

Improving Facilities Managers through reflective practice education

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ABSTRACT

Purpose:

Reviews the use of reflective practice education in facilities management (FM) and the impact this can have on decision making and innovation in the workplace. The two main drivers for the research were to understand how reflective practice was used by facilities managers and to comprehend whether reflective practice had benefitted individuals professionally.

Design/methodology/approach:

Results came from a hermeneutic study exploring the use of reflective practice in FM. This study engaged practitioners who had all completed a part time undergraduate certificate in FM, delivered via block study and distance learning. The research was carried out using unstructured interviews, and emailed questions.

Findings:

The research evidenced that there are benefits to facilities managers being more reflective in their working practice and facilities managers need encouragement to become reflective practitioners and to contribute to the wider organisation through improved service and innovation.

Research limitations/implications:

One of the potential limitations was that the research was carried out with a small section of professional FM students from one university, and has not focused on FMs that have not been engaged in further education; although this was a qualitative piece of work and not aimed at generalisation.

Practical implications:

Professional bodies, organisations and educators need to consider how they engage and encourage the concept of the reflective facilities manager.

Originality/value:

Whilst there is literature in relation to reflective practice in education and management per se, this focused on the use of reflective practice in the workplace within an FM context. The benefits of such an approach have not, to my knowledge, been formally assessed in FM.

Keywords: Facilities management, reflective practice, innovation

1 INTRODUCTION

Facilities Management education does tend towards the more formal, technology based routes, as Steenhuizen et al (2014) discussed in their research on FM education within Europe focusing on Portugal professionals and their definition of FM, how they deliver FM within their organisations and what education would be best for the Portuguese market. They recognised from their interviews that the majority of their interviewees discussed ‘place’ and did not acknowledge people or process and the managers had an in depth technical knowledge but felt that education needed to focus more on the soft skills in relation to management.

Alexander (2009:6) discussed the role of education in FM as being paramount and recognition of the need for managers, researchers and educators to be aware of organisational issues and trends to which FM must ‘*contribute and respond*’. Roper (2012:191) also recognised the issues with more traditional technology based education for FM, and reviewed a need for the FM to be able to cope with the ‘*complex social impacts that the workplace has on the worker and that the workers impart on the workspaces and the interactions of the users and space*’ This approach is drawn from a social constructionism view and she feels that FM should be taught from this perspective. This would draw on a different way of thinking and this research suggests reflective practice has the potential to address these needs and engage FM students to see the world differently. Her ideas concur with our current course approach in using problem based learning, but we can further develop a greater understanding of how different people view the world from a different standpoint; as Roper suggested (2012:196) “*more elaborate and thoughtful approaches to educating the fully rounded professional*”.

As Coenen and von Felton (2014) discussed facilities management is a service based industry and therefore education needs to also focus on management in relation to process, the tangibility management (the brand of FM, including uniforms of the FM staff, logos etc.), personnel management and relationship management. The author's wider doctoral research has highlighted how reflective practice has led to a change in all four elements, from the improvements in decision making and therefore innovation (process), the raised profile of themselves within the organisation (tangibility), increased self-awareness leading to improved communication with staff and end users (personnel management) and their ability to flex their behaviours according to the situation has improved relationships. This paper focuses on how teaching reflective practice in FM education to professional students leads to engagement in reflective practice in the workplace and improved performance.

2 LITERATURE REVIEW

Reflective Practice

Bengtsson (1995) highlights four basic aspects of reflection: reflection as self-reflection, reflection as thinking, reflection as self-understanding and the distancing function of self-reflection. This is further reiterated by Boyd and Fales (1983), who see reflective learning as an individual process and internal examining resulting in a changed conceptual perspective. According to Bolton (2010:xix) reflective practice is “*paying critical attention to the practical values and theories which inform everyday actions by examining practice reflectively and reflexively. This leads to developmental insight.*” Bolton further explains the concepts of reflection and reflexivity alongside the concept of values. “*Reflection is an in depth consideration of events or situations: the people involved, what they experienced and how they*

felt about it." She also discusses that to fully engage in reflection, we have to be prepared to *"relive or review the experience"* and be able to *"replay from diverse points of view"*. She continues to explain reflexivity as a way of *"standing outside the self to examine, for example, how seemingly unwittingly we are involved in creating social or professional structures counter to our espoused values."* By the meaning of values, she continues in explaining that these are manifested in practice. For example, *"we are what we do"*. The recognition of the difference between our values in practice and our espoused values can be further explored through reflective practice to try to enable us to make them harmonious with each other. The definition from Bolton in relation to the terminology used to explain reflective practice complimented this piece of research, and agreed with my own pre-existing knowledge and understanding in relation to reflective and reflexive practice. Osterman and Kootkamp (2004:13-14) refer to reflective practice being designed as a way to *"facilitate identification, examination, and modification of the theories-in-use that shape behaviour... requiring change in deeply held action theories"*. This explanation identifies the active as opposed to passive engagement with this practice. It is not simply naval gazing but a way of changing our own inbuilt assumptions and behaviours.

Reflective Practice in Teaching

Reflective practice, as referred to by Bolton (2010:3) can be considered as being *"a state of mind"*, and therefore this is something that individuals have to engage with, it is not just a tool or technique to be used at particular moments but more a way of living. Reflective practice allows us to explore and question our own values, beliefs, behaviours ideologies and assumptions not just in the workplace or in our home environment, but in everything we do. Reflective practice often leads to action or a deeper reflective exploration of 'self'.

The concept of reflexivity according to Cunliffe (2009) is taking reflective practice further in relation to not only understanding our practices but also how we relate with others; the creation or organisational realities of shared practice and also how we talk and use language. We can then recognise how our circumstances and relationships are considered in relation to our behaviours as opposed to merely reacting to them and this can help us to understand and revise ethical ways of being. We could also consider whether there is a difference between our values in practice and our espoused values, these being our core moral beliefs. This can be affected by our organisational values being different to our own. Bolton (2010) refers to reflexivity as an awareness of how I am experienced and perceived by others. Bolton also discussed her use of reflective and reflexive practice as a *"through-the-mirror"* method to allow for a combined reflexive and reflective journey.

Locating reflection in teaching practice can be evidenced back to Dewey (1933) as he considered the way of taking in new knowledge and the thought process that this can commence; he defined reflection as *"active, persistent and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it and further conclusions to which it tends constitutes reflective thought"* (Dewey, 1933:9). As discussed previously this still has some focus on an active as opposed to passive process. Whilst Dewey does not refer to the emotional engagement in relation to learning and reflective practice, Boud et al (1985:19) defines reflection as *"a generic term for those intellectual and affective activities in which individuals engage to explore their experiences in order to lead to new understandings and appreciations"*.

3 RESEARCH METHODOLOGY

This section will focus on the approach to the research strategy, the chosen research method and some discussion on the social actors used within the research.

Research Strategy

The research has been carried out using a hermeneutic exploration. Hermeneutics is the study of interpretation (Follesdal, 2001) and the research has been an exploration of whether facilities managers are engaged in reflective practice and the benefits they feel this may have given them from both a personal and organisational context. The approach to the research has been through a qualitative investigation through the hermeneutic tradition as this allows for the researcher to engage in the understanding of meaning of everyday language and to try to form some concepts from this social world (Giddens, 1976) or the "lived experience" (Laverly, 2003) and also to ensure it is an interpretation of the information as opposed to a translation. Hermeneutics allows for a bottom up approach by adopting the position of the researcher as the learner rather than expert; therefore the learning will be taken from the experiences of the social actors. These lay concepts are taken to allow for the researcher to create more technical concepts which are created through iterations of examination and reflection, and further re-examination. The concept is not static and therefore allows for the researcher to explore the information and for it to be evolving throughout the process. The aim is to provide a useful description and understanding to fit the research being discussed (Blaikie, 2010).

The process of the hermeneutic cycle was drawn on from Gummesson's model (2000) which involved initial discussion of pre understanding, and acknowledgement of own life history and also exploration of the literature in reflective practice. The text from the interviews was then revisited in several iterations to reflect on the text, thoughts and the theory until understanding was gained on that particular theme.

Using the hermeneutic approach allowed understanding and reporting on the social reality of the "actors" and to create meanings and interpretations of their own thoughts, whilst trying to remain true to their language; there is also a need for the researcher to ensure that their own interpretations remain true to the actors. It is important to stay within the information and to remain within the hermeneutic cycle and the recognition of own influences and the impact this has on the study needs to be recognised. In order for the research to be robust, all decisions should be reflected upon, including the use of the theoretical framework and be made explicit to others (Koch, 1996). The research has taken an emergent format within the tradition of interpretative research, and therefore the use of narrative and approaches evolved through the engagement with the text.

The Social Actors

The social actors were taken from students/alumni that have engaged with our professional programmes in facilities management, as these are all underpinned by reflective practice. As the students are based all over the UK due to the delivery method of the course, there is a mixture of face to face interviews and telephone interviews; and also emailed questions. These students are all part time professionals studying on a blended learning basis. From our course perspective, blended learning relates to part time distance learning and part time block study. The research included 34 email responses, 7 face to face interviews and 5 telephone interviews and I felt at

this point that I had achieved theoretical saturation as there was nothing new coming from the interviews (Blaikie, 2010).

4 THE HERMENEUTIC EXPLORATION

There is a dearth of literature in relation to facilities management and reflective practice, and whilst the professional body in the UK, British Institute for Facilities Management, discusses this as being a skill for facilities managers, there was no evidence of research focused on the benefits of using reflective practice in facilities management in the workplace.

To aid the narrative discussions, Høystrup (2004) discussed the need to be able to understand the differences between levels of reflection and also to understand organisational learning and the links between the two. Moon (1999) stated there was no common and agreed upon concept of reflection but Høystrup focuses on the need to not necessarily define reflection but to distinguish between the levels of reflection, drawing on individual, interactional and organisational. Van Woerkom's (2003) view of reflection refer to the individual reviewing an experience, and refers to this as the reflective practitioner, however individuals can reflect together in an organisational context and this type of reflection is important for teams. To draw further on the discussion of reflection and critical reflection, Mezirow discussed critical reflection in relation to not only understanding the task itself, but also understanding the premise of problem solving. It involves a "*critique of the presuppositions on which our beliefs have been built*" Mezirow (1990:1). There is more concern with the why we have behaved or carried out a task in a certain way; the deeper exploration of self. Høystrup (2004:445) believes that '*reflection builds the bridge between individual and organisational learning.*'

The use of reflective practice in the workplace

As part of the interview discussions and the emailed questions students were asked whether they engaged in reflective practice and if so whether they could give some examples. The first examples lead to the use of reflective practice to focus on improvements within project work and/or how they delivered a service.

"... reflecting on any similar work that has previously been undertaken which could guide future decisions. I would also reflect on situations and interactions when conducting staff appraisals for my team" (DO-email response)

"Since 2011 then the FM team has carried out over 10 small office refurbishments with success, this has been achieved through me using my reflection skills and looking at how I project managed the very first project and how I managed the whole process but more importantly how I felt as a person and project leader, and how my actions effected the project in general." (MP - email response)

From the interview text, reflective practice was used as a productive tool to aid learning from mistakes and to understand how this could be improved for the future. Reflective practice appears to be a practical tool which can be applied to understand how organisational practice and processes can be improved moving forward. This links to Dewey's (1933) concepts in relation to defining the problem and thinking ahead, therefore drawing from observation and investigation and leading to three areas, formation of a guiding idea for action or a plan; playing the new ideas with others, such as within the team; and then testing the idea in action (Høystrup,

2004). Boud et al (1985) refer to reflection as a process that links experiences (and this could be emotions, behaviours as well as processes) and a commitment to action, which again as discussed by the social actors appears to be the route that has been taken. The need to allow for time is crucial as well, to allow distance from the experience. Interestingly one of the email responses stated that they actually planned time in their diary for the purpose of reflection.

I use it daily, a 1 hour session scheduled in my diary to take time out to reflect on work issues. I find it a really effective way of working out root cause of issues, outcomes and ways of making improvements for future. (LT - email response)

Referring back to Schön's (1991) concept of reflection in and on action, the responses showed evidence of reflection on action, having taken time away; as Boud et al (1985) would agree with, to reflect on their actions and the implications of them to then gain some further understanding to be able to make the changes. However Schön does discuss professionals relying heavily on the 'knowing in action' which relates to their tacit knowledge, and can allow individuals to make a split second decision based on their previous experiences and perhaps this relates to the very practical application of reflection by the social actors in relation to problem solving.

Verdonschot (2006) takes reflective practice further to try to address whether reflective practice can aid innovation in the workplace, and from the views of the students, there was evidence that having time and space to reflect on service delivery, or projects can lead to changes of improvement, and therefore some innovation in the workplace. For FM as an industry, the concept of innovation is vital, as most outsourced contracts now actually state a percentage of innovation is required every month. One of the respondents acknowledged the reactive nature of FM, but equally the importance of engaging with reflective practice with his team. Whilst this could be considered as a quality review, the reflective practice is evidenced by him recognising the need to engage in this process.

"There is strength in the operational stuff that we do, for the reactive stuff we do, for the planning stuff we do... absolutely vitally important because most of the time if you are reacting to something it is not planned, it is last minute and if it is an emergency 'let's crack it, let's do it, but get it done'. But then, yes, take the time out and it is the hardest thing to do because you are moving onto the next thing, but what you need to do is stand back and get everybody round the table and go right okay, how did that go? (BF -telephone interview)

The above statement acknowledges how FMs can see reflective practice initially, "I am too busy"; "don't have time for that stuff"; "got to move on the next thing" etc., there could be a million and one reasons not to engage but the reality is above in black and white that actually having to deal with the situation in the moment is key, and decisions have to be made quickly sometimes, however, there also needs to be realisation that to prevent the same mistakes occurring the situation needs to be reflected upon to be able to change. In FM there needs to be a pause button at some point to understand the deeper issues behind the problems.

The other aspect that came out in the use of reflective practice was the difference in dealing with situations involving people (as opposed to process or projects) linking to more general organisational behaviour. *"It can be a snap shot reflection after an interaction with someone and I think to myself 'did that go ok?' - Yes or no. Was I fair there? - Yes or no? Did I get what I needed there? - Yes or no. Depending on the answer and the importance of the situation will depend on if I give it anymore thought!" (WE- email response)* This response lends itself to the view of Schön's (1991) reflection in action and on action with evidence of both and also agrees

with Swan and Bailey (2004) in recognition of interactions that went well. One of the FMs reflected on the working with other people and recognised that she had changed her style through using reflective practice... *"It has become a big part of how I work and how I treat other people now. ...previously I had just gone 'right, you are moving there' and just done it. Now, I am going 'okay, well how are they going to perceive it and trying to think ahead and stand back and think if that was me, how would I feel about it? What would be my concerns? ... You are going into meetings and you are coming from their point of view. They realise that you are working with them and not against them."*(FC-face to face interview) There is greater consideration of people in relation to change projects and the use of empathy to explore potential misgivings from the people that are being moved and allowing her to review the way the change is delivered and how the people are engaged; evidencing a more in depth level of reflection.

"I don't use reflective practice"

Out of the social actors that engaged with the research only two stated they didn't engage with it, however their comments evidence some engagement with their teams and their own personal reflection and learning, which led me to believe that there may be a barrier with the terminology. Both students reflected on learning and changes to service delivery, for example *"I haven't, although encouraged my team to do so and explained the process of learning. We do reflect on practice in working terms, for lessons learned, as opposed to personal behaviours and skill naturally, but perhaps not formally. Learning from experiences etc. (DL -email response)* In trying to understand and interpret the comments, it draws back to Schön's (1983) ideas on reflection in and on action in relation to the individuals perhaps not perceiving this as reflective practice as they are doing it in the moment, or 'thinking on their feet'. This concept of the terminology being alien as opposed to the practice would concur with the view of the student below:

"Reflective practice is something strange to me. I found it quite enjoyable when I got into it. I have actually done this for many years but never realised I was doing it. So I have been doing it unknowingly for many years, it is just basically reflective practice to me is going away and taking a long hard look at yourself and thinking right ... what have you done right and what have you done wrong and being honest with yourself and learning. Reflective practice to me is a method for me to basically learn and improve what I am and how I behave. (TE - face to face interview)

Revisiting Edwards and Thomas's (2010) question whether reflective practice can be taught, their discussions almost counteract this, in that they have engaged with the learning and are now drawing on reflective practice as a learned skill and also, as Dewey (1933) discussed, as "lived practices" to enable them to become more self-critical.

Perceived risks of not engaging in reflective practice

This was an interesting question that came out in some of the interviews as they were unstructured discussions; but the responses led to interesting reflections on learning and being able to move forward. Some of the students reflected on the role of FM and equally the impact of working in the public sector and perceived risks of being outsourced. *"I think you constantly need to reflect on what you are doing, either whether you are in the private sector and wanting to expand and move out, or whether you are in the public sector and you are delivering the service and you want to make it better and constantly keep up there so you won't be outsourced"*

(BS - face to face interview) There was also a view of *"If you don't reflect, you don't learn; you don't improve. If we don't learn, we don't develop and we don't improve; we leave ourselves open to outsourcing or rival private organisations coming in and taking it from us."* (TE -face to face interview) Another view from an FM in a private sector organisation with an inhouse provision stated *"If you don't reflect, you don't identify any opportunities"* (BF-telephone interview).

There was recognition of the need to continually improve service. Verdonschot (2006) discussed reflection with the future as a good starting point as this can lead to innovation and breaks away from the more traditional or dominant ways of thinking. "It can have three starting points - past, present and future" (Verdonschot, 2006:675). This was reiterated by TM (face to face interview) as she stated *"I think once you start using it, it makes you stop and think about your actions in the future. You sort of almost reflect in advance, well it's not reflecting in advance but you think about the implications in advance and what the possible outcomes could be, so it is a more measured response than we might have had in the past."* This concurs with Op de Weegh (2004) who discusses the need to let go of existing frames of reference and create new ones.

Perceived importance of engagement in reflective practice for facilities managers

Throughout the interviews, discussions took place about the importance of reflective practice in relation to facilities management. The British Institute of Facilities Management (BIFM) encourages reflective practice through their courses and as part of the continuing personal development of their members and there was a need to understand from our students whether they felt reflective practice was a key skill for the industry. Some of the comments reinforced the importance of reflective practice for the profession:

"I think BIFM need to train their FMs to think before they shoot really. FMs ... are very lively people and they are very vocal by virtue of what they do and I think the reflective practice would help them more in their role to be more accepting... it is getting back to the communications side as well and how you communicate in the right way with the right people at the right time." (FC - telephone interview)

"It identifies opportunity for process improvement I think, that could be financial, that could be engagement that could be how you are perceived within the business as a department. Another benefit is that if you do it right you take your relationship with your contractors or your staff to another level?"(BF-telephone interview) Both statements have focused on improved relationships and a more honest and open environment for communication drawing also on empathy. Some of the social actors also referred to engaging their team in reflective practice to have the concept embedded in order to encourage improvements in service delivery; they did identify that they didn't use the terminology, but explained the concepts as *"it is about revisiting, looking back and would you change anything"* (BF-telephone interview). The approach has enabled the team to understand the reasons behind reflective practice, but has also enabled them to continually learn from these experiences.

Emancipation and empowerment are considered in Moon (1999) in a discussion of the purposes and potential outcomes for reflection. In summary these are:

- Consider the process of our own learning
- Critically review something
- Build theory from observations

- Engage in personal or self-development
- Empower or emancipate ourselves (Moon, 1999:23)

In relation to the delivery of the reflective practice module on the FM course, the first 4 elements of these are addressed not only through the module but across the course which does ask students to use their reflection across several models to aid in their critique of organisational practice. The element of empowerment or emancipation of self can be a demonstration of reflection to understanding self and moving away from 'group think'. However, I hasten to add that this research was not focusing on emancipation. Moon (1999) encapsulated the discussions from the social actors, in the sense of engagement and reviewing performance from a critical perspective.

5 CONCLUSION

In a fast moving environment there is a need to encourage FMs to be more open to reflection to allow them the time and space to think differently, to change the organisational treadmill and to make differences to the practice. As Raelin (2002) highlighted action is paramount from an organisational perspective, but this research highlighted that the ability to take the time to step back and reflect on the delivery of FM services, has led to improved ways of working. So whilst the decision or the action may not be immediate, the benefits outweigh the time of correcting or resolving problems. Facilities management is a complex working environment, which deals with operational, tactical and strategic issues and has numerous amounts of very different soft and hard services roles falling under its remit. Using reflective practice as an underpinning for all courses related to facilities can help the individuals to constantly challenge their values and beliefs in the workplace in order to continually innovate in the changing world that is FM.

The learning from the research and the use of reflective practice can also be considered in team development. As evidenced by the social actors, they have taken the use of reflective practice to further develop their own FM teams and their skills to enhance working practice from an interpersonal and organisational perspective. To encourage a lived practice (Dewey, 1933) students need to be engaged in reflective practice from the start of the course, in relation to their learning and also their workplace practice. King (2005) discussed adult education theory and suggested that learners may reawaken their intellectual side by their return to education and therefore in learning which encourages critical reflection may then be able to challenge their own values and beliefs as their level of confidence grows. FM by nature requires individuals to manage a myriad of relationships, and using reflective practice and gaining increased self-awareness may be a way of improving them.

REFERENCES

- Alexander, K. (2009) *European Facilities Management. The next generation. Futures EuroFM research project.* [Online] Last accessed 4 August 2014 at www.ifma.org/docs/fm-forecasts/2010_eurofm.pdf?sfvrsn=2.
- Bengtsson, J (1995) What is reflection? On reflection in the teaching profession and teacher education. *Teachers and Teaching: Theory and Practice*, Vol. 1, No. 1, pp. 23-32.
- Blaikie, N. (2010) *Designing Social research*, (2nd ed.) Polity Press, Cambridge
- Bolton, G (2010) *Reflective Practice. Writing and Professional Development*, 3rd Edition. Sage,

London

Boud D., Keogh R. & Walker D. (1985) *Reflection: Turning Experience into Learning*, Kogan Page, London

Boyd, E.M., and Fales, A.W. (1983) Reflective learning: key to learning from experience. *Journal of Humanistic Psychology*, Vol 23, No. 2 pp 99-117.

Cunliffe, A.L. (2009) Reflexivity, learning and reflexive practice. In: Armstrong, S. and Fukami, C (Eds). *Handbook in Management Learning, Education and Development*. Sage, London

Dewey, J. (1933) *How we think*. Houghton Mifflin Company, Boston, MA

Edwards, G. and Thomas, G. (2010) Can reflective practice be taught? *Educational Studies*. Vol 36, No. 4, pp 403-414.

Follesdal, D. (2001) Hermeneutics. *International Journal of Psychoanalysis*, Vol 82, No.2, pp375-379.

Giddens, A (1976) *New rules of sociological method: A positive critique of interpretative sociologies*. Hutchinson, London

Gummesson, E. (2000) *Qualitative Methods in Management Research* (Second Edition), Sage, London

Høyrup, S. (2004) Reflection as a core process of organisational learning. *The Journal of Workplace Learning*, Vol 16, No. 8, pp 442-454.

King, K.P. (2005) *Bringing transformative learning to life*. Malabar, FL: Kreiger, Koch, T.

(1996) Implementation of a hermeneutic inquiry in nursing: philosophy, rigour and representation. *Journal of Advanced Nursing*, Vol. 24, pp174-184

Laverty, S. M. (2003). Hermeneutic phenomenology and phenomenology: A comparison of historical and methodological considerations. *International Journal of Qualitative Methods*, Vol 2, No. 3. [Online] Last accessed 9 July 2014 at

http://www.ualberta.ca/~iiqm/backissues/2_3final/pdf/laverty.pdf.

Mezirow, J. (1991). *Transformative Dimensions of Adult Learning*. Jossey-Bass, San Francisco, CA

Moon, J. (1999) *Learning Journals*. Kogan Page Limited, London:

Op de Weegh, S. (2004) *How to break through: a research on knowledge productivity focusing on breakthroughs at Habiforum Innovations Projects*, University of Twente, Enschede.

Osterman, K.F. and Kootkamp, R.B. (2004) *Reflective Practice for Educators*, 2nd Edition, Corwin Press (Sage), London

Raelin, J.A. (2002) "I don't have time to think! Versus the art of reflective practice. *Reflections*, Vol 4, No. 1, pp 66-79.

Roper, K. (2012) Educational implications of an FM social constructionist view. In: Alexander, K. and Price, I. (Eds) *Managing Organizational Ecologies. Space, Management and Organizations*. Routledge, New York, pp 189-197.

Schön, D. A (1983, 1991) *The reflective practitioner. How professionals think in action*. Ashgate Publishing Ltd, Aldershot.

Swan, E. and Bailey, A. (2004) Thinking with feeling: the emotions of reflection. In: Reynolds, M. and Vince, R. (Eds) *Organizing reflection*. Ashgate Publishing Company, Aldershot, pp 105-125.

Van Woerkom, M. (2003) *Critical reflection at work. Bridging individual and organisational learning*, PhD Thesis, Twente University, Enschede/Print Partners, Ipskamp.

Verdonschot, S. (2006) Methods to enhance reflective behaviour in innovation processes. *Journal of European Industrial Training*, Vol 30, No. 9, pp 670-686.