

Learning, training and assessing on-the-job: what do workers think?

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Abstract

Interviewing workers about learning, training and assessment on-the-job can elicit unexpected reactions and responses. This paper draws on data from a qualitative study conducted with food production workers at three food-processing companies in North East Victoria. The study utilised multiple interviews with production workers, assessor/managers and colleagues of workers, as well as observations of the workers on-the-job. As part of the study, production workers were asked about the usefulness of training and assessment to them in their work (and also in life in general). The workers were very clear about the ways in which training and assessment did and did *not* assist them in their work and in their learning on-the-job. This paper explores some of these responses and considers how these insights might contribute to the ways in which assessment, in particular, is approached and practised in workplaces, to encourage a level of responsibility and self-direction for the worker-as-learner.

Introduction

Australian workplaces utilise both nationally recognised training and training in general for a variety of purposes (Smith et al., 2005), including to be responsive to changing industry needs, to provide specialised skills and/or to broaden learning options for workers (DEST, 2005). In many workplaces, workers are encouraged to learn throughout their employment (ANTA, 2003a), formally and informally on-the-job, in order to acquire or upgrade qualifications and to develop new and transferable skills sets (Wood, 2004). Assessing workers' skills, knowledge and abilities is a critical component of Training Packages (Smith & Keating, 2003), yet the ways in which workers view and approach training and assessment and the effects of training and assessment on their ability to perform job-based and generic skills, is little understood. This paper draws on a study of food production workers conducted in three workplaces over an eighteen-month period and focuses on what these workers-as-learners *do* (and *do not*) learn from the training and assessment that they undertake. It is hoped that by drawing on the responses of these workers, we may come to understand better how to assess workers generally (within the parameters of nationally recognised training), which could contribute to enhancing outcomes for the worker and the enterprise.

Literature review

The notion of lifelong learning, which views learning as a process of acquiring knowledge and/or skills throughout life via formal and informal education,

training, work and general life experience (OECD, 1996; Kearns et al., 1999; Field, 2006), also implies that workers will assume a level of responsibility for their own learning. Workers are encouraged to continually develop and transform their skills (Billett & Pavlova, 2005) and to obtain nationally recognised qualifications to enhance their employability. The need for continuous learning and encouragement to learn is increasing, as workers are being asked to maintain the currency and quality of their vocational skills (Billett, 2001), using a combination of learning on-the-job and formal study (NCVER, 2003). Approaches to competency-based training (CBT) and assessment increasingly require a level of self-direction (Knowles et al., 2005; Field, 2006) and individual learner responsibility (Maclaren & Marshall, 1998); and, whilst workers are expected more and more to self-manage their own learning (Candy, 1991; Mackeracher, 2004), they also require support from the enterprise, to take responsibility for their own learning (ANTA, 1997; Field, 2006). Knowles et al. (2005) recognise that self-direction does not imply learning in isolation; rather, it is social in nature, as it usually takes place in association with others, such as teachers, mentors and peers. In a collaborative environment, workers can learn from one another, assist one another in their understanding and also direct their own learning to meet personal goals (see, for example, Lave, 1990; Maehl, 2000; Morris & Beckett, 2004).

Within the Australian vocational education and training (VET) sector, competency-based Training Packages (currently developed by ten Industry Skills Councils) provide a set of nationally endorsed standards and qualifications for recognising and assessing workers' skills (Smith & Keating, 2003). Assessment is viewed as a pivotal component of all Training Packages and the National Strategy for VET 2004-2010 (ANTA, 2003b) emphasises a client-driven culture to meet the particular needs of employers and individuals. However, whilst worker responsibility for learning and gathering evidence of competence is encouraged, it does not occur simply by saying so. It is the concomitant responsibility of organisations to provide support for workers-as-learners, to assist in developing confidence and independent learning skills (Billett, 2001), so workers can assume a level of responsibility for their own learning and assessment needs. Specific learner support investigated by Eraut et al. (1998) included:

- The use of rotations and shadowing, where the learner worked alongside a practitioner for an extended period, before taking over the job;
- The use of designated 'experts', where learners, as part of the socialisation process, established who the experts were and how to utilise them; and
- Ongoing consultation and observation, which entailed seeking another perspective on a problem, from a colleague.

Whilst these practices relate to informal learning on-the-job (Eraut et al., 1998) they also have applications for accredited workplace training and assessment. Within similar supportive environments, individuals can be encouraged to develop self-determination (Field, 2006) and also be challenged to move to higher levels (Maehl, 2000).

In a report commissioned by ANTA (1997), the type of support considered most valuable by workplace learners was educational support, including: receiving feedback about progress; coaching, mentoring and individual follow-up; individual learning assessments; planning and preparation involving the supervisor; and, being involved in managing the learning. Furthermore, in a study of fully on-the-job training, flexibility in the pace of on-the-job training to suit individual learner needs was highly regarded by learners (and trainers) and had the capacity to develop their independence and self-direction (Wood, 2004). It is evident that developing autonomy and responsibility for learning and assessment, an initiative of lifelong learning, must be coupled with learner support, so that they are willing to take responsibility for their learning, rather than having it thrust upon them. Within the parameters of their own unique requirements, workplaces must initiate processes for learners to develop autonomy, while also meeting nationally recognised training and assessment imperatives.

This paper focuses on the notion that workers are not merely objects of the assessment, but are active participants in the process and can be encouraged to develop a level of autonomy for their own learning and assessment within a socially constructed, supportive environment (Lave, 1990; Billett, 2001). Workers actively construct knowledge from the work they do and from the interactions they have with one another and they also take these ways of knowing to training and assessment activities. Consequently, sustained and appropriate support also has the capacity to bring to visibility worker confidence and independent learning skills. To follow is a brief description of the methodology used in the study, which precedes a discussion of responses from workers regarding the ways in which training and assessment practices do (and do not) assist them in their work. The discussion will be used as a basis for suggesting wider implications that the findings may have for workplace learning and assessment practices.

Research methodology

A qualitative ethnographic study (Hammersley & Atkinson, 1990; Wolcott, 1998) was conducted between 2001 – 2003 at three food production companies in regional Victoria – a dairy company (Harvestime Produce), an edible oilseed processor (Emerald Food Co.) and the catering division of a multi-site healthcare firm (Valleyview Processing). Data was gathered principally through semi-structured interviews with and on-the-job observations of, nine production workers (three from each company). The principal respondents, comprising five male and four female workers, were initially informed of the study through a notice being displayed in their respective workplaces and those who showed interest were approached informally to take part in the study. To ensure that respondents entered the research project voluntarily, a plain language statement and consent form was provided. Each of the principal respondents undertook three separate interviews, at three- to four-monthly intervals, during the length of the study. Additionally, six of the workers were observed performing their work on

one occasion each (for between 3/4 to 1 1/2 hours) and three workers were observed on two occasions each (for between 1 to 1 1/2 hours). An assessor from each workplace and four colleagues of workers (secondary respondents) were also interviewed. The nine production workers were all undertaking formal training and assessment in the Certificate in Food Processing, the Certificate in Dairy Processing, or the Certificate in Hospitality (Catering Operations) at Australian Qualifications Framework (AQF) levels 1, 2, or 3. Pseudonyms were used in the study to maintain anonymity for the companies and their employees. Limitations of the study include it having been on a small scale and being conducted by one researcher. Additionally, rostering constraints and company sensitivity surrounding production processes, limited the number of worker observations undertaken. The small-scale and industry-specific nature of the study means that conclusions may not be generalisable. The discussion that follows draws on data from production workers in the study and explores these workers' perceptions of the ways in which learning and training, in general and assessment, in particular, does and does not assist them in their everyday work.

Findings and discussion

For workers in this study, continuing with formal learning after compulsory training was completed signified a level of self-direction, as they chose (or declined) to participate in such activities. The majority of workers in this study displayed a keen interest in pursuing further learning opportunities, not only to develop skills and understanding for the job, but also for reasons of personal fulfillment and self-improvement. Charlie, an organiser in the processing section at Harvestime Produce, continued with assessment and training:

[p]robably for the challenge and I like satisfying my needs and improving myself is one of my main needs. It makes me feel happy learning new things. I feel happy going home from this place knowing that I have learnt something new (Charlie, production worker, Interview 2).

Charlie's response, which mirrors the attitudes of the majority of workers in the study, indicates that workplace learning and assessment activities are not separate or distinct from learning for personal growth. Charlie not only wanted to develop job-based skills and understanding, he also wanted personal satisfaction, or achievement, from the learning, training and assessment.

Assuming responsibility for aspects of their own assessment also signalled a level of self-direction and learner involvement (Maclaren & Marshall, 1998; Field, 2006) for workers in this study. Having said this, whilst assessment policy emphasises joint involvement of learners and assessors in planning and implementing competency assessment activities, the realities of workplace practices in this study meant that worker involvement was focused on more modest and pragmatic decisions regarding 'get(ting) to organise (assessment) when we want to do it, the time and we get all the equipment ready' (Patricia, milk powder packager, Harvestime Produce: Interview 1); and, taking the initiative to contact the assessor to say 'I'll be free in half an hour's time. I'd like someone to assess me on this' (Jim, drier operator, Harvestime Produce: Interview 1). Additionally, the availability of finding 'time – when I can do them

(assessments)' (Jim: Interview 1), particularly during working hours, impinged on the level of involvement that workers could take and most written assessment tasks, utilised for self-paced learning, were 'all done outside work hours' (Sally, cook/cleaner, Valleyview Processing: Interview 1). Workplace practices, however minor, that encouraged these workers to take a level of responsibility for their own learning (Maehl, 2000), by having them actively involved in organising aspects of assessment tasks, were not simply a means of disseminating responsibility from the assessor to the worker. Rather, such practices imitated those activities of the workplace for which workers already assumed a level of responsibility and discretion (Billett, 2001). To put it another way, workers in this study were familiar with taking some responsibility in their job, so similar expectations for their own assessment were not foreign to them.

Whilst a diverse range of assessment methods was employed overall at each of the three companies, the most commonly used methods for all nine workers were written assessments and verbal responses. For seven of the workers, on-the-job assessments were utilised (to varying degrees) and some off-the-job assessments also featured. Yet Training Packages (for example, the Food Processing Industry Training Package) emphasise the use of multiple sources of evidence and a variety of assessment methods to determine competence. Having said this, production demands as well as time and cost constraints, tended to shape the choice of available assessment methods in individual workplaces (Dickson & Bloch, 1999). The fieldwork shows that six of the workers had a preference for on-the-job assessments '[b]ecause I'm actually there doing it and not just trying to think of it in my head. I can actually see it happening' (Patricia: production worker, Interview 1). Being observed performing the task also ensured that 'everything is done properly on-the-job. Then, it covers us all. We all know we are doing a particular job properly' (Jane, cook/cleaner, Valleyview Processing: Interview 1). On-the-job assessment practices provided 'real life' assessment experiences for these workers (and their assessors), where the practical application of skills and knowledge was evident to the assessors through observation and questioning and the workers could display their knowing through their actions and verbal responses. Video assessment, undertaken by two of the workers, entailed feedback and discussion on the assessment experience from other learners and the assessor and presented opportunities for self-reflection. Conversely, self-paced training manuals, incorporating written assessment tasks and used by seven of the production workers and portfolio-style photographic evidence provided by three of the workers, were, by their nature, distanced or detached from the worker because the assessor 'hasn't seen exactly what I've done or how I did it' (Elizabeth, cook/cleaner, Valleyview Processing: Interview 1). Similarly, Jane (production worker, Interview 1) was not impressed with her assessor as:

[h]e *should* have been here. That's the understanding we were under, that he would do that but, no, he wants us to take photos for work that we've done and he will look at that (later) and he just goes on our word that we actually do all different sorts of sandwiches and that sort of thing.

So, whilst written and photographic portfolio assessment methods may have been epistemologically sound, they failed to overtly display the active, practical

dimensions of these workers' skills and understanding. How did the assessor know that the written tasks or the photographs presented for assessment were authentic samples of the assessee's own work, or that the assessee could take that information and competently replicate the skills on-the-job? These questions focus attention on the very real need of the workers in this study to demonstrate their competence in the 'here and now' by performing the task and using verbal interaction with the assessor and also their colleagues. These practical assessment tasks reinforced their ability to perform the work to an industry standard.

This discussion raises another question: how valuable to workers in this study were assessment practices that closely matched the activity of the work and the skills training? When the assessment and training matched one another closely, for example in the practical demonstration of handwashing techniques on-the-job, following training in safe workplace hygiene practices, workers in this study were able to make connections between what they had learnt, how it was assessed and the significance of the skill or task, within competent workplace practices. The assessment reinforced the training, as 'they are training you in the way they are going to assess you as well' (Jim, production worker, Interview 2). For this reason, workers in this study noted a relevance to those assessment activities which connected most directly to the training and also to the job. On the other hand, generic training and its assessment lacked relevance to the requirements of three of the production workers because there was insufficient connection with what was actually practised on-the-job. Likewise, when workers were already 'competent at what we are doing' but were still put through the training (Sally, production worker, Interview 2), the usefulness of the assessment as a means of furthering understanding became diminished. A lack of cohesion between the assessment and the training had ambiguous qualities, as it cast doubt on the usefulness of the skills for these workers, beyond the assessment experience. Accordingly, these workers could be dismissive of learning and assessment that failed to connect directly with the embodied activity of their daily work.

The practical assessment of skills, which related most directly to the realities of the job helped six of the workers in this study to understand their work better, as it 'test(s) you to see if you can do the jobs you are supposed to be doing properly' (Jim, Interview 3). On-the-job assessment tasks, which embodied worker practices, were valued because workers could actively show and explain first hand what they did and what they knew, in the real experience of the work. As Jim emphatically maintained '[y]ou can't actually write down 'Yeah I can drive a forklift'. You generally have to show each part of it, explain what happens and what it does' (production worker, Interview 3). Likewise, a simulation assessment, undertaken by Michael for an electrical S-licence, meant 'there was a switchboard and you had to like turn (connect) the power on, so you could prove you knew what you were doing' (Michael, preventative maintenance worker, Emerald Food Co: Interview 3). Hands-on, performative assessment experiences, when these were available, had the capacity to contribute to general understanding of practices and to enhance the learning of these workers through their embodied

practices (Morris & Beckett, 2004). The daily tasks of these production workers incorporated their thoughts and actions and the majority of the workers in this study were able to apply knowledge gained through assessment (and training) when they undertook new tasks. Additionally, workers also learnt the importance of following correct procedures through being assessed and, in these ways, developed greater understanding of their work requirements. Assessment practices also directly influenced the ways in which six of the workers in this study carried out their duties, as they gained background knowledge and understanding about the reasons for work procedures, through being assessed. Rather than carrying out work tasks blindly or routinely, workers developed insights into the reasons for specific practices. As a result, assessment had the capacity to take workers beyond the routine performance of tasks and assisted them to make informed decisions, about whether ‘to stop something or keep it running and stuff like that’ (Michael, production worker, Interview 3). Additionally, assessment ‘has actually explained things for me (and) if there are any problems, you can recognize them (and) can take initiative’ (Patricia, production worker, Interview 3); and, ‘[y]ou are probably more careful (safety conscious) about the way you go about doing things now’ (Andrew, cleaner/bobcat driver, Emerald Food Co: Interview 3).

It is evident from the workers’ responses that they reflected on the usefulness of assessment and training to them in their everyday work and readily connected the learning with their assessment. Having said this, Sally (production worker, Interview 3) recognised the limitations of training and assessment in assisting her to deal with critical issues:

(The training and assessment) doesn’t help me. No. Not what I have (to do) here. (When problems occur) I just take it with life experience, like what you have experienced in life. And how you deal with the situation at home, I basically deal with it here ... I don’t think you can (train and assess people) especially in things like emergencies because everyone is different and no matter, you might have had every first aid training that there is, but when it comes to the crunch you just panic and fall to pieces ... But, other times you might not have had any training and from what you have witnessed around you, everything might just click into gear and you think ‘I remember that happened in one case and we did this or that’.

Like Sally, Charlie (production worker, Interview 3) was able to clearly delineate the usefulness of his informal learning from formal training and assessment experiences:

(I learn by) studying the piece of equipment or something and getting an idea for the way it might run. Like, some things you can look at and it is just obvious that they go a certain way. But, other things are more complicated and you have really got to look at them to see what is happening. Even if you are looking at them (machines) running, with someone else running it, instead of listening to them, or reading an SOP (standard operating procedure), just watch the piece of machinery and look how it runs and try to pick it up from there ... through that studying a piece of machinery and looking at how it runs, when a problem arises you can think ‘Well, I remember watching how it ran and I noticed that this was happening and that was happening’ and you get a better understanding of it ...

Similarly, Patricia (production worker, Interview 3) recognised that she learnt how to deal with problems from repeated observation and practice:

... over time. Well, say like the (can) closer that crashes all the time and the cans get jammed in it, well we used to ring up the fitter to get him to come and get it out. Now we don't. We can do it ourselves. We watched him ... It's not really your training and assessment. It's more watching and learning what other people are doing. Hands-on, I reckon!

Jim (production worker, Interview 3) was also fairly blunt in his appraisal of training and assessment in helping him to undertake new or unusual work tasks:

Training and assessment hasn't really helped. No, not really. Well, in the training they are actually saying 'If something happens, like a power flick, or anything like that, you just go to your SOP's for it. Like the major ones, power flick, power failure, that type of thing ... (Assessments) haven't helped me to learn to solve problems. No. See, any problems that do come up, you actually fix them before there is any assessments for it. Just something like high moisture or low moisture, bad sediment, that type of thing. You just fix it yourself ...

As the preceding examples demonstrate, the workers in this study reflected on their experiences to determine the usefulness (and limitations) of their training and assessment. They were quick to recognise when training and assessment assisted them to understand their work and to perform tasks better on-the-job. Likewise, they readily acknowledged the limitations of specific training and assessment in helping them to solve problems, or to deal with non-routine procedures or unanticipated events. These reflective practices also demonstrated a capacity for the workers in this study to become more self-directed in and to be given a greater level of responsibility for, their own learning.

Conclusions

Implications for workplace learning and assessment practices

Drawing on the literature and the participant data leads to the presentation of a number of implications for workplaces generally, in the ways workplaces could approach (and reform) training and assessment practices by encouraging and supporting a level of learner responsibility and self-direction.

These are:

- As workers in this study take some level of responsibility for arranging aspects of their assessment, assessment tools should include these aspects as part of the actual assessment experience;
- Where practicable, workers should be involved with the assessor in choosing the most appropriate assessment method(s) and forms of evidence to suit their needs (ANTA, 1997) and in planning their future training and assessment;
- When available, regular work interactions between production workers and in-house assessors (as colleagues), should form part of the assessment experience, as these informal discussions and observations provide evidence for assessors of what the workers know and can do, or conversely, have not yet mastered;
- Workplaces should formally arrange for experienced workers to mentor novice/less-experienced workers when they are learning about the job

(Eraut et al., 1998) and when preparing to undertake assessment. Experienced workers could guide assesseees in organizing the assessment, including approaching the assessor and determining the most appropriate assessment method(s) for the assessee, to assist in developing learner self-direction (Mackeracher, 2004);

- At the lower AQF levels, problem-solving as a means of determining competence does not figure greatly in workplace assessment practices (Billett, 2001). Greater emphasis needs to be placed on developing assessment tools which overtly recognise the problem-solving, task management and organisational skills of workers at the lower AQF levels, as workers in this study clearly learn from these experiences; and
- It is not sufficient for workers to take responsibility only at the time of the assessment experience. They should be guided in their learning by trainers/assessors and managers/supervisors to assume 'ownership' for monitoring changes in their work practices, following assessment. Workers must learn the significance of being reflexive in maintaining work standards and not rely on constant monitoring by others.

Having stated the above, it must be acknowledged that when nationally recognised training is being assessed, there are limitations to what is allowable in variation of the assessment.

Production workers in this study were reflective about their own on-the-job learning, training and assessment and were explicit about what they do and do *not* learn from these experiences. The fieldwork demonstrates that these workers readily connected their learning, training and assessment with the practicalities of their job and that taking a level of responsibility for their own learning and assessment was an extension of the responsibility that they already took daily in their work. By drawing on the perceptions of these workers, we may come to understand better how to assess (and train) workers in general, to assist them to become more self-directed in their own learning and assessment. These insights could also contribute to enhancing support for the worker-as-learner and in improving outcomes for the enterprise.

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