
Learning in the restructured workplace: a case study

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Abstract

Workplace restructuring implies people changing roles, leading to the deskilling of people who must learn their way back to competence. Reports the case of a person learning in a new role. The conceptual framework for the analysis is the Dreyfus model of skill development. Shows the model to be effective both for research and for individuals to understand their own development. The results enrich the understanding of workplace learning, in particular the manner in which people can be helped to learn a new role.

Introduction

The realities of workplace restructuring are being felt in many companies. A common result of such restructuring are role changes. This can lead to personnel being required to move from roles where they have developed substantial expertise into new roles where they are basically novices (Dreyfus, 1982). These changes necessitate intense learning events for the personnel involved as they grow back to competence and beyond. Those managers who understand this change as a learning event (Swieringa and Wierdsma, 1992) seek to provide professional development and training programmes for those who have been displaced. In such instances, the nature of the programmes initiated by the company are critical.

There is little research into the learning processes of personnel caught up in such restructuring processes. If guidance is sought from studies conducted in the more general workplace context then Coulson-Thomas (1992) reports that professionals from 80 different organizations preferred training that emphasized learning in the workplace using workplace problems. Also, this finding is emphasized by Choi and Hannafin (1995) who use the theoretical basis of situated cognition to inform their description of effective learning environments.

This paper analyses a case study of the learning processes of an employee who was promoted to a new role in a restructuring process. The employee had volunteered to participate in a professional development programme which was the focus of a research project. The research project was a collaboration between an industrial company that was dissatisfied with its professional development and training programmes and researchers from two universities.

The structure of the paper is as follows. Initially the content of the professional development programme is briefly presented. Next, a description of the research project leads into the presentation of the case study.

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Finally, the discussion emphasizes the significance of the findings.

The professional development programme

The aim of the professional development programme was to facilitate workplace learning. The programme was synthesized from the works of Argyris (1982), de Bono (1992), Butler (1996), Covey (1990), Dreyfus (1982), Revans (1983), Schon (1983) and Senge *et al.* (1994). The principles underlying the programme are that effective learning is likely to occur when individuals:

- identify and reflect on their core values and assumptions;
- use cycles of action and reflection based on real work problems;
- plan their professional growth and have the plan supported by the company;
- work in an environment that supports and challenges their thinking and acting;
- know that their personal practical knowledge (Butler, 1996) is valuable and is valued by the company.

The proposed three-year professional development programme incorporated workshops conducted by action learning consultants (Hill, 1993, 1994). In between the workshops the participants implemented individual work-based projects (Action Learning Explorations (ALEs)) based on cycles of action and reflection. Mentoring and support groups were set up in the workplace to provide a forum to help the participants reflect on their actions (Balatti *et al.*, 1997).

In the context of the case study analysed in this paper the relevant model from the professional development programme is the Dreyfus model of skill development. This model was presented to the participants to assist their understanding of their own development and the development of those around them. However, in the next section of this paper it will be used as the conceptual model to explore the case data because it provides descriptions of skill acquisition levels which can be used as indicators of professional development.

The Dreyfus model (Dreyfus, 1982; Dreyfus and Dreyfus, 1986) consists of five levels of skill acquisition and role perceptions (Table I). The central focus of the model is that people can, over time, proceed from novice behaviour, which is governed by rules, to

expert behaviour which is context driven and characterized by rich tacit knowledge. The levels are highly contextual and progression from one level to the next is neither time dependent nor guaranteed. An individual may remain at one level, or even regress as their role changes in a company.

Novices focus on following rules to help them carry out their tasks. This requires little judgement by the novice, and in turn the novice feels little responsibility for his/her performance. The advanced beginner stage is typified by people who have an amount of relevant experience behind them but still feel that answers to questions and problems are to be found outside themselves and take little ownership of any shortcomings or difficulties associated with the successful completion of the task.

A competent performer determines his/her action by analysis and understands that rules can be violated provided the most analytically sound plan is pursued. A sense of responsibility for performance develops as the plan carries emotional investment on its success or failure.

While the competent performer focuses on the parts that make up the big picture, the proficient performer is able to synthesize and focus on the whole. Proficient performers use intuition to recognize problems as they can draw on many experiences from a variety of contexts. Often, explanations of proficient actions are given in personalized maxims which have been generated through extensive experiences. Reasoning and judgement are still the processes used to solve problems and determine what action needs to be taken.

An expert has a compelling sense of the best action in the situation. The complexity of the expert's actions is generally not noticed except under exceptional circumstances. Most situations are dealt with by holistic recognition of patterns and solutions which are arrived at with apparent ease.

The study

The research was a longitudinal university-industry collaborative study investigating professional growth and thinking in an industrial workplace. It was planned to take over three years but collected data for only 18 months due to the restructuring process. The aim was to address the frustration felt by this company at the long-term ineffectiveness of

Table 1 Dreyfus model of skill acquisition

Dreyfus level	Performance mode	Role perception
Novice	Rule-governed and context-free performance	Detached
Advanced beginner	Follows rules, solves problems by asking questions, some appreciation of the context	Little responsibility for performance, looking for solutions outside the self
Competent	Performance is analytic, goal-directed and contextual	Take emotional and moral responsibility for the outcomes of performance
Proficient	Performance is speedy and flexible, guided by maxims, and situations are perceived as wholes	Involved with the wider picture and long-range goals
Expert	Performance derived from a deep, tacit understanding of situations	Highly involved but unable to explain all that they know is correct

much staff development. A research-based development programme was implemented and the research study sought to understand its impact on the 50 personnel who volunteered to join.

Over an 18-month period, the researchers collected data through a number of semi-structured workplace interviews, stimulated-recall interviews and testing programmes. Stimulated-recall interviews (Marland, 1984; O'Brien, 1993) involve personnel being videotaped at work and a short time later, while viewing the video, being asked to recall their on-the-job thinking.

The employee, who shall be referred to as Jenny, was moved to a new position during the research study. Before involvement in this research, Jenny had been employed for nine years as a typist in the costing section of the company. Over this time her dominant role had involved "sitting and waiting" for typing work. However, the accounts officer, who had been in the role for 17 years, indicated his intention to leave the company and Jenny was asked to take over his role. The officer agreed to return on a part-time basis to train her in the job. This meant that she had to learn the complex aspects of cost accounting for the company's national and international markets. This new role for Jenny defines the context of the case. Over 18 months, data were gathered from Jenny in the form of seven

semi-structured interviews and five stimulated-recall interviews. These data were the basis of the case.

The case

Jenny's learning mapped onto the Dreyfus model

When Jenny moved into the new position, she expected to be able to thoroughly learn her new role in a reasonable amount of time. This view turned out to be overly optimistic. She found the role very demanding and complex and cited the large monetary figures with which she had to deal. To cope, her initial preference was for clearly defined written procedures. Around this time she stated:

I would prefer to be able to sit down or take home on the weekend a book that you could read up, and come back to work on Monday and have it clearer as to the way everything works in there, but there is nothing.

In the absence of task guidelines, and as her trainer was not always available, she often had difficulty in determining what to do. She began night classes to build her theoretical knowledge, and at work tried to replicate actions from past successful experiences. This duplication technique rarely produced adequate results in new situations, and consequently she often had to defer tasks until she could consult with her trainer, or her supervisor. This mirrors the Dreyfus model's

description of “novice” – “advanced beginner” behaviour which suggests that when a worker has little experience, they need simple rules to guide their actions and they seek help outside themselves. However, while the model also suggests that these inexperienced workers typically hold little responsibility for their actions, Jenny demonstrated a strong desire to perform correctly. Perhaps her long time with the company, and her commitment to its success as demonstrated by her voluntary participation in the professional development programme, influenced her response.

After three months, the complexities of the role were even more apparent to Jenny and she indicated that gaining more personal experience rather than following procedures was more likely to lead to better performance. Books and written procedures were no longer perceived as a primary source of help, instead, specific files, meetings and workplace colleagues were the major sources of information that she sought. Looking for meaning became part of her performance, her questions became “triggers” for further information gathering. Typical comments by her at the time were:

Information is the whole key to a problem, there's always a solution if you gather enough information.

I find myself ... asking ... “why did we do it like this?”. Before ... it was ... being told something and just absorbing it without it having a lot of meaning ... I found there are reasons why we do things in such ways but they're reasons that I couldn't see initially.

Despite the growing number of variables and contextual rules, Jenny felt she was developing insight into her role and was more likely to stop and ask what to do rather than panic when she didn't know. She was pleased by her progress during this time, but observed that her judgement of events was sometimes wrong. This interview excerpt after six months in the role indicated her general feeling:

Jenny: In my old position ... I was being told what to do ... now it's a whole new thought process because it's up to me to decide. I have to initiate what needs to be done.

Interviewer: Which did you prefer?

Jenny: Well, if you had asked me two months ago, or three months ago, I would have said the old way. Because I knew where I was ... but now, I've got more confidence, I enjoy this.

Interviewer: Would you go back?

Jenny: No! (she laughs) No way!

Her search for comprehensive rules is de-emphasized as patterns and meaningful elements are more readily recognized, and she formulates her own guiding principles from experience.

During the next few months Jenny's development allowed her to work problems out herself. She observed that she was always learning more about her work. Her growing analytic powers and confidence moved her to question others' views on the right way to do things as she wanted to be “convinced” that a “correct” approach was being used. Meetings were now being used as sources of advice and contextual information. And she began to realize that by noting such factors as production delays and technical faults she could anticipate future disruptions and negative effects on the completion of her work. For example, while working on one account, she drew on her wide knowledge of the plant operators' roster and the equipment maintenance schedules affecting an order to accurately notify the supervisor of the progress of the order. Jenny's developing ability to analyse what was needed to carry out her workplace tasks demonstrated characteristics of competent behaviour as described in the Dreyfus model.

Most difficulty was now experienced with aspects of managing the demands of the work. Jenny commonly stated that she found it: ... difficult to organize the job itself, and that frustrates me ... I still think that I should be able to. I don't see any light at the end of the tunnel. ... all I want for Christmas is less stress.

While her ability to gather and prioritize information and to plan her time indicates developing competence, her perceptions of increased stress may be due to the concern an advanced beginner develops on being overwhelmed with the numerous situational factors. Alternatively, it may have been as a result of the intense analytic effort required to produce good performance in the competent stage.

Fifteen months after commencing the role Jenny was generally able to plan solutions which wouldn't “cause problems” and were “efficient” and “made sense” to her. However, she still felt that there were aspects of the role, for example preparing financial year budgets, that she knew very little about. While she had reached competence on her regular

tasks, her performance remained rule driven for less frequently orchestrated tasks in her new role. In other words, different segments of her role, depending on their frequency and magnitude were at different levels on the Dreyfus scale of development.

Role of informal workplace interactions

Learning from interactions with her trainer, managers and mentor contributed significantly to Jenny's professional growth. For instance, Jenny described the benefits and difficulties she went through during the induction into the new role with her trainer. She expected that he would be available for only one or two months, however workload requirements meant that he returned on a casual basis for nearly a year.

Initially the trainer continued to perform a majority of the work, particularly the "back-log", while Jenny would attempt tasks at another desk. One clear benefit of this was the motivational effect of her observing the trainer's experienced performance. She commented:

I sit back and think, "Wow", I would really like to be able to do that.

More interactive aspects of his induction consisted of verbal explanations of processes and occasionally, if she questioned, he would provide system models to clarify theory. He would also proffer maxims as problem-solving techniques which were an indication of his proficient-to-expert level of development. For example, he told Jenny:

The figures talk to you ... You have just got to keep your ears open.

Jenny found it difficult to use these maxims herself at the time. It wasn't until some months later, while struggling with a problem, that she began to see meaning in them:

I didn't know what to do ... (then) I found something. I thought this is really eerie. He tells me the figures talk to me and I laugh at him and then all of a sudden there it is.

Her perception during this early time had been of feeling "lost", and waiting for it to "click". She was concerned about her ability to handle the work when the trainer left. Jenny found it difficult to learn readily from her trainer:

I think it is probably my fault ... I should say "Can you go through this step by step with me and let me know what's happening?" The way he trains is he has got a huge knowledge of the whole running of (the company) from being here 17 years and I think he takes a lot of that

for granted and it is more or less "oh do this and do that".

After several months Jenny was still saving queries to ask him but he tended to return her questions with, "What do you think?", or "How are we going to get around this?", or no answer at all. Despite occasional concern, she perceived that this was his plan to build her confidence and shift ownership of the role to her. This led to her proffering her own solutions for approval. At that time, her perception of her professional growth in the role was that while she had built up a body of knowledge, she would need another ten years to attain the level of her trainer. She also stated:

He has the best knowledge, but that doesn't necessarily make you a good teacher. So I think that has been a little bit of a hurdle. ... I don't like to tell him.

Many issues were at work here, but of significance was that Jenny's professional trainer was highly skilled, but inexperienced at training. Her experiences with the trainer confirm the difficulty experts have in sharing their "opaque knowledge" (Billett, 1995), that is, making explicit what they implicitly do. Another interpretation could be that he lacked the patience and understanding necessary to promote the most effective learning in her as a novice (Cornford and Athanasou, 1995). The Dreyfus model suggests that experts use a vast store of very contextual, experiential knowledge in an intuitive "just do it" way, and because of this they find it hard to articulate what they do know, much less explain it to a beginner looking for simple context-free rules. Had the trainer been in the more conventional mould of coach (Choi and Hannafin, 1995) it would seem clear that Jenny's learning would have been more efficient and less disconcerting, as she had indicated it was from time to time.

An important change in Jenny's perception of her role occurred when her manager for the first twelve months was replaced due to further restructuring. Jenny's first manager had been a support in her early growth. He would advise her by phone or visits several times a day. Over time he decreased this contact, but maintained daily supervision and checked copies of her outgoing work. She would refer to him with potential solutions to problems and he would make suggestions. After he left she commented that she missed his motivational style:

Listening to him and what he has done is more beneficial in a way than him actually asking me what I have done.

Her second manager responded to her problem-solving enquiries very differently. He handed her problems back to her suggesting that she could handle them. Jenny was forced to accept ownership of her role:

Everyone has got their own jobs to do and they can help to a certain extent, but knowing that this is your responsibility, this is your role, you have to solve it ... has helped me a lot ... it is just me and you have to do it. There is no one else out there really that can do it all for you.

Jenny's confidence in her ability was boosted. She assumed responsibility and her sense of stress decreased dramatically. Reference to the Dreyfus model suggests that the acceptance of the rich source of knowledge within the self by the competent worker is necessary to move his/her performance on to the proficient level.

Jenny also experienced growth in her role perceptions and awareness through discussions with a mentor she had been teamed with as part of the professional development programme. She found the mentor very useful:

You know somebody else is showing interest whereas, if there wasn't that kind of participation ... you wouldn't be as eager to do it (ALE), or as eager to achieve anything out of it ... because you'd be just left on your own.

Her mentor's ability to listen and question helped her to cope with the pressures. The mentor did not give her the answers, but he helped her to see beyond her focus and become more proactive on examining her assumptions about her performance:

A lot of time I don't feel like I have achieved anything ... his (mentor) questions make me realize that, yes, I have changed the way I do this, or I am handling this in a different way ... I don't see it until it is put in front of me basically.

While many of the workplace interactions described here are difficult to monitor, Jenny's reporting of them at least indicates that such interactions played a significant role in Jenny's professional development.

Role of external courses

Jenny participated in two formal courses during the study: one was provided by a local institution and other was the professional development programme which was part of the research study. Her responses to these indicated that they were generally useful,

especially those aspects where she could easily transfer her learning to her workplace.

Prior to her promotion to her new role, Jenny had voluntarily enrolled in a business accounting course. She indicated there were several difficulties with this, not least being her tendency to "drift off" and think about work-related matters instead of listening to the lecturer:

When you're working full time the last thing you want to do is leave work and go to (study) at night.

Her course lecturers could have asked her to apply various lecture inputs to her workplace and this would have made her learning more authentic (Choi and Hannafin, 1995). For example, two months into her new role, Jenny attended a three-day external training course on the computer costing system which "walked her" through the manuals and the system. She indicated that this had immediate value as it was totally relevant to her work:

Lectures that have an interest for me, and that I can understand, have relevance to your work. I think those kind of things tend to stick a lot better. More than something you may think you're never going to use again.

As a voluntary participant in the long-term professional development study Jenny attended workshops and various meetings for mentoring and support groups; and she undertook two individual projects (ALEs) during her first year in her new role.

Her initial project was to read some literature relevant to her new role and write procedures for specific aspects of her work. She found the ALE folder (a suggested framework to assist the planning, action and evaluation of her ALE) very helpful. Also, the support group, including her mentor, was beneficial in prompting her into action. For instance, while her mentor initiated most of the early meetings, she soon began to initiate them herself.

Jenny began a second ALE after six months. This involved her using the Dreyfus model to analyse her performance and identify areas that needed improvement. Again she used her ALE folder to assist her planning. A number of benefits from this process were evident to Jenny. First, she generated a work performance checklist by thinking through her work tasks and this helped her to clarify her perception of her work. For the first time, she felt she had a clear job description.

Second, using the Dreyfus model to "stop and think ... how good am I at doing this?",

enforced reflectivity on her professional behaviour. Third, her trainer's analysis of her development in her work roles generally validated her understanding of her progress. For instance, of Jenny's 17 identified work areas, she and her trainer rated seven at the same level on the Dreyfus model of skill acquisition, the trainer rated her higher in one area, and in five areas he rated her lower than her self-rating. As a result he made suggestions as to what she needed to do to be competent in the five areas. This gave Jenny more focus for improvement:

It gave me an idea on where I needed to drive, where I needed to exert a bit more energy and learn a little bit more in particular areas.

Unfortunately she never repeated this comparative rating process at a later time, nor did she put the energy into certain non-routine areas, as she had not anticipated the degree to which "day-to-day" activities would "over-rule" her planning. It was at this time that stress was playing a significant role in her daily workplace functioning. She had not included stress in the checklist as she felt it wasn't "something that you can rate yourself on a day-to-day basis". When she felt "bogged down", she listed things to be done and the highlighting of completed tasks gave her a sense of progress. In retrospect, she felt her choice of the Dreyfus model for her second ALE may have been premature.

In retrospect, Jenny felt that the professional training programme had helped her to develop from a novice. It had provided her with structure, and she began to manage her own professional growth. Self-reflection on her learning and performance was not strongly evident, but her mentor and support groups provided opportunities for verbal reflection. Her comments on the programme were generally favourable, and it was evident that she had come a long way from her rule-driven novice behaviour some fifteen months earlier:

Through the professional development ... you think a little bit deeper and you think "Are there other ways?" or "Why did this happen?" and not just jump to a conclusion that "This happened because of ...".

Discussion and conclusion

When placed in a new role outside her existing expertise, Jenny found herself to be working at the level of novice. She had to depend on the advice of a trainer who had many years'

experience in his role but little experience in training novices. This created problems for Jenny's development as the Dreyfus model suggests that novices need guidance while developing their experiential knowledge. This study supports the findings of other studies in that the trainer, for various reasons, was not able to provide the amount of guidance that Jenny felt she required. This could be attributed to his inability to share expert knowledge (Billett, 1995), or that he lacked the patience and understanding necessary to promote the most effective learning in her as a novice. Jenny's experience with her trainer confirms the difficulty experts have in sharing their "opaque knowledge", making explicit what they implicitly do.

But what the trainer very skilfully achieved with Jenny was to create the precise tensions that moved her forward in her development. He stopped answering her questions and insisted she become analytic herself and think through her actions. The new supervisor also added to this pressure on Jenny and she responded with renewed growth and deeper learning. She coped with a gradual weaning away from rule-governed and monitored behaviour and thus opened up opportunities for independent practice. Also, it is apparent that, over time, Jenny's emotional competence impacted favourably on her professional development in her new role through her demonstrated self-management and emotional resilience.

A range of training exposures worked well for Jenny's professional growth; however, training that involved real workplace problems was most beneficial for Jenny. The professional development programme allowed her to legitimately place the highest priority on her own work practices and it also provided structures that helped her to plan and maintain her self-development in the workplace.

Many of Jenny's workplace interactions, some initiated by the professional development programme, impacted favourably on her development. For example, a mentor was critical through the provision of unthreatening support and also for assisting her to review her self-learning and growth. Dialogue with mentors and managers did help her to make sense of her experiences and it allowed her to discover more than she originally thought she could articulate.

This case study has revealed critical stages in the professional development of an

employee suddenly placed in a context requiring new learning. Jenny's willingness to share her thinking behind her highs and lows has provided a rich foundation for examining such role transitions and allowed her to stand back and look at her own professional development. The Dreyfus model and the ALE process provided useful frameworks to facilitate the professional development of the employee. How to more effectively assist employees to reflect on their professional development and to monitor their own progress is an important area requiring more research. Clearly, the interviews by the researchers have assisted this process, but more work needs to be done on the setting up of company support structures that employees find user friendly and easily accessible.

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