Exploring the performance of tacit knowledge: How to make ordinary people deliver extraordinary results in teams

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ABSTRACT

Our research question is how do we transform individual and collective tacit knowledge into collective, explicit and actionable knowledge in teams?.

As our methodological approach, we conducted a longitudinal survey study from 2012 to 2014 to of two teams of staff employed with a Norwegian furniture manufacturer. Each team included designers, production engineers, and salespeople. The survey included the teams and the upper corporate team. The survey monitored the design, production and market processes involved in launching furniture to the marketplace (30 months).

The teams decided to rotate their professional roles as designers, production engineers, and salespeople. This rotating role mechanism and socialization process encouraged the sharing of knowledge. The team members transformed their tacit knowledge into collective explicit knowledge, allowing it to deliver innovative results within a time limit. As a theoretical implication, we have found a workable means of transforming tacit, productive, individual and collective knowing into explicit actionable knowledge. Productive team knowledge was converted into tacit managerial knowledge in upper management personnel, enabling the group to translate knowledge into explicit business actions. We propose, as a general theory, that by rotating professional roles within a team individual tacit knowledge can be transformed into collective explicit knowledge. The productive team tacit knowledge that was transferred was identified as expert, nodding, familiarity and holistic knowledge.

As a practical implication, we show that rotating professional roles within a team works when a team is afforded enough time to develop a socialization process. When professionals are given direction, trust, responsibility and time to develop results, they break out of their comfort zones and deliver extraordinary results together. As a practical implication, we show that this process can be planned, managed and controlled. Role rotation facilitates both the creation of high-performance teams and the transformation of tacit professional knowledge into explicit knowledge. The transformation of tacit knowledge into explicit knowledge helps increase efficiency and effectiveness in knowledge-intensive corporations. Therefore, practically, is it possible to create a corporate flywheel from tacit knowledge? The conversion of productive tacit knowledge into tacit managerial knowledge converted into specific business actions can create an explicit corporate flywheel while maintaining tacit knowledge as a competitive advantage.

1. Introduction

We examine how tacit knowledge converts into explicit knowledge in teams and how this can be managed and controlled by upper management. We first ask what kind of professional knowledge is transferred and managed? We imagine that professional knowledge is divided into four types:

1. Expert knowledge derived from education and practical experience accumulated through one's profession. The expert applies his knowledge, skills, and attitudes to be regarded as a professional. Designers, production engineers, and marketing specialists are, in this case, experts in their fields.

2. Working knowledge wielded by the professional with a working familiarity with a company or branch. All involved professionals have a working familiarity with other fields.

3. Recognizing or nodding knowledge wielded by the professional who is familiar with the current situation, as in this case of Norway's largest furniture company.

4. A combination of expert, working and nodding knowing transformed into holistic professional knowledge. A team leader possesses holistic professional knowledge.

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Expert and holistic knowledge mainly reflect tacit forms of knowledge. The processing of knowledge is tacit, while generated results are explicit. Working knowledge (e.g., knowledge of procedures) and nodding knowledge (e.g., the recognition of patterns) can be stored in information systems and reused. We cannot store tacit knowledge or reuse it, while explicit knowledge can be stored and reused. For any business, access to tacit knowledge is a competitive advantage, while explicit knowledge is available to all companies. The transformation of tacit knowledge into collective explicit knowledge in a corporation generates more possibilities and opportunities for synergy and innovation. We have been examining ways to transfer and share tacit knowledge since Polanyi (1958, 1966) first coined the concept. Polyani defined tacit knowledge as difficult for individuals to articulate because it is practical knowledge developed by individuals as they attempt to master various tasks over time. Nonaka and Takeuchi (1995) presented tacit knowledge as an essential facet of "The knowledge creating company". In their view, an organization creates knowledge through interactions and through conversion between tacit and explicit dimensions. Barney (1991) and Spender (1996) identified tacit knowledge as an essential strategic resource for a firm. Baumard (1999) and Choo (1998) studied the management and importance of tacit knowledge in organizations and teams. Organizations face considerable challenges in extracting benefits from knowledge not converted into a more explicit form. It is considered necessary to observe tacit knowledge under working conditions, to find a knowledge worker as a mentor, or to develop a culture that encourages the development of tacit knowledge. Two later studies conclude that research conducted on the transformation of tacit knowledge has come to a standstill without offering practical implications on the transformation of tacit knowledge (Aarseth, 2014; Pettersen, 2015). In particular, little progress has been made in developing an understanding of the nature and extent of the contributions of tacit knowledge in terms of improving the performance of a business or production process (Shamsie & Mannor, 2013). Wallace, Van Fleet, and Downs (2011) concluded that this lack of progress is rooted in a lack of "established social science research methods … in refereed journals in knowledge management" (p. 19), as articles do "… not meet typical criteria for formal research methods" (p.19) and do not address difficult research questions regarding the performance of tacit knowledge. Zahedia, Shahinb, and Babar (2016) concluded that " organizational contextual information is missing from a large number of studies" (2015, p. 995), making it impossible to understand contexts of tacit knowledge and knowledge sharing. Duguid (2005) concluded that studies based on readily available explicit knowledge to the exclusion of tacit knowledge take us back, not forward.

Wang, Huang, Davison, and Yang (2018) revealed that knowledge transfer positively relates to team performance and that knowledge sharing among individuals is necessary for the effective and efficient completion of team tasks. We do not, however, have longitudinal studies on the rotation of professional work roles in teams as a means of transforming tacit knowledge (Olaisen & Revang, 2017a,b). There is, in general, a lack of research on the transformation of tacit professional knowledge in teams. We decided for these reasons to examine the following research question: How do we transform individual and collective tacit knowledge into collective, explicit, actionable knowledge in teams? We were afforded the empirical opportunity to follow the processes of two teams for the whole study period until the developed product was launched (30 months). The point of production launch represents the linking of tacit knowledge to business performance and industrial production.

2. Methodology and study design

This study is explorative and conceptual and uses concepts of knowledge management together with in-depth interviews with two Norwegian teams creating new furniture designs. The design process represents the meeting of the art of design, craftsmanship and the market. Each team included seven members. Two of the members were professional external designers, two were production engineers, two were salespeople, and one was part of the upper management team.

The design process lasted for two years. We conducted a longitudinal survey study from 2012 to 2014 of the whole design, production and market process. We conducted a total of 21 individual interviews with each team 6, 12 and 18 months after the start of the process. We held two team meetings before conducting the survey and two team meetings after the completion of the survey for reflection and discussion. We sent interview transcripts and summaries of the sessions to each team member to solicit comments, additions, and criticisms. We held a one day-long meeting with each team after the completion of the process. The teams were employed with the Norwegian furniture producer Ekornes. The design process involved collaboration between two Ekornes production sites. We followed the process through to the introduction of the designed furniture into the marketplace. The total survey process lasted 30 months. We interviewed the upper corporate management group (9 individuals) of Ekornes twice (18 interviews) to solicit their views on critical success factors. Each member of the upper management team was given a summary of the interviews and was asked to correct and include additional information through emails and phone calls. After 30 months, we held a meeting with the upper management team. We conducted a total of 60 in-depth interviews and held seven meetings.

We referred to Baugh (1990); Yin (2009), and Richter (1998), together with Alvesson and Kärreman (2007), to develop the methodological basis for the study. We designed the study as a conceptual study focused on developing and applying concepts of the modes of knowing. Our descriptions, analyses, and theoretical approach are thus integrated.

3. The case

Ekornes is a leading Norwegian furniture producer with annual sales of 420 million Euros and 2300 employees. Its main production site has always been located in the small town of Sykkylven (8200 inhabitants) located on the north-western coast of Norway. Ekornes values sustainable production together with the development of its workers' knowledge, skills, and professional attitudes. Ekornes has long cooperated with all senior high schools in its area in educating and recruiting new staff. The company's turnover rate is very low. Ekornes recruits all of its leaders through the Ekornes pipeline system. Ekornes views competence and design as central to market survival. The company has emphasized teamwork through self-governed working groups for more than 30 years. Ekornes shares its profits with its employees and shareholders. No bonuses are given throughout the year because its personnel is expected to work from intrinsic motivation with a permanent salary and yearly bonus dependent on company profits. Ekornes exports 91% of its products to the EU and USA. Ekornes is known for producing well-designed furniture and high-quality products. Its most widely known product is the "Stressless" chair, which has been produced in various styles since 1984 (Ekornes, 2018).

4. Modes of knowing

4.1. Rotation of team roles

Rather than focusing on types of knowledge, we discuss ways of knowing, as it is our perception that knowing involves an on-going process. Types of knowledge only provide us with a snapshot of this process and thus provide us with a static idea of knowledge. Hence, our modes of knowing model applies a fluid scale of non-representable to representable knowing in which boundaries between the levels are unclear (Topp, 1999; Nag & Gioia, 2012). We have selected three knowing modes. One is non-representable knowing, which refers to the