A Literature-Based Analysis of People's Roles in Business Process Management

Full Paper

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Abstract

A lot of organizations strive for process orientation to increase their performance. The change from function orientation towards process orientation is a huge project which considers changes in organizational structures but also used information technologies. But many companies struggle by implementing and operating processes successfully. In the last years, culture has examined extensively to be one of the drivers for successful process management. In this context, people have been identified as an important factor for the success of process initiatives. Despite their relevance, only scarce research deals with people as a distinct and fundamental factor in process management as well as in the overall project to achieve process orientation. Goal of this paper is to analyze the different roles of people in process management. Therefore, a literature review is conducted to provide an overview of existing research.

Keywords

Business process management, people, role, expertise, empowerment, commitment

Introduction

More and more companies shift from function orientation towards process orientation (Neubauer 2009). The key objectives are to enable flexibility to changing business requirements (Neubauer 2009) and to increase business performance (Davenport and Short 1990). This shift is often performed as a huge project to reorganize the whole organization (i.e., organizational structures such as teams and departments are altered but also the related information technology (IT)). However, many companies have difficulties to implement and successfully operate processes (Hammer 2010) and consequently organize themselves in a process-oriented way. Some of the reasons why these process-related projects fail are cultural resistance, a lack of employees' identification with processes, and missing overall process thinking (e.g., Grau and Moormann 2014; vom Brocke and Sinnl 2011). To overcome these problems, the holistic approach of business process management (BPM) has evolved, which perceives *"processes as the central core from which business is conducted, so long as they are supported by the people within the organization"* (Jeston and Nelis 2008, p. 4). These shared basic assumptions, values, or beliefs of a group of individuals is referred to as culture (Schein 2010). In recent years, researchers increasingly analyzed the role of culture in BPM (vom Brocke and Schmiedel 2011; vom Brocke and Sinnl 2011) and developed suggestions how an organizational culture supportive for BPM should look like (Tumbas and Schmiedel 2013). In the context of culture, the researchers stressed the importance of the process employees and call for their involvement (vom Brocke et al. 2014) and motivation (Tumbas and Schmiedel 2013). Here, it is especially important to understand the factors influencing employees' attitudes and behaviors to follow a process-oriented working style (e.g., Kettenbohrer et al. 2015b; Kettenbohrer et al. 2015a). I assume that based on employees' roles these factors can vary. Based on that assumption, goal of this research is to understand and analyze the different roles of people in BPM literature first. Then, role-specific change management could be applied to successfully become process-oriented. Thus, the paper is guided by the following research question: *How are people considered in the BPM literature and which roles do they perform?*

To answer this question, a literature review is conducted. The remainder of the paper is structured as follows: In the next section, the elaboration of the two concepts of BPM and people serves as theoretical

background for the literature review. After that, the design of the literature review and the research results are presented (section 'Literature Review on People in BPM'). The following discussion emphasizes the relevance of people for BPM. On that basis, the implications and limitations of the literature review are presented. Finally, the paper concludes with a summary.

Theoretical Background

BPM has emerged as a succeeding concept evolving from total quality management (TQM) (Crosby 1979; Powell 1995) and business process reengineering (BPR) (Davenport 1993; Hammer and Champy 1993). Due to this history, its original focus was on technology, which includes analyzing and improving business processes (Elzinga et al. 1995; Zairi 1997). For the goal of automation, workflow modelling and information technology got more and more important (Jeston and Nelis 2008). However, some researchers have begun to see BPM as a holistic approach to manage an organization evolving from functional and hierarchical management (DeToro and McCabe 1997). From their point of view, BPM consists of several other aspects beyond IT which creates *"a process-centric, customer-focused organization that integrates management, people, processes, and technology for both operational and strategic improvement"* (Antonucci and Goeke 2011, p. 3). A more holistic definition is provided by van der Aalst et al. (2003) who state that BPM is about *"supporting business processes using methods, techniques, and software to design, enact, control, and analyse operational processes involving humans, organizations, applications, documents and other sources of information"* (van der Aalst et al. 2003). This definition stresses the fact that BPM consists of several elements and highlights the *"involvement of different actors and different levels of organizational reality"* (Recker 2014, p. 7). The importance of people has grown since several maturity models have included them as an essential factor for BPM (de Bruin et al. 2005; de Bruin and Rosemann 2007; Rosemann and vom Brocke 2010). For instance, the factor people is one of the six used core elements of BPM identified by Rosemann and de Bruin (2005).

More and more, people are seen as one of the most critical factors because they are the *"key to implementing [...] process design"* (Jeston and Nelis 2008, p. 25). In addition, several recent studies showed that the employees' knowledge, skills and attitudes positively influence BPM success (Bandara et al. 2009; Marjanovic and Bandara 2010; Mathiesen et al. 2013).

Literature Review on People in BPM

Design

To get comprehensive insights into the role of people in BPM, a literature review following the approaches by Webster and Watson (2002) and vom Brocke et al. (2009) was conducted. The literature search was started by scanning the Business Process Management Journal and the BPM Conference because the state-of-the-art literature in BPM is predominantly published here. Supplementary, to take up-to-date research of higher quality into account as well as to not only scan exclusive BPM literature, outlets ranked as B or better by the German JOURQUAL 3.0 ranking published by the German Academic Association for Business Research (VHB) were scanned (time focus: 2004-2014). To cover articles dealing with people in BPM, the keywords *Business Process Management* or *BPM* in the title or abstract of the papers as well as the search term *people* in full-text searches were used. The keyword *people* was chosen because it serves as a generic term and also covers the keywords *staff* or *employee*. In a pre-test, more hits with the keyword *people* were received than with the other two keywords. In addition, relevant papers which I was already aware of were not covered by an exclusive search using *staff* or *employee*[1]. To receive only scientific papers, peer-reviewed (scholarly) articles only were included.

In the subsequent filtering process, the complete text of each identified paper was reviewed to assert its relevance and significance for analyzing the role of people in BPM. In parallel, each paper was categorized according to its extent to which it is dealing with people in BPM. To classify the identified papers, two categories were used:

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[1] For example, in the AISel Database, I received 99 hits using the keyword *people* whereby I only received 51 for the keyword *staff* and 37 for *employee*.

1. *Papers that only mention people's role in BPM:* Papers which belong to this category merely mention the relation between people and BPM in few words.
2. *Papers that elaborate on people in BPM:* This category's papers deal more intensively with the role of people in BPM. So, it could be only a paragraph about the relation between people and BPM but also a single section or a full paper about human aspects of BPM.

After reading and scanning all papers regarding people's roles in BPM, 52 papers were identified which mention the relation between people and BPM and 10 papers which elaborate on people in BPM. Based on papers of category 2, a forward and backward search was conducted to identify additional research focusing on people in BPM. The papers which were identified via forward and backward search were categorized in the same way as the initial papers. After that, in total, 52 papers were categorized as mentioning people's role in BPM and 22 as elaborating on people in BPM[2].

Content-Based Analysis

The most relevant papers are published in the Business Process Management Journal or at conferences with no specific reference to BPM. Especially the second finding is surprising because more relevant articles also published in the BPM conference proceedings were expected.

To identify, name, and categorize the essential ideas of the papers found via literature search, those 22 papers which elaborate on people in BPM were analyzed via word-frequency analysis. To measure word importance, the in-document word-occurrence frequency is used (Carroll and Roeloffs 1969). As a result, the following nine categories were derived: (1) management commitment, (2) governance, (3) organizational culture, (4) communication, (5) training, (6) teamwork, (7) process orientation (including process understanding), (8) employee commitment (including involvement), and (9) employee motivation.

In a second step, coding was used to develop a deeper understanding of the data (Baskerville and Pries-Heje 1999). Conducting coding, three key concepts which dominate the BPM literature regarding people could be examined: expertise, empowerment, and commitment. The derived concepts are highly correlated whereby an overlap arises.

Expertise

In the context of BPM, new requirements for qualification arise. As a consequence, people have to be trained to gain expertise. An expert is a person who has specialized skills or knowledge in a particular area acquired by experience or study. Accordingly, expertise is a set of characteristics, skills, and knowledge of a person that distinguish this person from less experienced people (Ericsson et al. 2007; Germain 2006). In addition, an expert not only sees what to do but he/she also knows how to do it. Becoming such an expert, requires a lot of training and practice (Dreyfus and Dreyfus 2005; Feigenbaum and McCorduck 1983).

Acquiring process-related knowledge and expertise is predominant in BPM literature regarding people (de Bruin and Rosemann 2007; Rosemann and vom Brocke 2010). Especially since people are one of the core elements of Rosemann and de Bruin's (2005) BPM maturity model. Gaining BPM knowledge and expertise is not only important for the daily execution of the business processes but also for becoming a process-oriented company (Willaert et al. 2007). In addition, training continually empowers people to act responsible, to solve problems (vom Brocke and Schmiedel 2011) and to adapt process changes (McCormack et al. 2009) which fosters a process-oriented culture (Tumbas and Schmiedel 2013). Process expertise also includes process collaboration (de Bruin and Rosemann 2007; Rosemann and vom Brocke 2010) which is supported by teamwork or open communication (Tumbas and Schmiedel 2013; Willaert et al. 2007).

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[2] Due to space limitations, I left out the list which contains the outlets, the amount of hits and the amount of relevant papers as well as the categorization of the relevant papers. This list can be obtained by the author.

Empowerment

In management research, empowerment is distinguished by three approaches (Menon 2001): the structural approach, the motivational approach, and the leadership approach. Following the structural approach, *"empowerment is understood as the granting of power and decision-making authority"* (Menon 2001, p. 155). Thus, power derives from hierarchical authority, control of resources, and network centrality (Menon 2001). As such, it is *"the ability to effect (or affect) organizational outcomes"* (Menon 2001, p. 155). Based on these definitions, empowerment refers to *"moving decision making authority down the organisational hierarchy and granting employees the ability to significantly affect organisational outcomes"* (Menon 2001, p. 156). This traditional approach of empowerment increases employee participation (Kanter 1977) and ensures that employees have the authority to do their jobs (London 1993).

Empowerment by the motivational approach is defined as *"a process of enhancing feelings of self-efficacy among organizational members through the identification of conditions that foster powerlessness and through their removal by both formal organizational practices and informal techniques of providing efficacy information"* (Conger and Kanungo 1988, p. 474). Other authors (Spreitzer 1995; Thomas and Velthouse 1990) extended this view by equalizing empowerment to energizing. According to them, empowerment increases the employees' motivation which consequently influences work outcomes (Thomas and Velthouse 1990).

The leadership approach also highlights the energizing character of empowerment. Leaders can motivate and energize their employees to follow a certain vision and act correspondingly (Bennis and Nanus 1985; Burke 1986).

In BPM literature, empowerment refers to assessing process-related accountabilities and responsibilities in terms of creating process governance. In process-oriented organizations, several tasks, accountabilities, and responsibilities are bundled into different roles which are taken over by the employees. The employees are empowered and get a certain freedom of action for defining, improving, and monitoring business processes (Schmelzer and Sesselmann 2008). According to Spanyi (2010), BPM governance is essential to *"create the right structures, metrics, roles, and responsibilities to measure and manage the performance of a firm's end-to-end business process"* (Spanyi 2010, p.223).

There are several studies (e.g., Neubauer 2009) which show that governance is a crucial element for successful BPM to *"analyze, design, implement, and continuously optimize the business processes along with the business strategy"* (Neubauer 2009, p.173). Thereby, accountable and responsible process management roles (e.g., process owner) are located at senior executive or senior management level (Pritchard and Armistead 1999). Nesheim (2011) analyzes the relation between process management roles and line management. He shows that this relationship is not balanced. In many cases, the authority of process owners is secondary to the authority of the managers in operative business areas. However, to align the two roles of process owners and line managers, he suggests a number of mechanisms (e.g., process owner networks or dialog) (Nesheim 2011). If process management roles get embedded into the organizational structure, they support customer-oriented thinking and process thinking (Škrinjar and Trkman 2013; vom Brocke et al. 2014). Due to the creation of a process mindset, process orientation (Kohlbacher and Gruenwald 2011a), and BPM culture can arise (Tumbas and Schmiedel 2013; vom Brocke and Sinnl 2011). Consequently, BPM manifests itself as a long-term approach (vom Brocke et al. 2014).

Commitment

Empowerment and expertise enables employees to successfully operate processes according to BPM goals. These aspects are accompanied by the commitment of the involved people. But the concept of commitment is not as prevalent as empowerment and expertise in BPM literature. Organizational commitment literature differs between two aspects of commitment: behavior and attitude. Commitment-related behavior relates to exceeding formal and/or normative expectations (Mowday and Steers 1979). A person shows attitudinal commitment if *"the identity of the person (is linked) to the organization"* (Sheldon. 1971, p. 143) or when *"the goals of the organization and those of the individual become increasingly integrated and congruent"* (Hall. et al. 1970, p. 176). Consequently, the person identifies himself/herself with the respective organization and its goals (Mowday and Steers 1979). In the context of BPM, commitment also includes taking over responsibility and accountability for process decisions (Schmiedel et al. 2013). The

extent of commitment is closely related to organizational and BPM culture (Kohlbacher and Gruenwald 2011a; Schmiedel et al. 2013; vom Brocke and Sinnl 2011). Culture and the role of people in BPM are closely connected and interact in the following way: top management decides to follow a BPM approach. The managers' appreciation for process orientation changes organizational structure by introducing process management roles (e.g., process owner). These structural changes lead to changing actions and attitudes of the employees (vom Brocke and Sinnl 2011) which influence the organizational culture and consequently the process orientation of the firm (Kohlbacher and Gruenwald 2011a). It becomes obvious that top management commitment is considered as a key driver for becoming a process-oriented company. But not only top management support is required but also the commitment of the employees (vom Brocke and Schmiedel 2011). Schmiedel et al. (2013) identified four cultural values supporting BPM (customer orientation, excellence, responsibility, and teamwork). Using these cultural values, Tumbas and Schmiedel (2013) derived concrete activities to develop a BPM-supportive culture. Besides training, teamwork, involvement and governance, they also mentioned intrinsic motivation of employees as one of the key drivers to achieve a process-oriented culture (Tumbas and Schmiedel 2013). But the results of the literature review show that employee commitment and motivation are an under-research topic. Only 5 papers focus these aspects.

Summarizing, the literature review indicates that expertise and empowerment are the predominant topics in BPM literature regarding people. Though, employee commitment and motivation are considered as important drivers for process orientation, they have not been examined as extensively as the other two concepts of empowerment and expertise. In addition, the results of the literature review show that BPM literature merely deals with people in three roles: supporter, owner, and performer.

Different Roles of People in BPM

To get a deeper understanding of the three roles (supporter, owner, and performer), word-frequency analysis serves as a starting point again. The results of the content-based analysis show that 7 papers explicitly focus on top management, 16 papers on (senior) management, and 10 papers deal with staff.
Top management serves as supporter for BPM (Kohlbacher and Gruenwald 2011a; Schmelzer and Sesselmann 2008). Several studies (e.g., Ewusi-Mensah and Przasnyski 1994; Indulska et al. 2006) show that missing top management support is one of the major causes for BPM implementation failures. As supporter, top management initiates BPM projects and ensures their implementation (by e.g. acting as a role model for employees and ensuring funding for the projects) (Ewusi-Mensah and Przasnyski 1994; Schmelzer and Sesselmann 2008). For BPM success, a clear definition of BPM and its intended use has to be communicated and supported by top management (Armistead et al. 1999) to create a common understanding in the organization (Ewusi-Mensah and Przasnyski 1994). In addition, top management can support process thinking (Kohlbacher and Gruenwald 2011a) and the establishment of BPM by adequate leadership behavior, reward structures and governance practices (vom Brocke et al. 2014). Thereby, top management should not only be a passive supporter but an actively involved participant by introducing and sustaining a common understanding of processes (Indulska et al. 2006; vom Brocke et al. 2014). If top management is not aware of its role as supporter, it can lead to cynicism among the employees. This attitude can become an obstacle for further BPM initiatives.

Successful BPM requires a person who is accountable and responsible for definition, implementation, and operation of processes. In BPM literature, the term 'process owner' became prevalent. The person who takes over the process owner role is responsible for one or several processes. But he/she is only able to do this if he/she has the adequate authority. The demand for authority leads to the assignment of process ownership to executive or management level (Kohlbacher and Gruenwald 2011b; Neubauer 2009) because it is *"the ultimate way to ensure that processes receive the maximum commitment and attention"* (Jeston and Nelis 2008, p.338). Executives or managers are more involved in the every-day work of their employees than top managers. So, they know the 'real' processes as they are executed and lived in the daily operations as well as the corresponding barriers or obstacles for correct execution. Due to adequate authority, the management as owner receives relevant information about an organization's visions, goals or challenges. Knowing about these aspects influences the further development of business processes. Furthermore, the management has the authority to act as disciplinary leader to avoid conflicts (Schmelzer and Sesselmann 2008).

Besides the persons responsible for process definition and improvement, the employees who execute the processes play an important role because *"you can have the most effective and efficient new or redesigned processes in the world, but unless you can convince people to use them efficiently or at all then you have nothing"* (Jeston and Nelis 2008, p.7). Employees can be understood as performers who carry out activities within a business process (Ferstl and Sinz 1997; Hammer 2010) by continually enhancing and applying their process-related expertise and knowledge (de Bruin and Rosemann 2007). Due to their process-related knowledge, the employees develop themselves from objects to subjects (Schmelzer and Sesselmann 2008). However, to completely deploy their potential, employees have to be committed to the processes. This commitment is influenced by motivation (Schmelzer and Sesselmann 2008) and organizational culture or BPM culture (Tumbas and Schmiedel 2013).

Summarizing the results of the literature review, there are three key concepts regarding people in BPM: expertise, empowerment, and commitment. Within these three key concepts people can take over different roles. According to the (management) level in the organization, a person can be supporter, owner, or performer. So, top management acts as supporter for BPM, management takes over ownership for business processes and staff performs different tasks within an organization's processes.

Discussion, Limitations, and Implications

In this paper, a literature review was conducted to analyze people's role in BPM. Besides identifying three key concepts, the different roles of people in BPM were examined. The findings presented in the previous sections show that BPM has become a holistic approach by not only focusing on IT and modelling but also including culture as well as people (Goeke and Antonucci 2011; van der Aalst et al. 2003).

Existing research that explicitly focuses on people in BPM basically deals with process-related expertise and knowledge. However, to adequately use this knowledge, people have to be committed to the process. Though, employee commitment and motivation are considered as important drivers for process orientation, these two factors have not been examined as extensively as the other two concepts of empowerment and expertise yet. This finding calls for further research regarding employees' motivation for and commitment to processes. A first attempt to highlight the human factor in process management and process standardization literature was made by Kettenbohrer et al. (2015b). They analyzed employees' roles in the context of process standardization initiatives as well as the impact of employees' attitudes toward their job on process standardization acceptance. The authors hypothesized the impact of different job characteristics, work-role fit, co-worker relation as well as the broader process environment on employees' perception of meaningfulness of work and consequently process standardization acceptance (Kettenbohrer et al. 2015b). But their model is solely focused on employees executing the different tasks in a process. Using the results of my literature review, their model could be enhanced. It could be promising to analyze whether there are differences in process (standardization) acceptance dependent on the different roles (supporter, owner or performer). For instance, in case of process standardization or process change (which often goes along with IT implementations such as an enterprise resource planning system implementation), a process owner is not affected in the same extent as an employee executing tasks in the process. Consequently, a process owner might be more likely to accept process standardization or process change (and consequently the implementation of the corresponding IT).

In this paper, three roles regarding the involvement of people in BPM were identified: supporter, owner, and performer. The results of this literature review show that BPM literature focuses on top management and management by recognizing them as supporter and owner. Staff is seen as performer who is not considered as extensively as management. Indeed, there is a comprehensive review by Palmberg (2009). But she identified solely two process roles: process owner and process team member. She showed the different tasks of these roles (e.g., accountability for process improvement or documentation of processes) but it remains unclear to what (management) level these roles have to be assigned. My literature review closes this gap and contributes to BPM literature by distinguishing people's roles and assigning them to certain (management) levels.

The concepts derived in this paper confirm results of other management disciplines. For instance, change management is very focused on people because it is all about employees, their behaviors, and mindsets (Kotter 1996). In change management literature, people strategies are one of three different strategies for successful change (organizational, technical, and people strategies) (Aladwani 2001). People strategy consists of staff and management attitudes, involvement, and training (Aladwani 2001) as well as motivation (Schmelzer and Sesselmann 2008). Successful change is dependent from different factors, e.g., top man-

agement acts as enabler (Kotter 1996), managers serve as a role model, or employees are performers of change (Jeston and Nelis 2008; Schmelzer and Sesselmann 2008). Another example is enterprise content management literature. Here, four dimensions are used: tools, strategy, process, and people (Alalwan and Weistroffer 2012). The dimension of people includes training, stakeholder involvement, and management commitment (Alalwan and Weistroffer 2012; Tyrväinen et al. 2006; vom Brocke et al. 2010a; vom Brocke et al. 2010b).

Despite this comprehensive review, a limitation of this study is the potential for omitting single papers. The literature review was based on the key terms *Business Process Management* or *BPM* and *people*. Therefore, papers might not be included if they solely mention *process management* instead of *Business Process Management* or *actor, agent* or *participant* instead of *people*. However, due to the relatively high amount of articles and the conducted forward and backward search, all essential aspects relevant for people's role in BPM seem to be captured.

The literature review and the derived overview of people's roles have great implications for research and practice. Indeed, people are one of the core elements of BPM (Rosemann and vom Brocke 2010). But there has been no detailed analysis about their role in BPM yet. The literature review on hand is an important step toward closing this gap. The results of this paper allow other researchers to put their own research in a better context. For practitioners, the implication of the work lies in emphasizing the importance of employees; especially in projects aiming process orientation or an IT implementation. For successful process implementation and operation, not only empowerment and expertise are relevant but also commitment. Companies should consider that staff's commitment is equally important to the commitment of (top) management. Knowing the different roles as well as their special requirements (e.g., regarding training) could help organizations to apply role-specific change management which enables successful BPM implementation.

Conclusion

To my knowledge, this paper provides the first systematic literature review on people's roles in BPM. The review involved relevant outlets of the BPM community as well as further qualitatively high outlets. As a result, I structured the current research on people's role in BPM by identifying three key concepts and three groups of consideration regarding people in BPM. This paper gives an overview of research regarding people's role in BPM and calls for further research regarding staff's motivation and commitment in the context of BPM.

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