

Contextual Sensitivity in Grounded Theory: The Role of Pilot Studies

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Abstract: Grounded Theory is an established methodological approach for context specific inductive theory building. The grounded nature of the methodology refers to these specific contexts from which emergent propositions are drawn. Thus, any grounded theory study requires not only theoretical sensitivity, but also a good insight on how to design the research in the human activity systems to be studied. The lack of this insight may result in inefficient theoretical sampling or even erroneous purposeful sampling. These problems would not necessarily be critical, as it could be argued that through the elliptical process that characterizes grounded theory, remedial loops would always bring the researcher to the core of the theory. However, these elliptical remedial processes can take very long periods of time and result in catastrophic delays in research projects. As a strategy, this paper discusses, contrasts and compares the use of pilot studies in four different grounded theory projects. Each pilot brought different insights about the context, resulting in changes of focus, guidance to improve data collection instruments and informing theoretical sampling. Additionally, as all four projects were undertaken by researchers with little experience of inductive approaches in general and grounded theory in particular, the pilot studies also served the purpose of training in interviewing, relating to interviewees, memoing, constant comparison and coding. This last outcome of the pilot study was actually not planned initially, but revealed itself to be a crucial success factor in the running of the projects. The paper concludes with a theoretical proposition for the concept of contextual sensitivity and for the inclusion of the pilot study in grounded theory research designs.

Keywords: pilot studies, grounded theory, context, research design

1. Introduction

Qualitative research is context-bound. This means that the researchers have to be sensitive to the context of the research and immerse themselves in the setting and situation. (Holway, 1997:5)

Grounded Theory (Glaser and Strauss, 1967; Glaser, 1992; Strauss and Corbin, 1990) is a research methodology in which theory and models are inductively extracted from the analysis of contextual data. This analysis involves the iterative discovery of concepts and tentative explanations of phenomena, as theory emerges from data. Because there is no preliminary testing or replication of any *a priori* theory, the method stands for its dedicated grasp of substantive areas, which is not static and suffers alterations with the discovery and constant comparison of new data, until sufficiently stable defining properties, explanatory categories, and linking sets of relationships are achieved.

This pre-emptive endeavour (Glaser, 1992) places upon the researcher a pioneering aura, in the sense that the newly discovered theory is applicable locally and solidly grounded in context-specific core values, understandings and boundaries.

Moreover, the method's intrinsic link to practical experience and the recursive procedural loops of theoretical formulation – comprehending a permanent interplay of the human-activity system and individual characteristics – lead to one more essential condition determining any successful Grounded Theory research: it must fit to context without force (Flower, 1989:296).

Therefore, this paper argues that knowledge of the context is a fundamental information resource in improving researchers' understanding of activities, relationships and stakeholders' thinking. Therefore this knowledge of the context becomes a key aspect in collecting data from and interacting with

informants. This was clearly defended by Glaser and Strauss (1967:46) when proposing that insight as well as theoretical sensitivity were the main components in the social scientist armoury. Our proposition is that this insight that must necessarily include understanding of the complex contextual characteristics of the human-activity system being studied should be considered at the beginning of the process of grounded theory rather than later on in the process.

A number of propositions have been made to link the emerging theory with the context, such as the reflective coding matrix, which serves as a relational bridge from the analysis of axial coding to the interpretation of selective coding (Scott and Howell, 2008) or the conditional matrix coding which comes after dimensionalising and axial coding (Schatzman, 1991). These approaches aim at making the researcher's emerging theories denser, more complex and more precise (Charmaz, 2003).

The proposition in this paper is that the insight proposed by Glaser and Strauss (1967:46) should be acquired much earlier in the process of data collection and analysis, that is a precursor to the iterative process that characterises axial coding and theory building. In fact, most of the discussions on Grounded Theory application focus on "beyond the decisions concerning initial collection of data [which] cannot be planned in advance of the emerging theory" (Glaser and Strauss, 1967:47). This poses two major problems. First, the process of identifying "what groups and subgroups does one turn to next in data collection" (Glaser and Strauss, 1967:47) may be very long and depending on the researcher's own theoretical sensitivity may lead away from the convergence of theory or even result in erroneous and biased theoretical propositions. Therefore, sound contextual sensitivity is important from the very early stages of the research process. Second, the choice of these groups should be guided by a sound contextual sensitivity in order to identify the theoretical purpose that leads to the selection of multiple comparison groups. Therefore, this contextual sensitivity is not only fundamental at the onset of the project but also during the whole process of constant comparison and theoretical sampling.

The basic principle sustaining this premise is that, in the study of organisational processes, it is important to ensure the retrievability of discussions, solutions, decisions and actions undertaken in the methodological execution of grounded theory-based research. Such a claim for context-aware scholarship and for the possibility of making locally-informed and locally-significant contributions to theory is embedded in the very propositions of Grounded Theory as a methodology committed to understanding emic perspectives.

If this principle is acknowledged by the novice grounded theorist, then the "very attraction" of the method as described by Dey (1999:24) – the compulsion to "face up to some fairly basic issues about the nature of social research", and to accept that "to do research requires reflection on what we are doing and how we do it" – shall be dealt with pragmatically, because it exists to ensure tangible knowledge and to preserve the essential links between the abstract and the concrete.

To better perform well-grounded knowledge development and to construct tangible theory, this paper discusses and proposes a specific mechanism – i.e. pilot studies – that can be used to acquire early contextual sensitivity through the collection of essential information for effective research design and development of greater awareness of dynamic events, agents and circumstances that can positively modify the research process flow and affect decision-making.

The paper proceeds as follows. In the first section, pilot studies are discussed as tactical instruments to obtain an entry point into the universe of reference and socialisation in which meaning making occurs. The claim here is that only after such contextual sensitivity is acquired, can Grounded Theory methods focus on making empirical events and informants understandings meaningful via the effort of refinement and conceptualisation. This paper provides four examples of how novice researchers implementing Grounded Theory-based inquiry encountered multiple contextual variables in their approach to different phenomena. The experiences described account for pilot studies as procedural scaffolds. The way pilot studies contributed to assessing, modifying and enhancing initial research designs is also discussed. The paper closes with a recommendation for the inclusion of pilot studies in Grounded theory-based research, suggesting that the inductive steps of contextual exploration associated with pilot studying provide enhanced methodological insight into how the human activity environment can be effectively studied.

2. The search for salient meanings or why do grounded theory-based studies need pilot studies?

Pilot studies are largely under-reported in the qualitative research literature (Sampson, 2004; Whiteley and Whiteley, 2005). This underdevelopment of actionable knowledge concerning the practice of pilot studies is surprising to those who, like the authors of this paper, explicitly choose to use them to frame questions, collect background information, refine a research approach or tailor efficient research instruments.

This methodological choice is mainly of pragmatic origin. Pilot studies in qualitative research are paramount in adapting to the situation on the ground, which is unique and varies for every research. This *groundedness* seems to be the very advantage of qualitative research, especially “the empirical leverage it offers on the point of view of those being studied and the sensitivity to context that is especially attractive to researchers in a variety of fields” (Bryman et al., 1996:353).

Moreover, pilot studies hold the potential of minimising problems associated with cold, unreflecting immersion in the field, as Sampson purports: “immersion in the field without any pre-exposure can provide a researcher with a feast of fascinating information and observations and can result in not knowing where to start”. So after the feast comes the reckoning.

To avoid unpleasant surprises, De Vaus (1993:54) warns: “Do not take the risk. Pilot test first”. This position suggests that a considerable advantage of conducting a pilot study is anticipating the debilities of the research project, namely by controlling the adequacy of protocols, methods and instruments.

Sampson (2004:399) also alerts for the fact that it is “often only when data is evaluated that any gaps in a research design begin to show up”, hence a running a pilot can save time invested in unfeasible projects, “particularly in the context of today’s social science, which is frequently strictly time-bounded and pressurized”.

Reflecting on the nature of pilot studies as applied in the discipline of project management, Turner (2005:5) summarizes the learning opportunities the researcher can extract from assessing the feasibility of any study, and presents them as risk mitigation strategies: “learning how to reduce uncertainty in product or process of a project; learning what will work or not in the design of a new product; learning by testing the efficacy of a research instrument”. If we replace “product” by “research project”, it is more understandable how pilot studies increase the likelihood of success in the main study.

Similarly, van Teijlingen and Hundley (2001) offer a list of reasons for conducting pilot studies, amongst which are: “developing and testing adequacy of research instruments; assessing the feasibility of a full-scale study; designing a research protocol; (...) collecting preliminary data; assessing the proposed data analysis techniques to uncover potential problems; developing a research question and a research plan; training a researcher in as many elements of the research process as possible”.

To these advantages we would add the possibility of establishing whether or not the sampling frame is theoretically relevant or even feasible. Also, substantive data extractable from pilot findings can be used to design following stages of data collection, thus reinforcing the researcher’s audit trail and enhancing the rigour of qualitative research.

Such an achievement confirms Silverman’s (2000:35) assertion that in qualitative research, “what happens in the field as you attempt to gather data itself is a source of data rather than just a technical problem in need of a solution”.

For this matter, pilot studies are an invaluable source of contextual data, which have the ability of moving the researcher into the phenomenon’s ecology and into the core of respondents’ accounts, thus partitioning the broad emergent theory into workable, theoretically-relevant conceptual units.

Whiteley and Whiteley (2005:10) seem to corroborate this idea by claiming that through pilot studies, insight can be gained about how to choose among different approaches: “the notion of a

familiarization study entails visualization of the proposed research context in such a way that recognition is made that very often, the researcher's knowledge of the context, that is the *inside* environment, can be improved".

The ethnographic method clearly asserts the primacy of context in the exploration and analysis of frameworks of interaction, by describing how elements of the context "help fix the interpretations that each protagonist gives" (Weber, 2001:485) to events. This occurs through the immersion of the researcher in the heart of a culture and requires them to "enter into the matrix of meanings of the researched, to participate in their system of organized activities" (Wax, 1980:272-273).

Furthermore, contributions coming from the discipline of ubiquitous computing (Coutaz et al., 2005) help to understand the nature of context, by regarding it as an interactional process, in which mutable environments are composed of "reconfigurable, migratory and multiscale" conditions affecting roles, relations and entities. For this reason, context must not be regarded as a stable set of variables.

On the other hand, Grounded Theory's *modus operandi*, focuses on the incremental interpenetration of data and analysis. This approach requires of the researcher to adopt an openness necessary to "allow conditions of the field or interests of the informants to guide foci" of the investigation (Snow et al. 2003:187). The pursuit of an exploratory inductive move towards the discovery of middle range theories and explanatory propositions through coding and emergent constant comparative analysis of empirical data is Grounded Theory's process.

For this reason, when endeavouring an understanding of phenomena to compare issues and interrelationships, Grounded Theory provides a sufficiently "open approach that invites data material to speak and subjective manifestations to come forth (...) - it may only generate local empirical theories, but results will be sufficiently grounded directly in the observed data" (Martins and Nunes, 2009), and provide an analytical framework to understand social interaction at particular phenomena level.

However, the drive in the early iterative open coding process that characterises grounded theory is to produce an emergent explanatory framework that explicates the phenomenon being studied, rather than the context in which it is rooted. The understanding of the context is facilitated during (or after axial coding) through the use conditional relationship guides and reflective coding matrixes (Scott and Howell, 2008; Charmaz, 2003, Schatzman, 1991). This approach may result in very long processes and iterative cycles of data collection and analysis as the categories that characterise both the phenomenon being studied and the human-activity context where it occurs are expected to emerge from the same data collection strategy and focus. This process may be particularly difficult and fraught with frustrations and pitfalls for novice Grounded Theory researchers. Thus, this paper argues that a pilot-study stage should be considered in the research design of the Grounded Theory studies, aiming specifically at eliciting information and categories that characterise the context in support of further theoretical construct development. This pilot study should precede the main typical grounded theory process that focuses primarily on the phenomenon to be addressed. That is, open-coding and axial coding in the pilot should result in categories that explicate the context. On the other-hand, open coding in the typical (main) procedure should result in categories that support the understanding and development of integrated theoretical explanations of the phenomenon being studied.

Understanding context is consequently an attempt to map and recognise those variables through providing a structured view of the world in which systems operate. The pilot study plays a crucial role in achieving such structured view, as translated by Fig. 1.

An initial stage of *recognition* is essential to enhance the capacity of ascribing significance to activities, facts, artefacts and decisions as interpreted by the researcher. To enhance the awareness developed in the previous stage, the researcher must strive to make contextual knowledge explicit, therefore *capturing and representing* it, rendering descriptive categories and explanatory concepts accessible throughout the research process. By completion of this phase, the researcher must have developed and elaborated a primary theoretical framework with which to focus the research problem and structure the research design. It is then time to *tailor sharper exploratory tools*, which will aid the development of taxonomies and concepts. However, and because such taxonomies and concepts do not emerge *in vacuo* and separate from the context, the researcher faces again the beginning of the

context-awareness cycle, starting with recognition, essential to the discovery of analytic understandings.

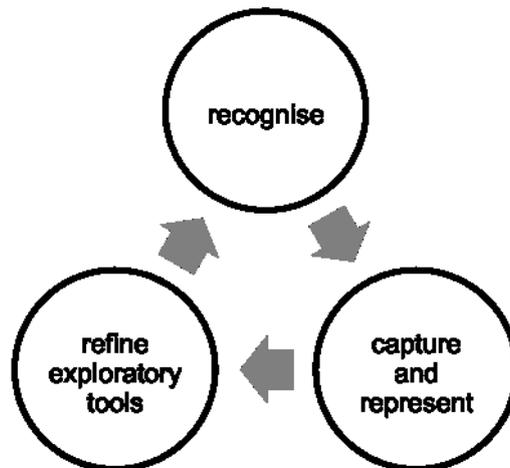


Figure 1: Pilot studies' context-awareness cycle

3. Experiences in piloting grounded theory-based research

In order to illustrate the propositions made above, this section discusses the role of 4 pilot studies as a tool to understand research contexts based on the experiences of four novice doctoral researchers entering the field of inductive qualitative inquiry. It takes both a reflexive and a pragmatic approach towards assessing how pilot studies contributed to informed grounded theory research design decisions. In essence, the discussion is concerned with revealing how each researcher attempted to find a pilot research design that suits their particular research question and research context, offering the voice of the ordinary novice researcher. The presentation of cases follows a common structure, namely initial research objectives; reasons to conduct a pilot study; data collection and analysis; contribution of the pilot study to greater contextual sensitivity; and finally how the pilot study assisted in the design of later research stages.

3.1 The role of academic librarians in HE institutional IS strategic planning: The case of Syrian Governmental universities

3.1.1 Initial research objectives

This research investigates academic librarian involvement in Information Systems Strategic Planning (ISSP) in Syrian Universities and is aimed at generating theoretical propositions about the role of academic librarians in University-wide ISSP. Academic librarians' traditional roles are increasingly being questioned and expanded, with impact on librarians' self-perceptions, institutional mission, and professional relations with students, staff and planning stakeholders.

3.1.2 Reasons to conduct a pilot study

The pilot study was conducted to explore these emerging organisational identities across the Syrian Higher Education ecology. Since the number of HE public organisations in Syria is relatively small, the pilot aimed at identifying groups of informants, if the groups and subgroups to be studied exist homogeneously across the national scenario and if there were sufficient numbers of informants to enable meaningful data collection and analysis.

3.1.3 Data collection and analysis

Informants from all governmental Syrian Universities (Damascus University, Aleppo University, Tishrin University and Al Baath University) were identified using a snowballing technique, initiated by an initial holistic meta-inquiry exercise conducted with Higher Education Ministerial Department. This department implements national Syrian policies, funds, coordinates and interfaces with all public HE institutions. The key informants for the pilot study in HE organisations were high level representatives of the Information Systems Technology Department, the Strategic Planning Department and the Academic Libraries Department. Data was collected through open interviews at ministerial level and

semi-structured interviews at the HE levels. Data analysis focuses essentially on open coding and embryonic axial coding.

3.1.4 Contribution of the pilot study to greater contextual sensitivity

At top-level management there was the awareness that academic librarians' participation in ISSP processes can potentially contribute to minimise issues related to universities' neglect of the IS/IT interrelationship. Yet the pilot proved to be a vital tool in eliciting planning and management processes that remain largely unspoken and undocumented in the Syrian context as well as in the definition of groups and subgroups to be interviewed.

This experience was particularly insightful in the sense that it meant the operationalisation of what Shapiro et al (2007:130) name "polycontextual sensitive research", i.e., a temporal-spatial, environmental and cultural contextualisation of phenomena that "strengthens scholars' understanding of an organization under study at various levels of analysis (individual, group, organizational and national level)". Pilot study's results revealed the *ad hoc* contribution of academic librarians in the delivery of university-wide information services, despite their subject expertise and experience in information management. The pilot also enabled the identification of a number of both formal and informal collaborations and co-operations between the different stakeholders in ISSP process.

3.1.5 How the pilot study assisted in the design of later research stages

In this case, the pilot also enabled the identification of an initial set of informants and the identification of initial categories used in the design of the interview scripts for the next stage. The pilot also confirmed that the study was not only feasible but was seen to highly interesting and useful by both the Syrian HE authorities and the professional stakeholders involved. Finally, the initial open coding led to the focusing of the research objectives into questioning the processes sustaining the unstructured and non-formalised contribution of academic librarians in ISSP, since they *de facto* play a consultative role of technical and ethical nature.

3.2 Identifying knowledge sharing barriers in the inter-professional collaboration of traditional and western medicine healthcare professionals in China

3.2.1 Initial research objectives

This research project aimed at investigating barriers for knowledge sharing (KS) between Western Medicine (WM) and Traditional Chinese Medicine (TCM) professionals in their collaborative healthcare practices taking place in Chinese healthcare organisations. The research project adopted the Straussian Grounded Theory approach as the overarching methodology to guide, manage, and analyse data collected in a single case-study design. A public hospital in Central China was selected as the case-study site.

3.2.2 Reasons to conduct a pilot study

As a deliberately designed component of the research design for the project, a pilot study was conducted prior to the main stage of data gathering and analysis. The purpose for the pilot study was to obtain a better understanding of the current situation in Chinese health care institutions with regards to the cohabitation, interaction and sharing of knowledge between TCM and WM practitioners. Specifically, to better understand the nature of the institutional relationships between the two professional groups and the organisational processes that support these relationships.

3.2.3 Data collection and analysis

Seven healthcare professionals and workers were purposively approached and interviewed. These interviewees were two WM doctors (a neurosurgeon, and an orthopaedics doctor), a neurosurgical nurse, two TCM doctors, an ICT manager, and the chief hospital administrator who is also a cardiac surgeon. Data was analysed using open coding, axial coding and constant comparison.

The pilot study also provided unique opportunities to improve the researcher's skills in conducting semi-structured interviews: in terms of approaching potential participants, selecting the interview environment, engaging in deep conversation, and in seizing opportunities for probing and following-up emerging topics. Processes of approaching and securing access to potential informants were initially

rather frustrating due to very heavy workloads of the informants, cultural aversion to disclose information in interviews and a perceived difference of status between researchers and surgeons. The pilot enabled the consideration of strategies to minimise these problems and ultimately, determined the success of data collection during the main study.

The pilot study not only revealed insights into hospital procedures and communication channels, but also provided significant implications for narrowing of the research focus, sampling, design of the initial interview scripts and generally the design of remainder research stages. Essentially, pilot findings suggested that different departments in the hospital exhibit very different patterns of KS behaviour between the two medical communities. Furthermore, very different levels of integration of complementary treatments take place in different departments. This resulted in the decision to choose one specific department, namely the Department of Neurosurgery. This department has an apparent history of using WM and TCM compound treatments for rehabilitating patients after craniotomies.

3.2.4 Contribution of the pilot study to greater contextual sensitivity

The pilot clearly identified that KS between TCM and WM practitioners is very problematic in Chinese hospitals. Contrary to what happens in Western hospitals, these two medical communities were placed in the same physical institutions and asked to work complementarily by governmental political decision. However, the pilot indicated that the two very distinct groups did not seem to interact harmoniously. This seems to follow a national trend that was later confirmed in the literature review, since the two groups of professionals come from almost entirely different healthcare philosophies.

3.2.5 How the pilot study assisted in the design of later research stages

The pilot has validated the research question and confirmed the research gap that originated the study. The pilot also confirmed the selected case-study as a good platform for conducting the investigation and the researchers were able to secure guaranteed interview access to potential participants. Furthermore, the pilot also enabled the creation of an initial set of categories that guided the next steps of the data collection.

3.3 Adoption of information systems in omani organisations – the case of customer relationship management in the banking sector

3.3.1 Initial research objectives

The research focus of this inquiry was to investigate perceptions on the threats facing Customer Relationship Management (CRM) use in the Omani banking sector. Initially, the strategy was to conduct this research using a Grounded Theory approach that would study the current strategies of Omani banks in terms of CRM and identify risks associated with its adoption.

3.3.2 Reasons to conduct a pilot study

The objectives of the pilot were to better understand the Omani bank sector and its business environment, namely in what concerned to CRM strategies and systems adopted. The pilot study was devised and conducted in one of the commercial banks in Muscat that agreed to grant access and support to the investigation.

3.3.3 Data collection and analysis

This pilot study revealed an unexpected finding: there was no systematic use of CRM processes, practices and IT systems in the bank. These findings clearly threatened the viability and focus of the entire research project. Therefore, the pilot study was extended to include interviews with top management of the remaining five national commercial banks in Oman. Four of these agreed to participate and eight additional interviews took place. The findings of these interviews confirmed that none of the banks was actually using CRM on a systematic and strategic manner, but all five banks had a firm intention to do so in the near future.

3.3.4 Contribution of the pilot study to greater contextual sensitivity

The pilot study was therefore crucial in understanding the Omani bank sector and business environment and enabled early reaction to undesirable or adverse contextual characteristics.

Additionally, like in all other cases it allowed corrections to research design and supported the designing of subsequent data collection instruments.

3.3.5 How the pilot study assisted in the design of later research stages

Confronted with the absence of systematic CRM processes in the national scenario in Oman, the entire project had to be revised and refocused. Research questions were redrawn around aspects of customer need for CRM and user satisfaction with current service provision. Ultimately, this resulted in a research design based on a mixed-method approach rather than a pure grounded theory approach.]

The final design consisted of a triangulation of literature review, in-depth qualitative case study looking at the internal perceptions of CRM in the bank sector and a quantitative customer survey to gauge customer satisfaction with current services and needs for CRM. The qualitative component of this Qual-quant approach, as proposed by Creswell (2003), was implemented by employing some of the grounded theory techniques such as coding, constant comparison, theoretical sampling, theoretical saturation and memoing, but did not follow a full Grounded Theory approach.

3.4 Dynamics of attitudinal alignment, a grounded theory of Portuguese academics' eLearning perceptions

3.4.1 Initial research objectives

The purpose of this study is to present a grounded theory of Portuguese academics' perceptions regarding eLearning appropriation through an inquiry of perceived individual and institutional motivators, enablers and barriers.

3.4.2 Reasons to conduct a pilot study

In this case, the pilot aimed at studying and assessing the HE Portuguese context in terms of its perceptions of use and appropriation of eLearning. This was deemed necessary in order to help build a map of associations that would integrate critical enablers that foster a clear and meaningful purpose in using eLearning.

3.4.3 Data collection and analysis

The subject matter itself defined the initial boundaries of a relevant informant sample comprising eLearning experts – seven lecturers, three eLearning administrators and three eLearning strategists, including a former Minister of Science and Higher Education. Moreover, informants were affiliated with Portuguese Higher Education Institutions at different stages of their eLearning strategy implementation: two universities are recognized precursors of eLearning institutional embedding at national level; one university is acknowledged for realizing technology-based spinoffs with the community; and three other universities were chosen for the comparatively less visible dimension of their eLearning embedding planning. Data was collected using semi-structured interviews and analysed using open coding, axial coding, constant comparison and memoing.

Results from the pilot study produced formalised categories that the researcher linked and related reflectively. Emergent theoretical constructs extracted from open coding revealed that academics' appropriation is best achieved when change introduced by eLearning is not vertically imposed by top management structures, but rather when it develops spontaneously through small scale projects, influence of champions, or teachers' enhanced individual capacity. Furthermore, it became clear that career and reward systems for academics engaged in eLearning suffer from an effort-reward imbalance. The current compensation system in Portuguese HE institutions, does not seem to be designed to foster the scholarship of e-teaching. Finally, trust emerged as an important aspect of eLearning appropriation and seems to be a factor in academics decision making. Trust seems to increase the levels of available information on and transparency of eLearning systems, and by acting as an organising agent, particularly helpful in the management of uncertainty regarding the appropriation of eLearning.

3.4.4 Contribution of the pilot study to greater contextual sensitivity

The purposive sampling strategy adopted in informant selection during the pilot study stage contributed to the discovery of Higher Education teaching communities that manifested high levels of participation in online educational delivery. In terms of theory-building, trust emerged as core aggregating category. The study's research questions were reformulated in order to explore trust as a catalyst for the use of eLearning by Portuguese academics.

3.4.5 How the pilot study assisted in the design of later research stages

In response to the aforementioned findings discovered during the pilot study stage, the main doctoral research will endeavour to further the inquiry into the trajectories of trust as the main leverage for academics' appropriation of eLearning. Both micro and macro levels stemming from the pilot study's findings seem to provide solid grounds for further theoretical development and empirical investigation. Academics' trust in eLearning systems will be considered in the context of Portuguese Universities as aggregate social systems.

Theoretical sampling efforts will contribute to the identification and recruitment of a theoretically relevant social arena of action, composed of academics affiliated with Faculties where eLearning appropriation issues pertaining to trust and attitudinal alignment manifest themselves in considerable depth. Moreover, studying the community of academics will potentially allow the researcher to examine a specific intra-organisational dynamics (Strauss et al., 1985:158), reinforced by a common professional and occupational world.

4. Discussion

The previous section attempted at demonstrating, through the provision of examples of actual research practice, how contextual knowledge lies in the experience of each organisation, in each artefact, and moreover in the activities, events and conditions that become apparent when the researcher inquires processes pertaining to specific contexts.

Contextual information categories related to each of the research projects explained above address mainly issues of:

- Immediate context - encapsulating essential elements to the understanding and conceptualisation of organisational processes (the actual unfolding development of processes and activities, and applied governing elements that constitute these processes);
- Internal context - covering structural features, formalised methods, repertoires of action, communication processes and the relationships of main internal stakeholders;
- Environmental context – including factors that can be attributed to the macro-social setting in which an organisation operates.

Pilot studies can therefore contribute to render such contextual representations suitable to inductive reasoning, as the four-tiered model represented in Fig. 2 illustrates: (1) through the establishment of causes, conditions and relationships between empirical data (which entails pursuing loops that re-centre the researcher in the core aspects of the phenomenon under investigation); (2) through inter-contextual comparison as to infer theoretically relevant information; (3) through the activation of significant functions, roles, actors and operational goals; (4) through the collection and structuring of relevant contextual aspects, facets and attributes.

Carlson and McCaslin (2003:553) also argue in favour of considering contextual constructs in the development of Grounded Theory-based projects. In the absence of what they define as a meta-inquiry, "grounded theory can erroneously create a grand tour question and subsequent main and probing questions from an incomplete perspective".

The introduction of pilot studies in the design of Grounded Theory research gives investigators important learning opportunities prior to formal research undertakings and helps them recognise the collection of verbal and symbolic assertions that sustain theory development by identifying the conditions under which the variables of a phenomenon are related (Campbell, 1990:65).

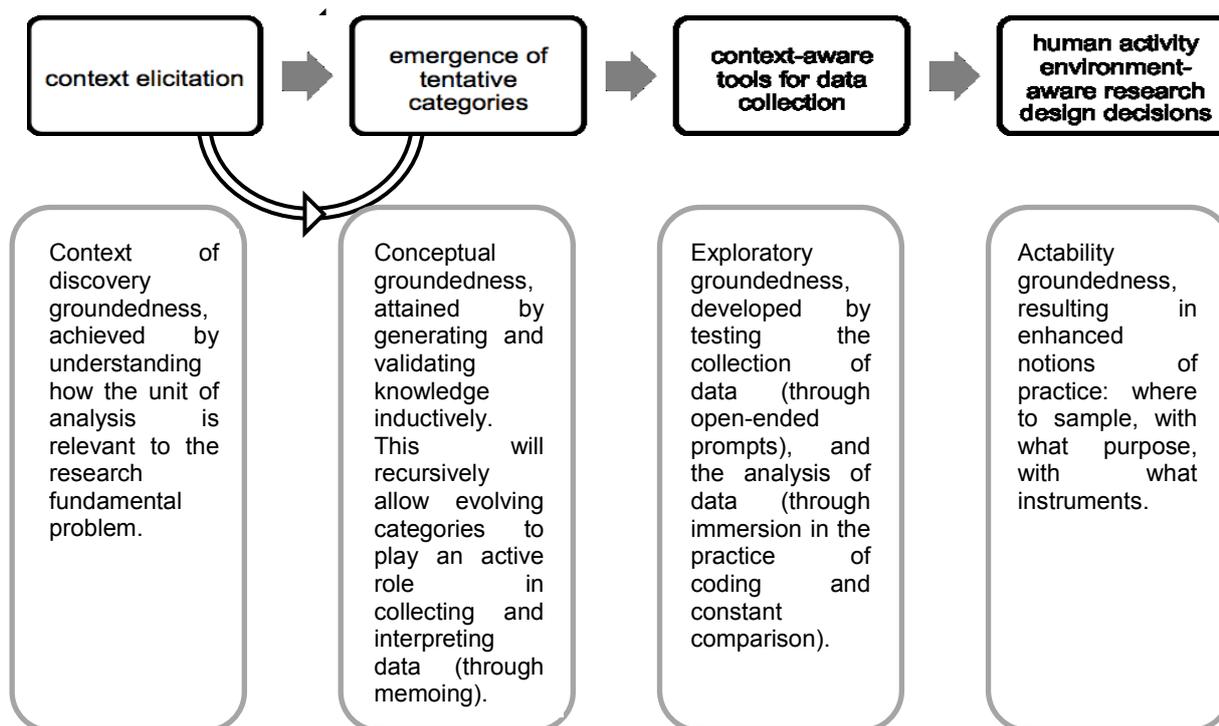


Figure 2: Contextual knowledge elicitation with pilot studies for inductive approaches

It is certainly not by that chance that the context sensitivity of empirical research is “receiving greater attention among scholars studying organisational and management practices”, as Whetten (2008:29) observes. But organisational behaviour scholars such as Rousseau and Fried (2001) and Johns (2001) have voiced earlier pleas for greater sensitivity to context as a means of adding explanatory value to research. Johns (2001:34), in particular, calls for an appreciation of context as a “helpful counterpoint to the intrapsychic perceptions, cognitions, attributions and dispositions that comprise the core of person-centred theories”. Rousseau and Fried (2001:3), on the other hand, critique the forces working against contextual awareness by misrepresenting the complexity of underlying phenomena, namely the tendency to publish research that focus on de-contextualised individuals or groups as an example of parsimonious research findings.

Strauss and Corbin (1990:127) are not alien to the centrality of context and are advocates of an enhanced understanding of the phenomenological structure sustaining any process or, in their words, of “the circumstances in which problems, issues, happenings or events pertaining to a phenomenon are situated or arise”. Theoretical relevance seems to be enhanced when the researcher and the research design clearly state the interconnectedness of problem, purpose, informants and context.

Pilot studies can contribute to operationalise context as a conceptual construct, immerse in the substance of analyses. They provide the researcher with the necessary reflexivity and awareness of the human ecology that determine what Strauss and Corbin (1990:42) define as “the attribute of having insight, the ability to give meaning to data, the capacity to understand, and the capability to separate the pertinent from that which isn’t”.

Being aware of the human ecology and having the insight to inscribe events and processes in perspective, the grounded theory researcher should additionally be cogent of issues related to theory credibility. Here too, enhanced contextual sensitivity can contribute in a pragmatic way, and from a very early stage of the process, to credible research findings. The further demonstration of this value, again providing examples of pilot studies’ role is certainly a future research endeavour worth pursuing.

Glaser and Strauss (1967:237) have documented how to establish the credibility of a Grounded Theory project and indicate the inter-related properties of the applicable substantive grounded theory:

(i) it must closely fit the substantive area in which it will be used (fitness); (ii) it must be readily understandable by the stakeholders concerned with the substantive area (understanding); (iii) it must be sufficiently general and flexible to make diverse changing situations understandable (generality); (iv) it must possess controllable concepts of sufficient generality (control).

The properties of fitness, understanding and control seem to be directly connected to the enhanced understanding of the research context brought along by the incorporation of pilot studies in the design of a grounded theory project:

- Fit, in the sense of fidelity to the everyday realities of any substantive area and to the principle of theoretical induction from diverse data. Without knowledge of what is actually going on, emergent theories are divorced from the layers of reality and do not quite apply to dealing with them;
- Understanding, in the sense that those engaged in the substantive area are able to grasp the emergent theory in terms of their own experiences, based on the researcher's capacity to create relatable, explanatory constructs.
- Control, in the sense that the resulting theory should guide and equip its user with enough theoretical amplitude that is directly applicable to ongoing situational realities. (Glaser and Strauss, 1967)

Without the identification, conceptual understanding and rendering of context through coding and categorisation in a pilot study stage, the unravelling theory would be so underdeveloped as to lack a vital component and thus could be considered to be theoretically unrobust.

This vital component is, in summary, the capacity of any grounded theory's research findings to "explain the social or psychosocial organization of the people", namely the findings' explicit contribution to "identify and conceptualise the basic processes that these people use to solve their problem" (Glaser, 2001:59).

5. Conclusion

While recognizing "the art of grounded theory analysis" (Strauss & Corbin, 1998), many authors such as Scott and Howell (2008) suggest that a "more specific method for understanding the relationships among the categories seems necessary prior to construction of a Reflective Coding Matrix". In this line of thought and using the experience of the four research projects discussed above, this paper makes to fundamental propositions, namely the concept of contextual sensitivity and the pilot study as vehicle for its acquisition in the early stages of the project.

Contextual sensitivity is proposed and defined in this paper as the structuring of the inductive analytical process through extending the range of theoretically sensitizing concepts that must be addressed and understood in order to use the context in which participants are situated, within a human activity system, in the creation of grounded theory. The contextual sensitive researcher has the ability to develop themes from research data through segmenting and reassembling data pertaining to context-dependent realities – the unfolding development of organisational processes and activities; the repertoires of action and stakeholders' interactions; the macro-social setting - thus achieving increased depth of analysis. Because of its preoccupation with the identification of contextual features that sustain further stages of theory development, contextual sensitivity works as a initiator to theoretical sensitivity, which involves the researchers having "attributes of insight, the ability to give meaning to the data, and the capacity to (...) separate what is pertinent from that which isn't" (Strauss and Corbin, 1998:41).

Pilot studies using open coding specifically directed at generating contextual sensitivity, may generate focused, partitioned representations of context-dependent realities, opening up locally-circumscribed opportunities of inquiry. Conducting a pilot study is an opportunity to equip researchers with a more articulated view on the internal structure of wider phenomena, preventing them from facing a large monolithic cognitive space with unmanageable possibilities for access and concomitant difficulties in reasoning, synthesis and interpretation.

As demonstrated by the accounts shared above, the use of pilot studies as a context information management tool, implemented in the process of consolidating the research design, acted as *in situ* training for developing and testing the adequacy of data collection and analysis instruments, and as a relevance filter. This latter function proved moreover to help novice researchers defining which

knowledge stocks could be taken into consideration, hence providing a sense of direction in the execution of further research tasks.

Given their contribution to research design risk assessment and to the implementation of risk-reduced strategies in main research projects, this paper recommends the inclusion of pilot studies in Grounded Theory-based research projects.

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