JYX JYVÄSKYLÄN YLIOPISTO UNIVERSITY OF JYVÄSKYLÄ

This is a self-archived version of an original article. This version may differ from the original in pagination and typographic details.

Author(s): Collin, Kaija; Herranen, Sanna; Paloniemi, Susanna; Auvinen, Tommi; Riivari, Elina; Sintonen, Teppo; Lemmetty, Soila

Title: Leadership as an enabler of professional agency and creativity : case studies from the Finnish information technology sector

Year: 2018

Version: Accepted version (Final draft)

Copyright: © 2018 Brian Towers (BRITOW) and John Wiley & Sons Ltd.

Rights: In Copyright

Rights url: http://rightsstatements.org/page/InC/1.0/?language=en

Please cite the original version:

Collin, K., Herranen, S., Paloniemi, S., Auvinen, T., Riivari, E., Sintonen, T., & Lemmetty, S. (2018). Leadership as an enabler of professional agency and creativity : case studies from the Finnish information technology sector. International Journal of Training and Development, 22(3), 222-232. https://doi.org/10.1111/ijtd.12130

Leadership as an enabler of professional agency and creativity in information technology organisations

Abstract

This paper summarises and elaborates the findings of a research project (CREANCY) on leadership as an enabler of professional agency and creativity in information technology organisations. The synthesis in this paper is based on a summary of three primary studies. Each of the studies approached either leadership, creativity and/or professional agency with a specific focus. Leaning on mixed-methods and ethnographic approach including various empirical data collection and analytical tools, the project investigated relationship between professional agency and creativity; issues that frame professional agency and creativity; and the meaning of leadership practices for the enhancement of agency and creativity. The findings highlight the strong connection between professional agency and creativity and their context- and situation-specific manifestations. The findings also address creativity that manifests itself in interaction, processes and collaboration. Further, the findings discuss the role of agile HRD for professional agency and creativity, and show that flexible leadership practices are necessary in supporting professional agency and creativity.

Introduction

We live in societally and economically interesting times tinged by multiple threats, tensions and insecurities. Working life is under constant change and scrutiny, as one deals with demands for efficiency and continuously negotiates rules for work (Littleton, Taylor and Eteläpelto, 2012). Global competition has sparked a new kind of leadership culture and structural changes that have ostensibly increased an individual professional's responsibility and space to act, but in reality decreased professional autonomy, if anything. Owing to e.g. growing demands to produce various reports, workload has increased and brought about responsibility over one's own productivity – however, professionals' decision-making authority over organisational resources has not increased in relation to the proliferated workload (Collin, 2009; Kirpal, 2004). Consequently, there is a need to ensure possibilities for continuous professional development and learning in workplaces (Van der Heijden, Collin and Lewis, 2012).

Public discussion often slanders leadership and atmosphere in workplaces, and offers augmentation of creativity, innovating and well-being at work as a solution. One has highlighted creativity in responding to the tightening demands of the turbulent working life (Ulrich and Mengiste, 2014). The meaning of professional agency in the development of work organisations has also been argued to be central (Billett, 2011; Goller and Paloniemi, 2017). Further, one has argued that good leadership practices, employee well-being and the perceived productivity of a work community are connected (Kuoppala, Lamminpää, Liira and Vainio, 2008). Organisational power structures pose a challenge, as middle managers often act as interpreters of demands and wishes coming from both top management and employees. It is therefore important to study opportunities and spaces for and perceptions of professional agency, creativity and leadership from the viewpoint of various professionals (Caldwell, 2007; Koene 2006; Mantere, 2008; Scott, 2011).

The Leadership as an enabler of creative professional agency in information technology organisations - CREANCY project (2015–2016) explored connections between leadership, professional agency, and creativity in two Finnish information technology organisations, and an ethnographic and mixed-methods research approach was utilised[1].

[1] See CREANCY website: https://www.jyu.fi/edupsy/fi/tutkimus/tutkimushankkeet/kotisivut/jelmo

In this paper we summarise and further elaborate the findings of the CREANCY project (Collin et al., 2017c; Collin et al., 2017b; Sintonen et al., 2017). Consequently, the project aimed to answer the following research questions: 1) How professional agency and creativity are context-specifically intertwined in IT-work?, 2) How does creativity manifest itself in everyday work processes and practices, and 3) How professional agency and creativity can be supported by HR and leadership practices?

Professional agency, creativity and leadership

Our approach to professional agency and creativity is informed by the socio-cultural tradition, highlighting e.g. practical creativity that involves new ideas and practices emerging in an organisation or a small community (Moran, 2011). This accentuates the fact that a large part of creativity is connected with everyday social lives and practices. By exploring practices, one is able to describe what, how and why people do something (Gherardi, 2015). We see professional agency and creativity as strongly linked (see e.g. Glăveanu, 2011). Further, there already exists research evidence (e.g. Billett, 2011; Goller and Paloniemi, 2017) concerning the pivotal role of professional agency in learning and development within work contexts. Professional agency and creativity at work are essentially the same as professional development and learning at work with regards to, for example, affordances, willingness to develop oneself, sharing and participation (Collin et al., 2017c).

In its most active and positive forms, *professional agency* can be seen as individuals' creative initiatives with regards to the development of existing working practices (Littleton et al., 2012; Sawyer, 2012). However, professional agency can also manifest in seemingly less progressive and positive ways, for example, adopting a critical stance or entering into a struggle against reforms suggested from the outside (Fenwick, 2006; Vähäsantanen and Billett, 2008). Furthermore, professional agency can manifest as individual-level action or as something practiced within, and emerging from, a collective enterprise; hence, it can involve participation and collaboration within the work community or within the entire work organisation (Hökkä, Eteläpelto and Rasku-Puttonen, 2012). In this paper, professional agency is understood to be practiced when professionals or communities influence, make choices and adopt stances in relation to their work and professional identity (Eteläpelto et al., 2013).

Further, the concept of *creativity* has been seen vital for, especially, knowledge-intensive work, such as information technology (Ulrich and Mengiste, 2014). The concept of creativity is a multifaceted construct and thus it lacks satisfactory framing (Anderson, Potocnik and Zhou, 2014; Sawyer, 2012). From the perspectives of social sciences and organisation and leadership studies, the definition of creativity includes the aspects of novelty, value and usefulness (Anderson et al., 2014). Creativity has often been seen as a linear and 'individual/collective' process in which individuals only play a role at the start of a collective process (Oddane, 2014). However, this understanding overlooks the complexity of creative endeavours conducted in real-life settings (Hargadon and Bechky, 2006; Rosso, 2014). Thus, in much of project-like work it is difficult to anticipate what the actual process will be like, or what kinds of creativity will be needed in these messy processes (Oddane, 2014). In CREANCY we approached creativity as an everyday phenomenon feasible for everybody, occurring at both individual and collective levels. The IT professionals themselves viewed technical creativity (e.g. new software languages or devices, technical innovations) as the "real" creativity.

Although questions concerning professional agency and creativity are becoming increasingly more pressing, the question of what exactly is meant by these concepts still remains largely unanswered (Glăveanu, 2011, 2015). Previous studies concerning professional agency and creativity (e.g. Dumas, Schmidt and Alexander, 2016; Eteläpelto et al., 2013) have principally focused on theory development and modelling; hence, both context- and situation-sensitive empirical evidence concerning both phenomena is still lacking in relation to how they become manifest in everyday work. The relationship between creativity and agency has been discussed and questioned, with the relational nature of both phenomena being underlined (Glăveanu, 2011). Overall, it can be argued that supporting both professional agency and creativity in the workplace can be understood as a process whereby individuals can express and share their opinions with their work community, as well as proposing ideas for the development of working practices within their own work communities (Collin et al., 2017c)

Leadership practices have been remarked as one of the most important framing aspects for professional agency and creativity (Collin, Herranen and Riivari, 2017b). Since 1990's, discursive approaches to leadership have gained strength emphasizing leadership influence power negotiated in social processes among leader and organizational memebers (see e.g. Fairhurst, 2011; Auvinen et al., 2013). Recently, leadership as

practice approach has emerged as a new paradigm, which focuses on practices instead of the traits or behaviors of certain individuals (Raelin, 2016). Such practices can be understood as a coordinated efforts including organizational outcomes, problem solving and encompassing routines among organizational members. Management, instead, is typically based on an authoritative relationship between a manager and subordinates, and managers value order, efficiency, impersonality and risk adverse (Mintzberg, 1973; Yukl, 2010; Bass, 1990). Debate over the concepts of leadership and management has highlighted that being a leader does not automatically imply being a manager, and vice versa, a person can be a manager without having the capabilities to lead people. Leading and managing are distinct processes, but leaders and managers are not necessarily different types of people (Yukl, 2010, 24–25). In CREANCY, we were particularly interested in leadership practices within managerial and nonmanagerial contexts.

Methodology and empirical data

In CREANCY the ethnographic (see Hammersley and Atkinson, 2007; Hall and Howard, 2008) and mixed-methods (e.g. Tashakkori and Teddlie, 2003) approaches were utilized to shed light on the crucial, qualitative nuances of everyday work, and professional agency and creativity including it. The aim of an ethnographic research strategy in work organisations is to understand professionals' actions, everyday work, culture and work processes in their own context. This kind of contextual understanding is indispensable also in organisational development work.

The entire data of the project comprise i) approximately 70 pages of notes based on field observations, ii) 34 voluntary-based interviews with IT professionals: altogether 1514 minutes of audio-recordings and 472 pages of transcriptions, iii) 93 responses (32,3 %) to a quantitative questionnaire. The data were analysed with thematic, content and ethnographic analysis as well as statistical methods. For a more detailed methodological description, see the original studies. For detailed methodological choices see the original articles.

The context and target organisations. Information technology is a sector employing various kinds of knowledge workers and experts, such as developers and coders. These professionals' work includes individual and independent thinking, knowledge processing, and problem solving as well as non-routine tasks (e.g. Caniëls, Stobbeleir and

De Clippeleer, 2014). Therefore, IT work can be undoubtedly described as creative field of work (Ulrich and Mengiste, 2014).We purposefully selected two differently structured and managed IT organisations to gain an insight of the space for and manifestations of professional agency and creativity within different ways of organising work, including leadership arrangements. Despite having a professional field in common, the two IT organisations selected for this project differed from each other in terms of customers, products, processes, and services – as well as leadership practices and organisational structure.

The other participating company has strong traditions and hierarchies, and merged with a global organisation is now part of large-scale international serial production, with thousands of employees in the corporation. Also HR actions are thus organised. The second company is a young domestic software development subcontractor of about 250 employees. With highly-customised products, it eventually plans to expand its operations abroad. Since the beginning of 2015, the organisation has operated without formal hierarchies, with the exception of a few people (e.g., the CEO) at the top. In practice, this means that each project has a project "leader" who coordinates the interaction with the customer, but the project leaders do not have HR responsibilities, such as performance evaluations.

Summary of the main findings of the primary studies in the CREANCY project

We next present the main findings from the primary studies of our project in a condensed fashion and then elaborate the conclusions of the project more broadly. In Table 1 below we describe the studied phenomena of the primary studies, the utilised data in each of the studies and the main findings.

TABLE 1. The phenomena and data of the CREANCY primary studies.

Phenomenon	Data and analysis	Main findings
Nature of creativity in IT work and manifestations of professional agency in the descriptions of everyday creative work (Collin et al.,	Interviews and 89 open-ended questionnaire responses. Thematic analysis.	The manifestations of creativity (problem-solving, process, state of mind and attitude, freedom and autonomy) are strongly linked

2017c)		with professional agency. Professional agency can be seen as a prerequisite for creativity, an outcome of creativity or these two concepts can be seen as synonymous.
Aspects of work that frame professional agency and creativity in IT work (Collin et al., 2017b)	Observations and interviews. Content analysis.	Customers, work environment, time and resources, products, collaboration and management and leadership frame professional agency and creativity context-sensitively and situationally in IT work.
Professional agency and creativity from the perspective of leadership practices (Sintonen et al., 2016)	Interviews. Ethnographic analysis.	The meaning of management and leadership practices for professional agency and creativity is constructed via organisation-specific features and styles producing under-cover actions or even anomie.

In this paper we have summarised and further elaborated the findings of the CREANCY project. We found that creativity is strongly social in nature, constructed in interaction and relations between organisational members (Collin et al., 2017c). We also found creativity to both require and produce professional agency, and they were framed by e.g. customers, physical work environment, time and resources, nature of production and products, management and leadership and collaboration (Collin et al., 2017b). In terms of leadership, professional agency and creativity seemed to require support, professional autonomy and, situation-wisely, agility and flexibility in human resource work (Sintonen et al., 2017).

In terms of generalisability, we cannot argue that our findings are applicable to other contexts as such, although we have tried to ensure the plausibility of our interpretations with the help of researcher, methodological and data triangulation. However, our interpretations are limited due to our mainly qualitative data, which is why further research on these phenomena and their relationship is needed. In addition, the relatively small questionnaire sample did not allow us to use more sophisticated analysis methods at this point. We next present the *six main highlights emerging* from our original findings

(see Collin et al., 2017a), and further discuss their meaning for creativity, human resource and leadership practices especially in knowledge-intensive organisations.

The six main highlights from CREANCY-project

1) The connection between professional agency and creativity is significant

As mentioned above, professional agency and creativity were found to be strongly connected. Creativity was seen as expertise requiring problem solving but also as creation of novelty where the practicing of professional agency was particularly linked to seeking information, learning new things, experimentation and participating or not participating (in events). Creativity was also seen as development of work methods, state of mind and attitude that, from the viewpoint of professional agency, manifested as continuous observation and evaluation of actions, active experimentation and both individuals and groups taking responsibility. Further, creativity was seen as freedom and autonomy at work. All the above-mentioned forms of professional agency were described as both prerequisites and outcomes of creativity in creative work practices. Professional agency and creativity can thus be seen as strongly intertwined (for a more detailed treatment of this relationship, see Collin et al., 2017c).

What is notable is *how* professional agency and creativity were connected: in our data, particular forms of professional agency seemed to be connected to particular forms of creativity. For example, prioritisation of work phases was subsumed with sustainable problem solving. For instance, through mutual scheduling and prioritisation by local managers and employees, one could ensure sustainable solutions that would prevent haste in the future – a creative model of action that is rarely observed as one. Simultaneously, it is an indication of strong group-level professional agency as one tries to make sure that certain favorable conditions for work continue to exist. Sustainable problem solving was manifested situation- and customer-specifically so that one attempted to create a good and sustainable solution for customers to the problem at hand.

2) Professional agency and creativity are context- and situation-specific and manifest themselves in working life in various ways

Forms of professional agency and creativity naturally blend with each other in everyday

work. It is highly context- and situation-specific what kind of professional agency and creativity is appropriate and feasible at a given time. Certain kind of creativity (e.g. technical innovations) cannot be forced out at a specific moment, and sometimes professional agency and creativity serve an individual professional's or group's interests in terms of work (e.g. "cutting corners" in an inventive way to be able to advance even the most basic core work in extreme haste), but are not necessarily parallel with the organisation's official aims.

Technical creativity realised variably in organisations Practical creativity manifested in both organisations in different ways and situations, but a common denominator was often the advancement of work: how to advance work optimally in a situation with diverse work practices or insufficient basic resources? The aim, also collectively, was to "increase opportunities for lazing about" by aiming to create sustainable and sensible solutions.

3) Work process knowledge is important for the actualisation of creativity

In the two IT organisations of this project, work processes and their sufficient conceptualisation transpired as essential conditions for professional agency and creativity – but in different ways. Our observations can also be interpreted with the concept of work process knowledge (see Boreham, 2004) which helps to conceive challenges pertaining to work processes at different levels of organisations. Work process knowledge entails the idea of all professionals in an organisation conceptualising the whole of work in a similar manner, at least to a certain extent.

The experience of insufficient or even absent work process knowledge was highlighted especially in the other participating company. It is a global enterprise where, according to the participating professionals, information mainly travels globally at the level of top management and all actors are not always adequately informed in terms of the advancement of projects. This might cause frustration, as one is prevented from having a sufficient picture of processes and projects are momentarily at a standstill. However, it is also possible that an individual professional could have too much work process knowledge. This becomes manifest in middle manager's experience of trying to provide enough information on the one hand, but "shelter" the subordinates from irrelevant or excess information on the other hand.

In the other participating company work process knowledge pertaining to customer projects is, in principle, available for all professionals in a certain project. This stems from professional autonomy and lack of hierarchies of the company. The management and advancement of customer projects are the responsibility of the project team, project leader and customer, and it is also their responsibility to keep pertinent actors updated and ensure that these pertinent actors have access to information that is indispensable in solving the problems at hand. One has autonomy in work and opportunities to choose in terms of participation in projects, but these do not necessarily lead to sufficient work process knowledge. What might be problematic is that opportunities for making choices and autonomy do not actualise in those points that are critical in terms of the whole of work: an individual professional can be occupied with all sorts of interesting things in his or her own work tasks, but he or she does not necessarily have the bigger picture of what goes on in other projects or units – which could have an impact on what he or she is doing. This might result in overlapping actions and misunderstandings, which is not desirable in terms of the entirety of the organisation's action. Opportunities for self-direction in one's work have been enhanced by increasing professional autonomy, which however might have simultaneously narrowed one's understanding of what the bigger picture is or who is aware of it.

4) Creativity manifests itself as relations, interaction and collaboration

It is not enough to master the core technical know-how in information technology work, but as part of professionalism one has to know how to act with members of the work community and customers. Professional agency and creativity include individual thinking and actions, but always also the social aspect: asking, experimenting together, discussion, giving advice and (not) participating. In the best case, one was able to resolve problems in collaboration, but colleagues might also cause grey hairs. Further, the experience of absent structures and ownership in projects sometimes caused a situation perceived as "churning", which required lots of interaction to be fixed. Interaction and relations thus essentially related to both positive and negative aspects of work and were an important condition of work.

Customers and customer relations were seen as the lifeline of work, which denoted that relations and interaction with customers absolutely had to be in order. Constant

negotiations with customers defined frames and limits for work, which meant that fluid communication was indispensable. Direct and continuous contact with customers was ideal so that one did not have to make products "blindly". Sometimes one did receive too little information from customers, which caused problems in terms of the advancement of work.

Pertaining to interaction, management and leadership were found to be an essential component defining professional agency and creativity. In our target organisations, management and leadership manifested differently: on the other hand, the relation to one's immediate superior was mainly experienced as good and confidential, which enabled continuous discussion and smooth flow of work. This became manifest also in meeting conventions that were found to be dialogical. On the other hand, the relation to superiors might be vaguer. Division of responsibilities was characterised and experienced by some professionals as negligence, as responsibilities and the bigger picture in certain projects were unclear.

5) What is expected of human resource management (HR) – and what is the role of agile HR?

As we researched IT organisations, we could not avoid running into the concepts of "lean" and "agile processes". Lean and agile work processes originate from manufacturing processes in factories (the idea in a nutshell being the avoidance of futile work and spillage), but they have also gained ground in IT and knowledge work (e.g. Holbeche, 2015). Agility is expanding to knowledge work, as idiosyncrasies of knowledge work, such as self-direction, tight collaboration and coaching, increasingly define basically any work. Lean is often seen as a background philosophy whereas agility is realised in everyday work practices (Wang, Conboy and Cawley, 2012). If work methods and processes are agile, leadership and support for HR cannot remain as they used to be, either, or can they?

Agility was manifested at the time of the research as experimentation of agile work processes, but not so much in HR or management and leadership. However, there were gestures towards agile HR at the level of local action, as one had e.g. tried to increase opportunities for creative action and strengthen openness and the flow of information. Overall, one could describe organizations' action as agile, as one had attempted to find

new and suitable solutions for HR and leadership in alternating conditions, e.g. organisational growth, or organisational structures (team- and project-based) as well as a structure without formal supervisors. In the current organisational models, the pitfall and partly also present state is excess agility: the absence of certain structures and practices perhaps prevents HR from being both flexible and catering to the staff's well-being at the same time.

Our findings from the target organisations show that agility should not equal to structures that are either too weak or too rigid. Support networks and structures are needed e.g. in a situation where an individual professional faces challenges in their work or personal life (e.g. situation in life changes or onset of work-based burn-out). In these cases, support from colleagues in often arbitrary work situations alone is not enough. Even in the most agile organisations and agile HR, management and leadership should be arranged appropriately to match the organisation and its situations, bearing in mind professionals' autonomy and self-direction.

6) Flexible leadership practices are necessary in supporting professional agency and creativity

Regardless of the leadership style, there is creativity in organisations that manifests itself in various ways. This is not a question of a certain leadership style ruling something out, or even destroying creativity, but creativity exists amid all leadership styles – its forms just alternate. Some of these forms are more and some are less in accordance with an organisation's official interests. Certain kind of creativity might thus serve employees in everyday work, but is not necessarily such that is valued or supported by e.g. top management. Leadership is connected to professional agency and creativity as support and space provided for professionals, prioritisation of work tasks, offering of work process knowledge and on the other hand holding it back, as well as showing appreciation. Further, leadership is caring about well-being at work that can manifest itself as discussion and dialogue. Well-being at work and creativity are thus intertwined also in this fashion.

The leadership culture in the organization can be highly hierarchical and represents the managerialist leadership style: for example, all professionals in other participating company could pinpoint their formal supervisor. However, it is notable that some

professionals felt that leadership is missing. Although a formal supervisor exists and is designated, this does not automatically create leadership that emerges in interaction and in the manager being present.

At the other end of the leadership spectrum in the other participating company was the "laissez-faire" organisation where formal leadership is virtually absent and actors are largely self-directed and autonomous. To be a significant supporter of creativity, a leader must show his or her professional agency in his or her own role and be a role model for others. Our research showed that leadership is not in hierarchies, and bureaucracy even dissipates it. Creativity is stimulated by what is generally regarded as good leadership: interaction, consideration of and support for employees, integrity, rectitude and dynamism that a leader can display with his or her own example.

Conclusions

Based on the highlights described above, the optimal circumstances for exercising professional agency and creativity are multifaceted and context-bound. They are also framed by many issues related to the people we collaborate with, more physical resources given for us, as well as leadership practices. The ideal leadership style enabling professional agency and creativity is thus most likely somewhere in between the two extremes (managerialism and laissez-faire) in an appropriate manner depending on the organisation and changing situations (see e.g. Eslen- Ziya and Erhart, 2015; Salovaara and Bathurst, 2018). The very issue in our setting turned out to be that the existence of managerial hierarchies does not automatically generate conditions where a manager is also a leader, and vice versa, a nonmanagerial arrangement does not produce leadership by itself. We discovered that the absence of formal management was possible because there was social space for informal influencing and captivating individual actions, i.e. leadership. Thus, the absence of management is not automatically the same as the existence of leadership.

In the future, one will most probably speak of leadership as multi-voiced, where leadership is not seen as an exclusive right belonging to designated leaders, but as a phenomenon constructed in interaction between various actors and alternating practices (see Raelin, 2016) and networks. Well-being and suitable professional agency and creativity of all organisational members can be guaranteed with mutually constructed

leadership practices. Further, future research should be targeted at interaction and relations in organisations and to those practices where leadership is constructed. Therefore, the optimal and context-sensitive model of leadership is constructed and transformed in an agile way depending on changing situations supporting professional agency and creativity. As one of our interviewee noted "in my work, creativity is to increase the opportunities to lazing about".

Acknowledgements

This work was supported by the Finnish Work Environment Fund (project number 114386).

References

Anderson, N., Potocnik, K. and Zhou, J. (2014), 'Innovation and creativity in organizations: A state-of-the-science review, prospective commentary, and guiding framework, *Journal of Management*, **40***,* 5, 1297–1333.

Auvinen, T., Lämsä, A.-M., Sintonen, T. and Takala, T. (2013), 'Leadership manipulation and ethics in storytelling', *Journal of Business Ethics,* **116** (2), 415–431.

Bass, B. M. (1990),' From transactional to transformational leadership: Learning to share the vision', *Organizational Dynamics*, **18***,* 3, 19–31.

Billett, S. (2011), 'Subjectivity, self and personal agency in learning through and for work', In M. Malloch, L. Cairns, K. Evans and B. O'Connor (eds), *The International Handbook of Workplace Learning* (London: Sage), pp. 60–72.

Boreham, N. (2004), 'Orienting the work-cased curriculum towards work process knowledge: a rationale and a German case study', *Studies in Continuing Education*, **26***,* 2, 209–227.

Caldwell, R. (2007), 'Agency and change: re-evaluating Foucault's legacy', *Organization*, **14,** 6, 769–791.

Caniëls, M. C. J., De Stobbeleir, K. and De Clippeleer, I. (2014), 'The antecedents of creativity revisited: A process perspective', *Creativity and Innovation Management,* **23**, 2, 96–110.

Collin, K. (2009), 'Work-related identity in individual and social learning at work', *Journal of Workplace Learning,* **21**, 1, 23–35.

Collin, K., Auvinen, T., Herranen, S., Paloniemi, S., Riivari, E., Sintonen,T. and Lemmetty, S. (2017a), *Johtajuutta vai johtajattomuutta? Johtamisen merkitys luovuudelle informaatioteknologian organisaatioissa. [Leadership or No Leadership? The Meaning of Leadership for Creativity in Information Technology Organisations]*. University of Jyväskylä, Finland. Available online: http://urn.fi/URN:ISBN:978-951-39-6921-9

Collin, K., Herranen, S. and Riivari, E. (2017b), 'Which aspects frame professional agency and creativity in information technology work?', *Business Creativity and the Creative Economy*, **3***,* 1, 88-89.

Collin, K., Lemmetty, S., Herranen, S. and Paloniemi, S. (2017c), 'Professional agency and creativity in information technology work', In M. Goller and S. Paloniemi (eds), *Agency at Work – An Agentic Perspective on Professional Learning and Development* (Dordrecht: Springer), pp. 249-270.

Dumas, D., Schmidt, L. C. and Alexander, P. A. (2016), 'Predicting creative problem solving in engineering design', *Thinking Skills and Creativity,* **21**, 50–66.

Eslen-Ziya, H. and Erhart, I. (2015), 'Toward post-heroic leadership: a case study of Gezi's collaborating multiple leaders', *Leadership,* **11***,* 4, 471–488.

Eteläpelto, A., Vähäsantanen, K., Hökkä, P. and Paloniemi, S. (2013), 'What is agency? Conceptualizing professional agency at work', *Educational Research Review,* **10**, 45–65.

Fairhurst, G. T. (2011), 'Discursive approaches to leadership', In A. Bryman, D. Collinson, K. Grint, B. Jackson, and M. Uhl-Bien (eds), *The SAGE Handbook of*

Leadership (London: Sage), pp. 495–517.

Fenwick, T. (2006), 'Escaping/becoming subjects: Learning to work the boundaries in a boundaryless work', In S. Billett, T. Fenwick and M. Somerville (eds), *Work, Subjectivity and Learning* (Dordrecht: Springer), pp. 21–36.

Gherardi, S. (2015), 'Organizational learning: the sociology of practice'. In M. Easterby-Smith and M. A. Lyles (eds), *Handbook of Organizational Learning and Knowledge Management* (New Jersey: Wiley), pp. 43–65.

Glăveanu, V. P. (2011), 'How are we creative together? Comparing sociocognitive and sociocultural answers', *Theory & Psychology,* **21***,* 4, 473–492.

Glăveanu, V. P. (2015), 'From individual agency to co-agency', In C. W. Gruber, M. Clark, S. H. Klempe and J. Valsiner (eds), *Constraints of Agency. Explorations of Theory in Everyday Life* (New York: Springer), pp. 245–265

Goller, M. and Paloniemi, S. (eds) (2017), *Agency at Work. An Agentic Perspective on Professional learning and Development* (Dordrecht: Springer).

Hall, B. and Howard, K. (2008), 'As synergistic approach: Conducting mixed methods research with typological and systemic design considerations', *Journal of Mixed Methods,* **2***,* 3, 248–269.

Hammersley, M. and Atkinson, P, (2007), *Ethnography: Principles in Practic*e (3rd eds.) (Milton Park: Routledge).

Hargadon, A. B. and Bechky, B. A. (2006), 'When collections of creatives become creative collectives: a field study of problem solving at work', *Organization Science,* **17***,* 4, 484–500.

Holbeche, L. (2015), *The Agile Organization*. *How to Build an Innovative, Sustainable and Resilient Business* (London: Kogan Page).

Hsieh, H-F. and Shannon, S. E. (2005), 'Three approaches to qualitative content analysis', *Qualitative Health Research,* **15***,* 9, 1277–1288.

Hökkä, P., Eteläpelto, A. and Rasku-Puttonen, H. (2012), 'The professional agency of teacher educators amid academic discourses', *Journal of Education for Teaching,* **38***,* 1, 83–102.

Kirpal, S. (2004), 'Researching work identities in a European context', *Career Development International,* **9***,* 3, 199–221.

Koene, B. A. S. (2006), 'Situated human agency, institutional entrepreneurship and institutional change', *Journal of Organizational Change Management,* **19,** 3, 365–382.

Kuoppala, J., Lamminpää, A., Liira, J. and Vainio, H. (2008), 'Leadership, job well-being, and health effects. A systematic review and a meta-Analysis', *Journal of Occupational & Environmental Medicine*, 50*,* 8 , 904–915.

Littleton, K., Taylor, S. and Eteläpelto, A. (2012), 'Creativity and creative work in contemporary working contexts', *Vocations and Learning Studies in Vocational and Professional Education,* **5,** 1, 1–4.

Mantere, S. (2008), 'Role expectations and middle manager strategic agency', *Journal of Management Studies,* **45,** 2, 295–316.

Mintzberg, H. (1973), *The Nature of Managerial Work* (New York: Harper).

Moran, S. (2011), 'Creativity in school', In K. Littleton, C. Wood and J. K. Straarman

(eds), *International Handbook of Psychology in Education* (Bingley: Emerald), pp. 319–359.

Oddane, T. (2014), 'The collective creativity of academics and practitioners innovation projects', *International Journal of Managing Projects in Business,* **8,** 1, 33–57.

Raelin, J. A. (2016),' Introduction to Leadership-as-Practice: Theory and Application', In J. A. Raelin (ed), *Leadership-as-Practice. Theory and Application* (London: Routledge), pp. 1–27.

Rosso, B. D. (2014), 'Creativity and constraints: exploring the role of constraints in the creative processes of research and development teams', *Organization Studies,* **35,** 4, 551–585.

Salovaara, P. and Bathurst, R. (2018), 'Power-with leadership practices: an unfinished business', *Leadership*, **14**, 2, 179-202

Sawyer, R. K. (2012), 'Extending sociocultural theory to group creativity', *Vocations and Learning: Studies in Vocational and Professional Education,* **5,** 1, 59–75.

Scott, K. (2011), 'Chief nurse executives: professional dual agents leading with intention', *Nurse Leader,* **9***,* 1, 32–34.

Sintonen, T., Riivari, E., Auvinen, T., Collin, K., Paloniemi, S. and Herranen, S. (2016), *What does leadership (or its absence) mean for creativity and agency?* Paper presented in AOM 2016. Anaheim, USA.

Tashakkori, A. and Teddlie, C. (2003), *Handbook of Mixed Methods in Social & Behavioral Research* (Thousand Oaks: Sage).

Ulrich, F. and Mengiste, S. A. (2014), 'The challenges of creativity in software organizations', In B. Bergvall-Kåreborn and P. A. Nielsen (eds), *Creating Value for All Through IT* (Dordrecht: Springer), pp. 16–34.

Van der Heijden, B., Collin, K. and Lewis, P. (2012), 'Continuing professional Development' (Editorial). Special Issue on Continuing Professional Development. *International Journal of Training and Development,* **16,** 3, 155–163.

Vähäsantanen, K. and Billett, S. (2008), 'Negotiating professional identity: Vocational teachers' personal strategies in a reform context'. In S. Billett, C. Harteis and A. Eteläpelto (eds), *Emerging Perspectives of Workplace Learning* (Rotterdam: Sense), pp. 35–49.

Wang, X., Conboy, K. and Cawley, O. (2012), "Leagile" software development: An experience report analysis of the application of lean approaches in agile software development', *Journal of Systems and Software,* **85,** 6, 1287–1299.

Yukl, G. (2010), *Leadership in Organizations*, Upper Saddle River: Prentice-Hall.