in semiurban transport. Aside from this, such an instrument may not be applied only in one area of occurrence of this type of transport, making it necessary to identify and analyze the perception of all the actors and in all of the areas of occurrence of semiurban transport in Brazil, since the geographic configuration and socioeconomic situation of the diverse areas of occurrence of semiurban transport in Brazil is distinct, which will probably result in different perceptions in reference to the users of transport in the various regions.

REFERENCES

- Bardin, L. (1977). *Análise de conteúdo*. Lisboa: Edições 70.
- Bauer, W. M. (2002). Análise de conteúdo clássica: uma revisão. Em M. W. Bauer & G. Gaskell (Orgs.) *Pesquisa Qualitativa com Texto, Imagem e Som* (pp. 64-89). 2ª edição. Petrópolis: Vozes.
- Berg, B. L. (1998). *Qualitative research methods for the social sciences*. Boston: Allyn and Bacon.
- Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, 32, 513-531.
- Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology*, 22, 723-742.

- Bronfenbrenner, U. (1988). Interacting systems in human development. Research paradigms: Present and future. Em N. Bolger, A. Caspi, G. Downey e M. Moorehouse (Orgs.), *Persons in context* (p.25-49). New York: Cambridge University Press
- Bronfenbrenner, U. (1992). Ecological systems theory. Em R. Vasta (Org.), *Six theories of child development* (p. 187-243). London: Jessica Kingsley.
- Bronfenbrenner, U. (1994). Ecological models of human development. Em T. Husten e T. N. Postlethwaite (Orgs.), *International Encyclopedia of Education* (2ª ed. Vol. 3, p. 1643-1647). New York: Elsevier Science.
- Bronfenbrenner, U. (1996). A ecologia do desenvolvimento humano: experimentos naturais e planejamentos. (MA. Veríssimo, Trad.). Porto Alegre: Artes Médicas. (Trabalho originalmente publicado em 1979).
- Bronfenbrenner, U. (1999). Environments in developmental perspective: Theoretical and operational models. Em S. L. Friedman e T. D. Wachs (Orgs.), *Measuring environment across the life span: Emerging methods and concepts* (p.3-28). Washington, DC: American Psychological Association.
- Bronfenbrenner, U. e Ceci, S. (1994). Nature-nurture reconceptualized in developmental perspective: A bioecological model. *Psychological Review*, 101, 568-586.
- Bronfenbrenner, U. e Morris, P.A. (1998). The ecology of developmental process. Em W. Damon e R. M. Lerner (Orgs.), *Handbook of child psychology: Vol.1. Theoretical models of human development*. (5ª ed., p. 993-1028). New York: Wiley.
- Ceftru (2006). Projeto Básico do Sistema de Transporte Público Urbano Convencional da Cidade de Manaus. Relatório técnico. Brasília.
- Farr, R. M. (1982). Interviewing: the Social Psychology of the Interview. In. F. Fransella (ed.). *Psychology for Occupational Therapists*. London: Macmillan.
- Magalhães, M. T. Q.; Yamashita, Y. (2009) Repensando o Planejamento. Texto de Discussão Ceftru/UnB.
- Matus, C. (1984). Política y Plan. IVEPLAN, Caracas.
- Menezes, E. O. (2004) Estudo comparativo entre o Transporte Rodoviário Interestadual Semiurbano e o Interestadual de Passageiros. Dissertação de Mestrado. Departamento de Engenharia Civil e Ambiental, Universidade de Brasília. Brasília. 123p.
- Souza Filho, E. A. (1996). Estratégia e medidas em análise de conteúdo. Em L. Pasquali (Org.). *Teoria e Métodos de Medida em Ciência do Comportamento*. (pp.319-339). Brasília: Laboratório de Pesquisa em Avaliação e medida/Instituto de Psicologia/UnB: INEP.
- Gaskell, G. (2003). Entrevistas individuais e grupais. Em M.W. Bauer & G. Gaskell (Orgs.) *Pesquisa Qualitativa com Texto, Imagem e Som* (pp. 64-89). 2ª edição. Petrópolis: Vozes.
- Lüdik, M. (1986). *Pesquisa em educação: abordagens qualitativas*. São Paulo: EPU
- Nahoum, C. (1978). *A Entrevista Psicológica*. 2ª edição. Rio de Janeiro: Agi