Dialogic Leadership and ICT-intensive Workplaces
How to Enhance Learning Potential?

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Abstract. Work organisations face demanding challenges - expectations to be creative, innovative, agile, competitive, efficient, and adept at utilizing a variety of employee knowledge while understanding and taking care of employee well-being. In addition, organisations are actively implementing new ICT-systems and environments because they appear to increase the effectiveness of interaction and collaboration, workplace learning, and work performance (Korpelainen 2011). Employees are expected to learn and to innovate continuously. Thus, managers often need to be like social acrobats (Ruohonen 2006), combining basic tasks, managing projects, and creating and meeting innovative goals. In addition, they need to be social architects (Barrett 1995) in their efforts to foster innovation and learning. Work units may be potential versatile learning and development spaces (Tikkamäki 2006, Syvänen 2008), but at the same time, existing routines, traditions, and power-relations in organisations create different kinds of boundaries and conflicts (Syvänen 2010).

Dialogic leadership might be one of the key factors in successful modern organisations. Dialogic leadership is a prerequisite to meeting the challenges mentioned above. What are the features of dialogic leadership? How work organisations' innovativeness and renewal can be promoted by dialogic leadership? And what kind of possibilities and obstacles ICT –intensive work contexts create to dialogic leadership? The research program *Dialogic leadership promoting innovativeness* funded by Tekes (a Finnish Funding Agency for Technology and Innovation) is aiming to answer these questions.

This paper examines the potential of learning in ICT-intensive work contexts and some of the challenges of learning when adopting and using e-Calendar (eC) in one of our professional case organisations.

Keywords: learning potential in work context, dialogic leadership, application of technologies, participatory action research, cooperative and dialogic development.

1 Introduction

1.1 Framework

Modern work organisations face demanding challenges - expectations to be creative, innovative, agile, competitive, efficient, and adept at utilizing a variety of employee knowledge while taking care of employee well-being. Work has become more knowledge-, professional-, network-, and virtual-based in many professions. Work processes in many sectors depend heavily on technical mediation. Organisations are actively implementing new ICT-systems (information, communication and technology systems) and environments because they believe they will increase the effectiveness of interaction and collaboration, workplace learning and work performance (Korpelainen 2011). Work and learning processes, as well as communication, are technologically mediated by e-mails, Intranets, homepages, Facebook, video conferences, and electronic calendars, to name only a few. This trend also challenges traditional leadership and management. Technology has changed working methods, communication, and knowledge management in different types of work and service units. At the same time, routines, traditions, and power-relations in organisations create different kinds of boundaries and conflicts (Syvänen 2010) between various actors.

Due to this trend, employees and managers are continuously facing new learning challenges. Managers need to be like social acrobats in combining basic tasks, project managing, and innovative goals (Ruohonen 2006). They also need to be like social architects in an effort to foster learning and innovation (Barrett 1995). This paper suggests that dialogic leadership is the crucial factor in handling these contradictory challenges. Dialogic leadership is based on collaboration, interaction, discussion, listening, and mutual trust and appreciation (Isaacs 1999, Bass 1999, Bass et al. 1990, 2006, Whitney & Trosten-Bloom & Rader 2010, Yankelovich 2001).

This paper examines the crucial modes of organisational learning and the challenges of dialogic leadership in ICT-dominated work environments, especially when harnessing and using a new ICT application in one of our professional case organisations. It focuses especially on the challenges related to employees' skills and attitudes toward using a new application and organizing work processes with it.

1.2 Frame of reference - *Dialogic leadership promoting innovativeness* –research program

This paper is based on the *Dialogic leadership promoting innovativeness* research program (***Dinno***–project 2012-2014, www.dinno.fi) funded by Tekes. The **D**inno project is a multidisciplinary program, combining theories concerning creativity, innovativeness, learning, motivation, and leadership. Tekes funds working life development and action research projects with significant novelty, and research with applicable results, and brings research branches of sciences together. The subject organisations of the program represent both private and public sectors. Organisations are from local government (educational, social and health sectors, municipalities, congregations), state (professional expert organisations), and private enterprises (services and professional organisations).

The research task of the program is to find out *How dialogic leadership can enhance the creativity and innovativeness of organisations*. The program strives to promote innovativeness, sustainability of working life, productivity, and competitiveness by combining various multidisciplinary scientific and theoretical points of views. The main themes include 1) dialogic leadership, power, and responsibility, especially in the situations of organisational restructuring, 2) dialogic and innovative learning paces, especially in technology-intensive work environments, 3) dialogic skills of leaders, especially in challenging situations, 4) dialogic career management, especially downshifting and 5) dia-

logic development methods as the sources of creativity and innovativeness. The main methods of the program are survey, participatory action research, case studies, and interviews. The study combines qualitative and quantitative data.

This paper concentrates on theme two, where the research task is to figure out *What kind of prerequisites and preconditions ICT–intensive work organisations create for dialogic and innovative learning spaces and dialogic leadership*. The main data will be generated by an innovativeness questionnaire, which is carried out in all the case organisations in the autumn of 2012. In addition to the questionnaire, qualitative data will be gathered in two or three case organisations.

Next the paper will examine the crucial modes of organisational learning and the principles of dialogic leadership focusing on harnessing and using a new ICT application in one of our case organisations. It will focus particularly on challenges related to employees' attitudes and skills in using e-Calendar (further eC) and on how eC enables the organizing of work processes, mutual schedules, and services.

2 Potential of learning and dialogic leadership

The organisations are examined as potential but versatile learning spaces (Tikkamäki 2006, Syvänen 2008). The main modes of organisational learning are participation, knowing, social interaction and supporting, and reflecting (Tikkamäki 2006). All these modes take place in individual, communal, and organisational contexts. Figure one summarizes the modes of learning potential in ICT –intensive work contexts.
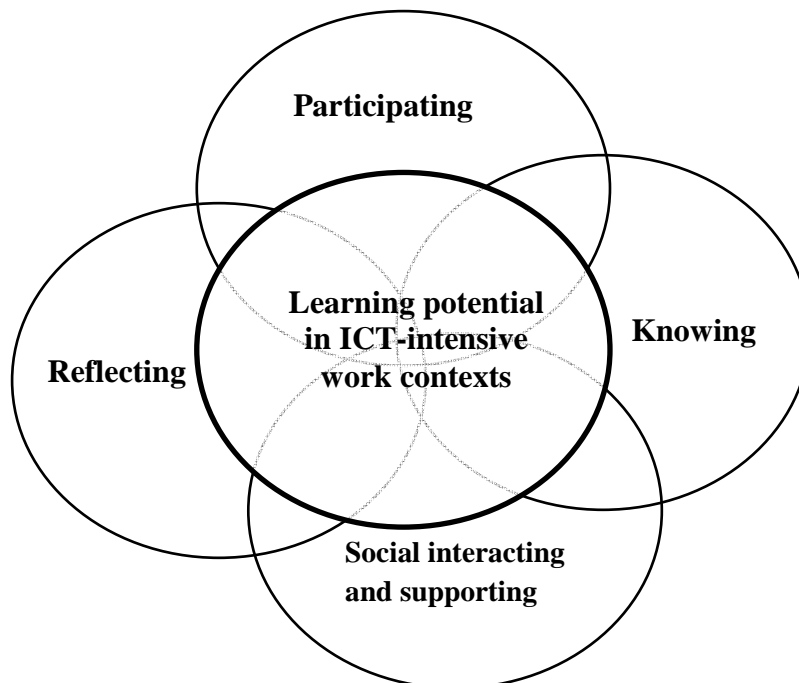

Fig. 1. Modes of learning potential in ICT-intensive work contexts (modified from Tikkamäki 2006).

When harnessing and using new technologies, the challenge is to recognize, coordinate, and develop these modes of learning potentials. Dialogic leadership is one of the key factors in successfully meeting this challenge. The critical questions from the point of view of dialogic leadership and ICT-mediated work processes are

- *Are the management and organisational cultures promoting participation or withdrawal*?
- *What are the possibilities and forums for participation and learning?*
- *How is the knowledge constructed, developed, and shared?*
- *What are the forms of social interaction and is there enough support?*
- *Are there possibilities for reflection?*

Harnessing and using ICTs takes place through *participation*. It is essential to coordinate the operations, interpretations, and meanings in a meaningful way. The crucial questions are, do ICTs promote or inhibit participation, and what kind of participation do they allow. Employees can be active or passive participants, social interaction can be participation or withdrawal, and the organisational culture might be permissive or compulsive. (Tikkamäki 2006.) We believe that through dialogic leadership it is possible to promote active participation and a permissive culture. However, we consider whether the ICTs and technological applications promote active and meaningful participation.

In the current global economy, generation and assimilation of knowledge would appear to be indispensable to the success of an organisation. Based on Blacler (1999), knowledge in organisations can take five images: embrained (conceptual skills), embodied (tacit knowledge, habits), encultured (behavior models, values), embedded (roles, rituals, products) and encoded (behavior models, common language) knowledge. He conceptualizes the forms of knowledge as *knowing*, which refers to the situated, mediated, temporary, pragmatic, and contested nature of knowledge. Today, knowing is heavily ICT-mediated. Technical applications and programs have speeded up the exchange of information, created easier access to information, and allowed many people to reach information at the same time (Korpelainen 2011). The challenge for organisations and superiors is to create relevant forums and spaces for the generating, interpreting, combining, and sharing of knowing.

Social interaction and collective learning processes play an important role in organisational learning (e.g. Tikkamäki 2006; Syvänen 2008, 2010). It has also been found that employees choose to learn how to use ICT systems in informal learning situations, by asking peers and solving problems together with colleagues while working (Korpelainen 2011). Individual and collective meanings are negotiated and developed in social interaction. This negotiation process might also create negative rationales of conventions and routines (Syvänen 2010). *Supporting* is one critical factor in meaningful interaction and learning. It includes peer support and encouragement to participate. The organisational culture may be competitive or cooperative (see cooperation strategies; Syvänen 2010). Dialogic leadership plays a crucial role in promoting cooperation and in supporting organisational cultures.

Reflective processes are key factors in learning. Reflections should take place in individual, collective, and organisational contexts (Syvänen 2008). Reflection means evaluation of participation, which may take the form of breaking assumptions, questioning, and inquiring. It is crucial to create forums and spaces for reflection as well as to make reflection an integral part of work and development processes. (Syvänen 2008, 2010) Reflection is crucial when applying and using new technical solutions. However, do ICTs promote or inhibit reflective processes?

Next, we will present a short case study example where the modes of participating, knowing, interacting, and reflecting are challenged by a new technological application – e-Calendar (eC).

3   Example of learning challenges related to applying e-Calendar

This case study is about a parallel development project of the Dinno program. It presents an example of a new professional organisation established at the beginning of 2011. Researcher Sirpa Syvänen and workplace developer Antti Kokkonen have been supporting the challenging restructuring process of a professional organisation. The applied research method is participatory action research (Syvänen 2010, 2008). The researcher's main task is to co-ordinate a joint development group and to apply the organisational-economic theoretical frame of reference based on x-efficiency theory (Syvänen 2003, 2008, 2010).

Arguments for this restructuring process were based on economic reasons; lack of resources forced five independent service units from various municipalities to join and establish a new organisation. Units wanted to secure their basic tasks, employee workplaces, and the quality of their services. The management structures were also renewed during the restructuring process.

The development project carried out various organisational changes using many dialogic development methods and structures. For instance, the professional organisation was divided into two functional areas – the southern and the northern areas. Two responsible managers were named to those geographical areas and both of the areas' superiors participated in the multi-professional teams. Earlier there was only one superior per service unit, focusing the employer's power on economics, organisation, and human resources.

In the new organisation, there was an absence of mutual forums or systems to plan and schedule services, actions, and economics. There was also a lack of co-operation between superiors and employees, in individual areas, and on teams. The main challenges were focused on the long geographical distances between the service units. The organising of work processes and management could not depend on face-to-face interaction anymore.

New working and communication environments brought out the need to use electronic systems to communicate and schedule mutual actions and work processes. Two service units had previously used an e-Calendar (eC). The previous users of eC explained the strengths and weaknesses about the system to the workplace developer. These experiences revealed a very important development target for the various learning forums. The most important forums of mutual dialogue concerning eC were the organisation's development group, the superiors' meetings, the meetings of the southern and northern areas, the meetings of the multi-professional teams, and the development discussions between superiors and employees.

The main challenges of the development process of eC focused on the following:

Attitudes, emotions, routines, change resistance

"Everyone doesn't want to use the new system. Fear of growing control and losing independence."

Motivation

"*It was noticed - the lack of internal motivation to learn a new system. Everyone doesn't use it."*

Skills and support

"I am sure that we will find internal trainers among our own staff. We must take care that they have enough time to do their jobs and support each other."

Commitment, principles

"Everyone doesn't want to use eC."

"There are different ways and principles of using the eC system."

"Everyone doesn't put all the relevant information in eC on time; it affects the other people badly."

"One of the problems is that all the employees don't put all working periods or personal activities into eC, and if there is not a reservation, the employer, colleagues and superiors are allowed to make reservations."

"I don't get information of reservations made by others related to my working time on time."

System problems

"eC doesn't work properly all the time."

"There are many difficulties in using the new system, problems with equipment, computers, programs, and mobile phones."

"Someone says that the problem arises from the settings of my computer, someone says that the problem arises from the settings of the person that is making the reservations, and a third says that the problem arises from the reservations made by mobile phones."

"Internet connections do not work all the time or in all the places, that's why it is difficult to make necessary reservations if you are elsewhere than in your office."

"The sC program does not work in my mobile phone."

In order to get these problems solved, issues were taken to mutual discussions at several dialogic forums. In the spring of 2011, the development group appointed a preparation group in order to map all the problems and all the successes concerning the eC. After these dialogues started, there was a half-year time span for applying the new eC.

The second reflection was in the autumn of 2011. All personnel were offered an opportunity to tell their experiences of applying the eC. Reflection was very important because it revealed many problems. The quantity of problems was decreased, but the major problems were the same as they had been earlier: some of the employees did not want to use the eC and some major mistakes had been made because of a lack of knowledge. Negative attitudes and a lack of commitment were also reported. Some of the employees wanted to hide their lack of competence concerning eC. Lack of competence was the main reason they did not want to, and could not, use the system. It affected the quality of work; reservations focusing to certain services and clients, for example, had vanished from the system while other users had cancelled their own reservations.

The third reflection was arranged in the spring of 2012. It took place both at superiors' meetings and in development groups. Other issues in those development dialogues concerned internal and external relations and communication. Superiors wanted to stress commitment to eC. They had heard that there were still problems in technological systems, a lack of commitment to the mutual principles among certain persons, some serious mistakes had occurred, and information has not been updated. Because of the problems, people experienced the whole system as unreliable. Superiors experienced a need to interference. Each one of them emphasized the employer's obligation to use eC and to act according to the mutual principles. They also wanted to check out the needs for support among personnel and individuals.

The fourth reflection - a supporting and interference discussion - took place as employee/superior discussions in the spring of 2012. All personnel were challenged to apply and commit to eC.

4 Conclusions

The benefits of ICTs include speeding up the exchange of information, creating easy access to information, allowing many people to reach information at the same time, and making it easier to

reach people. However, the implementation of new ICT applications often faces problems and failures – the applications do not work as planned. (Korpelainen 2011.)

The case study illuminated the challenges related to implementing a new technological application, e-Calendar. Firstly, it handled the challenges of participation when harnessing a new technical solution. Participation is not even possible if the solution, programs, connections or devices does not work, or if the employees do not have the relevant skills, instructions and equipment to use them. A crucial mission is to map out and break the barriers to participation, which may be related to attitudes, motivation, lacking skills, lacking leadership, or rigid organisational structures.

Secondly, it is important to notice what kind of knowing the participants have or should have when implementing a new technical solution. Employees also need to know about the arguments for a new application. It is important to create spaces for generating and sharing knowledge as well as to recognize the knowledge gaps. In our example, the employees that had used the eC earlier had valuable knowledge that was used as a collective learning resource during the development process.

Thirdly, it is important to take care of the forums for social interaction, support, and dialogue. Shared meanings and understanding are crucial when developing collective work processes and operations. Knowing creation, learning processes, and social support take place in social interactions. In the case example, the development project created a dialogic forum for different professionals and new workmates. Dialogic leadership is the way to promote social interaction and supporting.

Fourthly, the prerequisites for adopting new technological applications and learning new skills are the capabilities and the possibilities of reflection. Time and space are needed for individuals and communities to question, consider, and evaluate work processes, behavior models and habits, and judgments.

ICTs create a huge potential when developing work processes and managing knowledge. However, there are also many challenges to be recognized. Based on the preliminary data and the analysis of the case example, when harnessing new technical applications, the focus should be on meaningful participation, possibilities for generating and sharing knowledge, supportive interactions, and spaces for reflection. Participation, knowing, interacting, and reflection create potentials for learning and potentials for learning are obtained through dialogic leadership. Referring to Isaacs (1999), dialogic leadership is carried out by listening, respecting, voicing, and suspending. The development project presented in the case example is based on these principles.

The research task for theme two is to discover, and attempt to solve, the possibilities and obstacles ICT-intensive work contexts create for dialogic leadership and dialogic learning spaces. We are at the beginning of our research journey. The next step is to generate more data with the innovativeness questionnaire to find out more about the relationships among ICTs, dialogic leadership, and learning.

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