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Stakeholders' views and experiences of leadership education in construction: suggestions for improvements

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Abstract

In construction-related education, leadership development is generally a scarce feature in education curricula. Yet, the critical need of "good" leadership at all levels of construction-related organisations is being increasingly highlighted in research and in practice. In this paper, we focus on how leadership competence at middle-manager level, e.g. site managers, may be enhanced and we examine how higher education may address this need. The overall aim is to suggest how leadership development may be introduced and/or improved in programs and courses. Rather than using a questionnaire or individual interviews, the data was collected in three focus groups. Each group addressed one level of higher education: vocational, bachelor and master, respectively, and included practitioner, teacher and student stakeholders. The focus groups were recorded. The field notes and the photographic documentation strengthened the reliability of our interpretations. The paper describes how focus groups were used, discusses the aggregated findings from the groups and suggests some ways in which education curricula can be improved to incorporate transferable leadership development and competence to contexts in which graduates will operate.

1. Introduction

Although, leadership – as phenomenon, process, activity and ability – permeates all levels of organizations, the vast literature on the topic focuses on top-level leaders and tends to be generic and prescriptive. Rather than studying

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the work leaders actually do, how the practice of leadership evolves on a day-to-day basis, this literature tends to adopt a heroic perspective, viewing leaders as charismatic individuals capable of convincing others to follow their visionary lead. Despite a growing body of empirical and interpretative research on the practice of leadership e.g. practice theory of management (e.g. Tengblad, 2012; Barker, 1997; Barley & Kunda, 2001) and strategy-as-practice (e.g. Golsorkhi et al., 2010) to name only two perspectives, it is the first named prescriptive literature that pervades leadership training in Higher Education as well as in organisations. The consequences of this state of affairs are a growing critique of leadership training and calls for empirical research on the design and delivery of such education (Bolden et al., 2011; De Rue et al., 2011). To foster sustainable leadership training in higher education, there is a need for better knowledge and understanding of what it means to do leadership, i.e., the processes, relationships and actions that unfold in ordinary daily exchanges between people in a workplace.

Based on a case study of managers/leaders, Alvesson and Sveningsson (2003) suggest the need for re-thinking leadership so as to take into account the "mundane", i.e. small acts that managers carry out every day such as listening and chatting, and which are often trivialised. Sveningsson and Alvesson (2012: 84) further elaborate their notion of mundane leadership, describing the key activity as "influencing expectations, meanings, and values about what is desirable and necessary related to everyday work". In other words, mundane leaders can be seen as sense givers (Gioia & Chittipeddi, 1991). Holmberg and Tyrstrup (2010) found that leadership as carried out by 62 managers was best described as event-driven actions arising mostly from unforeseen happenings. Solving the many large and small unforeseen occurrences on a daily basis demands flexibility, experience, hindsight, judgment and improvisation, all of which are necessary qualities for organizational and situational sense-making (Weick, 1995). Styhre (2012), drawing on Lindblom (1959), describes the leadership of construction site managers as "muddling through", i.e. skilfully solving problems as they inevitably crop up, and trying to be everywhere at the same time.

In the construction-related education, leadership-development remains a scarce feature in education curricula in higher education. Yet, the critical need of "good" leadership, at all levels of construction-related organisations, is being increasingly highlighted in construction-management research and practice. In Sweden, for example, the trade press in the construction sector as well as in other industrial sectors has been deploring the dearth of leaders and managers at middle levels; in fact it seems to be more usual these days that their number is diminishing rather than augmenting. To change this trend, the EU FLIBA program, *Sustainable Leadership in the Building Sector*, was initiated as a joint collaboration of Scandinavian countries. The main focus of the program, which is ongoing, is to improve leadership at operational levels through improving vocational and higher-education curricula. In order to achieve viable curricula, the current state of affairs in the building sectors needs to be mapped. Questions such as "What does leadership entail at the operational level?", "What do managerial leaders actually do on a day-to-day basis?", "What competences and skill do they deploy?" and "What is needed in order to foster these competences in educational settings?" The study reported in this paper is a part of the larger FLIBA program.

We have focused on the documented need of enhanced leadership competence at middle and lower manager levels, e.g. site managers and foremen, and examine how higher education may address this need. The overall aim is to suggest how leadership-development may be introduced and/or improved in programs and courses. To fulfil this aim, we have sought answers to the following research questions: 1. What particular knowledge and competences do today's site managers need in their daily practices? 2. What kind of education curricula would be needed to cover these knowledge areas and foster these competences? 3. What is missing in current curricula and how can these be improved.

Rather than using a questionnaire or individual interviews, the data was collected in three focus groups, organized around the three research questions. Each group addressed one level of higher education: vocational, bachelor and master, respectively, and included practitioner, teacher and student stakeholders. The focus groups were recorded, and field notes and photographic documentation strengthened the reliability of our interpretations. Here we describe the method used and the main findings. We also discuss some implications for curricula design in higher education and suggest possible improvements.

2. Study design

We sought a design that would enable us to draw conclusions based on empirical evidence rather than on our own hypotheses and inferences from our experiences as teachers and researchers. Rather than rely on interviews in which

respondents would individually provide their accounts of the information solicited, we wanted to create dialogues between stakeholders in which different perspectives could be wetted against each other, discussed in an open forum, and if possible give rise to aggregated, new ideas.

Interview studies tend to view context as stable and homogeneous, as a given rather than a changing, highly precarious institutional environment. The discourses and conversational enactments that are documented, and on which researcher inferences are based, are embedded in contextual factors that manifest the causal effects of both the social and the discursive practices and agencies of the investigated phenomena. Moreover, research, be it quantitative or qualitative, is by its very nature selective. We make sense of our empirical objects of study by choosing what we wish to represent; and in that representation we consciously or unconsciously exclude other accounts. Furthermore, when we carry out qualitative research, we participate in enactment and interpretation processes in which our à priori assumptions may bias our choices of method as well as our representations of "the truth". A research methodology, we argue, should have built-in learning loops for all the participants in the research. For researchers this would mean that the methods should include time and space for ongoing testing of, and reflection on, assumptions and/or hypotheses. The method should also allow time and space for respondents to reflect and react over preliminary findings.

In order to achieve as holistic a representation as possible of the contexts we wanted to interrogate, we adapted a three-phase (exploratory phase, focused phase, and feedback phase) iterative multi-method that would ensure triangulation, flexibility and reflexivity for both researchers and respondents (e.g. Räisänen & Gunnarson, 2004; Gunnarson & Räisänen, 2008).

2.1. Methodological procedure

The multi-mode method (see Fig. 1) builds on already prevalent social-science methods, observations, in-depth-interviews and focus groups, which we have combined and adapted for this research study in order to achieve triangulation in the data sources. In the following we elaborate on the exploratory and the focused phase, which have so far been carried out, and only briefly mention the feedback stage, which has yet to be done.

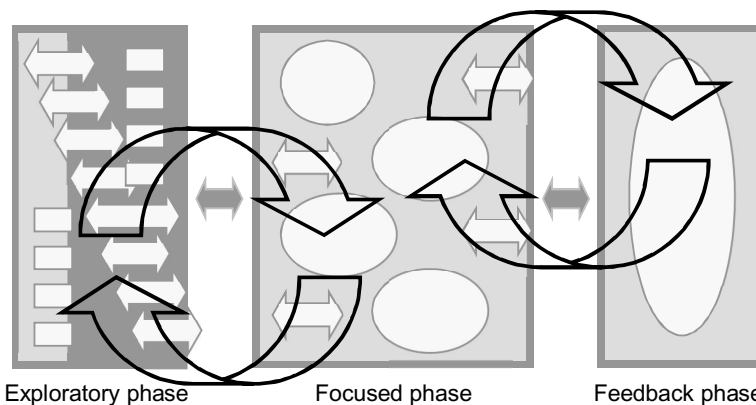Exploratory phase   Focused phase   Feedback phase

Fig. 1. The three-phase iterative multi-method (Legend: squares = field observations; white two-way arrows = interviews; horizontal ovals = focus groups; vertical oval = seminars; curved arrows = learning loops). (Räisänen & Gunnarson, 2004)

Exploratory phase: Two years prior to the current study, we had carried out an in-depth interview study of 12 site managers and 20 supervisors/foremen who worked under these site managers. The aim was to investigate site-managers' roles, function and responsibilities, their leadership, in their day-to-day practices (Josephson et al., 2013). The interviews with the site managers, lasting about 2 hours each, took the form of life stories; the supervisors and foremen, on the other hand, were asked to comment on their site-manager's work, role and responsibilities in the

projects. What we wanted to uncover was what site managers actually do rather than what their job descriptions (or they themselves for that matter) formally say they do. The data and findings from this study served to inform the design as well as thematic orientation of the focused phase.

Focused phase: Focus groups seemed to be the best method for fulfilling the aim and answering the research questions posed in the current study. In contrast to group interviews, focus groups are centred around a group discussion focused on some kind of collective activity (e.g. Kitzinger & Barbour, 1999). The participants generate the data through their interactions and conversations. Compared to personal interviews, focus groups are more democratic, flexible, multi-vocal, and dynamic.

The researcher's job is to establish the discussion topic, to facilitate, to provide appropriate back-channeling, and to ensure that all the participants contribute to the discussions. As Barbour (1999) suggests, focus groups are a versatile tool for studying change since they can *"tease out shifts in perspectives and invite participants to comment on these as they unfold"* (p. 118). Moreover, the focus group process itself creates a forum for reflection for its participants, which in turn may generate new ideas and perspectives. By assuming an unobtrusive role, the control of the researcher is mitigated which reduces the risk of bias.

In this study, three focus groups were carried out, respectively addressing three levels of higher education: vocational education, bachelor level and master level. Higher vocational education consists of post upper-secondary-school specific workplace-oriented programs designed and carried out in close collaboration with industry. Moreover, the programs may differ from year to year depending on the needs of specific industries. The duration of the programs are generally two years, during which students acquire the skills and competences of the specific craftsmanship of a profession.

Rather than creating homogeneous focus groups, we chose to have mixed groups, consisting of professional practitioners, teachers/program coordinators and students from construction-related fields. In each of the groups we had 9 participants, which is the recommended top limit of participants. These were evenly distributed among the three categories of participants, in accordance with e.g. Barbour (1999). The three focus-group sessions were similarly structured in terms of the themes addressed and the techniques used, following Kreuger (1994). The duration of each focus-group session was three hours of focused activities and discussions followed by a communal lunch for debriefing and mingling.

Three questions were addressed: 1. What competencies are most important for site managers of middle to large construction projects? This was a crucial question since the focus groups were not homogeneous and the different categories could have very different world-views of what the actual work of a site manager on a day-to-day basis demanded and entailed. 2. How should a higher-education curriculum (at each level) be designed to foster these competences? 3. What elements are missing in today's curricula? Each question was dealt with through focused activities designed to elicit individual perspectives as well as collective reflections on these perspectives.

The participants were given three large post-it cards and asked to individually note one important competence on each card. The cards were then collected, and were expanded upon in turn by their respective author to ensure that everyone understood what was meant by the word. The card was then posted on a white board and a brief collective discussion ensued. As the activity progressed, a pattern began to emerge on the white board. The participants were asked to individually select what they considered to be the three most critical capabilities from the arrangement created on the whiteboard. This individual prioritization served as the basis for the following activities. To elicit answers for the second and third questions, the participants were sorted in smaller groups containing a representative from each category, and a similar process of collective brainstorming, short-listing and publishing on the whiteboard was followed.

Feedback phase: (Note that this research is still ongoing and neither the iterations mentioned earlier nor the feedback phase have yet been completed). The rationale for a feedback phase is that one of the problems with academic research is that practitioners seldom gain timely access to the results of the research. One reason for this lack of communication is that key actors in industry are not prone to reading academic articles or conference papers, and academics seldom publish in trade journals. The purpose of this phase is therefore to provide feedback of our analysis of the collected data as timely as possible and to test the researchers' reactions to and interpretations of our inferences. These sessions are usually carried out as workshops or seminars, in which as many of the respondents as possible may be gathered as well as other interested stakeholders. The feedback obtained from these events may then serve as further data, and to strengthen triangulation. To date, the participants in each focus group have

received a summary of the outcomes from the respective focus group they attended including a request for comments if they disagreed with any of the information. No disagreements have been voiced so far; however, the participants have commented positively on the focus-group sessions, which enabled them to verbalise their thoughts and share ideas concerning both work and education contexts.

3. Findings

In this section we briefly present our analysis of the focus-group data. We first report each focus group's answers to the three questions posed and then provide a brief discussion of the implications of the results for future curricula design.

Vocational level: In answer to the first question, the competences that dominated the whiteboard consisted on the one hand of general project-management skills such as planning, cost awareness, and on the other, social competences, e.g. personal competences (being forthright, clear, flexible, self-critical, enthusiastic) and interpersonal competences (ability to listen, to communicate and to build teams). Interestingly, the practitioners mostly highlighted social competences while the teachers prioritised project knowledge and technical competences. The choices of the students were more vaguely formulated and tended to be generic; they chose words like "competence" and "knowledge" and had difficulties specifying what they meant.

In answer to the second question, concerning how the curricula at this level should be designed, there was strong agreement among all participants that there should be close collaboration between teachers and practitioners in order to ensure that the vocational education be as up-to-date as possible and follows the development and needs of particular industry craftsmanship. The three elements that must be included in the education at this level are more group work, more traineeships/practice in real construction settings, and more people focus (i.e. psychology).

The answers to question three, what is lacking in vocational programs, correlated well with the answers to the second questions. In other words what the current education lacked was practice in the real world of construction. Beside a number of suggestions for improving the curricula, the participants particularly emphasized a need to review the recruitment process to the programs, mainly by instituting personal interviews with applicants. Leadership competence per se was not mentioned in this focus group.

Bachelor level: In answer to question one, the members of this focus group also prioritized social competences over technical knowledge. However, compared to the vocational group, there were some interesting differences. Here the emphasis was on interpersonal competences such as communication skills, team building and leadership. Representatives from all three categories, practitioner, teacher and student, prioritized various forms of people skills. In terms of technical knowledge, all the practitioners highlighted planning activities whereas the teachers highlighted technical knowledge and result orientation as important.

Question two gave rise to much discussion. There was an emphatic call for a stronger link between theory and practice. The participants were in agreement that some kind of traineeship on construction sites and in different branches of the industry should be mandatory in the bachelor education. The participants wanted new pedagogical approaches e.g. situation and problem-based learning and learning-by-doing, and novel tools e.g. role play, simulations and case studies. They also wanted leadership to be a continuous, underpinning theme throughout the curricula, and considered tasks that fostered critical thinking to be imperative.

The answers to question three, however, gave rise to some contradictions. While the participants advocated a need for "soft knowledge", focusing on group dynamics and social psychology, here they emphasized a need for more industry and branch-specific knowledge. They criticized the construction-related curricula for being too general on the one hand, and too specific on the other. Students lacked a holistic picture of the industry and of the whole construction process (from idea to maintenance). After further scrutiny of the data, we understand that what is sought by this focus group is a balance between the technical and social, and that both be firmly anchored in the processes and practices of the industry rather than stemming from theoretical abstractions.

Master level: Like the other levels, here too social competences were highlighted rather than technical ones. However, these participants, especially practitioners, chose more specific and specialised competences such as decision making, mediation and negotiation abilities, which require knowledge and expertise beyond communication training. In terms of interpersonal communication, practitioners highlighted the ability to support and motivate their co-workers. Practitioners also prioritized juridical and business administration capabilities.

Teachers and students tended to concentrate on various types of communication skills such as with different internal and external stakeholders. They also highlighted teambuilding and situational understanding and flexibility. When the participants described their understanding of their prioritized competences, and their post-it notes were arranged on the whiteboard, a complex web of interrelated competences emerged, all of which entailed interaction and interchanges in a variety of different contexts with diverse interlocutors.

The answers to the second question added to the complexity generated on the whiteboard. Beside the generic competences already mentioned in the previous focus groups, these participants desired master curricula that were broader than those currently offered as well as more depth in knowledge areas that are critical for survival in today's global knowledge society. To obtain depth, participants would like to see specialized theoretical courses such as relevant law and finance courses, ITC (BIM) courses, HR-specific as well as project-psychology courses, but they also emphasized the importance of integrating and anchoring the theoretical knowledge in the current developments and needs, the possibilities and constraints, of the industry. Such integration demands novel pedagogies such as problem-based learning, case studies, a situational approach e.g. to leadership and management as well as novel methods such as workshops rather than lectures, more practice-based exercises and short internships.

Given the answers to the first two questions, it is not so surprising that the participants in the master-level focus group suggested some categorical changes of the traditional construction-related curricula. In summary they wanted much more collaboration between the industry and academia and a stronger integration of hard and soft knowledge so that synergies may be obtained. They advocated emphasis on processes and life cycles rather than on tools and product. The future curricula that were visualized on the white board when all these suggestions were posted and discussed, presented a very different curriculum to those currently being taught.

4. Discussion

All the participants in the three focus groups were in agreement that current traditional curricula lacked sufficient internship opportunities, links between theory and practice, knowledge areas such as social psychology, finances, and interpersonal communication. Moreover, no time is provided for reflection, question raising and follow-up of the topics addressed. In other word, there seems to be a serious discrepancy between what is taught and what is actually practiced and needed in the work place. Leadership competences of various kinds are important, but lacking in higher education curricula. They all agreed that leadership is a dynamic social process involving several individuals interacting in various situations rather than a set of preferred qualities possessed by one rational human being. Managerial leaders need a broad repertoire of various competences, both social and technical, as well as a variety of tools and methods, which may be applied as the situation demands. It is the ability to judge what could work in each unforeseen situation that requires training – a kind of knowing in practice.

Björklund and Jönson-Bergström (2003) interviewed 100 leaders and listed seven qualities that all these leaders stressed: passion, self-knowledge, motivated, ability to build effective teams, ability to communicate clearly, to be present/engaged, and to have courage. Our respondents also highlighted all of these qualities, either implicitly or explicitly.

However, conventional engineering education and organizational training courses tend to follow a positivistic mindset and approach to problem solving rather than fostering a constructivist mindset trained to deal with wicked problems (Rittel & Webber, 1973) and attentive to double-loop learning (Argyris & Schön, 1978). Although, research on learning has increased exponentially since the late 70s, so far only drops have trickled into engineering education. Schön's work, for example, resonates well with the focus group participants' suggested reforms for future higher-education curricula.

Schön (1983) was critical of what he termed the "scientification" of engineering knowledge to the point where the embodied know-how of, and pride, in engineering craftsmanship has disappeared. In the construction and building sectors, the pride in building-site craftsmanship seems to prevail even among higher-level line managers (Löwstedt & Räisänen, 2014). A consequence of the scientification of higher education has been the decoupling of theory from practice, which was a complaint that permeated all the focus groups. Schön (1983) called for "reflective practitioners," which also applies to teaching and learning. Learning needs to be action-driven and include reflection loops, allowing for both individual reflection and, more importantly, collective reflection. Through collective reflection, students and instructors perspectives and past experiences may be wetted, and new perspectives be

generated. Knowledge becomes a collective endeavour, as it has to be in the workplace, rather that an individual, competitive acquisition to be tested and graded – and then often forgotten.

Schön advocates two kinds of reflective exercises for practitioners and learners: reflection-in-practice and reflection-on-practice. The former entails continuous question raising, where the crucial question is not "what should be done", but "why should it be done in this way" and "what are the consequences when it is done in this way". "Is there a more effective way"; in other words reflecting-in-action nurtures double-loop learning. The later, reflecting-on-action, is in our view an absolutely necessary step to achieve deep learning. This kind of reflection entails reviewing, and following up, on what has been done. Asking similar questions as the ones above, learners reflect critically over the outcome of their actions, the results of their thinking. As an example, we can mention one of the reflection-on-action exercises in a leadership course we offer at master level. In small groups (5-6 students per group), students have to take on the role of project leader and collectively write two kinds of e-mails to their peers: one calling to a meeting to discuss the consequences of an impending organizational change, the other to announce a top-management decision, which is negative for the project. Each group collectively writes the drafts and hands them in for comments. The "best" drafts are posted on the course website, after which follows the reflection-on-action exercise, where each group critiques the posted drafts and their own drafts. We could also call this exercise a kind of benchmarking exercise. The third step is for each group to rewrite their drafts, including the groups whose drafts were posted. It should be noted that the teacher acts as facilitator rather than instructor. This was just one example, of many. We are persuaded that reflection-on and in action would enrich both "hard" technical oriented courses as well as "soft" social-science-oriented courses. In the following we briefly mentions some suggestions for incorporating leadership development in the curricula within the built environment and construction.

5. Some suggestions for improvements

Learning to lead effectively is a lifelong learning endeavor, which need to start early in engineering education and be incorporated as a continuous, sequentially progressive strain throughout the education. For example, it can start by fostering self-awareness and self-criticism; if students are not able to lead themselves, how will they ever learn to lead others! From the self, the progression to the group is natural. Knowledge of group dynamics and group psychology form the theoretical ingredients here, the practice of which occurs in group activities. Linking and reflecting-on and in action concerning one's own group development and dynamics would naturally link theory with practice as well as increase self and group awareness.

The situational contingency of leadership could be highlighted through making the students take a critical stance toward leadership measurement tools; they could examine the affordances and constraints of different models as they apply to different situations. This critical examination could be extended to assessment capabilities models in recruitment processes, and further to examine project-management models, processes and tools and technologies-in use through short focused internships in organisations. If students are trained in reflecting-in and on actions, they will be much more able to embody their learning. A powerful tool to enhance internship learning, as well as all learning, is through verbalizing or externalizing through writing or talking about their observations and experiences.

These are only some suggestions. A more comprehensive suggestion, which does not seem very common in the Nordic countries, is co-op engineering educations, where students work and study simultaneously. These programs, similarly to the vocational programs described earlier, are designed in collaboration with the needs of industry. However, in co-op programs, the collaboration is between specific firms and the university throughout the whole bachelor or master education. In other words, students work half time and study half time, and their practice and studies are tightly linked through the course tasks and their final diploma work. We would recommend that universities examine the possibility of developing co-op programs especially focused on educating and fostering site-managers and other managerial-leaders at operational levels.

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