Main Article:

A Portrait of the Researcher as a Boundary Crosser

ISSN: 1712-851X

Jacob D. Vakkayil

Xavier Institute of Management, Bhubaneswar 751013, INDIA

jacobdvakkayil@yahoo.com

Abstract

This article traces the roots of the author's doctoral work to his pre-doctoral experiences in varied spheres of practice. The research choices made are thus inevitably influenced by these experiences. These include the selection of an interdisciplinary domain to locate his doctoral work, the choice of a "boundary object" as the unit of analysis, and the formulation of a methodological mix that reflected the multidimensionality of the research topic. These choices also reflect the researcher's quest for personal meaningfulness and consequently, a certain degree of irrationality that is characteristic of any human endeavor. The author explores the idea of creative research as negotiating the boundary of acceptability and highlights the importance of freedom and tolerance for experimentation to aid this enterprise.

Keywords: doctoral research; boundary-crossing; research choices

1. Introduction

I am a doctoral scholar in management. My work examines the phenomenon of boundary-crossing in organizations from a learning and development perspective. While my experience in education, library management, and documentation primed me for adopting a framework where learning and development were central themes, my own trajectory through varied settings of practice aroused my interest in boundary-crossing interactions. This article is an attempt to tell the story of how my doctoral work has evolved as the result of my pre-doctoral experiences.

There are many ways in which a single story can be told. This account of my doctoral research is--as it appears at this particular point of my journey--months away from completion. For a doctoral scholar, this phase is challenging not only from the demands of the program, but also because of the major changes involved in professional transition into the first post-doctoral assignment. Ibarra and Lineback (2005) emphasize how telling stories can be especially useful in such phases of change. Stories help us in reinventing ourselves and linking the past to the future. They recommend that we make our stories coherent by stressing continuity and causality. For this, we need to highlight connections and patterns in the past that make the present probable. If being alive to patterns is an important characteristic of a researcher, then this retrospective identification of patterns might also be a research-like exercise.

2. Information and Learning

The early triggers of my doctoral research were nurtured by my experiences as teacher-librarian at a well-known boarding school in India. The school library had a good collection of books with excellent sections on fiction, biography, and Indian history. As the librarian, I had a reasonably good budget, a team of dedicated staff, and the freedom to develop its services in the direction I deemed fit. I set out to make the library well-organized and efficient. I purchased computers and software. I employed data entry operators to enter records into the database. I used barcodes (not widely used in Indian libraries at the time) to avoid errors in transactions and to aid the stock-taking exercise which was restarted after many years. I regularly analyzed computer generated transaction statistics to help me in decision-making.

However, much to my dismay, this efficiency in library housekeeping did not visibly change the way learners used the library. I noticed that very few made use of the online catalogue to search for books. They still asked for "that fat book with a blue cover on Medieval India that Ms Dutta used for her class last week" and "the book with those beautiful wood-cut prints that Mr Khan used for his art exhibition two years ago." Such queries were more than our database could handle.

Undaunted, I added CD-ROMs and online resources to the collection. However, these too were not used to their full potential. To my disappointment, the Internet was more often used as a communication medium (for e-mailing, instant messaging, etc.) rather than as a source of information (as evidenced by the low use of online resources).

I surmised that a systematic approach to information-seeking and problem-solving was missing. I began to explore the idea of training students in research skills for independent learning. A convenient starting point was the concept of "information literacy" as defined by the American Library Association (1998). I was also influenced by the work of many researchers in the field. These included "the information search process" of Carol Kuhlthau (1993, 1995) and "the information problem-solving model" (the "Big6" approach) of Eisenberg and Berkowitz (1990) that was widely used by schools across the world at the time. These models approached learning

from an information perspective and defined generic steps to aid the process. For example, the Big 6 approach denotes task definition, information seeking and strategy, location and accumulation, use of information, synthesis, and evaluation.

Implementation, however, was an uphill task and was limited in nature. Teaching generic research skills as a librarian was less effective than I had anticipated. Over time I became doubtful of the effectiveness of teaching these separately, divorced from actual academic work in subjects taught in school. A more elaborate approach required the commitment of teachers to this approach and its more general objectives. Understandably, the extra burden on a stretched curriculum was unwelcome. Unsatisfied, I began to look beyond "information problem-solving" to examine the complex relationship between learners and resources.

3. Interaction and Participation in Learning

Like many other high school librarians, I was accustomed to the sudden surges of interest in topics as varied as colonialism and sports medicine. These were the results of teacher-specified "research assignments" that students had to complete for the required grades. As I observed students more closely, I noticed that some of these interests were more enduring. For example, on one occasion, there was an interest in Japan and its culture that was longer lasting than the typical assignment frenzy. On further exploration I identified the source of this and many other deeper, more involved interests to a young teacher and his select group of enthusiastic readers who formed a sort of unofficial literary fraternity. The interest in Japan was prompted by a desire to contribute to their late evening discussions on "The Tale of Genji." Learning seemed to be most effective when it was associated with an intrinsically meaningful activity.

Other observations prompted me to examine my practice from diverse perspectives. Once, a senior teacher complained that it had become "too easy" to locate books in the library. I was surprised that he did not think highly of our new software or the library assistant's detached efficiency in handing over the right book to him within a minute. He wistfully recalled how previously, in the process of finding a book, he often used to have long conversations with the librarian. These exchanges (that covered anything under the sun) he said, were extremely helpful to him both as a teacher and as an avid reader.

I soon began to suspect that the key to significant knowledge activities lay not so much in neatly organized information silos as in social interactions and participation in significant activities.

4. Science, Communities, and Repositories

There was much talk of the migration from "information management to knowledge management" (e.g., Skyrme, 1997) during this time and this idea found many supporters in library and information science circles. Despite some dissenting voices (e.g., Wilson, 2002), I wanted to explore these ideas further. I joined a premier institute of advanced scientific research

in India, as a trainee in information and knowledge management.

The center where I was being trained had excellent infrastructure for publishing scholarly work electronically. They had set up an institutional repository to make the work of scientists of the institute more accessible to everyone across the globe. However, much to the dismay of the staff at the center, scientists were not enthusiastic about populating the repository with their work. This reluctance to enhance the visibility of their work was puzzling.

The introduction of a friendlier user-interface caused little improvement in the situation. Interacting with scientists, as part of my training assignments, I began to get glimpses into the ways in which they worked. Specifically examining their relationship to documents, I learned that what was true of secondary school students was equally applicable in advanced scientific research settings. Scientists worked within their own communities and their decision to publish a work was not merely driven by the technical consideration of accessibility but by social forces such as peer recognition and approval. As with high school students, information repositories made sense only as tools in a socially meaningful activity.

5. Management as a Border Zone

There was however, no intellectual space to examine these issues deeply, situated in the highly technology-oriented work at the centre. Learning and knowledge were studied by scholars in a number of disciplines such as philosophy, education, psychology, sociology, information science, and so forth. I was looking for a domain that recognized how these approaches were intricately interlinked. With much discussion on issues concerning "organizational learning," "knowledge management," and other similar concepts, the field of management seemed an interesting interdisciplinary conversation space and a convergence zone that grazed the borders of many disciplines. I was drawn to a doctoral program in management that offered me an opportunity to explore these ideas further. I joined the program after receiving an enthusiastic affirmation from my potential doctoral advisor that these issues were at the heart of recent research in the field.

However, research in multidisciplinary fields such as management can pose many challenges for a researcher. Des Gasper (2002) observed that disciplines were like cultures that historically emerged in some manner as competitors and not as partners. Management, as a professional, multidisciplinary field, experiences these conflicts more intimately. Armand Hatchuel observes:

> Management sciences are among the youngest of all human sciences. They still suffer from being *bogged down* in recurrent controversies on the effectiveness and meaning of management techniques or their borrowings from a number of other sciences. Too often, they are perceived as a 'crossroads' of other more fundamental disciplines. The management sciences are thus condemned to find a better definition of the true nature of their object and scientific identity. (Hatchuel, 2001, p. S34)

Predictably, researchers in management were working from varied perspectives to understand

learning in organizations. This diversity is illustrated by Easterby-Smith (1997), who identified the contributing disciplines of organizational learning as: psychology, organization development, management science, sociology, organizational theory, strategy, production management, and cultural anthropology. Each of these approached learning and knowledge in significantly different ways. For example, Wilson (2002) reports how the terms *knowledge* and *information* have been used synonymously across domains. Brown and Duguid (2000) too make a similar observation and wonder whether attempts to unambiguously define terms such as *learning* would ever be fruitful.

Such multiplicities posed a host of problems. On the one hand, many researchers ignored the rich diversity of the field. Consequently, in many discussions in the fields of organizational learning and knowledge management, the authors presupposed a universal, homogeneous understanding of the phenomenon of learning. On the other hand, discussions in fragmented research communities often failed to achieve fruitful inter-community dialogues. For example, Bell, Whitwell, and Lukas (2000) illustrate the varied ways in which organizational learning is decomposed by researchers in various functional domains in management.

As a researcher who had set out to explore this diversity, I needed to delve deep into these discussions and make sense of the dominant strands of thought. This was challenging, and I needed a convenient technique that satisfied the demands of my ambitious goal. The answer lay in the linguistic device of *metaphor*. Exploring the literature on learning and organizations, I found that a number of metaphors were employed in these discussions. I surmised that an analysis of these would help me make sense of this seemingly unmanageable diversity. A number of authors had pointed out the power of metaphors in organizational thought. Tsoukas (1991, 1993) opined that metaphors can be used for yielding scientific theories if they are suitably processed. Jackson (2003) concluded that, "the history of management thought is a story of the use of different metaphors to understand organizations" (p. 31). According to Morgan (1986), managers try to make sense of organizational realities by invoking varied metaphors. Prange (1999) asserts that, "in organizational learning research, metaphors play a significant role and if applied in a critical way yield substantive potential for theory development" (p. 37).

The identification of the prominent metaphors of learning in organizations (Vakkayil, 2006b) gave me a convenient lens for my study. My first impulse was to integrate these varied metaphors and to propose a unified model of learning. However, a coherent model that avoided contradictory assumptions was almost impossible.

Driven by my experiences described above, it was no surprise that I was deeply drawn to the metaphor of "learning as participation" pointed out by many authors (e.g., Sfard, 1998). Adopting a participatory, community-oriented approach to knowledge and learning, I encountered interesting work by a number of researchers. I was particularly drawn to the ideas of Suchman (1987), Lave and Wenger (1991), and Brown and Duguid (1991, 2000). All these

authors seemed to be speaking a language that I intuitively understood. They stressed the processes of learning in interaction and concentrated on knowing rather than knowledge.

6. "Activity" as a Boundary Object

One of the first steps in any research project is fixing a meaningful unit of analysis. This was not easy in my case. While I realized the importance of the individual processes of learning, I was aware that solely concentrating on the individual did not give us the whole picture. I did not want to suffer from what Huysman (1999) called "the individual bias" in the literature on organizational learning. Moreover, I was uncomfortable with traditional psychological approaches that pigeon-holed individuals. They aimed to look at "'what is in the head' rather than 'what the head is in'" (Canter, 1986, as cited Dixon, 2001, p. 600). In contrast, a vision that talked of our "many possible selves" (Ibarra, 2002) was an empowering image for me.

I explored many approaches that looked beyond the individual, while not ignoring this aspect altogether, and was particularly drawn to *socioculturalism* (Sawyer, 2002; Wertsch, 1995). On further exploration, I zeroed in on "activity theory" as a theoretical framework that I could use. This framework has roots in the ideas of Vygotsky (1930) who proposed that signs and other cultural artifacts mediate human action. When used in a collective activity, these artifacts are better described as tools that mediate the action of the subject on the object. Thus, activity theorists analyze human behavior as embedded in collectively organized and tool-mediated activities.

Activity theory provided a unit of analysis (viz. the activity) that appealed to me. The notions of "activity," "action," and "operation" (Leontyev, 1977) effectively connected individual and trans-individual spheres. Activity was thus a sort of *boundary object* that linked varied perspectives in my exploration into learning. According to Star and Griesemer (1989), "boundary objects are objects which are both plastic enough to adapt to local needs and the constraints of the several parties employing them, yet robust enough to maintain a common identity across sites" (p. 393). The concept of activity was plastic enough for varied levels of analysis and yet had a robust identity and a common set of elements.

Activity theory was being explored in a number of centers around the world. Ideas that had origins in Lev Vygotsky's work were interpreted in many ways. I found the approach adopted by Yrjö Engeström (1987) and others at the Center for Activity Theory and Developmental Work Research at the University of Helsinki particularly interesting.

7. Boundary Crossing and Trajectories

While exploring learning and related activities in modern work organizations (e.g., Donoghue, Harris, & Weitzman, 1999; Malone, 2004; Nardi, Whittaker, & Schwarz, 2002), I found that connections across organizational and work-practice boundaries were continuously highlighted

as a characteristic of "knowledge work." As described above, my own personal experience of learning was to constantly explore newer formulations of the problem of learning. I became aware of my own learning trajectory through boundary-crossing leaps from a secondary school, to an institute of scientific research, and further to a management school. This realization prompted me to study boundary-crossing as a phenomenon that supported learning in organizations. The framework of activity theory was specially suited for such a study.

The vast array of loosely coupled ideas now coagulated into a viable doctoral project. I was going to concentrate on the phenomenon of boundary-crossing using the sociocultural framework of activity theory that emphasized the importance of mediating artifacts in activities, and the evolution of these activities through processes of learning and development.

A boundary crosser's work is indicative of the variety of his or her experiences. This journey through varied worlds can be visualized as a trajectory. While moving through these worlds, crucial choices need to be made by the traveler on what aspects of one world to retain and bring forth in another.

As a traveler along the doctoral research journey, I retain an understanding of the importance of community, participation, and the intrinsic meaningfulness of learning activities from my experiences in boarding school education. From the field of library and information science, I retain an interest in the way people use information and construct their own knowledge. The idea of artifacts in activity theory is thus a very meaningful conceptualization of documents for me. My trajectory through an institute of research providing support services for scientific research resonates well with the centrality of tools in activity theory. I prefer to analyze technological artifacts as tools in a social activity than as stand-alone entities that might be understood in isolation.

Thus, research for me is not a solitary activity, or even a social activity involving an unquestioning allegiance to one particular community. My research is born of and shaped by a rather unique trajectory that enables me to participate in multiple communities of action--often simultaneously.

8. Method and Madness

Method denotes the rational, systematic, and objective aspects of human endeavors. I use the word *madness* to represent passion, emotions, and a degree of inherent irrationality in these endeavors. The choice of a particular research methodology is often projected as a rational activity that is directly driven by considerations involved in the research problem. The significance of the researcher's inclinations in this process is often overlooked. Yet, my selection of a particular methodology was primarily influenced by my intuitive preferences rather than the so called demands of the research question.

My preference for an "intensive," "small-N" form of research was nurtured by my way of responding to problems in practice. I had always tried to understand them by situating myself in the setting and making sense by observing and conversing informally with those in the middle of these challenges. In my doctoral research I aimed to use this method that intuitively appealed to me and sought legitimization by naming it in accordance with accepted practices in research methodology. Thus an *ethnographic* approach was chosen as the primary research methodology.

However, an ethnography that privileged the researcher as the only voice in the study was unappealing to me. To obtain an "emic" perspective, I needed to ensure that "insiders" also had a voice in my work. On similar lines Gergen and Gergen (2003) describe research as a "relational process" (p. 597). Realizing the importance of this, and acknowledging "the potential merging of the roles 'researcher' and 'participant' in the situation" (Checkland and Holwell, 1998, p. 16), I aimed for a research design in which participants would play a significant role in the inquiry.

Ethnographic approaches often stress naturalism and as a result, urge researchers to minimize their own influences in the field. This seemed to be a difficult proposition to me. The realization that "social phenomena are mental abstractions at a meta-level to their manifestations, [and] even thinking and arguing about them can change them" (Checkland & Holwell, 1998, p. 11) prompted me to go beyond a purely ethnographic approach. It was necessary to incorporate the inevitable changes in the field that result from the research process in my data analysis. Thus I added a flavor of *action research* to a primarily ethnographic study. My confidence in the feasibility of such improvisations and mixing of research approaches had been reinforced by the experiences of other doctoral scholars (e.g., Probert, 2006).

Though as in other professional fields, management research is driven by problems from the field, the idea of a "client" is not well addressed in doctoral research in management. Emphasising this, Hatchuel (2001) presents cooperation with the client as one of the "pillars of new management research." However, he invites researchers to go beyond normally seen client-oriented partnerships. He says that "the cooperation with companies should not be perceived as a useful consequence of research but as a prerequisite for the production of actionable knowledge" (p. S39). The intervention component of the study served to demonstrate such actionability.

Thus, though my research involves a great deal of method, I consider that it is important that I do not deny the madness. Human endeavors typically involve passion and a certain degree of irrationality--and research is no exception.

9. Images of Researchers

Once the methodological approaches are decided upon, the researcher needs to identify specific tools and techniques for data collection and analysis. The importance of this is revealed by the fact that one of the most widely-recognized images of researchers visualizes them as expert tool-

users. This image has often resulted in a danger that many tool-users are prone to. As the well-known saying goes, "For the one with the hammer, the whole world is a nail." This tendency in research has been deplored by many.

> Reading a typical scholarly management journal today can be depressing--because the vast majority of published papers devote few of their column inches to categorization. When the existence of different categories is noted, often they are handled with dummy variables or by omitting the outliers--as if maximizing R^2, rather than getting the categories clearly characterized is the hallmark of a good theory. (Carlile & Christensen, 2005, p. 8)

Touting another image of researchers, Hirschheim (1985) says that researchers should be viewed as craftsmen and tool builders, in addition to their image as tool users. However, many authors have drawn our attention to the fact that even this is not a widely encouraged image.

> Unequal emphasis on research, which entirely neglects innovations in methods, obviously weakens not just the creativity of the individual but also the vision, perspective and scale of ambition. The restricted repertoire of tools also limits scope for conceptualizing. (Unnikrishnan, 2004, p. 1493)

Apart from the images of tool users and tool builders, there is a third image that visualizes researchers themselves as tools. I was most comfortable with this image of the researcher. One reason for my preference was a visualization of tools as generic problem solvers useful in a wide array of situations. This was consistent with the image of researchers as boundary crossers.

Many authors view researchers as vehicles of data and exhort them to develop skills necessary for a human instrument. Lincoln and Guba (1985, cited in Hoepfl, 1997) identify the distinctive features that make humans excellent instruments. Humans respond to environmental cues and are able to interact with a given situation. They can collect information simultaneously at various levels and are able to view situations holistically. They can process data as they are gathered, provide feedback, and request verification. Pre-set instruments such as questionnaires are not effective in handling unanticipated responses. However, such oddities might provide rare insights into the phenomenon of interest and can be probed further when researchers function as effective instruments. Consequently, I strove to have a high degree of "theoretical sensitivity" that denotes "the attribute of having insight, the ability to give meaning to data, the capacity to understand, and capability to separate the pertinent from that which isn't" (Strauss & Corbin, 1990, p. 42, cited in Hoepfl, 1997).

Such an image of the researcher brings to light the oft-repeated concerns of bias and subjectivity in research. Objectivity as opposed to subjectivity is often touted as characteristic of systematic, scientific studies. However, objectivity can be interpreted in different ways. In the realm of social sciences, finding a universally acceptable definition for objectivity is a challenging proposition. According to Russell Ackoff, objectivity is the result of free interaction of many "subjectivities."

> Objectivity is not the absence of value judgments in purposeful behaviour. It is the social product of an open interaction of a wide variety of subjective value judgments. Objectivity is the systemic property of science taken as a whole, not a property of individual researchers or research. It is obtained only when all possible values have been taken into account; hence, like certainty, it is an ideal that science can continually approach but never attain. That which is true works, and it works whatever the values of those who put it to work. It is value-full, not value free. (Ackoff, 1979, p. 103)

The value-fullness of research reveals it as a human endeavor. This awareness enables researchers to carry out their work with a clear understanding of themselves as researchers.

10. Creative Research as Boundary Negotiation

There are a number of overt and covert criteria for a study to be accepted as good research in various disciplines. Doctoral scholars are careful to adhere to them. However, merely ensuring that what one does is accepted as research is not sufficient for many ambitious research scholars. Studies on doctoral research have often highlighted that creativity is an important factor in the endeavor (e.g., Dewett, Shin, Toh, & Semadeni, 2005). Creativity entails the freedom to experiment. Mokyr (2004) observes that society needs to have "a certain tolerance for rebels and deviants, who are dissatisfied with current states of knowledge and think they can do better" (p. 11).

Emphasis on the freedom of the researcher requires a certain level of tolerance for experimentation and even playful exploration in research. Such attempts to stretch the boundaries of what is acceptable as research, would enable scholars to experience the joy of discovery and to manage the inevitable uncertainties of research effectively. Mintzberg (2005) advises doctoral scholars to start with an interesting question and be open to the human factors of imagination, insight, and discovery in research. Lamm (2004) observes a trend that encourages tolerant, flexible images of research that helps scholars to extend boundaries.

> The classic structure of the thesis has given way to theory emerging from data, as well as countless structural possibilities. The elimination of hypothesis generating certainty, defined structure and pattern, and the loss of objectivity fundamental to the traditional dissertation, has left the student and supervisor with greater freedom of choice, and more open boundaries. (Lamm, 2004, p. 11)

I am heartened by such trends and have been tremendously motivated by the active encouragement for experimentation in my doctoral program. Thus, as a researcher, I see myself negotiating two processes that are seemingly in opposition (Vakkayil, 2006a). The first process is driven by a force that enables one to locate his/her work within the boundaries of what is accepted as research. This is analogous to what is known as centripetal force in physics. The second process is driven by a force in the opposite direction (analogous to the centrifugal force). This force that pulls me as a researcher toward the peripheries seeks to expand accepted boundaries by driving me to be innovative in the way research is done. Unlike centripetal and centrifugal forces that result in equilibrium, these opposing forces that drive researchers help

them to constantly re-negotiate boundaries of what is accepted as research and to embrace new possibilities.

11. Lessons Learned

The very nature of applied multi-disciplinary domains such as management catapults researchers to fragmented research terrains that reveal multifaceted problems. Complexities of practice urge them to look beyond imposed boundaries. I believe that, to be effective, researchers in such domains should embrace these forces whole-heartedly. Often, certain extremely useful handles evolve as one delves into this seemingly confusing arena of research. These handles--such as the idea of boundary-crossing in my case--help researchers to navigate their complex research terrains efficiently.

I have gained immensely by the very exercise of crafting this narrative. This gave me the opportunity to reflect on the trajectory that nurtured and shaped my current work. This gives a sense of coherence and purpose to what started out as random leaps across diverse domains of practice. Such a long term view of the doctoral project can give us a better understanding of our work.

We invariably form our own images of research and of ourselves as researchers. This is reflected in our work. For example, my image of creative research as boundary negotiation explains why I sought to combine ethnography with action research in my study. Being aware of who we are and where we come from can enable us to critically examine our research choices better.

Constant curiosity and a healthy amount of self-doubt are frequently suggested as desirable qualities of researchers. Often, these qualities prompt us to move beyond established domains and institutionally approved modes of inquiry. To facilitate this, the image of researcher as boundary crosser proposed in this article might be useful.

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