Changing the face of competency assessment: evaluation of the Certificate IV in Assessment and Workplace Training package in the mining industry

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Background to the study

The role of the assessor is 'to reliably determine the competencies or lack of competencies of an individual when assessed against a prescribed benchmark'.
(Van Berkel, 1996, p. 8)

Since the training and workplace reforms of the early 1980s the development and recognition of competency standards for work have been an integral part of the vocational education and training landscape. An important part of the process of competency attainment has become the training of workplace assessors who are able to assess competence on site and as a part of their normal work. This training involves completion of the Workplace Assessor component of the endorsed training package, the Certificate IV in Assessment and Workplace Training. This program covers three units of competency: Planning Assessment; Conducting Assessment; and Reviewing Assessment.

The mining industry in Queensland has readily embraced the qualifications framework and competency-based standards, and already has a significant history of ensuring the workforce has the appropriate skills and knowledge. Several hundred people have undertaken the workplace assessor program. However, early in 2002 The Queensland Mining Industry Training Advisory Body (QMITAB) was advised by members of its constituency of concerns about the efficacy of the program.

The commissioning of this study was timely indeed. Competency-based assessment has been an extensively debated issue in the vocational education and training literature since the early 1990s. Docking (1998) in a review of literature up to that date concluded that there was an urgent need to undertake further research into the effectiveness of competency-based assessment. Furthermore, Robinson (1998) stated that that the fundamental question as to whether assessor training programs were producing competent assessors was unanswered. Subsequently Smith (2000) found in an extensive review of general assessment practice in Queensland that there was a need to improve the quality of assessment in terms of validity, consistency, usefulness and cost effectiveness. Similarly, Clayton, Booth and Roy (2001) suggested that confidence in assessment decision-making needs to be improved. Booth (2000) reported that there is still confusion among practitioners about the key features of the implementation of competency-based assessment.

Methodology

Three main approaches were used in this study: a review of the literature relating to assessor training; interviews and focus groups to obtain the views of people involved in assessor training at mine sites; and a survey of people who had undertaken the assessor program.

Interviews and focus groups

The purpose of the interviews and focus groups was to obtain in-depth information about the effectiveness of workplace assessor training and its implementation at mine sites. The method used was based on Grounded Theory (Glaser and Strauss, 1967), which provides a number of well–established techniques to increase the rigour of qualitative research.

Eighty-three people were interviewed (39) or attended focus groups (44) on nineteen mine sites and seven sites in Brisbane. Sampling was based on 'snowballing', which involves asking informants from whom further information might be obtained. Sources were also selected on the basis of where disconfirming evidence might be found. This means that we were interested in being told something different to that which we had been told previously. Sampling was ceased when saturation was reached. This occurred when new information was not being obtained despite all efforts.

Interviews and focus groups were centred on the question of the effectiveness of the Workplace Assessor training and implementation and how it might be improved. Using a convergent interview technique, follow-up questions depended on the initial response of the interviewee. We were concerned that responses needed to be driven by the data rather than the interests of the interviewer.

The focus groups were somewhat more structured but still sought feedback from participants about how the effectiveness of the training could be improved. Participants were provided with a copy of the three units on planning, conducting and reviewing assessment. They were asked for their comments around the areas of: motivation to undertake the course; their reaction to it; what was learnt; what was useful; application of learning; outcomes; and improvements to the training package. Additional information was provided and recorded.

Data from the interviews and focus groups were subject to coding procedures consistent with Grounded Theory. This process involved the identification, from the raw data, of key sub themes and then major themes and concepts in a hierarchical fashion.

Survey

A survey was undertaken to obtain feedback about the specific competencies in the Workplace Assessor units The questionnaire was in three parts: general questions about the Workplace Assessor training; questions about how often the competencies were applied in the workplace; and questions about the usefulness of each of the competencies. Respondents were asked to indicate on a 7-point Likert scale their opinions about application and usefulness. In addition we asked for some demographic information: age; gender; level of education; sector worked; size of mine; whether a 'train the trainer' or similar course had been completed; year of completion of the Workplace Assessor program; and why the program had been undertaken. The questionnaire was piloted on a small group and appropriate amendments made. Questionnaires were distributed to a random sample of 100 people who had completed the assessor training. A total of eighty-three people returned the survey.

Qualitative results

A number of core themes were drawn from the interview data and are described in detail below. It is evident that there is considerable variability in a number of areas such as selection of assessors, training provision, follow-up of assessors, collaboration between provider and workplace, actual application of assessor competencies in the workplace, and understanding of competencies,

Context –understanding the importance of standards

Respondents indicated that there needed to be a clear understanding in the industry of the importance of competency standards. It appears that the competing demands of output on the one hand and meeting legislative requirements of having a competent and safe workforce on the other creates ambiguity. That competency is understood in different ways depending on the context and that legislation may drive the competency agenda has been suggested in other studies (ie Mulcahy, 2000). Smith (2000) found in a study of competency-based assessment in Queensland that not all employers have a commitment to conduct workplace assessments due to the need to focus on 'business' itself and not be sidetracked, a lack of belief in the competency-based system, and lack of expertise. Legally maintaining the assessor standards counts as 'evidence', 'protection' and 'compliance'.

Selecting workplace assessors

Employees were most often selected for workplace assessor training on the basis of their technical expertise and competence. Attributes such as competent, confident, good communicator, literacy, thorough and trustworthiness were emphasised as essential in a good assessor. At some sites and for various reasons it was stated that 'not always the best operators are chosen' either because the best operators were needed in production. Others might be chosen because they were 'nice blokes'. In some cases literacy was a problem.

Professional development was the most important reason given as to why people became assessors. The value of the qualification and the status/prestige of the position

were equally sought after, followed by opportunity for career advancement. The second most important reason for becoming an assessor was generated by the business needs and legal requirements from within the mining industry. To a lesser extent people said they took on assessor training because they had a personal interest in it or because it provided job variety.

In general, the characteristics and motivation of workplace assessors is poorly researched. Mulcahy and James (1999) in an extensive review of the contribution of competency-based training note that it may have provided workers with the power to control their own training. The commitment to assessment by those who choose to assess is important to the achievement of a safe working environment. Smith (2000) found in his study that there were instances of unprofessional and inadequate assessment processes. Given the push for increasing the qualifications of assessors (National Assessors and Workplace Assessors, 2001) a great deal of thought needs to be given to who would make an effective workplace assessor. Smith (2000) claims that many trainers and assessors lack the educational skills to provide remedial assistance to those experiencing difficulties with meeting competency requirements in the workplace.

Literacy issues

Literacy levels of people undertaking the Workplace Assessor training was an issue for approximately half of the mine sites visited. The wording of the competencies, the training and the requirements surrounding assessment itself was thought to be very challenging for many who may have left school early or experienced even marginal literacy difficulties. In a recent review of the assessment package conducted by the National Assessors and Workplace Trainers (2001) it was suggested that further development of the package needs to consider using plain English in the standards and identified literacy problems among assessors as a major concern. Smith (2000) also found that language and literacy were seen as major problems in the ability of people to make assessment judgements.

Content issues

Elements within the element *Plan Assessment* were described as 'hard' particularly in relation to the project and presentation. The time constraints imposed on completing the project were particularly problematic with up to 50% failing to complete

There were differing views about the usefulness of the competencies found in the package. Overall the contents contained within the element-*Plan Assessment* was thought to be useful for some mines particularly small mines but generally not applied at all sites because of the utilisation of 'off the shelf tools'. The Element *Conduct Assessment* on the other hand was useful and applied universally. The element-*Review Assessment* was generally thought to be useful but not always applied as taught, or even used at all.

In their review of the workplace assessor training package, the National Assessors and Workplace Trainers (2001) recommended that the content needs to be revised to meet the requirements of a broader range of practitioners from those skilled practitioners in RTOs to the part-time assessors in organisations. Jones (1999) suggests that there is a

need to ensure that assessors are not only skilled practitioners but also have a good grasp of educational and training principles.

The wording used in the Standards and subsequently found in the Workplace Assessor package was an issue at several mines This problem in relation to language and literacy has been identified in previous studies (i.e. Smith, 2000).

Quality of training

Respondents thought that there was a great deal of variation in the training of Workplace Assessors due to the: *'different providers'*; *'different approaches'*; *'different time frames 1-7 days'*; *'different materials used'* and *'different locations'*. Over half of the mines visited indicated they were happy with their provider while others expressed grave disappointment. It was clear that higher quality of training was associated with close collaboration between the employer and the provider, getting feedback about participants, and tailoring to the specific needs of the industry and site.

These concerns about variability in the quality of training providers have been expressed in a number of other studies (Dorking, 1998; Harris and Simons, 2000; Johnston and Holland, 2000; National Assessors and Workplace Trainers, 2001; Smith, 2000). There is evidence that training tends to be designed only around stated competencies because these are assessed and as a result the focus is more on the 'assessment package' (Smith, 2000 p vi) rather than training. As a result only the bare minimum is taught in some assessor training programs and the broader educational abilities are not obtained.

Others agree that assessor training is more effective if there is a partnership between trainer and employer (Mulcahy and James, 1998, 1999) and that training is tailor-made and on-site. 'Context not simply content, underwrites the interpretation of competency standards' (Mulcahy and James, 1999 p.122). This helps with other problems such as completion of difficult assessment items. It is difficult to see, given the available evidence, how attendance at a generic assessor training program conducted with an 'off-the-shelf' program is at all likely to produce quality outcomes at the workplace.

Skills currency

Skills currency was raised as an important problem given that assessors might not use some of the competencies very often at all to maintain their confidence. Booth (2000) has also suggested that there is a need to provide on-going support for assessors when they have completed their training to increase confidence in the assessment procedure. This supports further the notion mentioned above of a closer partnership between employer and provider. Johnston and Holland (2000) point out that as the demand for more specialist skills increases then so does the demand on the skill of the assessor. Assessor skill development may need to be ongoing rather than based on a basic training. Cornford and Beven (1999) suggest that novice learners frequently need close supervision when applying new competencies compared to those who are more expert.

The role of management

The responsibility for the outcome of the Workplace Assessor training also lies with the mine management. Whilst this was not a strong theme it was raised at one focus group and several mine sites. When it comes down to it, *'working with the standards'* and *'wanting a competency-based system'* was considered to be the responsibility of management. The outcome was really up to the 'industry and the providers'. Some companies want a complete assessors package in 3 days including Train the Trainer and Assessor. In this sense the companies *'are forcing'* the providers and in the end you will *'get a provider that will do it'*.

The ability to obtain quality outcomes in the workplace from the competency-based system depends a great deal on the commitment of the employer who will drive implementation in a number of ways. As noted earlier, this problem has been identified by others (i.e. Smith, 2000).

Gathering evidence

A key problem, because of the legal implications, was that of gathering appropriate evidence of competency. It was stated that assessment tended to be a single event at a particular time and in particular conditions. One might assess a person to be competent driving a vehicle in dry conditions but this may not indicate competency in wet conditions, for example.

That assessment tends to be summative rather than formative, is one shot' and needs to consider more holistic approaches has been raised frequently by others and is a major issue in the debate about the efficacy of assessment. Griffin (1995) argued that there are levels of competency and, for example, a single driving test is not a test of driving ability. Similarly, Chappell (1993, p 5) indicated that '…widespread access to various forms of assessment is a vital part of an equitable and cost effective system…'.

The idea that assessment should take many forms and be more holistic (Gonczi, 2001; Hall, 1996; Mulcahy and James, 1999) is an important addition to the behavioural underpinnings of competency-based assessment and clearly requires a broader view and involvement on the part of assessors and workplaces. Smith (2000) concluded that there is an over emphasis on summative assessment and the quantity rather than the quality of assessment.

Confidence in the assessor training

Approximately half the mines visited indicated they were confident that their staff were competent assessors after completing the assessor training. However, other training coordinators and managers voiced concerns. Confidence in the assessors upon completion of the training was increased with having a good provider and tailoring the course. However, the provider is still only able to work with the standards as they are and have the job of making sense of the standards. Hall (1996) has suggested that transparent quality systems provide a level of confidence in competency-based assessment.

Survey results

Description of the sample

The bulk of respondents (49%) were in the age group 36-47 yrs and 83% were under 48yrs of age. This distribution may reflect the tendency for more experienced operators to seek the assessor qualification. Only 8% of the sample were female. The majority (55%) were from the coal sector, 25% from the metalliferous sector and 8% from the extractive sector. Forty-nine percent of respondents worked in mines with between 101 and 300 persons and 83% had completed a train-the-trainer qualification. Fifty four percent of the sample completed assessor training in 2001 or 2002.

Interestingly, when asked about motivation to undertake assessor training 56% said that they were nominated. Personal satisfaction (46%) was also a key motivator. Pay, peer pressure, career and a quest for qualifications were minor factors in deciding to undertake training. It is not clear the extent to which this selection is based on ability.

Questionnaire responses

There was general satisfaction with the assessor training in terms of its usefulness and applicability. It was interesting that the reported frequency of application of competences associated with planning and reviewing was less than for conducting assessment. This accords with the findings of the interviews and focus group data, which suggested that planning and reviewing assessment were undertaken infrequently. Competencies associated with conducting assessment were also seen as more useful than assessment and reviewing. However, in general participants did not feel the need to change the content of the assessor training.

It was interesting that respondents did not have a negative view on the wording of the competencies, which is somewhat different to the opinions expressed in the interviews and focus groups and the findings of previous studies (Smith, 2000).

One Way Analysis of Variance showed that there were no differences in opinion due to any of the independent variables (age, gender, education, sector in which employed, mine size, completion of 'train the trainer' program, year of completion, and motivation).

Best practice in assessor training and implementation

The results of this study and the literature review suggest a number of initiatives that might improve assessor training and implementation of competency-based assessment in the workplace. There appear to be two major factors in creating best practice in assessor training and implementation. The first of these is acceptance and valuing by management of the importance of competency-based training. This would result in the development of integrated and systemic approach to implementing assessment. The second key is a partnership with a high quality provider who can provide appropriate training and ongoing support on-site.

These initiatives would result in the following best-practice:

- Development of clear protocols for competency-based assessment at the mine.
- Appropriate selection of assessors and 'pre-selection' training for those who do not meet essential criteria.
- Relevant, contextual assessor training designed collaboratively by the provider and the mine, and delivered on-site.
- Rewriting the competencies to make them more comprehensible to the average person.
- Ensure competency-based assessment is managed centrally.
- Increase essential communication, training and education skills in the course to improve assessor performance at the site.
- Follow-up of assessors immediately after the course to complete competency requirements.
- Supervision of initial assessments undertaken by assessors.
- A requirement that assessors, in order to maintain their skills, conduct regular assessments over a 12-month period.
- Competency review of assessors every 2 years in-vivo.
- Develop strategies for the collection and recording of competency assessment rather than 'one shot' assessments.
- Management of the provider-mine 'partnership'.

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