

**Workplace training and the impact it has on job performance: A
Central Queensland coal industry study.**

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Abstract

It is progressively becoming more important that organisations employ effective methods for enhancing the performance levels of their human capital. To discern whether formal training is having an impact on job performance there should be evidence of transfer and utilisation of that training to the employee and the job. The focus of the research reported in this paper, is on the transfer of behavioural training delivered at a Central Queensland coal mine. A training program is outlined which required employees to undertake a series of training modules over a period of eighteen months. The paper also discusses the findings of a survey undertaken with the participants in the training program and the outcomes of a series of interviews with the supervisors of these employees to determine whether there is evidence of the transfer of the training.

Keywords: Management Education, Training, Implementation, Coal Mining

Introduction

Workplace training is a means by which organisations can attempt to ensure enhancement of their human capital through improved job performance. However, for workplace training to have an impact on job performance, there should be evidence of transfer of that training to the job (Taylor 2000; Bangaruswamy 2002). Two approaches to training, informal and formal, can be undertaken in a workplace. Formal training will usually consist of instructional content that is predetermined and systematic, follows a detailed format with specific learning objectives as the outcome, can be focused on vocational/technical skills or behavioural skills, and usually encompasses some means of evaluation upon completion (Dawe 2003; Trewin 2003; Moy 2000). Behavioural skills training, according to the International Labour Office (1998) can impact on and enhance levels of workplace communication, leadership, time management, problem solving and other personal development skills.

This paper presents the processes and outcomes of a study into behavioural training, which was undertaken at a Central Queensland coal mine. In this instance behavioural training involved a Leadership Development Program consisting of a series of six modules that covered areas as diverse as communication, planning and delegation, performance management, role definition, self-management, and coaching through leadership.

Workplace training

Workplace training is a process by which organisations can endeavour to value add to their human capital through improved job performance. There are two approaches to training that can be undertaken in a workplace, informal and formal training. Informal training can be carried out in an impromptu manner, with no specific goals to be attained and can be easily adjusted to suit any situation (Dawe 2003; Macneil 2001; McNamara 1999). According to Cofer (2000) and Dobbs (2000), 70 % of learning in the workplace is via informal training methods, either by means of asking questions, being directed how to operate machinery, by

observing fellow workers, or receiving instruction from a supervisor or peer. In contrast, formal training will usually consist of instructional content that is predetermined according to the needs of the employee and the organisation; is systematic in approach; follows a detailed format with specific learning objectives as the outcome; is customarily focused on vocational/technical or behavioural skills; and usually encompasses some form of training evaluation upon completion (Dawe 2003; Trewin 2003; Moy 2000). According to Dawe (2003) and McNamara (1999) formal training can be presented in a variety of formats such as workshops, training seminars and presentations; it can be carried out on-the-job, on-site at specific training centres, off-site at established learning institutions, conference centres or designated seminar venues.

Two separate elements make up what is formal workplace training: there is that training which supports the augmentation of vocational or technical skills, whereby an employee is provided with specified training to upgrade current job related skills; and training that focuses on behavioural skills, such as the enhancement of workplace communication, leadership, time management, problem solving and other personal development skills (Venkatraman 2003; Berge et al 2002; Ridoutt et al 2002; Smith & Freeland 2002). Behavioural skills training undertaken at a Central Queensland coal mine is the focus of this paper. This will be discussed in more detail later in this paper.

According to Munshi (2002) and Schonewille (2001) organisations are increasingly seeing employees as human capital, which can be defined as being, the best people with the most advantageous knowledge, skills, attitude and attributes for the organisation. Therefore, it is in the organisation's best interests to assist their human capital to expand and augment their knowledge and skills in order to initiate enhanced performance. There are however arguments both for and against the implementation of workplace training, for instance Forrier and Sels (2003) argue that one of the main obstacles to the implementation of workplace training is the possibility that once trained employees will become the focus of poaching by

competitors. On the other hand, Martin, Pate and Beaumont (2001), Spencer (2002) and Westhead (1998) contend that workplace training is beneficial in reducing the outflow of employees to rival organisations; in augmenting employee motivation and self-efficacy; and in providing upgraded knowledge and skills for employees. All of which can ensure that trained employees are vital assets for the organisation.

There is a diverse array of reasons, such as better employer/employee feedback, improved monetary and non-monetary remuneration systems, workplace design, organisational structure and training and development, behind enhanced employee performance (Burrow & Berardinelli 2003; Santos & Stuart 2003; Billet 2001). There are some researchers, for example LaBonte (2003), who claim that no matter what the level of improvement in knowledge, skills and attitude through training, it is unlikely to manifest itself in improved performance. However, such researchers are in the minority, as most of the literature reviewed indicates a positive link between workplace training and performance. According to Santos and Stuart (2003), Burrow and Berardinelli (2003), and Billet (2001) employees will benefit from both intrinsic and extrinsic rewards, leading to a more motivated and self-reliant workforce, thereby improving individual performance levels. Further studies, such as those conducted by Miller (2003), Nickols (2000) and Westhead (1998), show that improved performance through the development of individuals via amelioration in knowledge, skills and attitude can enhance job satisfaction, increase levels of employee motivation, and provide greater flexibility and self-efficacy, which can all lead to increased employee productivity levels.

Workplace training, it is argued in the literature, has an affirmative effect on individual performance and is only truly effective if there is transfer of what has been learned in training to the person's job. Evidence of transfer of training exists when there is ongoing utilisation in the job of knowledge and skills acquired during training, and it can be demonstrated that the employee can sustain the recently acquired knowledge and skills over a period of time

(Elangovan & Karakowsky 1999). However, research such as that conducted by Cheng and Ho (2001) and Foxon (1993) shows that there is insufficient evidence that some forms of workplace training are being transferred to the job. This failure to transfer is principally significant to training associated with behavioural skills, whereby, according to Foxon (1993), there is restricted transfer of learned skills. Taylor (2000), Bangaruswamy (2002), Cheng and Ho (2001) and Foxon (1993) claim there are a number of factors or barriers that can influence the transfer of what is being learned in training to the person's job, such barriers can include individual, environmental, organisational factors, training design and culture.

The organisation at which the research was undertaken is a coal mine in the Central Queensland (CQ) Bowen Basin region. The training program conducted at the CQ mine is a package of individual modules based around the enhancement of behavioural skills in a leadership development program, for employees ranging from supervisory to management level. There are six modules that make up the package: managing performance – based on the management of the performance and communication for leaders. The time frame for each of the six modules ranged from one to two days for completion, with employees participating in various modules over a period of eighteen months.

Methodology

Given that workplace training is a vital activity adopted by organisations to enhance their human capital and job performance levels, there should be evidence of the transfer of that training to the employee's job. The results reported in this paper are based upon a survey given to participants in a leadership development program which was carried out over a period of eighteen months at a Central Queensland coal mine; and interviews with the supervisors (supervisors, superintendents and managers) of those participants, with the aim of determining whether or not transfer of that training to the job has occurred and whether or not there has been change in the levels of job performance as a result of the training. The questionnaire was a self-administered questionnaire that participants completed in work time.

The questionnaire was piloted with six (6) employees, who participated in the training program, to determine the validity and effectiveness of the questionnaire. The objectives of the study are to determine employees expectations of training and if they consider it useful and relevant. The convenience sample for the survey was drawn from employees who had participated in the leadership development training program. A total of 42 (43.75% of possible respondents) questionnaire responses were returned. Of the total responses received, (93%) of the respondents are employed in the operational side of the organisation, and (7%) are employed in the services section of the organisation.

Results

All current employees of the organisation, with the exception of pilot study participants, who undertook the leadership development training program, were afforded the opportunity to complete the questionnaire. Respondents to the survey are employed in the three main areas of the organisation, which are operational, services and administration. Expectations of workplace training relate to whether or not: the organisation considers training to be a key factor in their overall plans from the point of the employee; supervisors discuss particular training needs with employees; employees expect to apply what is learned in training to the job; employees receive the training they consider to be of assistance in their job; and, employees consider that there is room for improvement in their skill levels. Table 1 below shows an overall view of employees' expectations from workplace training. From this table it is clear that 81% of the respondents believe that there is a need for skills improvement.

Table 1: Employees expectations from workplace training

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree	Missing	Total
Skill development and training key factors	0	7 (16.7%)	5 (11.9%)	18 (42.9%)	11 (26.9%)	1 (2.4%)	42 (100%)
My supervisor discusses my training needs	11 (26.2%)	13 (31%)	8 (19%)	9 (21.4%)	1 (2.4%)	0	42 (100%)
Expect to apply skills learned in training	1 (2.4%)	2 (4.8%)	1 (2.4%)	27 (64.3%)	11 (26.2%)	0	42 (100%)

I do not receive the training I need	1 (2.4%)	9 (21.4%)	9 (21.4%)	17 (40.5%)	6 (14.3%)	0	42 (100%)
There is always room for improvement	1 (2.4%)	0	2 (4.8%)	13 (31%)	25 (59.5%)	1 (2.4%)	42 (100%)
My skills do not need improvement	7 (16.7%)	27 (64.3%)	2 (4.8%)	3 (7.1%)	2 (4.8%)	1 (2.4%)	42 (100%)

The leadership development training program consists of six modules: managing performance, communication for leaders, planning and delegating, self-management, coaching through leadership, and the role of the supervisor, superintendent or manager. The survey contained two questions in section four: the first question asked respondents to indicate how useful they consider the content of each module to have been to their job. Table 2 shows the results for the question relating to usefulness of the module content when compared to the job. Also Employee perceptions of workplace training results show that training influences their job satisfaction and as 88% of respondents believe that their satisfaction levels rise when they apply skills learned in training, and 78% believe that they receive personal benefit from training, which will come through in improved job performance levels. Further more Participation in training is seen as being important and critical to development (71%), while 92% believe that training is not a waste of time. However, there is a measure of uncertainty as to whether their time could be better spent on the job. There is also a degree of concern with 52% of respondents claiming that they have no input into the training they receive, leading to the perception that they do not receive the training they need.

Table 2: Usefulness of module content to the job

	Very useful	Mostly useful	Somewhat useful	Completely useless	Not applicable	Missing	Total
Managing performance	6 (14.3%)	13 (31%)	14 (33.3%)	1 (2.4%)	6 (14.3%)	2 (4.8%)	42 (100%)
Communications for leaders	6 (14.3%)	18 (42.9%)	10 (23.8%)	1 (2.4%)	6 (14.3%)	1 (2.4%)	42 (100%)
Planning and delegating	9 (21.4%)	13 (31%)	11 (26.2%)	2 (4.8%)	5 (11.9%)	2 (4.8%)	42 (100%)
Self-management	10 (23.8%)	16 (38.1%)	8 (19%)	1 (2.4%)	5 (11.9%)	2 (4.8%)	42 (100%)
Coaching through leadership	10 (23.8%)	15 (35.7%)	10 (23.8%)	2 (4.8%)	4 (9.5%)	1 (2.4%)	42 (100%)
Role of leader	8 (19%)	15 (35.7%)	10 (23.8%)	1 (2.4%)	5 (11.9%)	3 (7.1%)	42 (100%)

The second question asked respondents to indicate how much of what was learned in the modules they have applied to their job. Table 3 shows these results. The least transfer is apparent in the area of managing performance; only 35% of respondents see that most of this module is relevant. This may mean the module needs to be modified or the performance measurement in the work place is out of step with current policies and needs to be re-aligned.

Table 3: Application of module content to the job

	All	Most	Some	None	Not applicable	Missing	Total
Managing performance	2 (4.8%)	13 (31%)	15 (35.7%)	4 (9.5%)	6 (14.3%)	2 (4.8%)	42 (100%)
Communications for leaders	1 (2.4%)	13 (31%)	16 (38.1%)	5 (11.9%)	6 (14.3%)	1 (2.4%)	42 (100%)
Planning and delegating	3 (7.1%)	11 (26.2%)	15 (35.7%)	6 (14.3%)	5 (11.9%)	2 (4.8%)	42 (100%)
Self-management	2 (4.8%)	14 (33.3%)	14 (33.3%)	5 (11.9%)	5 (11.9%)	2 (4.8%)	42 (100%)
Coaching through leadership	6 (14.3%)	10 (23.8%)	14 (33.3%)	7 (16.7%)	4 (9.5%)	1 (2.4%)	42 (100%)
Role of leader	5 (11.9%)	10 (23.8%)	16 (38.1%)	3 (7.1%)	6 (14.3%)	2 (4.8%)	42 (100%)

It is interesting to note that 57% found the communications module of use, and 67% maintain that they apply the content, yet when related back to results from Tables 2 and 3 there is a perceived lack of communication between superintendents and supervisors, and managers and superintendents, with regards to employees training needs, showing that although they found the content to be of use, they actually fail to apply what was learned. Although 59% found the coaching through leadership module to be of use, only 38% apply what was learned, confirming that there is a lack of communication with subordinates when related back to employee training needs. Of the remaining modules, self-management (61%) (38%), role of leader (54%) (35%), and planning and delegation (52%) (33%), although found to be useful to the job, there is very little content actually applied to the job. With the managing performance module, only 44% found it to be of any use, with 35% applying it to the job, showing that this module does reflect the workplace.

To determine whether or not there is evidence of transfer to the participant's jobs, semi-structured interviews were conducted with five superintendents and one divisional manager. Three of the interviewees are employed in the services division of the organisation, while three are employed in the operational side of the organisation.

Discussion

The survey of employees who participated in the leadership development training program shows some contradictions relating to employees' expectations of workplace training. There is a disparity between responses relating to skill development and training, where 69% of respondents believe that skill development and training are key factors to the enhancement of performance, and supervisors discussing training needs with employees, whereby 57% of respondents state that their supervisor does not discuss training needs with them. As these supervisors have also participated in the training, in particular the communications module, they should see the need to communicate with subordinates regarding training needs. In the area of application of learned skills, 90% expect to apply skills learned in training to their job. However, as 54% of employees believe they do not receive the training they need, there is little likelihood that skills learned in training and seen as not being relevant to the job would be transferred to the job. Results for questions relating to the need for improvement illustrate that respondents believe that there is room for improvement in the way they perform their job (90%) and that their current skill levels also need to be improved (80%) in order to better carry out their job, showing that employees expect skill development and training to be critical factors in the enhancement of performance through being able to better perform their job.

Employee perceptions of workplace training results demonstrates that training influences their job satisfaction and believe that they receive personal benefit from training, which can result in improved job performance levels, thereby supporting results from studies undertaken by researchers such as Santos and Stuart (2003), Burrow and Berardinelli (2003), Billet (2001)

and Westhead (1998). Employees that report a degree of job satisfaction, and believe that they receive some personal benefit from training are less likely to seek employment with other organisations, which goes against the claim by LaBonte (2003) that improving knowledge and skills through training, is unlikely to lead to improved performance.

There are two conflicting points of view with regards to the interviews with superintendents. Of the six interviews, three involved personnel from the services section of the organisation, and three from the operational side. When asked about evidence of transfer of the training to subordinates' jobs, a superintendent from the services section stated "I'm seeing them do things now, such as the way they manage and the way they communicate with their crew, different to the way they did before the training," showing that there is evidence that in this part of the organisation that the communications and coaching modules have had some impact on employees. When asked about content from the other modules being transferred, there was consensus among personnel from the services section that "...where employees should be looking at time-lines, they are now looking at long term time frames rather than what is happening now or in the near future," indicating that content from the planning and delegating module is being transferred. However, there is little evidence of transfer of content from the remaining modules, which supports the findings of the survey.

There was consensus among the three interviewees from the operational section of the organisation, that other than "...subtle changes in the way they communicate with their supervisors," there is little evidence that any of the content of the modules has been transferred to the job. When asked if, in their opinion, employees felt comfortable about the training, the general reply indicated that "...they don't see the relevance to their job," adding that, "...if the training involved day-to-day activities, they might look at this type of training in a different light." This disparity in the amount of transfer indicates that an employees' working environment will impact on whether or not behavioural training is transferred to the

job, and that unless it is deemed relevant to the job, operational employees are unlikely to apply knowledge gained in such training.

Conclusion

The findings presented in this paper indicate that there is a link between workplace training and performance when employees receive training they see as being relevant to their job. However, they also show that environment and embedded culture such as that which is found in underground coal mining can be a barrier to the transfer of behavioural training to the job, thus indicating that the material in some of the modules needs to be modified depending on which part of the organisation the training is being aimed at. There is clearly a need to assess the effectiveness and outcomes of training and it is not simply the case that once training is done the job is done. For training to be effective it must be implemented in the workplace or the skills and behavioural transfer does not occur. In organisations such as coal mines where there is a strong well established culture behavioural change is no easy matter. After training there needs to be follow up and those staff who are not changing their behaviours need either further training or coaching to ensure that they do not reinforce old behaviours. Culture is not easily changed, but training if done effectively, can help.

This study concludes that embedded cultures can impact on the transfer of training to the job, particularly if that training is deemed by a majority of trainees to have little relationship to the job. Undertaking the study at a single worksite could prove to be a limitation, as there is no comparison between this site and others where similar training may have proven effective. Further evaluative research in other areas of the industry is needed to fully test the variables of perceptions and expectations of like training programs. Implications for practice are suggested by the need for greater evaluation of workplace training to determine levels of transfer of training to the job.

References

- Bangaruswamy, M 2002, online, *Making behavioural skills training more effective*, viewed 15 September 2003. Available: <http://www.expressitpeople.com/20021209/management1.shtml>
- Berge, Z, de Verneil, M, Berge, N, Davis, L & Smith, D 2002, database, 'The increasing scope of training and development competency', *Benchmarking: An International Journal*, vol.9, no. 1, pp. 43 – 61, viewed 8 July 2003. Available: Emerald.
- Billet, S 2001, 'Learning through work: workplace affordances and individual engagement', *Journal of Workplace Learning*, vol. 13, no. 5, pp. 209 – 214.
- Burrow, J & Berardinelli, P 2003, 'Systematic performance improvement – refining the space between learning and results', *Journal of Workplace Learning*, vol. 15, no. 1, pp.6 – 13.
- Cheng, EWL & Ho, DCK 2001, 'A review of transfer of training studies in the past decade', *Personnel Review*, vol. 30, no. 1, pp. 102 – 118.
- Cofer, DA 2000, online, *Informal workplace learning*, viewed 21 August 2003. Available: <http://www.ericacve.org/docgen.asp?tbl=pab&ID=100>
- Dawe, S 2003, *Determinants of successful training practices in Australian firms*, NCVET Adelaide.
- Dobbs, K 2000, database, 'Training on the fly', *Sales and Marketing Management*, vol. 152, no. 11, pp. 93 – 98, viewed 9 September 2003. Available: Proquest.
- Elangovan, AR & Karakowsky, L 1999, database, 'The role of trainee and environment factors in transfer of training: and exploratory framework', *Leadership & Organization Development Journal*, vol. 20, no. 5, pp. 268 -275, viewed 29 August 2003. Available: Emerald.
- Forrier, A & Sels, L 2003, 'Flexibility, turnover and training', *International Journal of Manpower*, vol. 24, no. 2, pp. 148 – 168.
- Foxon, M 1993, 'A process approach to the transfer of training – Part 1: The impact of motivation and supervisor support on transfer maintenance', *Australian Journal of Educational Technology*, vol. 9, no. 2, pp. 130 – 143.
- International Labour Office 1998, online, *Workplace learning, culture and performance*, viewed 10 September 2003. Available: http://www.logos-net.net/ilo/150_base/en/publ/019.htm
- LaBonte, TF 2003, database, 'Building a new performance vision for results', *Industrial and Commercial Training*, vol. 35, no. 1, pp. 33 – 37, viewed 30 July 2003. Available: Emerald.
- Macneil, C 2001, 'The supervisor as a facilitator of informal learning in work teams', *Journal of Workplace Learning*, vol. 13, no. 6, pp. 246 – 253.
- Martin, G, Pate, J & Beaumont, P 2001, 'Company-based education programmes: what's the pay-off for employers?', *Human Resource Journal*, vol. 11, no. 4, pp. 55 – 73.

- McNamara, C 1999, online, *Ways to look at training and development processes: Informal/formal and self-directed/other directed*, viewed 21 August 2003. Available: http://www.mapnp.org/library/trng_dev/ways/ways.htm
- Miller, P 2003, 'Workplace learning by action learning: a practical example', *Journal of Workplace Learning*, vol. 15, no. 1, pp. 14 – 23.
- Moy, J 2001, 'Enterprise training pays: lessons from the literature', in A. Smith (ed.), *Return on investment in training – research readings*, NCVER, Adelaide.
- Munshi, PP 2002, database, 'Investing in human beings', *Businessline*, 27 July 2002, viewed 22 May 2003. Available: Proquest.
- Nickols, F 2000, online, *Evaluating training there is no cookbook approach*, viewed 17 March 2003. Available: <http://home.att.net/~nickols/evaluate.htm>
- Ridoutt, L, Dutneall, R, Hummel, K & Selby Smith, C 2002, *Factors influencing the implementation of training and learning in the workplace*, NCVER, Adelaide.
- Santos, A & Stuart, M 2003, 'Employee perceptions and their influence on training effectiveness', *Human Resource Management Journal*, vol. 13, no. 1, pp. 27 – 45.
- Schonewille, M 2001, 'Does training generally work? Explaining labour productivity effects from schooling and training', *International Journal of Manpower*, vol. 22, no. 1, pp. 158 – 173.
- Smith, A & Freeland, B 2002, *Industry training: causes and consequences*, NCVER, Adelaide.
- Spencer, B 2002, 'research and pedagogics of work and learning', *Journal of Workplace Learning*, vol. 14, no. 7, pp. 298 – 305.
- Taylor, MC 2000, database, 'Transfer of learning in workplace literacy programs', *Adult Basic Education*, vol. 10, no. 1, pp. 3 – 20, viewed 11 August 2003. Available: Proquest.
- Trewin, D 2003, online, *Employer training expenditure and practices 2001 – 02*, Australian Bureau of Statistics, Canberra, viewed 19 May 2003. Available: <http://www.abs.gov.au>
- Venkatraman, L 2003, database, 'Falling short on HR', *Businessline*, 28 June 2003, viewed 12 September 2003. Available: Proquest.
- Westhead, P 1998, database, 'Factors associated with the provision of formal training by employers', *International Journal of Entrepreneurial Behaviour & Research*, vol. 4, no. 3, pp. 187 – 216, viewed 20 August 2003. Available: Emerald.