

# *The use of the Web Qualitative Data Analysis (webQDA) software to maximize the potential of qualitative analysis*

*Exploring Brazilian managers' perceptions on gender equality in the tourism sector*

## *O uso do software Web Qualitative Data Analysis (webQDA) para maximizar o potencial da análise qualitativa*

*Explorando as percepções dos gestores brasileiros sobre a igualdade de género no sector do turismo*

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**Abstract** — Although there is a gradual positive societal change, manifested in greater gender equality, the repercussion of gender role alterations in leadership positions is slow. The purpose of this paper is to present the innovative use of WebQDA qualitative software within a national tourism study. Exploring the practicalities of completing qualitative methodology as a team of researchers, we contribute to theory development. WebQDA software was useful in accelerating coding and analysis of data, captured from seven focus groups. Since the various stages of qualitative research were carried out by several researchers in the research group, this paper questions the implications of this for knowledge production. The systematization of information, required by WebQDA, helped overcome difficulties to synthesize the various interpretations. Thus it was possible to generate more ideas and less researcher bias.

**Keywords** - qualitative; gender; tourism; barriers; facilitators; conceptual framework development; WebQDA.

**Resumo** — Embora haja uma gradual e positiva mudança social que se manifesta numa maior igualdade de género, a sua repercussão, nas alterações do papel de género em cargos de liderança, é lenta. O objetivo deste trabalho é apresentar o uso inovador de software de análise qualitativa WebQDA, no turismo. Explorando os aspectos práticos para operacionalizar e potenciar a metodologia qualitativa com uma equipe de pesquisadores, contribuimos para desenvolvimento teórico. O software acelera a codificação e análise de dados qualitativos. Este estudo reflete sobre as vantagens do uso deste software para a produção de conhecimento pelas equipas de investigação. A sistematização da informação, exigido pelo WebQDA, ajuda a

superar as dificuldades de sintetizar as várias interpretações. Assim, foi possível gerar mais ideias e minimizar o enviesamento da pesquisa.

**Palavras Chave** – qualitativa, género, turismo, barreiras, facilitadores, desenvolvimento de modelo conceptual, WebQDA.

### I. INTRODUCTION

This work is part of a wider research project<sup>1</sup> that investigates how tourism companies and organizations deal with gender equality and to evaluate the potential played by networks and internationalization to promote forms of gender equality and to introduce innovative forms of economic growth (innovation, internationalization and networks)

Traditionally, most of the studies that link tourism and gender are mainly focused on poverty reduction and gender differences themes. Those ideas that underlie the development of those studies have a paternalistic character by proposing "helping women" instead of identify the explicit and implicit causes and mechanisms.

Analysis of the results was organized into thematic categories in light of the technique of content analysis. We collected qualitative data from a social sharing space, promoted by workshops, with 80 participants from private entities and

<sup>1</sup> 'Does gender equality have a say in the boost of innovative forms of economic growth? Reviving the economy through networks and internationalisation in the tourism sector' (PTDC/CS-SOC/119524/2010) (<http://www.genderintourism.com/>)

public organizations related to tourism. In this paper we focus on the support role of *WebQDA* software on coding and analysis of data, from seven focus group. Additionally we notice how the proper use of this software can help organize teamwork, not only in the distribution consistently tasks but also the integration of various interpretations. Coding in research groups is an interactive process that need clear questions, clear decisions and open mind to capture ideas, not forgetting minimize bias research.

After this introduction, we follow with a brief theoretical background. Next section is related to methodology and in the third we present some results. The fourth section is about building a new conceptual model. The paper ends with some conclusions and contributions.

## II. THEORETICAL BACKGROUND

The problem, i.e., the starting point for this research is the fact that qualified human resources are underutilized. The research question that guided this study was: how to capitalize qualified human resource, in tourism sector?

Women are underrepresented at all levels of management and do not (easily) reach top-management positions, evidencing the labour market failure to fully and effectively make use of the available human capital [1]. Although women constitute the majority of skilled workforce in the tourism sector, strong gender inequalities prevail, hindering their professional development, and thus restricting the development of the economic potential of the sector [1].

We cannot forget that:

- (1) tourism-related activities and the processes involved in tourism development are constructed out of gendered societies;
- (2) gender relations both inform, and are informed by the practices of all societies; and
- (3) tourism's identification as an industry is based on the economic, political or social power relations between nations or groups of people represents an extension of the politics of gender relations [2, 3].

## III. METHODOLOGY

Our starting point is that reality is subjective and there is multiple perspectives of sought [4]. Through focus group we bring together different perspectives of participants from various sectors of activity directly or indirectly linked to tourism. Focus groups are both an informal conversational interview and an observational technique [5, 6].

The present study was carried out to explore perceptions of participants of seven workshops, with the following objectives:

- To collect information concerning the regional specificities of the tourism industry and tourism employment, from the perspective of the key stakeholders in each region, comparing scenarios and visions about gender issues;
- To find out how the tourism industry varies regionally and how gender issues assume different dimensions according to the structure of the tourism industry;

- To raise tourism leaders awareness of the importance and benefits of promoting gender equality in their companies and organizations;

Description step-by-step description of the research process is provided in Fig. 1. Code development is an integration process, because codes can be collected in advance from theory concepts (theory-powered) or emerge from the data (data-powered). Build a codebook for a team project is also an integration challenge, because we need deal with multiple interpretations; by sharing and discuss it is possible to reach consensus. During coding and analysis steps new questions and new perspectives can emerge; a new research model can be create, as a result of making connections between categories, by asking data from different perspective, by looking inconsistencies between diverse coders as energy to new ideas. We break data, we look for patterns, we search similarities and singularities and we want to understand.

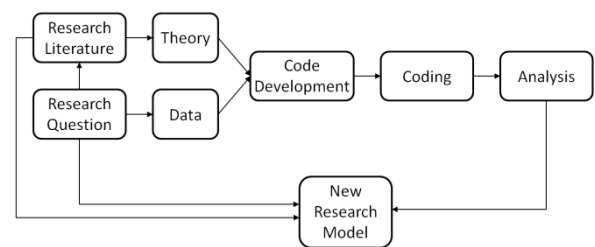
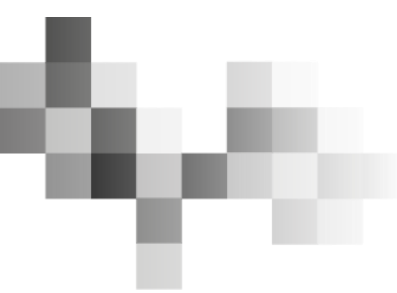


Figure 1. Research design process

Qualitative data analysis is mainly inductive in nature, that leads to themes “grounded in the data, and not given a priori” [7]. The methodology more used to inductively analyze qualitative data is Grounded theory [8, 9]. Qualitative data analysis can also use a deductive logic, by looking data, search for categories and relationships among such categories, developing typologies and assumptions, starting from initial categories and then modifying and integrating results. In practice, qualitative data analysis has an iterative nature; as Ian Dey [10] says: “It is more realistic to imagine qualitative data analysis as a series of spirals as we loop back and forth through various phases within the broader progress of the analysis”.

### A. Data collection

To support data collection it was build a protocol, that include 27 predetermined open-ended questions, divided into 4 main topics: 1) Perceptions on the role women play in the labour market/tourism sector and major constraints; 2) Recruitment and selection of human resources; 3) Relationship with (and between) co-workers/employees and 4) Strategies and actions to promote gender equality. This guide questions was sent to all invited participants, a week before the date of the focus groups; due to the sensitiveness of the topic, this approach sought to enlighten the participants about the type of questions that our study would like to answer, giving them time to reflect on the matter and get prepared for the discussion. The participants were selected according to their representativeness,



job creation capacity, level of connectivity with other agents (within the regional tourism network) and/or their role in the definition and implementation of regional and local policies for the tourism sector.

Research was conducted in Portugal, covering all seven Portuguese NUTS2 (level II) – Norte, Centro, Alentejo, Algarve, Lisboa, Madeira and Açores. The participants were selected according to their representativeness, job creation capacity, level of connectivity with other agents (within the regional tourism network) and/or their role in the definition and implementation of regional and local policies for the tourism sector. A total of 80 participants in all seven workshops, present a balanced distribution: Norte (male 54.5%; female 45.5%), Centro (male 33.3%; female 66.7%), Lisboa (male 63.6%; female 36.4%), Algarve (male 55.6%; female 44.4%), Alentejo (male 66.7%; female 33.3%), Madeira (male 35.7%; female 64.3%) and Açores (male 64.3%; female 35.7%). The focus groups took place within 5 months, between November 2013 and March 2014. Participants are top managers of different entities, belongs to companies (51%) and to support structure tourism economy organizations (49%). As we can observe in Fig. 2 all tourism activities are represented

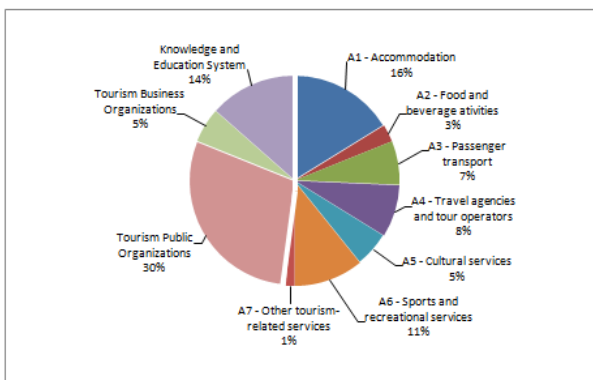


Figura 2. Focus Group Sample

The classification for the tourism characteristic activities/industries adopted in this study was based in international standard for *tourism* statistics as proposed by the United Nations and other international organizations: the Tourism Satellite Account: Methodological Framework [11]. We considered seven main sectors (Accommodation; Food and beverage; Passenger transport; Travel agencies; Cultural services, Sports and recreational services and other tourism-related services). We added more 3 categories related to other stakeholders (support structure tourism economy organizations) such as Tourism Public Organizations, Tourism Business Organizations and Knowledge and Education System.

<sup>1</sup> NUTS: Nomenclature of territorial units for statistics/statistical regions of Europe.

**B. Data coding**

All participants’ opinions were recorded in short-hand and then translated into English. Transcripts totalled 171 pages which constitute the corpus of analysis. Those transcripts were entered into *WebQDA* software, with a common and anonymous format. We have also 26 pages of notes, taken by moderators.

First step was reading transcripts, to have a global view of data. We read in detail, in order to understand the content and its details, exploration of additional participants’ narrative responses.

Project members participated in categories system building in an interactive way, to ensured that the results portrayed a recognizable quality. Creating codes needs a balance between rigour, logic and creativity, in order to build a frugal and operational categories system. Codes are “tags or labels for assigning units of meaning to the descriptive or inferential information compiled during a study” [12].

We take a process coding, starting with the development categories. In general this process was based on Strauss and Corbin’s [9], which involves progressive coding techniques: open coding, axial coding and selective coding (Table 1).

TABLE 1 CODING TECHNIQUES

Type	
Open coding	Refers to the process of generating initial concepts from data. Concepts are identified and their properties and dimensions discovered
Axial coding	Through axial coding, categories and their related subcategories and concepts were refined to form more precise explanations
Selective coding	Selective coding is used to integrate and refine categories to form a larger theoretical scheme

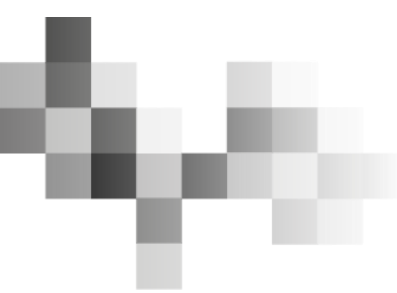
Source: Strauss and Corbin (1998)

We identified and defined categories; each of those categories has a label (short phrase) and description of meaning; to illustrate those meanings and perspectives some examples of text coded are giving. Next we develop a hierarchical category system where links or relationships between categories and subcategories indicate a subordinate order. Over the time, resulting from an interactive process, between project members, a consensual nodes hierarchy evolved; as we can see in Fig. 3, we identified 23 subcategories grouping in 7 categories.

1. Gender and labour	2. Human resources	3. Relationships	4. Gender Equality	5. Growth	6. External factors	7. Entrepreneurship
1.1 Management style 1.2 Vertical 1.3 Career 1.4 Decisions 1.5 Paygap 1.6 Horizontal 1.7 Working conditions 1.8 Work-family	2.1 Criteria 2.2 Job Adverts 2.3 GenManage	3.1 Leaders 3.2 Employees 3.3 LeadEmps 3.4 Conflict	4.1 External 4.2 Measures 4.3 Awareness	5.1 Innovation 5.2 Internationalisation 5.3 Networks	6.1 Cultural factors 6.2 Sector 6.3 Education	7. Entrepreneurship

Figura 3. Categories hierarchy

Data were first subjected to the processes of open and axial coding in order to develop a series of categories, sub-



categories, and main categories. Next, data sets were subjected to selective coding in order to produce the final theoretical integration. Coding is a spiral process, from open coding (where we explore ideas and meaning embedded in data) to identification of connections between codes. We also develop a code structure for coding participants (descriptors) and documents files (classification).

C. Data analysis

Qualitative data analysis is mainly inductive in nature. We used this inductive approach to condensing wide and varied data text, to link with research objectives and to develop a model and improve theory. Thus, the data analysis is guided by both the study objectives (deductive) and multiple readings and interpretations of the raw data (inductive). Analysis of focus group data can be conducted in various ways, depending the goals of the researcher. We can analyzed our data with quantitative or/and descriptive lenses; insights from those all results can be integrated to develop concept models.

Thematic analysis is a method of identifying and reporting patterns. We can use a priori themes based on theory or generate emergent themes [12]. Identifying recurring messages and unifying situations is the base of thematic analysis; first we break narrative data producing categories, next we look for patterns across all data, understand the phenomena and compare it in different settings.

Qualitative data displays are visual presentations of the themes that emerge from data analysis.

IV. RESULTS

A. Categories and subcategories

The most cited categories are: Gender and Labour (40.3%), External factors (22.2%) and Gender Equality (11.7%). When we look only to subcategories we can see that Cultural factors subcategories is the most cited, with 13.9%, follow by Work-family (9.4%), Horizontal (9.3%), Vertical (7.4%), Criteria (6.4%) and Management style (5.0%); those six subcategories totaled 51.3% of all occurrences. The others 19 subcategories sum 48.7% (see Fig.5).

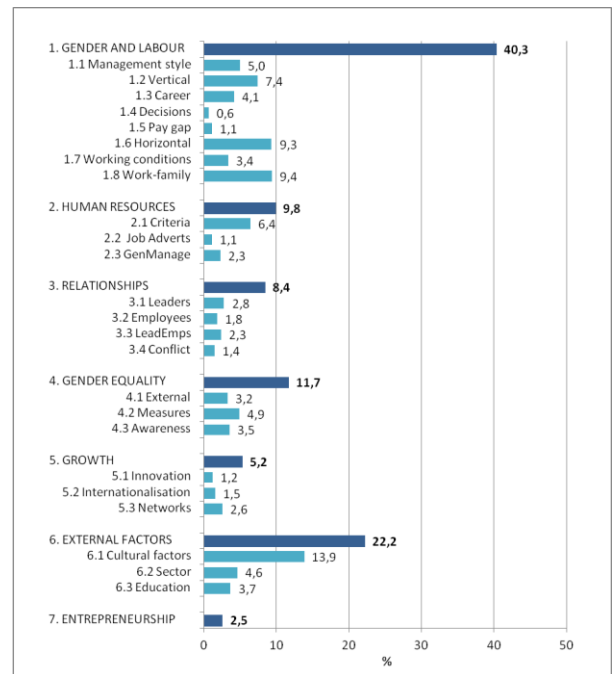


Figura 5. Categories and subcategories (relative frequency)

Now we can observe the most cited categories by male vs female (Fig. 6). We can see that there are some differences. Related to categories, men invoke more External factors (13.1%) than the women (9.0%). Related to subcategories, the greater difference, between men and women, is Work-family, with 6.7% for men and 12.4% for women.

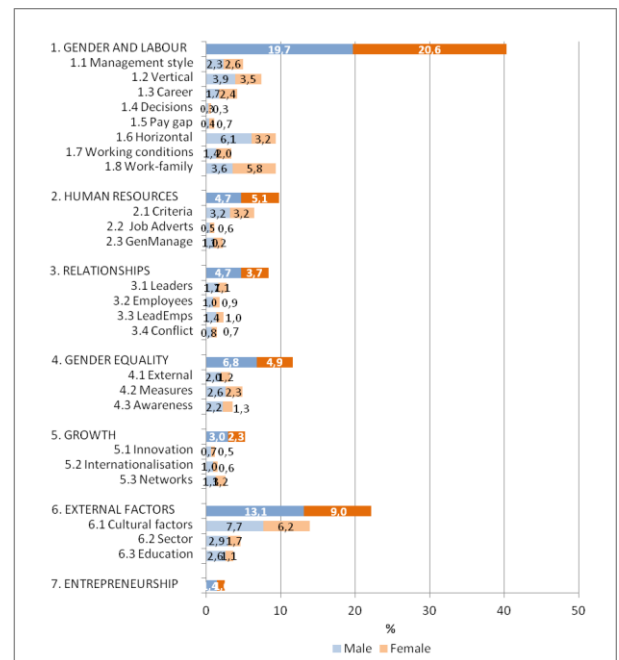
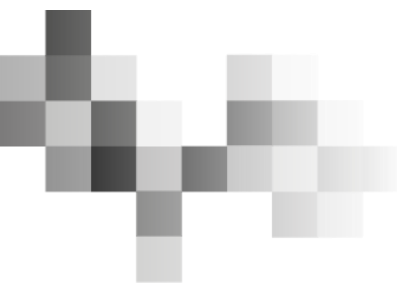


Figura 6. Categories and subcategories- Male/Female (relative frequency)



## V. TOWARD A NEW CONCEPTUAL MODEL

Rethinking about reasons why we study those issues it is possible to invoke some: (1) more unequal societies tend to have less sustainable economic growth [13, 14]; (2) this unbalance situation is generating many social problems like waste of human capital and an indignant society; (3) despite increasing from 4% in 2003 to 9% in 2013, the proportion of women on the boards of directors in Portugal, there is still a huge imbalance between women and men in these positions [15].

By coding and re-reading transcripts with new ways of looking to data, some concepts and connections emerge. For the design of the model structure, we can begin with a core category –factors- as a core focus with two categories: barriers and facilitators. We can consider that these factors are located at three levels: contextual (macro), organizational (meso) and individual (micro). Note, those all factors have transversal impact at all those levels.

This study seeks conceptualising the phenomenon of gender issues as significant predictors of operational performance. Traditional gender research approach focus is on seeking differences between the characteristics of men and women. The demand of the differences is the discourse background that seeks to justify gaps on work position and pay. In the past, women had no academic certificates and degrees which justified the lack of access to top jobs [16]. Currently for the same qualifications, it seems that meritocracy is a criterion rarely used, since people with the same skills are undervalued, particularly when there are preconceptions and myths about some characteristic, such as gender; thus women with the same skills can be undervalued. It seems that decisions, on human capital, are not based on data and reflection, but on invisible or unclear factors. Our premise is that there are invisible barriers and sources of discrimination that affect women's professional lives [17].

Our proposal:

Themes for barriers: 1) We need identify gender barriers to take action; 2) Removing barriers to recruitment, retention and carrier progression; 3) Removing stereotypes issues in decision making process.

Themes for Facilitators: 1) We need identify gender facilitators to take action; 2) Implement criteria based on merit and skills; 3) Implement family friendly policies (mobility, flexibility); 4) Implement results-orientation reward.

## VI. CONCLUSION AND CONTRIBUTIONS

This study has several contributions: theoretical, methodological, organizational performance, research management project and software engineering.

This study opens a new window for conceptualising the phenomenon of gender equality, identifying barriers to overcome and implementing strategies. From macro stand point, we are in accordance with “implementing effective anti-discrimination policies, alongside other policies that address the underlying causes of these wage gaps, is a concrete way to

progress toward greater social justice and fewer inequalities” [18]. Theory play a critical role in creation of codes, but also the process of integration of categories into a theoretical framework can improve the understanding of the phenomenon. Research may mean to search from different points of view not only of the participants but also of the researchers involved.

Our methodological strategy was explorative by nature. The big challenge was the deconstruction of several perceptions of diverse focus groups participants with diverse geographical location and also the integration of different perspectives of the researchers of project team. The support of software was crucial to plan, do, check all the operational team tasks; a clear understanding of the categories can be seen as an output of the interaction of the research team. In a broader sense, this strategy will also facilitate the integration of results of this qualitative study with the quantitative one; this project is based on mixed methods that seeks improve validity of findings. We can talk about practical research innovation at individual and collaborative levels. To researchers, using this software facilitates the organization, retrieval and interpretation of data not only at individual level but also at team work of the research project. Regular team meetings to building a codebook makes methods transparent and gives a common sense of meaning. We need check consistency with coding comparisons but also be open to creativity. Those tasks do appeal to characteristics linked to maturity and open mind of researchers. At organizational level some insights are developed in others project outputs [1, 17]. But the main ideas is related to managers that should design and manage their teams by: (1), taking in account human resource diversity as a rich input; (2) improving talent management with recruitment objective criteria based on merit; (3) overcome the stereotypes and myths about gender issues; looking and apply best practices identified in academic studies to build intelligent organizations.

Using an user-friendly software, as webQDA, give us online work platform with tools that support project management in a collaborative way. A strategic research design is need to effectively software use [19, 20]. In a exploratory project the design it is crucial to give structure to an evolutionary process and the analysis is inductive and iterative. Using software is a learning process; it is useful to begin using the software as a repository of all research materials in order to facilitate teamwork. Clear decisions should be taken to make sense to all researchers team; those decisions can be taken before handling software tools but also during analytical process tasks, such as: developing a coding structure, coding, recoding and querying. Organizing data is basic to ask questions, compare and explore data project.

It is also possible collect some insights for the software engineering development focus on user-centered design social aspects should be taken into account in software process improvement by observing their users, identifying barriers, acceptance and even the appropriation of the use of these tools [21-25]. Our study also bring innovation by testing this new software that allows to work online, collaboratively, with minimal learning time and use it as a support tool to management of research projects.

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