Induction and Deduction as Entry Points into Qualitative Data Analysis: How Can Early Analytical Choices Affect The Theorizing Process?

Completed Research Paper

Liliana Lopez
Western University and Universidad Externado de Colombia
llopezjimenez.phd@ivey.ca

ABSTRACT

Our conventional understanding of the relationship between research paradigms, methods and data analysis in qualitative research suggests that we first hold a worldview (paradigm), which guides our selection of method, which in turn dictates whether we start analyzing data deductively or inductively. However, it is also possible to understand this relationship as flowing in the opposite direction, and thus infer the paradigmatic beliefs of a researcher based on the data analyses he or she produces. In this paper, I compare two analyses I did to the same set of interview data – one started inductively, the other one deductively –, and from there I draw conclusions about the ontological and epistemological beliefs underpinning the two analyses, as well as my own. Similar exercises can help anyone faced with the ill-structured problem of making research design choices, and implicitly urged to fit into a single research paradigm.

Keywords

Induction and deduction, qualitative data analysis, research paradigms.

INTRODUCTION

Deduction and induction can be conceived as distinct entry points to data analysis, often but not always informed by different research paradigms. Their use as entry points to analysis may carry implications for the research process and the research findings.

The purpose of this paper is to explore how opting for a deductive or an inductive start can affect the analysis of qualitative data. More precisely, I seek to understand how and to what extent my own use of a deductive or an inductive approach to begin the formal analysis of qualitative data sources has led to variation in the thematic categories used to organize data (question 1), and how such variation can be interpreted ontologically and epistemologically (question 2). To address these questions, I will draw on two separate analyses performed to the same set of interview data which used these two different starting points.

At first glance, answering the second question might be either unnecessary or even foolish for at least two reasons. First, one may argue that, in addition to the research question at hand, ontology and epistemology will guide the choice of methods, and the methods selected will in turn prompt the researcher towards a deductive or an inductive start. Thus, deduction and induction as entry points do not define paradigmatic inclinations, but the other way around. Second, the terminology of ‘deduction and induction’ – in the sense of going from general law-like statements to instances or vice versa –, may already be indicative of a realist and objectivist worldview (i.e., positivist or post-positivist stance) and hence just speaking in those terms reveals in advance the answer to the question.

Upon closer examination, though, there are two counterarguments that justify the proposed exploration. First, to the extent that epistemologies and ontologies are beliefs (Guba and Lincoln, 1994; Orlikowski and Baroudi, 1991), they may change over time and they might not always be easy to discern. Therefore, understanding the effects of deduction and induction as entry points to data analysis in my own research can help me elucidate where I stand on those beliefs. My guess is that comparable exercises in self-reflectivity can help others, similarly faced with the ill-structured problem of making research design choices, and implicitly urged to fit into one (and ideally just one) social science paradigm. Second, even though ‘deduction and induction’, as a word set, appear to be rooted in positivist and post-positivist perspectives, the term induction is also present in the language of some social constructivists to signify their methodological choice of moving from data to theory. Hence, referring to an inductive entry point is not indicative per se of any ontological perspective. As such, I have not found any published work attempting to do the comparison that I am proposing, in the IS field or elsewhere.
The paper is structured as follows. Section 2 provides a conceptual background to understand deduction and induction and advances an ‘inverted’ way to think about how they may be related to methods and paradigms. Section 3 introduces the two analyses and succinctly presents the categories therein. Section 4 compares and contrasts the two sets of categories. Finally, section 5 relates this comparison to the ontological and epistemological assumptions behind the analyses that produced them, and discusses some implications.

CONCEPTUAL BACKGROUND ON DEDUCTIVE AND INDUCTIVE LOGICS

Deduction and Induction: Some definitions

There are at least three ways in which one can think conceptually about deduction and induction. At a basic level, deduction and induction are ways of thinking. In deduction, thinking flows from the general to the specific, whereas in induction thinking flows from the specific to the general. Second, from the perspective of formal logic and traditional (i.e., positivist) philosophy of science, deduction is an inferential form that goes from general law-like statements to specific facts, and induction does the opposite (Chalmers, 1999; Hawthorne, 2011). These two terms carry with them the assumptions of law-like statements and facts, which have been particularly controversial in the social sciences (Guba and Lincoln, 1994; Habermas, 1971; Orlikowski and Baroudi, 1991). Third, from a data analysis perspective, deduction and induction can also be seen as ways of moving between data and theory; deduction moves from theory to data, and induction moves from data to theory. This paper is based on the latter perspective.

Deduction and Induction: Their entanglement

Two misconceptions about deduction and induction as applied to data analysis are that they can exist independently of each other, and consequently, that induction can exist in pure form. Pragmatist philosophy has argued that deductive and inductive reasoning are interrelated parts of any inferential process (Habermas, 1971) and this mutual dependency has been explicitly incorporated into some methodologies, such as grounded theory (Corbin and Strauss, 1990).

The myth of pure induction has been dispelled for a long time. Many experienced researchers and methodologists argue that the analysis of qualitative data never happens in a conceptual vacuum, and that assuming otherwise is, at best, naïve (Braun and Clarke, 2006; Strauss and Corbin, 1993; Urquhart, Lehmann, and Myers, 2010; Vaughan, 1992). Therefore, for the praxis of qualitative data analysis it might be more appropriate to think of deduction and induction as two ‘ideal types’ of thinking forms by which pre-existing conceptions are incorporated into data analysis. The ‘strong form’ is deduction, whereby the study starts with a previously selected theoretical framework that the researcher uses to predetermine a set of categories to be used in analysis. The ‘weak form’ is induction, whereby the theorizing process starts from the data and moves to the creation of new theories or the refinement of existing ones.

Deduction and Induction: Their convoluted relation to paradigms and methods

Discussions on research paradigms and methods often convey, perhaps unwittingly, an imagery of researchers who are first aware of their paradigmatic beliefs, then make choices on methods based on such beliefs, and then start their data analysis deductively or inductively as indicated by their method of choice. At the least, this is the ideal chain we should strive to follow as reflexive researchers.

However, some conceptual discussions and accounts of research practice seem to suggest a less straightforward relationship between paradigmatic beliefs and methods-in-use, and between methods-in-use and entry points in data analysis. For example, Burrell and Morgan (1979) describe as methodological oscillation the situation where methodological design drifts away from espoused ontological beliefs, and Matavire and Brown (2013) conducted a review of the use of grounded theory in empirical IS studies and found that researchers do not always make clear which paradigm informs their study, studies using the method seem to be operating under either a positivist / post-positivist or a constructivist stance, and sometimes researchers use only certain techniques from the grounded theory ‘toolbox’ and start their analysis deductively, which runs counter the method’s canons.

This might imply that the highly structured imagery of the relationship between paradigms, method choices and analytical entry points should not be taken at face value. In practice, certain methods have always had, or have developed over time, one-to-many relationships to paradigms. Likewise, methods-in-use might overwrite method-in-theory, which makes the relationship between method and analytical choices uncertain. Finally, the whole process relating paradigms to method

---

1 I thank an anonymous reviewer for bringing this comment to my attention.
choices to data analysis might be iterative rather than linear, with individual researchers jumping on the research cycle at different points.

Under this view, it becomes easier to notice that it is possible to invert the way in which we conventionally think about the path going from paradigm to analysis, and see it as a path going from actual analysis to paradigm. This is what I do here: Rather than assuming that I started my analysis deductively or inductively because of my paradigmatic stance and my method choices, I try to understand how my own analyses yield different results depending on whether I start them deductively or inductively, and I aim to reflect on what that might tell me about my paradigmatic beliefs.

**TWO ANALYSES OF A SET OF INTERVIEW DATA**

To address the research questions, I will draw on two separate analyses that I performed based on the same set of interview data. Both analyses used coding as a tool for interpreting the data and for maintaining a close connection between the world of the data and the world of interpretation. Both analyses resulted in a set of data extracts tied by codes to a preliminary set of analytical categories and subcategories. However, in the first of these analyses the categories were arrived at inductively, whereas in the second one the categories were defined deductively.

The interview data were collected in the context of a research project aiming to explore information technology (IT) acquisition decisions by small firms. The project addresses, as general guiding questions, how small firm decision makers come to consider and go about acquiring IT for supporting the business, and what elements they factor into their decision of acquiring IT. The interview material comprises of 29 interviews with small business owners, which averaged 65 minutes and ranged from 37 minutes to 170 minutes. Data collection was informed by the critical incident technique (Flanagan, 1954). This technique was selected as a means of ensuring that collected data were anchored in actual instances of IT acquisition. In that sense, CIT helped us enhance contextual understanding while narrowing down the inquiry to specific events. Appendix A shows relevant excerpts from the interview guide. Interview questions gravitated around five topics: the acquisition decision, the business context around it, what other people thought and did around the decision, the process of searching, evaluating and selecting an IT product, and the decision-maker’s background. In total, data about 81 incidents (actual IT acquisition decisions) were retained for analysis.

**Inductive Analysis**

The first analysis followed an inductive logic. The intended outcome was a set of inter-related concepts that would help explain how small firm decision-makers came to consider and went about acquiring IT for supporting the business, as well as what elements they factored into their decision making. Data were preliminarily clustered into five themes: the chosen product, the decision maker views and background, the decision context, search, and evaluation.

Early in the coding process (first two interviews) it became apparent that the five topics were insufficient to capture some of the ideas participants were conveying. For example, in some decisions participants referred to difficulties or constraints that limited their choices, and described what they did to overcome such constraints and get hold of the expected IT product. As a response, I decided to break down the label “evaluation” into two labels: facing constraints and overcoming constraints to reflect this emergent trend. As the process continued, some other revisions occurred. In all cases, I would go back to the previously coded material and adjust it in light of the revisions, to ensure consistency. Next, data were represented in a thematic matrix display (Miles and Huberman, 1994), which allowed me to identify similarities and differences within the themes, and develop subcategories for those themes. Figure 1 presents the data-driven categories and some subcategories resulting from the analysis. A brief description of categories and subcategories can be found in Appendix B.
On the basis of their level of development, the resulting categories are equivalent to the results of open coding (Corbin and Strauss, 1990) or somewhere in between inline and focused coding (Charmaz, 2004) in grounded theory, or phase 3 of thematic analysis, where themes and subthemes are identified and data extracts are coded accordingly (Braun &nd Clarke, 2006). In that sense, categories are not refined and the relationships between them are only partially and tentatively drawn.

**Deductive Analysis**

The second analysis followed a deductive logic. I identified an opportunity to contribute to the management literature on organizational search. Exemplar work in this area has drawn from the Carnegie School (Cyert and March, 1963; Levitt and March, 1988; Simon, 1947) for its theoretical foundation, has been oriented towards large companies, and has used mathematical simulations as the method of choice (e.g., Gavetti and Levinthal, 2000; Rivkin and Siggelkow, 2003). In that sense, my research had both new contextual elements and a different method to offer. Consequently, the intended outcome of this analysis was to identify instances in the data in which the theory could and could not explain actual search behaviors, their antecedents, or their consequences, with the ultimate purpose of refining informing theory. Figure 2 presents the theory-driven categories I used for the analysis. A brief description of these categories can be found in Appendix C.
The categories and resulting coded material can be compared in their level of development to coded material in content analysis following a priori categories (Smith, 2000), or phase 3 of thematic analysis (Braun and Clarke, 2006). Therefore, the relationships among categories shown in Figure 3 correspond to what the theory originally posits; they do not have any inductive input.

Comparing the results of these two analyses at this intermediate step can illustrate some differences, and reveal some of the ontological and epistemological assumptions behind the analytical processes. The next section is an attempt in that direction.

**DISCUSSION**

The deductive and the inductive analyses introduced above were conducted under the same project and utilize the same data set. Not surprisingly, the categories derived from them have many characteristics in common. Each set of categories deals with motivations for acquiring of IT, the search (or lack thereof) of alternatives, and the process of evaluating and deciding. Likewise, each set pays attention to process. In other words, they are both faithful to the project’s purpose and to the interview guide.

Despite those similarities, the analyses also have marked differences. In what follows, I argue that the inductive analysis is more sensitive to variation in meanings and more respectful of participants’ own views. I draw on two examples from the data to substantiate and illuminate these claims.

**Explaining Lack of Search and the Role of Networks**

Let us consider the case of Mr. and Mrs. Wesley (all names have been changed), husband and wife, owners of a small bookkeeping business. After several unsuccessful attempts to run backups internally, they decided to hire an outsourcing service for storing daily backups of their clients’ accounting information. Some months later, when they needed to recover a backup file, it was not available. Disappointed, they decided to change their backup provider. To do this, rather than starting a new search process, they talked to a friend who is an IT consultant and hired the provider he recommended. Mr. and Mrs. Wesley explain the situation in these words:

**Mr. Wesley:** … but when we needed our backup they couldn’t give it to us and when the person who could give it to us got there, it was already too late for us, we didn’t have time to wait. Because with bookkeeping things need to be done when they need to be done and the payment has to be made that day so, like if I’m doing your GST submission, your GST pay has to be made or you’re going to get a fine if I don’t pay it on time. So we didn’t have time, so we had
to rebuild the data … and I said “you know, you guys are not good to me at all” and I cancelled… and then we went with another one … I think we switched because Barry switched.

Mrs. Wesley: Oh yes, that’s right. Yes we followed our …

Mr. Wesley: … our contact, our person, he switched company so we switched with him.

Interviewer: I’m sorry… who’s Barry?

Mrs. Wesley: He was the one that actually was in the backups, he was selling backup systems, he’s an IT guy. That’s why we got involved… I had forgotten about that one. We got involved with him and the company he was involved in, he himself changed over to a different company, that we knew the owner, Steve, that went through (name of a small business program), actually they both went through the program, and so we went with Barry because we trusted him. We had problems, we’d call Barry, Barry would come right over and help us or help us over the phone. So basically we followed the salesperson.

Mr. Wesley: Just like switching if we’d switch from Fords to Chevys, because the sales person we liked went to the Chevrolet dealer and we trusted her, so we did the same with our IT.

In the theory-driven analysis, the extract was coded as ‘lack of own search’ and ‘mimetic isomorphism’, which means that the decision makers did not search directly, but followed the experience of others. By contrast, in the data-driven analysis, the extract was coded as ‘search through a network’ under the search category, and as ‘asking and trusting advice’ under the overcoming constraints category. This means that asking people in your network is conceptualized as search, not as isomorphism, and that trusting the advice received is deemed as a means to overcome constraints (time in this case) which makes this behavior efficient under a different logic.

This example allows me to illustrate the different assumptions under which each analysis operates. In the inductive analysis, I am sensitive to the various meanings participants attach to search. For many of them, search does not have to mean looking for something personally; it might mean asking other people who may have useful information. In the deductive analysis, asking others does not count as search, but as diffusion. Therefore, a broader definition of search is closer to the participants’ own interpretations of their actions.

Further, in the context of organizational studies mimetic isomorphism usually carries the meaning of behavior that is driven more by legitimacy and ritual than by efficiency. I doubt Mr. and Mrs. Wesley would agree that their behavior was ritualistic rather than efficient. In that sense, the inductive interpretation may also be more respectful of their views.

Qualifying the Role of Networks

Now, let us consider the case of Brian, who had recently made the decision of moving from being solely a distributor to becoming a manufacturer of licensed promotional products. As a result, he needed an accounting system with more complex features. I asked Brian if he was trying to get advice about software from his peers and friends network, to which he replied:

Yes, the downside is our businesses are all different, so you’ve got a guy like myself that does licensed products for retail, while he imports, he doesn't decorate or build, so he doesn't do the manufacturing portion, the scalability of his business is half ours, so he's happy with just general technology, you've got other guys that are printing T-shirts, so they’ve got complexity of designs and inventory or whatever, but it's not set up for the retail side, so it's kind of we are all snowflakes, we are all different, even though we have common goals in mind, and common customers and common licenses, everybody behind that is completely different. So I’ve talked to five or six people and everybody's struggling with the same thing.

My inductive analysis sees networks as resources that small business owners might use for cultivating advice. This is a view I did not hold initially. It emerged from the initial interviews and I carried it to other interviews to learn more about it. From this and other answers, I learned that some participants use their networks selectively. That is, they do not follow any advice blindly. In this case, Brian assesses cautiously the potential pitfalls of following advice of peers whose businesses are different and might have different software needs.

By contrast, the theory guiding the deductive analysis understands learning from others as a process of diffusion of encoded experience, a process that implies some level of mindlessness and downplays the thinking process that might lie behind the selective use of networks. Although the extract does not really represent an instance of diffusion, I coded it under that category to remind myself of internal differences within that category later in the analysis.
Again, I believe the participant’s framework of reference is better preserved by the inductive analysis. By seeing networks as part of the context Brian had in mind for making his decision, rather than sources of normative isomorphism, I may arrive at an interpretation that is more consistent with the thinking Brian has put into his selective use of networks. Put differently, the inductive interpretation is inherently less guilty of ‘forcing fit’ (Vaughan, 1992).

In the interest of space, I only introduced two examples of the differences between the deductive and the inductive analyses. However, they do not constitute isolated cases, and they are also illustrative of similar situations I encountered in the comparative analysis.

LIMITATIONS AND IMPLICATIONS

The comparative analysis presented here has several limitations. First, it is based solely on initial coded categories, rather than final findings, hence it artificially reduces the interaction between induction and deduction that would arguably take place later in the theorizing process. Second, both analyses were conducted solely by the author, which has been considered a source of bias for a long time (Kassarjian 1977): it is not known how the interim results would have differed, had the analyses been carried out by someone else or by a team including the author. However, the purpose of this exercise has not been to put forward the substance of the findings as a contribution to research, but only to track down of my own beliefs. Consequently, the risk of bias threatening objectivity appears as a relatively minor concern in this context. Third, the choice of theory for the deductive analysis might be narrower than it needs to be; for example, network theorists have argued that networks are not always activated (Granovetter, 1973) and that network structure affects search (Uzzi, 1997), two ideas which would help address the misrepresentations attained through my deductive analysis.

Despite these limitations, the exercise may be revealing of the different assumptions running behind the two analyses. It seems to me that the inductive analysis, by accommodating a more context-embedded view and acknowledging multiple realities (e.g., defining what search is), and engaging in a process of learning from participants (e.g., how advice from networks is assessed), tilts towards constructivism. On the other hand, the deductive analysis bears the risks of forcing the theoretical lens into the data (e.g., holding one single truth about what search is), and privileging prediction (e.g., how much search), thereby reducing but not effacing the interpretative space, and it thus tilts towards post-positivism.

These results are not surprising, and in fact some scholars see openness and credibility as expected achievements from an inductive entry point to data analysis (Boyatzis, 1998; Charmaz, 2004; Strauss and Corbin, 1993). More importantly, I confirmed I can analyse the world with the eyes of a constructivist, which goes one step further than only assuming I hold a constructivist worldview.

It would be insufficient and unreasonably biased, though, to conclude that the inductive analysis is simply better. Although it tries to stay closer to the data, it also lacks depth in some areas where the deductive analysis has plenty. For example, when the acquisition of IT responds to internal business needs, the Carnegie School provides a rich vocabulary and a robust framework to talk about search processes. I doubt my own inductive analysis would have ever got close to that density. This is the idea grounded theorists describe as theoretical sensitivity (Boyatzis, 1998; Strauss and Corbin, 1993), defined as the prior knowledge a researcher brings to the enquiry, which should enlighten the enquiry.

To conclude, I believe the exercise presented in this paper can also be valuable for anyone wanting to inspect their own beliefs and how they permeate data analysis.

REFERENCES

APPENDIX A: INTERVIEW GUIDE

The question texts following each title were designed to remember the interviewer the issues to be covered. Text in brackets refers to notes and shall not be read aloud.

Critical Incident Questions

**Business Context:** I would like you to tell me what was happening at the organization at the time the decision was made, and why was an IT acquisition considered. What was the issue? What aspect(s) of the business would be affected by the technology? What was the role expected from IT? When did this happen?

**Decision Triggers:** Imagine that you have been placed back in time into that time. Was there any particular event that really made you consider the possibility of an IT acquisition? If so, what happened? Why did it make you think of IT as a possible way to handle it?
Influential people around the decision: Who had the idea of considering IT for the issue? Did you consult any other person (friends, colleagues, business network) before making up your mind? What did they advise you to do?

Gathering alternatives: Now let us focus on what happened after you were decided to consider IT as a possibility. Did you consider several alternatives?

- [If yes] which ones and why? Did you try and get information about them? How did you do it? How similar or different were they?

- [If no] what did you do and why? The product you were considering… which one was it? Or what was it like?

Selection criteria and process: Now, try to remember how the decision was made.

- [If several alternatives were considered]: Were there alternatives that you liked best? If so, which ones and why? Were there alternatives that you did not like? If so, which ones and why? Did you acquire an IT product? Which one? Was there any other reason why you selected that particular one?

- [If only one was considered]: Did you acquire an IT product / service? Why or why not?

General Questions

Decision maker views about IT: For your personal life, what do you think about IT? Are there products you particularly like or dislike? Why? Are there IT trends you particularly like or dislike? (By trends help them think of what IT is today: pervasive Internet connection, mobility, virtual environments, interactive videogames, etc.).

Let us think of IT in the context of this or other businesses you have participated in. How would you rate the importance of IT for doing business? Please explain.

Decision maker views as an IT user: How often do you use IT, either for personal or business reasons? Please explain. For how long have you used IT? Are there any particular products you deliberately use / not use? Why?

Decision maker’s previous experiences with IT acquisition: Have you made other similarly important IT decisions in the past? About how many? Please, briefly describe the situation. In retrospective, what did you learn or conclude from those experiences?

APPENDIX B: DESCRIPTION OF INDUCTIVE CATEGORIES

<table>
<thead>
<tr>
<th>Category</th>
<th>Subcategory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logics</td>
<td>- Reacting to a problem (e.g., current IT crashing frequently),</td>
</tr>
<tr>
<td></td>
<td>- Innovating through IT (e.g., offering new service, based on IT)</td>
</tr>
<tr>
<td></td>
<td>- Wanting to do things right (e.g., starting up a business with basic IT, such as a laptop, or accounting software)</td>
</tr>
<tr>
<td></td>
<td>- Complying with external pressures (e.g., taking up entrepreneurship classes and being told about websites as a business imperative).</td>
</tr>
<tr>
<td>Search for alternatives</td>
<td>- No search (e.g., DIY)</td>
</tr>
<tr>
<td></td>
<td>- Independent search: no help of social network (e.g., through Internet),</td>
</tr>
<tr>
<td></td>
<td>- Search through networks (e.g., asking family, business peers, etc.).</td>
</tr>
<tr>
<td></td>
<td>- Being receptive to unsolicited offers.</td>
</tr>
<tr>
<td>Evaluating and Deciding: Facing and Overcoming Constraints</td>
<td>Constraints:</td>
</tr>
<tr>
<td></td>
<td>- Lack of money</td>
</tr>
<tr>
<td></td>
<td>- Lack of IT knowledge</td>
</tr>
<tr>
<td></td>
<td>- Company-specific IT needs</td>
</tr>
<tr>
<td></td>
<td>- Lack of time</td>
</tr>
<tr>
<td></td>
<td>Addressed by:</td>
</tr>
<tr>
<td></td>
<td>- Satisficing (e.g., selecting cheapest option meeting minimum requirements)</td>
</tr>
</tbody>
</table>
- Stretching (e.g., buying products while on sale)
- Delaying and tweaking (e.g., disabling software modules not to overwhelm current server, until buying new one)
- Breaking up payments (e.g., leases and rentals)
- Conducting inexpensive trials (e.g., vendor-provided free trials)
- Asking and trusting advice (e.g., from a knowledgeable friend)
- Using knowledge proxies (e.g., choosing by aesthetics, by brand).

### APPENDIX C: DESCRIPTION OF DEDUCTIVE CATEGORIES

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routine</td>
<td>Pattern of activity that IT is expected to support (e.g., accounting, creating fashion illustrations)</td>
</tr>
<tr>
<td>Aspiration level</td>
<td>Minimum level of performance expected from routine using new IT.</td>
</tr>
<tr>
<td>Perceived performance</td>
<td>Level of performance before new IT.</td>
</tr>
<tr>
<td>Organizational slack</td>
<td>Time, knowledge and money the decision maker can have access to for this decision without compromising on other goals or activities.</td>
</tr>
<tr>
<td>Learning from direct experience – Search</td>
<td>Extensiveness: number of alternatives</td>
</tr>
<tr>
<td></td>
<td>Location: close or distant alternatives, in relation to current practice</td>
</tr>
<tr>
<td>Learning from others’ experience - Diffusion</td>
<td>Coercive isomorphic pressures, coming from authority (e.g., from new regulations)</td>
</tr>
<tr>
<td></td>
<td>Normative isomorphic pressures, coming from the professionalization of occupations (e.g., from small business training programs)</td>
</tr>
<tr>
<td></td>
<td>Mimetic isomorphic pressures, coming from environmental uncertainty (e.g., from IT hype cycles)</td>
</tr>
<tr>
<td>Evaluation mode</td>
<td>Cognitive: using prior knowledge to guide decision</td>
</tr>
<tr>
<td></td>
<td>Experiential: creating opportunities to experiment with an IT product and making decision based on experienced outcomes</td>
</tr>
</tbody>
</table>