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Key roles for middle management in Continuous Improvement

ABSTRACT

The objective of this paper is to explore the role of middle management in organizational change initiatives, and specifically in conjunction with Continuous Improvement (CI). The paper begins with a review of the CI literature, and then a case study in which action research was used to facilitate CI in a Danish manufacturing company is presented. Analysis of the case suggests that middle managers have an important role in facilitating CI, especially in terms of enabling top-down, bottom-up, and sideways communication and cooperation. More

importantly, perhaps, is the middle managers' personal sense making and interpretation of their role in the change process. Defining the role of middle management to reflect these functions and behaviors has implications for both management and academia, especially in terms of understanding the types of competencies middle managers must have in order to support and sustain the implementation of change in general, and CI in particular.

Keywords: Continuous Improvement; Middle Management; change projects, Longitudinal Action Research

Introduction

The question as to whether a “top down” or “bottom up approach to change management is more effective has existed for many years. Nonaka (1988) contends that the traditional understanding of both approaches to management relate to the flow and processing of information within an organization: the former involving the implantation of top management decisions at lower levels of the organization and the latter referring to decision making at the lower levels. The question as to which approach, if either, is most appropriate may be especially relevant in the field of Continuous Improvement (CI), because the very principles on which CI is built dictate a participative style of management, which may be construed as a bottom up approach. On the other hand, the literature clearly emphasizes the role of top management in the successful implementation of CI (e.g. Kaye and Anderson, 1999; Bessant and Francis, 1999; Jørgensen et al., 2003). Lost in this debate, however, is the role of middle management (for example, department managers and production line supervisors) in CI.

Judging by the lack of preparation middle managers receive concerning CI implementation, it may be concluded that many companies have failed to realize the critical roles that middle managers could potentially play in the successful implementation of change initiatives. One explanation for this “oversight” may be a lack of understanding as to what such a role entails. The objective of the paper is to begin to define the role of middle management in CI, on the basis of the current literature on CI, a review and typology of the roles of middle management in (general) strategy development, and the authors’ experiences with longitudinal action research in a Danish manufacturing company. The case serves as the backdrop for analyzing the actual roles of middle managers involved in CI implementation against the described typology. Finally, the paper includes a discussion of the types of roles middle managers might potentially play in successful CI implementation, and the resources that would be necessary to enable fulfillment of these roles. In this discussion inspiration from studies of middle manager change roles are included, which might inspire future research intending to define middle manager roles in continuous improvement.

A brief review of “traditional” CI

The basic premise behind CI is that organization-wide participation in small incremental changes should enable an organization to attain and sustain competitive advantage (Boer et al., 2000; Bessant and Francis, 1999). At the most basic level, CI involves using problem-analysis and problem-solving tools to improve on existing operational practices, to ensure quality and reduce costs associated with waste (Rijnders, 2002; Boer et al., 2000). More advanced CI practices include an understanding of such issues as (internal and external) customer/supplier relationships, market conditions, cross boundary cooperation, and the organization’s developmental objectives, as well as how each of these relate to the individual’s and companies’

performance (Bessant and Caffyn, 1997). Both *kaizen*, the Japanese version of CI, and earlier implementations of CI in the Western world emphasize high shop floor involvement, often in the form of teams, as shop floor employees are expected to possess the first hand knowledge of the work processes that is necessary for the planning and implementation improvement activities (Schroeder and Robinson, 1991). The most common way in which shop floor employees contribute to CI is by suggesting problems with the work processes to be solved; more mature teams may also participate actively in the planning, implementation, evaluation, and maintenance of improvements (Rijnders, 2002; Boer et al., 2000; Bessant and Caffyn, 1997).

After several years of more failures than successes with CI implementation, greater focus has been directed towards the role of top management in successful CI implementation. For instance, Kaye and Anderson (1999) cite senior management commitment and involvement as one of the ten key criteria for achieving and sustaining CI. It is expected that greater top management involvement in CI should address a number of specific problems with CI implementation, including the alignment of CI activities with the organization's strategic goals, the establishment of systems, procedures, and policies throughout the organization that support successful CI, and to encourage development of a "CI culture" (e.g. Kaye and Anderson, 1999; Schroeder and Robinson, 1991; Bessant and Caffyn, 1997).

Thus while there has been a move to extend (though not divert) the focus from the shop floor to emphasize top management involvement in CI, there has been little attention given to the role of middle management. At most, middle managers are mentioned in the context of team coaches or as those who support the planning and coordinating of CI activities to be implemented by the teams. Lacking however is empirical data that reflects how middle managers can support CI in their own right. In order to better understand the potential role of middle management in CI,

a brief review of the literature on the roles and functions of middle management in general operations management and strategic implementation is provided below.

Middle management's role past, current, and developing role in the organization

During the 1980's, the middle rungs of the organizational ladder have been severely reduced as organizations have attempted to shift from planning and control systems to more flexible forms of operational management through mass down-sizing, restructuring to flatter organizational structures and reengineering processes (Floyd and Wooldridge, 1994). While some (e.g. Womack, 1990) may have viewed the dwindling ranks of middle managers as a positive trend towards leaner production, others have sought to redefine the way in which the roles and functions of middle management are perceived. Floyd and Wooldridge (1994) have developed a typology of the roles and functions of "post" decentralization middle managers from another perspective, namely in terms of strategic implementation (see Figure 1). Their model suggests that middle managers have four primary roles: 1) implementing deliberate strategy 2) synthesizing information 3) championing alternatives 4) facilitating adaptability. Synthesizing information in this context refers to framing information being presented to top management in such a way as to control and/or influence their perceptions; championing alternatives also involves exerting influence on top management, as middle managers propose new proposals and initiatives for consideration. Facilitating involves helping subordinates accept and cope with change processes. The last type of behaviors Floyd and Wooldridge (1994) include in their typology are those related to implementing deliberate strategy, which is the most traditional approach to strategy, in which middle managers cascade top management strategy into operational actions. Although it is not explicitly accounted for in the model, some of the behaviors assumed in synthesizing information may also be related to "facing outwards", as the

information provided to top management would often involve perceptions of external factors (e.g. market, customer and supplier conditions).

		Behavioral Activity	
		Upward Influence	Downward Influence
Cognitive Influences	Divergent	Championing Strategic Alternatives	Facilitating Adaptability
	Integrative	Synthesizing Information	Implementing Deliberate Strategy

Figure 1: Based on the Typology of Middle Management Roles in Strategy (Floyd and Wooldridge, 1994)

Efforts to explore and describe the (potential) role of middle managers have also been made in the areas of general change management, knowledge integration, and knowledge creation. On the other hand, Hales (2002) claims that despite decentralization, the functions and roles of middle managers have gone largely unchanged and that organizations which purport middle management empowerment and influence on change initiatives do so because it improves their image in the external environment (e.g. to potential applicants, competitors, customers). Thus, “senior managers had *re-branded* rather re-formulated their organizations and their middle managers” (Hales, 2002, p. 11). Further, he explains that with re-branding, “the emphasis is less upon describing the specific requirements of these new roles as upon evoking the new identity and image of the managers who undertake them” (Hales, 2002, p. 16).

The brief review presented here indicates that while the potential role of middle managers is recognized within the areas of general and strategic operations and change and knowledge

management, this potential may not be fully exploited in practice. In addition, no empirical data are available to help define the role of middle management as it pertains specifically to CI. In the following section, a case study in a manufacturing company in Denmark is presented in order to shed light on how middle managers are and potentially can be involved in CI initiatives. Thereafter, the experiences in the case are reviewed in relationship to the typology in Figure 1, and inspiration from other models of middle manager roles in change projects are included in the discussion, so that a preliminary definition of the roles of middle management in CI can be developed.

Methodology

The longitudinal case presented below was conducted according to action research methods, in which the first author facilitated a CI implementation initiative planned in conjunction with members of top management. Originally, the plans involved facilitation of CI *only* at the shop floor level (i.e. not middle management); however, due to top management's request, the study (see below) was expanded to include facilitation of CI with a middle management group and this is the case presented in this paper. Specific information regarding the setting and the activities to be analyzed are provided in the case descriptions below.

The Case Company

Top management in the case company stated that CI had been implemented approximately five years prior to the time the first author began an eight-month study on CI implementation (see Jørgensen et al., 2003; Jørgensen et al., 2004). Until this point, some organizational restructuring had transpired, primarily in the form of re-organizing the shop floor operator shifts into teams, forming a cross-functional "middle management" team comprised of the production supervisors

from each of the eight functional departments, and establishing a top management team. With the exception of a few independent business management courses, the middle managers had not received any training or development in CI implementation for themselves or for their respective teams. From the perspective of the top management team, the CI implementation process had begun according to a top-down approach, but due to continued focus on the shop floor teams and their development could appropriately be described as bottom-up. Examples of shop floor level suggestion and reward systems were provided as evidence to the bottom-up perspective in the organization.

As mentioned previously, the initial research plan involved facilitating a CI implementation initiative at the shop floor level, but the study was extended to include CI facilitation with a group of team leaders/middle managers at the request of top management. The top management explained that their wish to involve the middle management group stemmed from what they (top management) perceived as a lack of willingness to work cooperatively; in fact, the members of the top management team viewed the middle managers as a significant barrier to successful CI development within the organization. Top management explained that while the middle managers had been quite effective in coaching their own teams in CI and in supporting minor CI projects at the team level, they had not adopted CI practices within their group. As described elsewhere (Jørgensen et al., 2003; Jørgensen et al., 2004), approximately 18 hours of workshops and meetings were conducted with the middle management team; in addition, the data collected includes numerous intermittent interviews and observations over the course of one year.

Initially these meetings with the middle management team revolved around addressing serious issues with top management and various organizational practices that preceded the study, but over time they focused on implementing improvements that exceeded those commonly associated with CI. Specifically, the middle management team established several internal

networks that provided links between members of the group and other departments, such as human resources, new product development, and top management. At the conclusion of the original study, the changes implemented by the middle management team could be observed not only for the middle managers, but also in other areas of the organization. These changes included improved communication between functional departments and across organizational levels (i.e. middle-up and middle-down), the establishment of “learning environments” in which members of the organization shared experiences with improvement efforts, and a tangible willingness to work cooperatively across organizational boundaries (Jørgensen et al., 2003).

Almost one year after the end of the study and over two years since its start, follow up interviews and observations were conducted with six of the original team leaders and three recent additions to the team. The purpose of the follow up data collection was to ascertain whether any of the implemented changes had been sustained over time. Further, the organization as a whole had experienced considerable changes during the time since the study began, including being sold to a larger international concern and consequently, the establishment of a new business strategy. Therefore, there was also interest in determining how the management team had fared through these events.

According to the middle managers, the previous year was characterized by a great deal of transition, with many changes in the way in which the production facility operates on a daily basis. For instance, the company had been forced to adopt a much more customer-oriented perspective than practiced before. In order to meet these “new” demands, additional emphasis had been placed on employee training, centralized accounting and reporting systems, and quality management practices. The middle managers described a number of successful initiatives that had been taken to address these issues, including an “expert user” program among the shop floor operators who demonstrated skills in using the new computer systems and could share their skills

with other operators. In addition, because of the increased willingness to cooperate, recent experiments with job rotation between departments had been quite positive. Suggestions for a job rotation plan had previously been submitted by the teams themselves, but top management had denied them, stating that the operators were not yet ready to undertake more responsibility.

Both of these solutions were considered especially meaningful because the shop floor workers themselves had been actively involved in their planning and implementation. The middle managers felt that this involvement facilitated the shop floor operators' acceptance of the many changes that were taking place in the organization. The middle managers also reported that the internal networks that had been established during the study were still functioning well, even though there had been some shifting of positions within the company. The middle management group was especially pleased that their network link to the top management group allowed them to actively participate in the short and long term developmental planning. Members of top management agreed that this involvement provided the decision-makers with much more accurate information about what was occurring at the different levels of the organization. The human resource manager also reported that having a network link between the middle management group and his department allowed for better recruitment and selection policies with respect to filling both available positions on the shop floor in the middle management group itself.

Discussion

In the case study presented here, a top-down approach had initially been employed when introducing change processes within the organization, but top management chose to support a more bottom-up approach to the implementation of change after a period of time. Middle management's role in the CI implementation was not given any attention in the company until they were perceived as a barrier to the planned changes and the study presented in this paper

marked the beginning of a concentrated focus on the middle management. Through regular workshops and meetings, the middle managers were able to gain experience in problem analysis, problem-solving, cooperative group work, effective communication, and the planning and implementation of various CI activities. The middle managers were also able to extend what they had learned during the study towards planning and implementing organization-wide improvements.

It is also through these functions and behaviors that the role of middle management in CI can be considered against the typology of roles of middle management developed by Floyd and Wooldridge (1994) and described previously in this paper. Although this typology relates to the roles of middle management in strategic development in a general sense, there do not appear to be any contradictions when applying it to strategic development compatible with CI. In fact, Bessant and Francis (1999) stress that alignment of CI activities with organizational strategy is critical in terms of CI development. They suggest that one of the primary ways in which an organization establishes “strategic CI” (Bessant and Francis, 1999, p.1108) is by policy deployment, which may be compared to what Floyd and Wooldridge (1994) refer to as implementing deliberate strategy. Therefore, each of the core elements in the typology (see Figure 1) will now be discussed in relation to the presented literature and the case example described. Possible variations of the typology in terms of the role of middle management in CI will then be explored.

- *Facilitating Adaptability*: Floyd and Wooldridge (1994) characterize facilitating the implementation of change processes among members of the organization as having a downward influence, which most accurately describes the more traditional perspective of the team leader in CI implementation (e.g. as team trainer, leader, and/or coach). The

middle managers in the case organization can be viewed as having facilitated the teams' adaptability to the changes occurring after the company's merger, through actively involving them in cross-functional training. In addition, the middle managers modeled good CI practices for the teams by successfully implementing their own improvement projects. Interestingly, Delbridge and Barton (2002) have discovered an emerging tendency in the UK and the USA towards incorporating CI specialists into the organization to facilitate training, development, and coaching of teams involved in CI. Thus, many organizations may be seeking these resources from outside of the organization to facilitate adaptability to CI, rather than incorporating these functions into the role of their own middle managers.

- *Implementing Deliberate Strategy*: Floyd and Wooldridge (1994) characterize the translation of strategic planning to the operational level as having a downward influence, which is compatible with the more traditional view of the role of middle management in strategy. As mentioned above, Bessant and Francis (1999) suggest that policy deployment is a critical component in CI development. These types of functions also appear to be consistent with the traditional roles of at least some middle managers in organizations implementing CI. For instance, Delbridge and Barton (2002) write "that the bulk of responsibility for the management of continuous improvement within their area fell to the team leaders" and that "[m]ost plants reported that the team leader position is the central link in gaining technical support for the implementation of shop floor teams" (p.687). Because the middle managers were following top management's mandate to coordinate the CI facilitation with the work processes, it is possible to deduce that they were implementing deliberate strategy. However, the literature suggests that this function

entails interpolating top management's more broad objectives to concrete operational goals, which these middle managers did not do. During much of the five-year period preceding study described here, the middle managers had in fact focused their efforts on interpolating organizational objectives so that the teams could understand and use them in their own CI planning.

- *Synthesizing Information*: Floyd and Wooldridge (1994) characterize the framing of information being presented to top management in such a way as to influence their perceptions as having an upward influence. How (or if) information is synthesized is difficult to determine, but it is possible that the middle managers exerted their influence with top management to gain approval of the (previously denied) job rotation and “super user” programs. Additionally, these middle managers became actively involved in various internal networks in which information synthesizing would be expected and their influence in such areas as HR (e.g. selection, training, and development) and organizational (e.g. short and long term planning) development was already evident in the final interviews.
- *Championing Strategies Alternatives*: Floyd and Wooldridge (1994) characterize serving as champions of new proposals and initiatives when presenting them to top management as having upward influence. To what extent the significance of championing *alternative* strategies is relevant to CI implementation is also difficult to discern, however there is empirical evidence that the presence of change agents or change champion is an important enabler of successful CI (e.g. Bateman and Rich, 2003; Delbridge and Barton, 2002; Jørgensen et al., 2003). In this context, a change agent or change champion must not only

exude enthusiasm for CI persistently over time, but must also be in a position to facilitate upward and downward communication, i.e. a middle-outward communication (Jørgensen et al., 2003). In the case organization, the researchers were at least initially the only change champions in the organization. From this discussion, it appears that the typology for the role of middle managers in strategic implementation can be used to some degree to define the role of middle management in CI. Specifically, middle managers tend to influence downward by facilitating adaptability of CI and through implementing deliberate strategy. Further, it may be possible at least to infer from the cases that middle managers exert influence upwards by synthesizing information and championing *CI* (rather than alternatives).

The typology used for the analysis may however be lacking in terms of a few important issues. Firstly, there is no role included that explicitly address relations to peers, and secondly the typology does not address middle managers' struggling with interpreting their own roles. For example the middle managers in the case study represented each of the functional departments in the organization, and cooperation across boundaries played an essential part in the CI implementation. The managers also felt that becoming involved in various lateral networks was a critical factor in supporting CI in the company. It is through the cross-functional planning of improvements and the establishment of internal networks with consequences throughout the organization that these managers began to exploit the unique potential afforded them by their positions in the middle of the organizational structure.

Therefore, it would be appropriate to expand the typology to encompass cross-functional or "facing sideways" behaviors so as to support cooperation between departments. Just as important, the typology fails to account for the potential middle managers have for implementing CI

initiatives at the middle level of the organization. The middle managers in the case study did not only interpolate top management objectives into concrete operational practices for their subordinates, but also used these organizational goals to implement CI relevant to their own work processes (e.g. cross-functional planning and problem solving, opening communication channels, etc).

Moreover, based on another case study an alternative typology has been developed for middle managers' roles in change projects (Balogun, 2003), which complements the model of Floyd & Wooldridge (1994) well. The argument behind the latter model is that during a specific change project middle managers fulfilled four different roles (see Figure 2). The actual change project implied an increased focus on customer service and cost efficiency (as is the case in many CI projects). The company was going from one having only one department to four departments. In the re-organized organization only one of the new departments took care of sales and customer service; while the three other departments now functioned as service departments that had contracts with the Sales department.

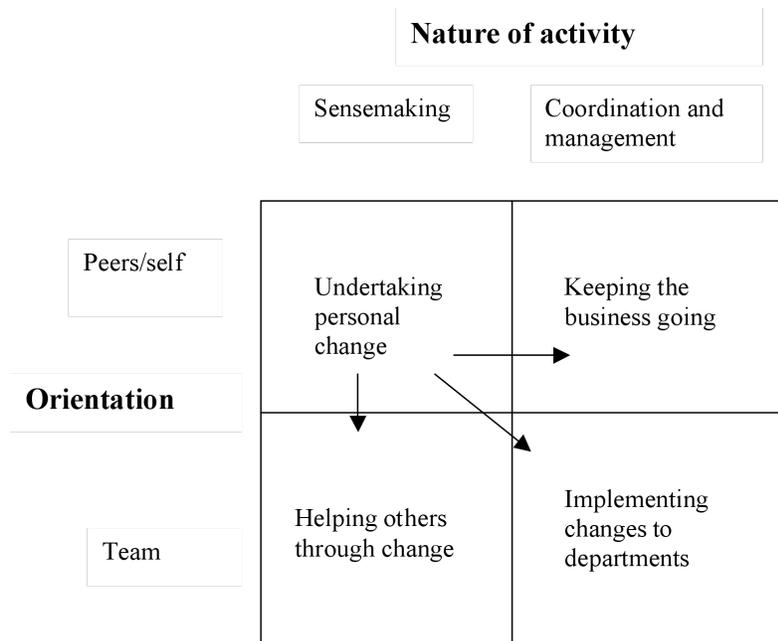


Figure 2: *Interpretation as the key middle manager task (Balogun, 2003 p.79).*

As illustrated in the figure above, middle managers in the study were expected to keep the business going, and to implement certain changes to their respective departments in the same period. However, at the same time the need for helping others, or what Floyd & Wooldridge (1994) labels as facilitating adaptability, had huge impact on their daily job as middle managers; secondly they used much energy on undertaking personal change, and being in dialog with peers. Based on her study Balogun (2003) concludes that the key role the middle managers played in the change process was related to their own coping with, and sense making, of what was going on in the organization. The role of undertaking personal change apparently provided energy to the other three middle manager roles. However, this crucial role is not explicitly dealt with in the Floyd & Wooldridge typology.

Furthermore Lüscher et al. (2008) made similar conclusions in relation to an action research study among middle managers at Lego A/S. The study concerned a change project in a production department, which implied that former production line managers were becoming responsible for each two or three self-managing teams. In this situation the middle managers faced many dilemmas of how much they should intervene in the management of the teams. Through sparring sessions with one of the researchers (a psychologist) they reached a point in their sense making process where they became able to approach their managerial doubts not as dilemmas but as paradoxes. This helped middle managers overcome the contradictions that they

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experienced in relation to subordinates and superiors, and is an example of a process of what Balogun (2003) labels as “undertaking personal change”.

Conclusion

The objective of this article was to begin to define the role of middle management in CI. Defining this role first entailed reviewing the current CI literature to determine some of the functions and behaviors that are associated with successful CI implementation. Thereafter, the paper presented a brief overview of the literature relevant to the role and functions of middle management in operations and change management and strategic implementation. Floyd & Wooldridge (1994) have sketched out a few roles that middle managers should cope with in relation to their upward and downward influence in the business strategy. A case was analyzed according to the framework of a typology of the roles of middle management in strategic implementation, but found lacking in terms of classifying the important role of establishing and sustaining cross-functional cooperation and organizational boundary spanning communication as well as implementation of middle level CI activities. Moreover the typology fails to focus explicitly on the importance of a personal change and sense making for middle managers involved in the change process. By adding the models of Balogun (2003) and Lüscher et al. (2008), however, it is possible to approach a more implicit part of being middle manager in a process of change as for example continuous improvements.

One direction for future research would involve investigating the conditions necessary for middle managers to fulfill these roles. More empirical data studies would be beneficial. To this end, comparative studies should be conducted in multiple organizations in which either top-down, bottom-up, or middle-outward CI strategies are used. Moreover, recently, the typology of Floyd & Wooldridge has been criticized for being too functionalistic and based on top

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management's explicit role expectations on behalf of middle managers sense making and agency (Mantere, 2008). In a larger perspective this critique must be taken into account in future research of middle manager roles in continuous improvements.

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