

Evaluation of Health and Safety Representative Training in South Australia

Report

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1. Executive Summary

1.1 General

An evaluation of health and safety representative training in South Australia was undertaken by VIOSH Australia, a centre within the University of Ballarat, on behalf of the WorkCover Corporation of South Australia. The evaluation was conducted between August and November, 1996.

The evaluation process involved visits to observe the delivery of various training programs, meetings with stakeholders and a postal questionnaire survey of a sample (n = 1200) of health and safety representatives, extracted from the WorkCover Corporation's database.

The evaluation found that the trained representatives are generally satisfied with the delivery of programs and believe that the content is relevant, inclusive and appropriate to them in their roles in the workplace. There is possibly merit in offering specific industry-focussed programs where numbers of trainees permit, although there is no strong evidence to suggest that all training should be industry specific.

The assessment of training during the field visits showed that the training led to a shift in attitude from one of victim blaming and the use of behaviour modifications for prevention (*safe-person*) towards one of understanding the importance of system and equipment failure and using higher order controls for prevention (*safe-place*). However, despite this improvement, the health and safety representatives retain a bias towards the safe-person model.

The survey results showed that there appeared to be little difference in the preference of safe-person or safe-place as a way of thinking between those who had no training, basic level and advanced level training. The exception appeared to be those health and safety representatives who had attended all three levels of training; they appeared to be distinct from other representatives and more inclined toward the safe-place philosophy.

While the change noted during the field visits, and the strengthening of the safe-place model among representatives who had completed all levels of training is encouraging, overall there is not clear understanding of contemporary thinking about accident causation and prevention.

The duration of the training is acceptable to most parties although the delivery of the basic level course in one five day block was discussed from an educational effectiveness point of perspective. Given the delivery techniques used by the various trainers, no clear conclusions can be drawn about the relative merits of different delivery patterns.

Access to the courses does not seem to present a major problem although it is reported that attending programs is more difficult for people from small workplaces and workplaces outside Adelaide.

There was a commonly expressed view that health and safety representatives face difficulties on return to work where management is unreceptive to their new ideas.

Course outcomes are not adequately evaluated at present and, amongst a number of recommendations, it is suggested that more detailed evaluations be undertaken and used to assist in the marketing of the health and safety representatives as a valuable resource in the workplace.

1.2 Summary Responses to Research Questions

The following are brief answers, that draw on the fuller discussion in the report, to the research questions. They are grouped under the headings of *Model Course Curricula*, *Training Delivery*, and *General Training Provision Issues*.

1.2.1 Model Course Curricula

1. Are the Curricula so designed as to equip health and safety representatives with the knowledge and skills to effectively and responsibly represent the members of their work group for the purposes of the Act?

Overall yes, the stakeholder's meetings, field visits, and the survey results indicate that the curricula are well designed. In particular it was noted in the survey results that those representatives who have attended at least one level of training were distinguishable from those who had attended no training by their confidence levels in the area of health and safety knowledge and skills.

2. Do the Curricula remain current, relevant and flexible to the needs of elected health and safety representatives throughout their term(s) of office in the context of their industry?

It seems that the curricula continue to meet the needs of the representatives over their terms of office. The survey results showed that there was no relationship between the measures of course quality (including *relevance*, etcetera) to either the length of service or level of training; thus indicating that the courses are held in equal esteem by those of varying training level and at various stages through their term as a health and safety representative.

3. Are the Curricula consistent with modern philosophies including experiential development of skills?

The observation of the training during the field visits revealed that the delivery of the curricula typically employs contemporary experiential learning styles. In particular split courses (two plus three days) offered the opportunity for workplace based projects midway through the courses and are therefore more closely aligned to this model.

4. *Do the Curricula achieve a progressive development of knowledge and skills through logical steps as demonstrated in practice, and as such, are the three levels of training (Basic, Advanced, Continuing) meeting the needs of health and safety representatives?*

The observation of training indicated that the curricula are modelled on a progression of development from the provision of *basic* knowledge, through to the enhancement of more *advanced* skills, to the more independent model of learning emphasised by the *continuing* program. The survey results would seem to indicate that in terms of self confidence in the area of health and safety knowledge and skills, the greatest difference among the various training levels is between no training and some training. However, in terms of the final questions on the survey that examined the conceptual approach to prevention, the group that stood apart by way of their focus on safe-place thinking was the group of representatives who had completed all three levels of training. This indicates that strong confidence in knowledge and skills is associated with completion of the basic training, but the conceptual underpinning of the safe-place model is more strongly established nearer the completion of all three levels.

5. *Do the Curricula adequately take into account issues relating to gender and non-English speaking background workers?*

The observation of the training showed that the trainers generally employ an inclusive style. This extends not only to inclusion of both men and women, but to the inclusion of participants from a variety of backgrounds through the use of a wide variety of examples and case studies.

The issues surrounding workers from non-English speaking backgrounds is more difficult to assess. There would appear from the database to be a low proportion of workers from non-English speaking backgrounds among the health and safety representatives

themselves, however the proportion among the workers they represent is probably much higher. Given the lack of information about this group, no particular comments can be made on this issue. In observing the training it was noted in some instances, workers with *special needs* were considered, as mentioned in the model course. The *general* category of workers with *special needs*, is probably a more useful term than specifics such as *gender*, as clearly the range of potential issues is wide. The use of general terminology, such as *inclusiveness*, within the curricula prevents the problem of being overly specific and thus overlooking the needs of some people. In this context the references made in the model course to workers with special needs is appropriate.

1.2.2 Training Delivery

1. Do the providers take carriage of the Curricula adequately?

The observation of training indicated that the current providers deliver the curricula in a satisfactory manner and in general accordance with the model course. The providers however are uncertain of their role in curricula development, and sometimes feel bound by the model course. Somewhat paradoxically, the WorkCover Corporation expect the providers to take greater carriage of the development and improvement of the courses.

2. Do the providers maintain high standards for training and training facilities?

The field visits indicated that the facilities for training were generally suitable. The most notable exception was that no facility observed was adequate for 30 participants as required by the approval criteria.

3. How should the individual quality of trainers be assured?

Currently it seems that individual trainers take feedback via the end of course evaluation forms. Potentially the individual quality of trainers could be assured by utilising a more rigorous quality based process as suggested elsewhere. This feedback process may

operate within a more formal structure. The performance of individual trainers could be related to the course outcomes achieved by trainees in terms of knowledge, skill and workplace application.

4. Is there equity of access to health and safety representatives including those in remote areas?

The survey results show that while about 50% of the respondents work outside Adelaide, 80% of training seemed to be conducted in Adelaide. Despite a high level of satisfaction with the course locations, it should be noted though almost all the dissatisfaction that was evident was from those living outside Adelaide. The distance to travel to training and the work pressure (which could be related to the extra time needed for travelling) were greater impediments to attending training for those working outside Adelaide. It can be strictly concluded then that there is not equity of access, however the level and effect of this inequity may not be substantial.

5. Does training delivery adequately allow for non-English speaking background (NESB) workers and other special groups e.g. workers with disabilities, indigenous people and women?

As noted above, the training delivery is typically inclusive in its nature.

An issue which appears to have received little attention is the problem of illiteracy among participants in the training. The educationally sound practices of employing group work, discussions, and so on, alleviated the problem somewhat and furthermore individual trainers appeared to make special efforts to deal with the issue. However, there appeared to be no formal recognition of the problem or mechanisms for improving the training for participants who have difficulty reading.

6. How should providers be held accountable for maintaining standards of training quality?

The quality model of improvement based on feedback should be employed. WorkCover Corporation should work with the providers to develop models of quality assurance and improvement, which the providers would then implement. Their implementation could then be audited as necessary.

1.2.3 General Training Provision Issues

1. How should training arrangements allow for those instances where employers are unable or unwilling to pay the course fees?

The instance of employers who are unwilling to pay fees seems to be relatively small, however respondents to the survey may have tended to be biased toward active representatives who work for supportive employers. Where employers are unwilling to pay the fees, a confrontational approach is unlikely to be useful and may harm workplace relations, therefore marketing the value of health and safety representatives and the value of the training via success stories would seem to be worthwhile.

2. Should training be more industry specific and, if so, what arrangements would allow this without undue impact on the efficiency of the overall training arrangements?

The survey results indicate a high level of satisfaction with the relevance of the general training to the participants' own industries.

Given the generic nature of knowledge in health and safety, industry specific training courses are not necessarily an improvement on the current system. Most industries obviously present an array of problems, so the establishment of general skills would seem

to be worthwhile. Likewise, the general training courses allow for interaction between representatives from a variety of backgrounds that would potentially widen the scope of their thinking and offer the opportunity to apply successful ideas from another industry.

The curricula currently allow for specialised training at the continuing level. This would be appropriate timing for the integration of employer based programs should industry specific sessions be needed.

3. Is the duration of training appropriate?

The survey indicated that the duration of the training is appropriate. The potential for a greater variety in the modes of delivery to allow for a broader range of individual needs should be explored. In particular there would seem to be some advantages in the option of the split course being more widely available.

2. Introduction

The Occupational Health, Safety and Welfare Act 1986 (SA) and the Occupational Health, Safety & Welfare Regulations, 1995 (Consolidated Regulations) make provision for workplace health and safety representatives and their training. Health and safety representatives are entitled to five days leave per year of their term to attend training approved by the Minister on the advice of the Occupational Health, Safety and Welfare Advisory Committee. The criteria for approval of course providers as well as model curricula for a three-level (*basic, advanced and continuing*) training system is outlined by the document, *Approval Criteria and Approved Model Course Curricula for Health and Safety Representative Training* (SAOHSC 1993). The two main components of this document are known hereafter as the *approval criteria*, and *model course*.

The brief for this research was to conduct a field evaluation of the arrangements for health and safety representative training in South Australia. The research was conducted by VIOSH Australia which is the Centre for Teaching and Research in Occupational Health and Safety at the University of Ballarat. The research was conducted during August, September, October and November 1996. The tender document submitted is contained in Appendix L.

The research employed three main methods of gaining information to evaluate the health and safety representative training system;

- consultation with WorkCover and its stakeholders;
- a postal survey of health and safety representatives; and
- field visits to observe training provision.

3. Aims: Research Questions

The aims of this research were to answer the following research questions. They are grouped under the headings of *Model Course Curricula*, *Training Delivery*, and *General Training Provision Issues*.

3.1 Model Course Curricula

1. Are the Curricula so designed as to equip health and safety representatives with the knowledge and skills to effectively and responsibly represent the members of their work group for the purposes of the Act?
2. Do the Curricula remain current, relevant and flexible to the needs of elected health and safety representatives throughout their term(s) of office in the context of their industry?
3. Are the Curricula consistent with modern philosophies including experiential development of skills?
4. Do the Curricula achieve a progressive development of knowledge and skills through logical steps as demonstrated in practice, and as such, are the three levels of training (Basic, Advanced, Continuing) meeting the needs of health and safety representatives?
5. Do the Curricula adequately take into account issues relating to gender and non-English speaking background workers?

3.2 Training Delivery

1. Do the providers take carriage of the Curricula adequately?
2. Do the providers maintain high standards for training and training facilities?
3. How should the individual quality of trainers be assured?
4. Is there equity of access to health and safety representatives including those in remote areas?
5. Does training delivery adequately allow for non-English speaking background (NESB) workers and other special groups e.g. workers with disabilities, indigenous people and women?

6. How should providers be held accountable for maintaining standards of training quality?

3.3 General Training Provision Issues

1. How should training arrangements allow for those instances where employers are unable or unwilling to pay the course fees?
2. Should training be more industry specific and, if so, what arrangements would allow this without undue impact on the efficiency of the overall training arrangements?
3. Is the duration of training appropriate?

4. Methodology

The research methodology comprised three main components.

1. Consultation with WorkCover and its stakeholders.
2. A postal survey of health and safety representatives.
3. Field visits to observe training provision.

Ethical approval for the work was obtained from the University of Ballarat Human Research Ethics Committee.

Statistical analysis was undertaken with the assistance of the School of Information Technology and Mathematical Sciences at the University of Ballarat.

4.1 Consultation with WorkCover and its stakeholders

A comprehensive list of stakeholders (parties having an interest in health and safety representative training) was proposed by the WorkCover Corporation and consultative meetings organised for the 8th and 9th October 1996. The meetings were preceded by a meeting with representatives of the project reference group (details of membership of this group are provided in Appendix B).

Representatives of the following parties (in order of meetings) were met at either the WorkCover offices or the offices of the respective groups:

- South Australian Employers' Chamber of Commerce and Industries (SAECCI)
- United Trades and Labor Council of South Australia (UTLC)
- Department for Industrial Affairs (DIA)
- Training Provider Coordinators:
National Safety Council of Australia: South Australian Division Limited (NSCA)
SAECCI
UTLC
- Health & Safety Training Expert

- Working Women's Centre
- Health and Safety Representative Trainers (NSCA, SAECCI & UTLC)
- WorkCover Corporation.

The names of participants are listed in Appendix B.

The meetings were informal. The researchers invited free and open responses to a range of questions which aimed to elicit information surrounding the research questions. Discussion amongst group members was encouraged.

All participants were invited to make written submissions to either expand on issues raised during the meetings, to address issues which they believed were not adequately covered or to address issues of a confidential nature. One written submission was received from one trainer.

4.2 A postal survey of health and safety representatives

A structured postal survey was designed in consultation with WorkCover (Appendix A). The survey was designed to provide information to assist with answering the research questions. The questions were based on obtaining basic explanatory information such as work location and the level of training attended and multiple response questions about matters such as the quality of training and self-confidence in the role of health and safety representative. The survey also included a set of case study based questions designed to measure approaches to prevention according to the safe-place, or hierarchy of control, model. These questions have been previously used in research in health and safety and have been used with permission (Q18, 19, 20 Culvenor 1996; Q21 Cowley & Else 1987). Provision was made for comments after some questions and a general provision for comments at the conclusion of the survey. The survey was divided into seven main parts.

1. You and Your Workplace
2. Health and Safety Representative Training
3. The Difficulties of Attending Training
4. Working as a Health and Safety Representative
5. The Causes of Accidents
6. Solving Safety Problems
7. Comments

The sample of 1200 from the 8516 health and safety representatives elected between 1 January 1993 and 31 July 1996 was selected at random by WorkCover from its database. Selecting representatives elected prior to January 1993 was considered likely to lead to a greater proportion of non-current representatives, wrong addresses, etcetera. The questionnaires were posted to the subject's home address to avoid any possible conflict with their employer about the survey.

Given the interest in the needs of workers from non-English speaking backgrounds (NESB), it was decided to identify this group of people and code the surveys sent to them in order to enable a separate analysis. However, success was limited because this group of people can only be identified in the database if they have registered their preferred language as one other than English, therefore only 29 representatives in the NESB category could be found. Other people from non-English speaking backgrounds are likely to be included in the database but their details cannot be retrieved using NESB search parameters.

The forms to be sent to the representatives in the NESB category were colour-coded so as to be identifiable upon receipt. The seven that were randomly drawn into the sample of 1200 were sent a colour-coded form. Given the small size of this sample it was decided to post the remaining NESB representatives a survey also for analysis separate to the main sample. These representatives were sent a third type of form.

A telephone follow-up of a sample of non-respondents was proposed at research design stage. It was proposed that this be conducted by calling the subjects at home given the problems which may be caused by calling the subjects at their workplace. However, once the research was underway it was discovered that the WorkCover database did not until recently list home telephone numbers. On the basis that problems may arise as a result of contacting people at work and consequently ethical approval was unlikely to be granted¹, it was decided that the telephone survey would not be undertaken.

For the analysis, the responses to the questions in parts one and two (Q1-12) are known as explanatory variables and the responses to further questions (Q13-21) are known as dependent variables. The analysis included descriptive tabulation of the responses to each question. Given that many of the dependent variables were based on banks of questions, factor analysis on each bank was undertaken to extract a smaller set of scores for each set of questions; these then became the dependant variables. To test for relationships between the explanatory variables and the dependent variables, analysis of variance of the dependent variables by each of the explanatory variables was undertaken.

4.3 Field visits to observe training provision

The field visits were conducted during August and September 1996 by Jane Lean and John Culvenor (researcher details are contained in Appendix K). The three current approved providers of health and safety representative training in South Australia were visited. These were the South Australian Employers' Chamber of Commerce and Industry (SAECCI), the National Safety Council of Australia: South Australian Division Limited (NSCA), and the United Trades and Labor Council of South Australia (UTLC).

¹ Ethical approval for the research was granted by the University of Ballarat Human Research Ethics Committee. However, the application to this committee requested approval to contact health and safety representatives at home, not at work.

From the courses available at that time, the SAECCI and the UTLC were observed delivering the basic, advanced, and continuing courses. The NSCA was observed delivering the basic course and the advanced course. The NSCA was not delivering a continuing course at the time of the research.

Training was observed between Tuesday 27 August and Wednesday 11 September inclusive. For the basic course and the advanced course, at least two modules were observed being delivered by each provider. For the continuing course, the *Core Day* was observed being delivered by the UTLC, and *OHS Issues for Women* was observed being delivered by the SAECCI. Table 1 summarises the observation of the training showing the modules observed. A more detailed summary of the training observed showing the observer, times and dates are included in Appendix C.

Summary of Training Observations (Module Numbers)			
	SAECCI	UTLC	NSCA
Basic	2, 3 (part) & 4	3, 5 (part) & 6	1, 3 (part), 4
Advanced	6 & 7	3, 4 (part), 6, 8 & 9	8 & 9
Continuing	OHS Issues for Women	Core Day	None Available

Table 1 Summary of the Training Observations

5. Results

5.1 Consultation with WorkCover and its stakeholders

The meetings with the various stakeholders raised concerns and generated a range of ideas. The representation seemed appropriate and balanced although it should be noted that the representatives of the employers are likely to be those who have a particular interest in health and safety representatives and therefore have active representatives in their workplaces.

Among the various parties consulted there were very similar views about the strengths and weaknesses of the current approaches to training. A number of good ideas were generated and these provide opportunities for improvement of the training delivery and the education of the trainees. The specific noteworthy outcomes of the meetings are summarised below. Other outcomes are interwoven in the findings section of this report.

There was little doubt among the stakeholders that the health and safety representative is an important resource in the workplace. It was a common view, however, that employers (management) generally do not recognise the value of health and safety representatives and consequently under-utilise the resource. There was a strong belief that representatives are actively discouraged in many workplaces and that the enthusiasm with which many trainees return to the workplace is rapidly eroded as management ignore suggestions or oppose ideas. Given that the basic training is seen by many as an important confidence building exercise, it seems important that management be more receptive to the ideas of health and safety representatives if the value of the training is to be retained. It was widely held that the lack of management training in OHS is a relevant factor and it was suggested that the continuing training program (joint training) is therefore important in introducing management to OHS issues.

Associated with management acceptance of health and safety representatives is the ease with which time off for training is obtained. While getting time off did not seem to be an issue (as supported by the results of the postal survey), some of the stakeholders believed that representatives were sometimes made to feel guilty about the time away from their work and some even attend work as well as training in the same period.

While there was limited argument about the duration of the programs there was much discussion about the format of the training, that is; five-day blocks versus two- plus three-day blocks versus alternatives such as one day blocks. Many people argued that five days is too long in one block and that trainees are swamped with information by the end of the program. Conversely, many of the benefits of five day blocks were mentioned, including;

isolation from work allowing focus on the course, ease of attendance for shift workers and trainees travelling some distance to a course, and formation of stronger networks. From the employers' point of view there are some benefits associated with planning work when trainees are away for blocks of five days. It was suggested that flexibility in the formats offered is necessary to meet the various needs of employers and trainees and that five day blocks will work if trainers recognise the information-overload problems and break the week with a workplace visit to apply some of the learning.

The importance of the training programs in the formation of networks was frequently mentioned and it was suggested that five day blocks facilitated the formation of stronger networks. Given the apparent importance of the course in confidence building, it seems that the networks formed during training are important for on-going support.

In general, many of the parties agreed on the need for flexibility in both format for delivery and content. There was a belief that the curricula are somewhat prescriptive and deny the opportunity for course development and adjustment to meet the needs of a specific group of trainees. Conversely it was suggested that the providers do not take enough initiative in the development and adjustment of courses.

The need for flexibility was seen at each training level. At the continuing training level this flexibility potentially extends to the delivery of some programs via individual employers, that is; where an employer is delivering specific training on a particular issue, (for example; confined spaces) credit could be given against one of the five days to which representatives are entitled. Similarly the potential for Recognition of Prior Learning (RPL) was explored. For example, when health and safety representatives have received training in legal matters or negotiation skills elsewhere, their need to attend a full program was questioned when RPL may be possible. While it is beyond the scope of this report to discuss the detail, it is suggested that the matter be given some consideration given the increased flexibility it may offer. Those considerations should include the mechanisms for RPL processes and the complexities that may need to be considered.

At the continuing level, there was some question of the value of attendance at conferences which have less direct practical application in the workplace.

There was extensive discussion around the matter of skills acquisition versus knowledge acquisition which needs to be considered in the context of the role of the health and safety representative and changes to that role. It was held that the role of the health and safety representative is changing with workplace reform and that training needs to address these changes, for example; training needs to account for the trainees working in workplace teams. Some believed that the changing role of the health and safety representative is requiring less rule following and increasing problem solving skills. While there is concern that some management see the health and safety representative as a defacto health and safety adviser, someone to delegate OHS responsibility to, there was a strong belief that trainees need to be given some problem solving skills so that they may propose ideas to management and be able to argue against inappropriate solutions.

Course evaluation was discussed at length and there was a general belief that current methods of evaluation are not satisfactory. From the employer's point of view, there is no formalised way of determining value for investment in time off for training. From the trainer's point of view there is no way of measuring the effectiveness of the trainees on return to the workplace. It was suggested that the best indication of success is from the trainees who return to the advanced program. In the absence of rigorous course evaluation and formalised quality improvement measures, it was suggested that the information gleaned from the current end of course evaluation sheets is of limited value.

5.2 Postal survey of health and safety representatives

5.2.1 General

Surveys were mailed to 1200 health and safety representatives listed on the WorkCover Corporation database. Four-hundred and five (34%) were returned and 374 (31%) of these responded beyond Question One and were thus valid for use in the analysis.

A further 22 surveys were mailed to the remaining NESB workers on the database. The return of nine forms from this additional group represented a similar return rate as for the main sample. Given the small size of this additional sample, analysis of the data was considered to be inappropriate.

At the time of writing a further 50 surveys had been returned (49 from the sample of 1200 and one from the additional mailout to NESB representatives) making the return rate from the main sample approximately 39%. These additional returns were not included in the analysis.

5.2.2 Current Health and Safety Representative (Q1)

Approximately 80% of the returned surveys were from current health and safety representatives. The remaining 20% were from non-current health and safety representatives. Approximately half of the non-current representatives went on to complete the survey.

It would be assumed that the return rate would be lower for non-current representatives. This would indicate that the database contains at least 20% non-current representatives.

5.2.3 Work Location (Q2)

The returned sample was approximately equal from health and safety representatives working in Adelaide and outside Adelaide. The WorkCover database indicates that the population is split approximately 70% in Adelaide and 30% 'country'. This would seem to indicate that the return was higher from people working outside Adelaide. However, the

data could be compromised somewhat by individual interpretation of what is geographically defined as Adelaide. It is fair to say, at least, that the sample contains a good mix of metropolitan and country workers.

5.2.4 Age (Q3)

As Figure 1 shows, approximately 90% of the subjects who returned surveys were aged between 25 and 55.

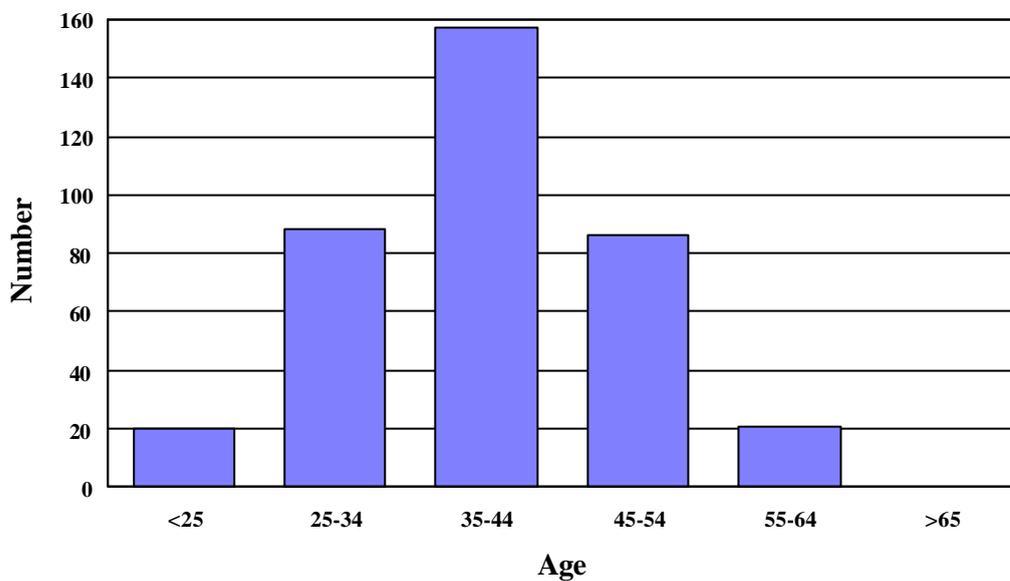


Figure 1 Age of Health and Safety Representatives

5.2.5 Gender (Q4)

Approximately 60% of the sample was male and 40% female. This proportion is the same as that in the population and indicates no bias in the return rates from males or females.

Slightly more males than females had attended the basic course but many more males had attended the advanced and continuing training.

5.2.6 Formal Health and Safety Qualifications (Q5)

The responses to the question about formal health and safety qualifications indicated that large numbers of the representatives held certificates in OHS (44%). Almost none held more advanced qualifications, while a reasonable number indicated they had other qualifications that related to OHS (15%). It was the intention at survey design stage that *Certificate in OHS* as a formal qualification would mean a program run typically by a university or TAFE college. It would seem likely that the respondents have interpreted this more widely. For instance some subjects may have included a certificate received following the basic or advanced courses, while others may have included certificates of competency of some kind.

5.2.7 Length of Time as Health and Safety Representative (Q6)

The length of service was fairly evenly distributed from less than one year to more than three years (Figure 2).

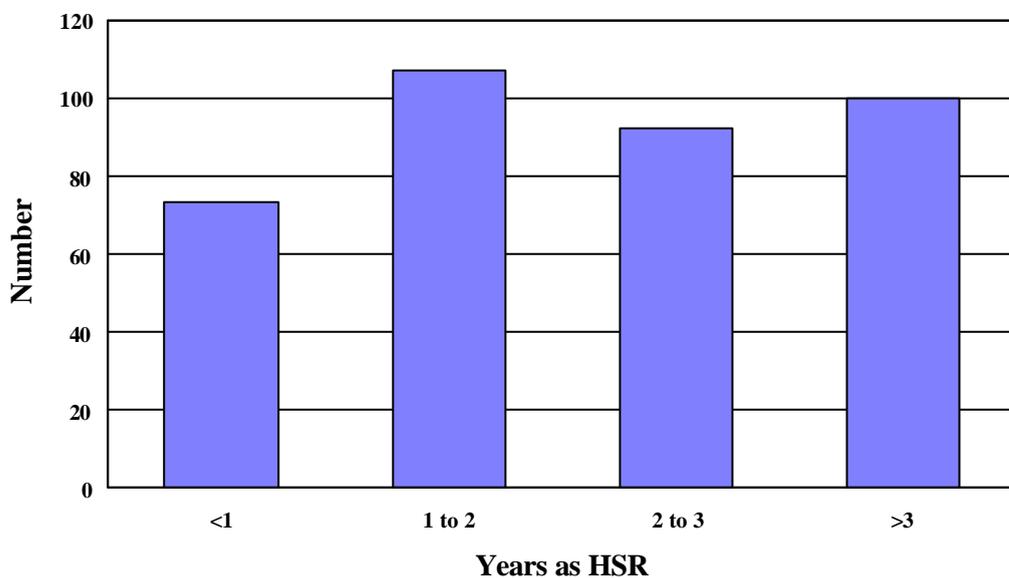


Figure 2 Length of Time Health and Safety Representative (Years)

5.2.8 Size of Represented Group (Q7)

Generally the size of the represented work groups (Figure 3) was below 50 (85%). Fifty percent of the subjects represented less than 20 fellow workers.

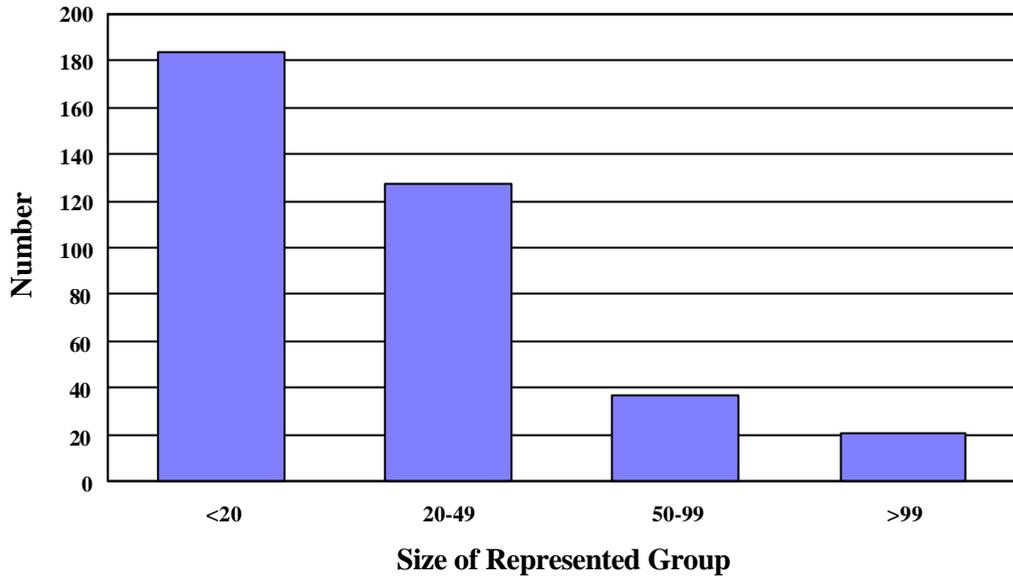


Figure 3 Size of Represented Group (Number of People)

5.2.9 Government or Non-Government Organisation (Q8)

The respondents were split roughly equally between government (55%) and non-government employers.

5.2.10 Industry (Q9)

Community Services (40%) and *Manufacturing* (20%) were the largest industry sectors represented in the sample (Figure 4). All other industry sectors represented between two and six percent of the sample.

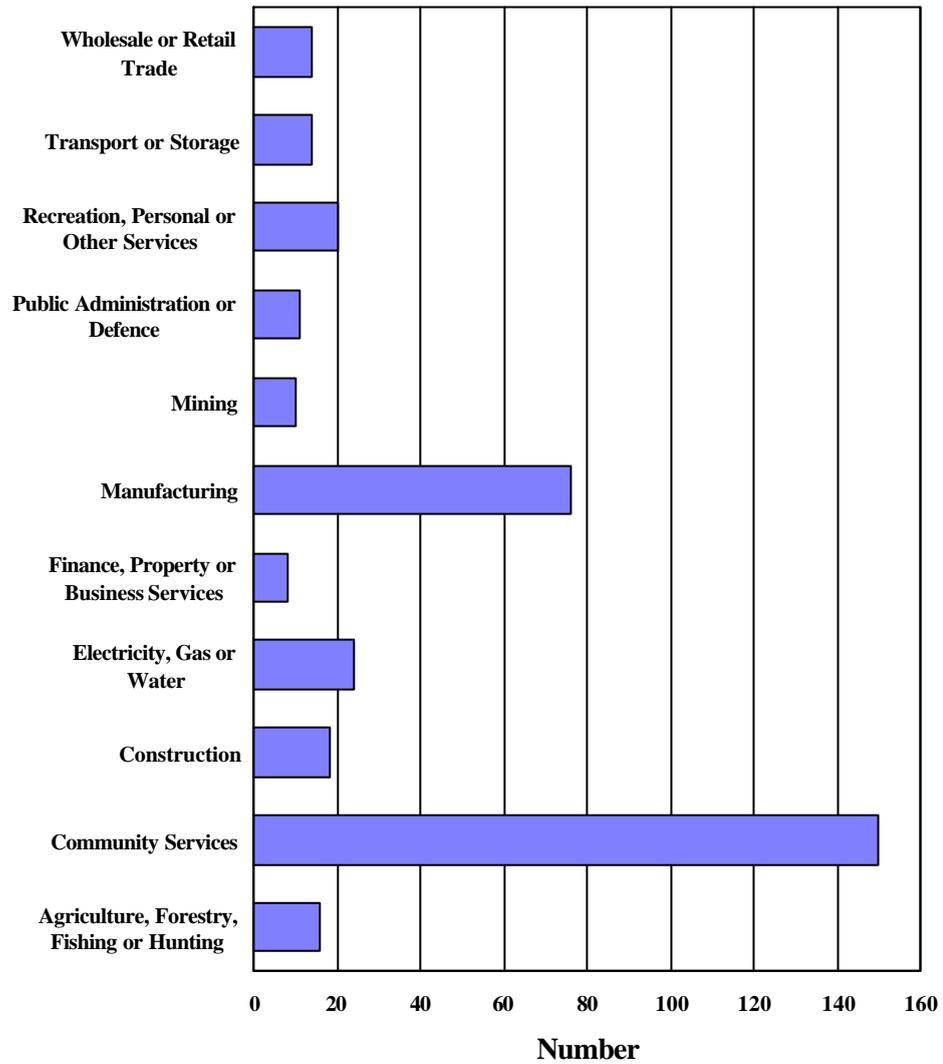


Figure 4 Industry

5.2.11 Size of Employer (total employees including all branches, offices, interstate, etc) (Q10)

Health and safety representatives working for large employers dominated the sample. Sixty-five percent of the sample were from organisations employing more than 200 people (Figure 5).



Figure 5 Size of Employer (Number of Employees)

5.2.12 Attendance at any WorkCover-Approved Health and Safety Representative Training (Q11)

Most of the sample (83%) had attended at least one WorkCover-approved health and safety representative training course (Table 2; Figure 6)

	Number	Percent
None	73	19.5
Basic	294	78.6
Advanced	118	31.6
Continuing	49	13.1

Table 2 Basic Course: Attended (Q12)

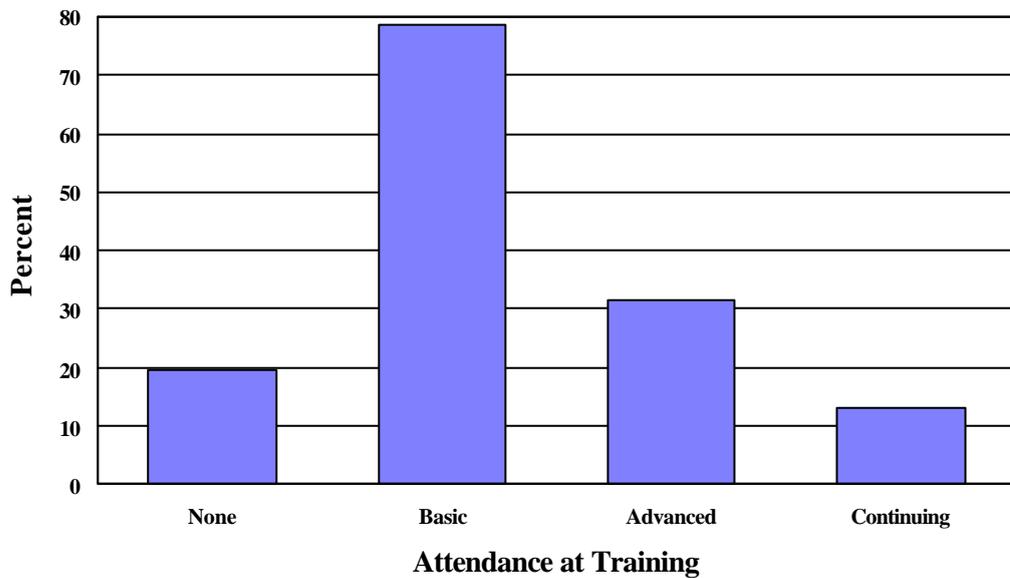


Figure 6 Attendance at Training (Percentage)

5.2.13 Training Courses: Providers (Q12)

Table 3 and Figure 7 show that the two main providers of the training were the UTLC and the SAECCI.

	Basic	Advanced	Continuing
SAECCI	88	44	34
UTLC	140	61	19
NSCA	26	8	4
Other	51	16	6

Table 3 Basic Training Course: Provider (Q12)

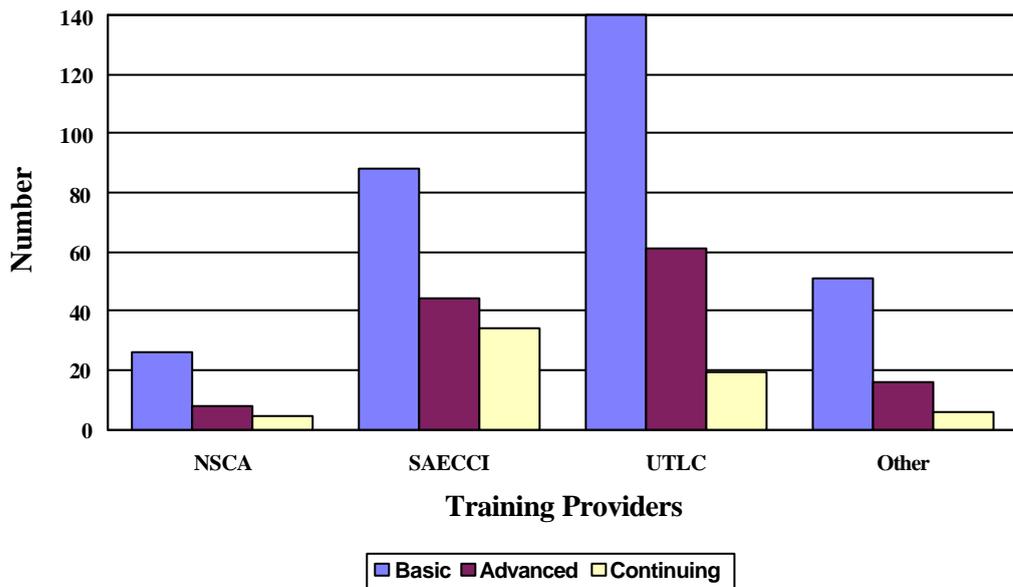


Figure 7 Training Providers

5.2.14 Training Courses: Year Attended (Q12)

The year attended varies little between the training levels. For basic and advanced training, 80% was undertaken in 1993 or more recently. While for continuing training, 90% was undertaken in 1993 or more recently.

5.2.15 Training Courses: Location and Convenience (Q12)

For all training levels, between 80 and 85% of the courses were held in Adelaide.

While it seems that the location of courses is not in accordance with the working location of many of the health and safety representatives, for each course over 90% report the location as convenient. However cross-tabulating the reported non-convenience of training locations by work locations (Table 4) shows that typically those working in Adelaide report no inconvenience in the training location while typically 10% of those working in other locations report inconvenience with respect to the training locations. These differences are shown to be significant for the basic and advanced courses.

Work Location	Basic	Advanced	Continuing
Adelaide	2.1	0	0
Other	12.8	12.1	11.1
Chi²	Chi ² (1) =11.9 P=0.00	Chi ² (1) =6.26 P=0.01	Chi ² (1) =2.38 P=0.12

Table 4 Convenience of Course Location: Percentage NOT convenient: By Work Location

5.2.16 Quality of the Training (Q13)

The detailed data and charts for this question are in Appendix F. Table 5 shows that there was strong agreement with all the positively framed statements and very little agreement disagreement with the two negatively framed statements (training was too long, and training was too short).

“At the last training course...	Percentage (%) of Responses				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a ... I was able to talk about my ideas”	0	2	7	68	23
b ... the course leader listened to what I had to say”	1	2	8	63	28
c ... the course leader used my ideas in examples”	1	6	44	39	10
d ... the course leader used examples that I understood”	0	1	4	72	23
e ... the course leader used a variety of presentation methods (eg; blackboard, overheads, video & printed notes)”	0	2	3	46	49
f ... there were enough group exercises”	1	3	7	60	29
g ... I made useful contacts with other OHS representatives”	2	8	23	47	20
h ... the facilities were comfortable”	0	5	11	64	20
i ... the sessions ran on time”	0	4	7	65	24
j ... the training was too short”	7	45	28	14	6
k ... the training was too long”	10	47	33	6	4
l ... the training was relevant to my industry”	3	9	21	57	10
m ... I learnt things that have been useful at my work”	0	2	11	64	23
n ... the notes were useful later on at my work”	1	4	16	59	21

Table 5 Course Quality: Percentage of Responses (Q13)

Factor analysis and analysis of variance of the resulting factors by the explanatory variables is contained in Appendix J. The main points of interest were as follows.

- The analysis of variance showed no statistical differences by provider. It seems reasonable to conclude that there is no evidence to suggest a difference between the course quality of the different providers.
- The analysis showed that there was no relationship between the length of service or level of training; this would seem to indicate that the training remains equally relevant over the terms of the representatives.
- In terms of equity, the main factors covering, teaching style, the applicability of the skills, and the interest and comfort of the training were not different when analysed by gender; indicating an equality in the delivery, usefulness and amenity of the training. A difference between males and females was noted on the factor representing the length of the training; women seemed more inclined to indicate that the training was too long. Perhaps this issue relates to non work responsibilities that are affected by the five day program.

5.2.17 Difficulties of Attending Training (Q14)

The detailed data and charts for this question are in Appendix G. Table 6 shows that there was strong disagreement that the employer is imposing difficulties by not paying for expenses. There was also strong disagreement about not knowing of training entitlements, not being interested, and not needing training. There was substantial agreement with the issues of being too busy at work (35% agree or strongly agree) and some agreement that the location of the training and the difficulty of gaining time off work is an impediment (for both questions, 14% agree or strongly agree).

It would seem that overall the pressures of work and the location of training are the main impediments to attendance at training.

	“It’s difficult to get to training because...”	Percentage (%) of Responses				
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a	... I am too busy at work”	12	35	18	23	12
b	... The training is too far away”	17	53	16	10	4
c	... My employer makes it difficult to take time off work”	26	45	14	12	4
d	... My employer won’t pay for the training expenses”	35	45	13	3	5
“Some other reasons I don’t attend training are that...”						
e	... I didn’t know I was entitled to training”	37	47	8	6	2
f	... I am not interested in the training”	45	42	10	2	2
g	... I don't need the training”	49	37	9	2	2

Table 6 Difficulties of Attending Training: Percentage of Responses (Q14)

Factor analysis and analysis of variance of the resulting factors by the explanatory variables is contained in Appendix J. The main points of interest were as follows.

- Health and safety representatives who had not attended training reported greater levels *employer imposed difficulties* than those who had attended training.
- Health and safety representatives working for government organisations rated a lack of *interest and need* as greater impediments than non-government workers.
- The following groups of health and safety representatives reported greater *workload and location* difficulties than their counterparts;
 - Those living outside Adelaide
 - Those representing small workgroups
 - Government workers
 - Those from small organisations
 - Those who have not attended training.

- Notably there seemed to be no difference on the reported difficulties by gender or industry.

5.2.18 Health and Safety Representative Knowledge (Q15)

The detailed data and charts for this question are in Appendix H. Table 7 shows that there was good agreement with the statements regarding knowledge of OHS committees and a representative's rights and responsibilities. There was substantial disagreement with the statements regarding knowledge of the OHS&W Act, Worksafe Australia, WorkCover, and the inspectorate.

	“For my job as Health & Safety Representative, I know enough about...	Percentage (%) of Responses				
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a	... the South Australian OHS&W Act 1986”	4	20	30	40	7
b	... what Worksafe Australia does”	6	36	26	30	3
c	... what WorkCover Corporation does”	5	30	23	36	5
d	... how the OHS committee should work”	2	10	17	58	13
e	... my rights and responsibilities under the OHS&W Act 1986”	3	9	14	59	14
f	... what the inspectorate does in SA”	6	32	27	31	5

Table 7 Health and Safety Representative Knowledge: Percentage of Responses (Q15)

Factor analysis and analysis of variance of the resulting factors by the explanatory variables is contained in Appendix J. The main points of interest were as follows.

- Health and safety representatives who have completed at least one level of training reported greater confidence with the bank of questions relating to health and safety knowledge.
- Health and safety representatives with greater lengths of service also reported greater confidence with the bank of questions relating to health and safety knowledge.
- Notably there seemed to be no difference on the measures of health and safety knowledge by provider.

As an illustration of the relationship between the level of training and these measures, Figure 8 shows that a greater proportion of the subjects with no training tended to disagree that they have sufficient knowledge about the OHS&W Act.

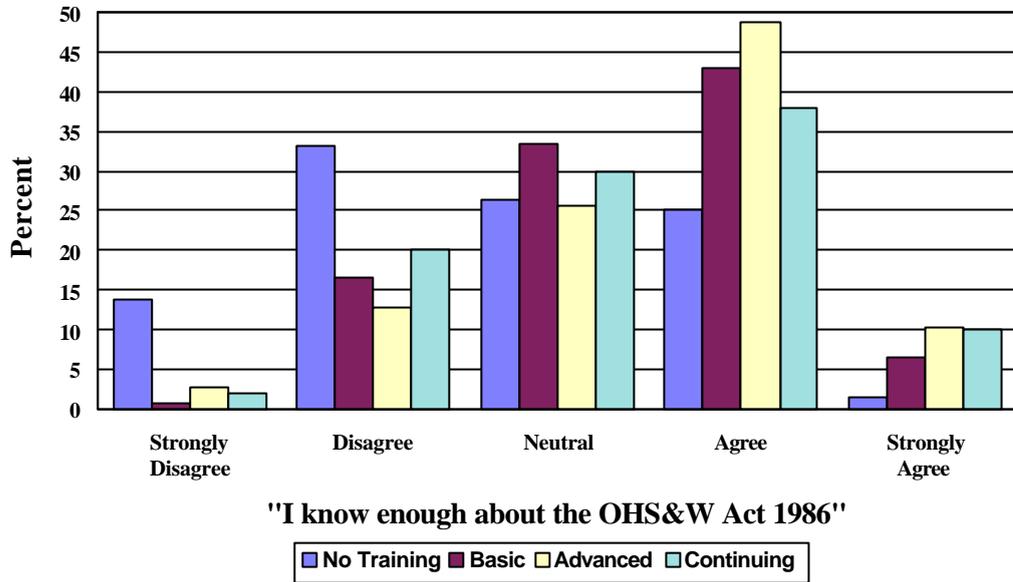


Figure 8 For my job as Health & Safety Representative, I know enough about ... the South Australian OHS&W Act 1986: By Training Level: Percentage of Responses

5.2.19 Health and Safety Representative Skills (Q16)

The detailed data and charts for this question are in Appendix H. Table 8 shows that there was generally strong agreement with the series of questions relating to health and safety skills. Those questions yielding the least agreement were those relating to; answering questions about laws, using the hierarchy of controls, preparing a case for dealing with issues, and explaining how OHS is related to productivity and quality.

	“In my job as Health & Safety Representative, I am confident to...	Percentage (%) of Responses				
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a	... interview fellow workers”	1	6	11	69	13
b	... recognise problems that people are having at work”	1	3	8	75	14
c	... investigate accidents at work”	2	6	16	65	11
d	... answer questions at work about health and safety laws”	2	12	25	52	9
e	... find information about OHS problems at work”	1	4	14	65	15
f	... identify hazards at work”	1	2	5	73	19
g	... assess risk at work”	1	4	12	67	16
h	... work out priorities for action”	1	5	14	69	11
i	... use regulations and codes of practice”	2	9	23	57	10
j	... use the "hierarchy of controls" to control risks”	3	11	28	50	8
k	... talk to managers about OHS problems at work”	1	4	8	67	20
l	... prepare a case for dealing with OHS issues”	4	12	29	46	10
m	... negotiate health and safety solutions with management”	2	8	18	57	15
n	... explain how safety is related to productivity and quality”	2	7	26	54	11
o	... keep records about health and safety”	2	8	17	62	11
p	... do extra training courses”	2	7	18	50	23

Table 8 Health and Safety Representative Skills: Percentage of Responses (Q16)

Factor analysis and analysis of variance of the resulting factors by the explanatory variables is contained in Appendix J. The main points of interest were as follows.

- Health and safety representatives with who have completed at least one level of training report greater confidence with the all aspects of hazard management skills.
- Health and safety representatives with greater lengths of service report greater confidence with the *core skills* and the *information and negotiation* aspects, of hazard management.
- Male health and safety representatives report greater confidence with the *information and negotiation* skills, (such as find information, talk to managers, etcetera).
- Notably there seemed to be no difference on the measures of health and safety skills between the three main providers.

As an illustration of the relationship between the level of training and these measures, Figure 9 shows that a greater proportion of the subjects with no training tend to disagree that they are confident to use the hierarchy of controls.

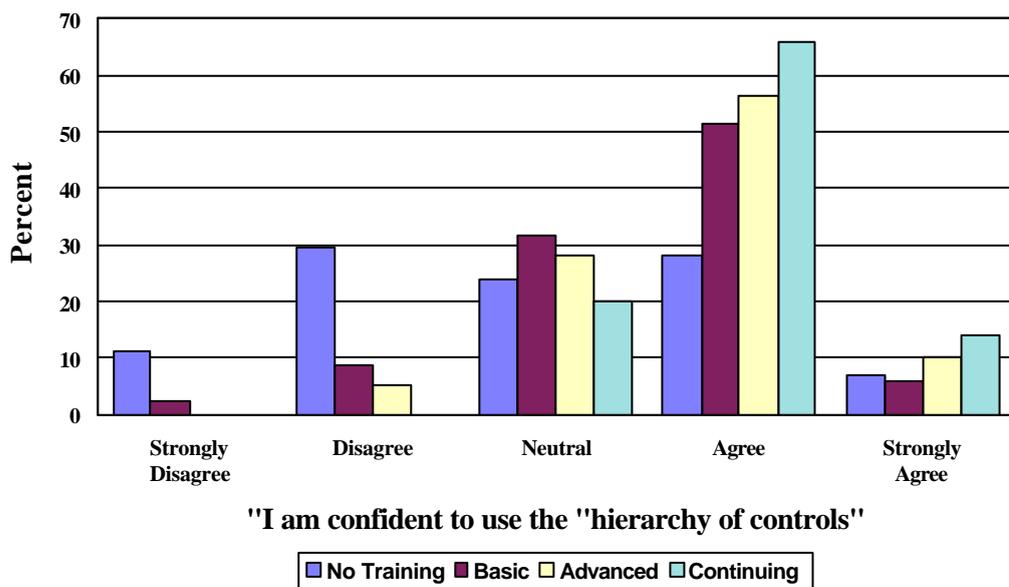


Figure 9 In my job as Health & Safety Representative, I am confident to... use the "hierarchy of controls" to control risks: By Training Level: Percentage of Responses

5.2.20 Accident Causes (Q17)

The detailed data and charts for this question are in Appendix I. Table 9 shows that there was no clear distinction between the range of statements regarding the causes of accidents. Generally there was a spread of opinion between disagree and agree with few adopting an extreme position. There seemed to be no clear model of causation. The questions were organised around the themes of safe-person (statements b, d, f, and h), and safe-place (statements b, d, f, and h). However there was no clear rejection of the safe-person model of accident analysis, in favour of the safe-place model emphasised by the legislation.

These findings are similar to those of Biggins and Phillips (1991) and Gaines and Biggins (1992) who showed a perpetuation of the careless worker myth. Both studies showed that approximately 46% of their study groups (125 workers undergoing health and safety training in Queensland and 82 workers undergoing health and safety training in the Northern Territory) believed *worker carelessness* was the main cause of accidents, while 54% cited *unsafe conditions*, or *both*. An earlier evaluation of health and safety representative training by Else & Cowley (1987) found similar views. The victim-blaming paradigm would seem to remain strong among health and safety representatives.

“Accidents at my workplace are usually caused by...	Percentage (%) of Responses				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
... lack of training in how to behave safely”	7	37	14	31	10
... lack of hazard control planning by management”	6	36	22	26	10
... carelessness of the injured person”	4	19	29	42	6
... unsafe working conditions”	9	40	25	22	5
... accident-prone workers”	15	38	30	14	3
... poor equipment”	8	46	20	21	6
... inexperience of the injured person”	5	26	27	37	5
... poor layout of workplace”	7	31	23	31	8

Table 9 Accident Causes: Percentage of Responses (Q17)

Factor analysis and analysis of variance of the resulting factors by the explanatory variables is contained in Appendix J. No clear trends emerged from this analysis. Notably there appeared to be no trend toward a safe-place approach among those who had completed a greater level of training.

5.2.21 Solving Safety Problems (Q18, 19, 20, 21)

This set of questions is the simplest to report as the responses were condensed from the ranking of each set of solutions to a single score for each set of solutions. The results are summarised in Table 10 and Figure 10.

Case	Mean Score	Standard Deviation	N
Q18. Aircraft Fitter	-0.49	0.49	364
Q198. Gardener	-0.35	0.42	365
Q20. Cable Laying Contractor	-0.33	0.53	361
Q21. Cleaner	0.15	0.46	362

Table 10 Solving Safety Problems: Correlation with Optimum Rank (Q18, 19, 20, 21)
 Note: The maximum score = 1.0, the minimum score = -1.0.

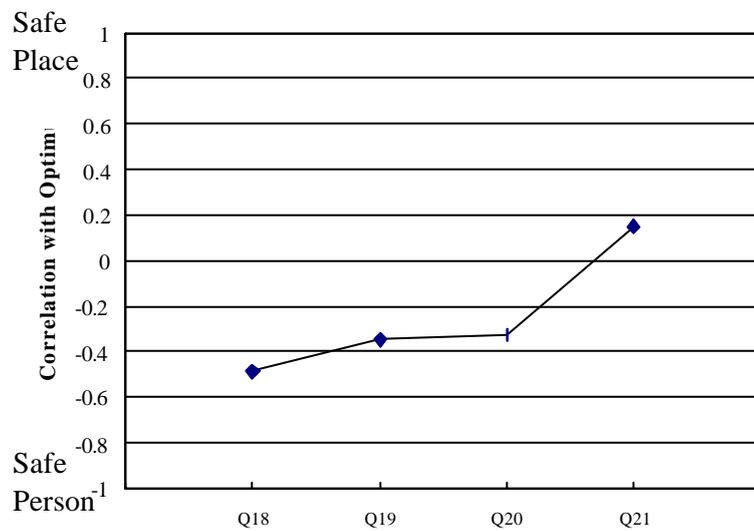


Figure 10 Solving Safety Problems: Mean correlations with 'optimum' ranks

Analysis of variance of these scores by the explanatory variables is contained in Appendix J. The main points of interest were as follows.

- Health and safety representatives with who have completed all levels of training score higher on Questions 18, 20 and 21.
- Younger health and safety representatives scored higher on Questions 20 and 21.
- Notably there seemed to be no difference on these measures by provider.
- Note: A higher score indicates a greater alignment with the safe-place model of prevention.

Table 11 and Figure 11 summarise the scores on these questions by training level. It is apparent that the group who had completed continuing training are the most distinctive in their safe-place responses to each of the case studies. None, basic and advanced training seem to be similar. This indicates that the safe-place model of thinking is most strongly evident in those subjects who have completed all levels of the training.

Case	Q18. Aircraft Fitter	Q19. Gardener	Q20. Cable Laying Contractor	Q21. Cleaner
None	-0.44	-0.53	-0.48	0.05
Basic	-0.37	-0.53	-0.32	0.10
Advanced	-0.35	-0.50	-0.33	0.20
Continuin	-0.18	-0.32	-0.16	0.37
ANOVA	F(3, 364)=3.87	F(3, 363)=2.59 P=0.05	F(3, 360)=3.79 P=0.01	F(3, 361)=6.01 P=0.00
	P=0.010			

Table 11 Solving Safety Problems: Correlation with Optimum Rank (Q18, 19, 20, 21): By Training Level

Note: The maximum score = 1.0, the minimum score = -1.0.

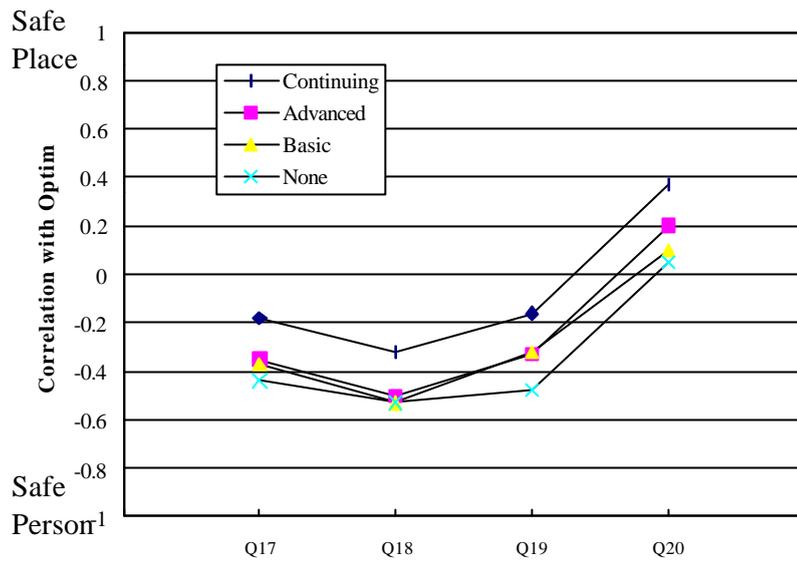


Figure 11 Solving Safety Problems: By Training Level: Mean correlations with 'optimum' ranks

5.3 Field visits to observe training provision

5.3.1 Facilities and Resources

Overall the facilities provided for training were good. Reports to the individual providers contain minor comments on potential improvements to the facilities where these were evident. In general, the training rooms were comfortable in terms of the environment and the furniture. The training facilities usually included equipment typical of training facilities. Adequate refreshment and sanitary facilities were evident. The requirement in the approval criteria for providers to have facilities for up to 30 participants was not evidently met by any of the three providers. Furthermore none of the providers seemed to make use of separate syndicate or group work facilities. There only appeared to be the availability of these facilities if nearby training rooms were unused at the time. All providers made use of group work which was conducted in the training rooms. The variation in the age of the facilities contributed to a variation in the appearance and style of the facilities and was most evident in the bathroom facilities. While improvements could be made by updating, all facilities were generally adequate.

5.3.2 Trainers

The trainers' formal qualifications in health and safety were typically around the Associate Diploma level. Some trainers had no formal qualifications. Some trainers held Bachelor's degrees in other disciplines that were sometimes related to health and safety (such as human resource management). Many of the trainers had attended train-the-trainer courses. Some trainers had been a health and safety representative in the past. The constituents of *appropriate qualifications* is not clear in the approval criteria. The approval criteria indicates that trainers should be skilled in the development, delivery, and evaluation of the course content and have an understanding of equity issues. From the observations it was evident that the trainers were skilled in delivery and demonstrated no obvious mis-understanding of equity issues. For instance there appeared to be no evidence of gender bias or racism in the delivery.

In summary some of the trainers held formal tertiary qualifications in OHS, which would seem to be highly worthwhile. However this is not to say that those without these formal qualifications are not suitably qualified by some other mechanism. There was strong evidence of superb delivery skills, active learning was a dominant theme, and there was strong participation encouraged from all participants.

5.3.3 Training Delivery

The style of delivery of the courses was similar across the three providers. The model of presenting a set of information, engaging the participants in a problem-based activity, and then debriefing and consolidating the main themes of that activity using a whole group session, was widespread. Often these activities were undertaken in small groups. The requirement for a group member to give feedback to the whole group was common. This style promoted active involvement of participants and appeared to be an effective model for this type of training. Overall the trainers built a strong personal rapport with the participants by making regular use of their first names, relating examples to their industries, and deliberately drawing a full range of participants into the activities. The use of physical resources such as overhead projectors and whiteboards was appropriate. The majority of learning was undertaken by the active involvement of the participants, as such tools such as overhead projectors were only needed to assist with explaining the theory, the task, and the consolidation of the main issues.

5.3.4 Training Delivery Timing

The model course specifies that the basic and advanced course be conducted over five consecutive days or be conducted in a split format consisting of a two day block and a three day block providing the course is completed within four weeks. The model course allows for the continuing training to be completed within 12 months.

The SAECCI and UTLC run the basic and advanced courses over five consecutive days (Monday to Friday). The SAECCI and UTLC collaborate to deliver five consecutive

days of continuing training. For the continuing training they alternate at delivering the core day and then each provide a one-day seminar on the remaining four days of the week.

The NSCA deliver their basic course and advanced course in a split format consisting of two blocks of three days and two days respectively. The basic course delivered by the NSCA involves learning activities in the period between the two blocks. The advanced course does not seem to share this feature. The NSCA make the continuing course available over five consecutive days, although course participants are entitled to choose some days and not others.

Some participants seemed to comment that the five consecutive days was a long time to attend a training course. This could be especially true for participants who were unaccustomed to a classroom environment, perhaps being more accustomed to an active job or maybe an outdoor job. The structure of splitting the course (NSCA) perhaps offers some advantages in this area. Furthermore the split course enabled an exercise to be conducted at the workplace in-between the sessions. This is to be commended as a way to consolidate the techniques learnt in the classroom.

5.3.5 Content

The courses delivered demonstrated a strong relationship to the model course. The structure of the courses outlined in the model course can be identified from the course outlines from the three providers. This relationship is most obvious in the case of the NSCA who use the terms “Module 1” and so on, for both the basic and advanced course. This strong connection to the model course continues in the NSCA’s notes that adhere fairly rigidly to the model course nomenclature. The structure of the basic course provided by the UTLC and SAECCI are very closely aligned with the model course, while the advanced courses have been rearranged to a greater extent. The UTLC and SAECCI do not use the term “module” and so the connection to the model course is less visible.

All courses appear to be delivered in accordance with the model course, although the relationship is a little less transparent in the case of the UTLC and SAECCI. The non-exact alignment of the courses run by the UTLC and SAECCI could be an indication that they have refined the courses in a *continuous improvement* approach.

Continuous improvement of the delivery of the courses should be encouraged. To reconcile the possible conflict between adherence to the model course and continuous improvement, there should be strong connections made in the course outlines to the structure and terminology of the model course and that improvement should be made keeping the fundamental structure intact and visible.

Hazard management skills are growing in importance in the workplace. While health and safety representatives have no responsibilities to undertake this process, an understanding of the methodology is clearly vital if they are to function effectively. It is probably also true that health and safety representatives by their training provide a vehicle for introducing health and safety legislation and management techniques into organisations. Although this is not a specifically intended information pathway it is probably unrealistic to deny its importance. Therefore hazard management techniques should be an important part of the training courses and any curriculum development should take this into consideration.

5.3.6 Evaluation by the Participants

At all the training observed, participants were encouraged to complete an evaluation of the course. Participants all seemed to complete the evaluations. The evaluation topics covered issues such as information, training style, and the venue. The evaluation forms collected varied in their scope and style between the providers.

The UTLC two-page form first addressed the fulfilment of four specific objectives. Consequently they used separate forms for the basic and advanced courses. The questions about specific course objectives seems worthwhile in that it reminds participants

of the objectives and gives a specific objective to consider. Following these questions the UTLC form asked for written responses to seven questions. Notably there were specific questions about topics that could potentially be *removed* from the course, and one question about topics that should be *added*. These two questions give an improvement flavour to the form. The UTLC used an entirely separate form for evaluation of the continuing course (core day). This form focussed directly on the objectives for the core day. These objectives made a clear link to those outlined in the model course.

The SAECCI and NSCA evaluation forms were two pages and one page respectively and both consisted of a series of multiple-choice style questions under topic headings with space following for comments. These forms offered less opportunity for written comment than the UTLC form but provided a greater range of prompts. One important value of listing in some depth the important features of the course is that it serves to remind the provider of what the provider believes is important for successful training.

Gaining ideas for improvement of the courses is probably best achieved by directly asking for suggestions, as done by the UTLC. However an analysis of multiple choice questions could also reveal the areas of least satisfaction to the participants. For this to operate effectively the forms need to be fairly comprehensive. Aside from the potential of using the forms to guide improvement, they can act as a pressure relief valve. Should participants be unhappy with something then clearly the provider is the best person to hear about the problem.

5.3.7 Literacy

During the visits to the training, it was noted that the level of literacy among the participants was a significant problem. For instance, a participant on the final day of a course was discussing the training with one of the researchers and in conversation mentioned that he was only able to read very slowly and had a limited vocabulary. This came as a great surprise and disappointment to the trainer, who had been able to identify a number of other people with similar problems in the group and make arrangements for

other participants to assist. Some of the trainers estimated that the proportion of participants who have some problems with reading the notes is often around ten percent. Some of the people who experience difficulty reading are from non-English speaking backgrounds, however this in itself would be useless as an indicator of literacy. While a number of the trainers from various providers clearly made efforts to accommodate those with reading difficulties there seemed to be no formal mechanisms for dealing for this problem. From the anecdotal evidence, literacy is a substantial problem and needs to be considered in the design and delivery of training.

5.3.8 'Testing' Before and After the Training

The basic course delivered by each provider was assessed by administering a test at the beginning of the training and at the conclusion of the training. The test consisted of the final four questions on the postal survey (questions 18, 19, 21 & 21, see section 5.2 above). These are referred to here as Cases One, Two, Three and Four. The results of this testing follow. The data reported is the correlation of the subjects ranking of the potential solutions for each case with an 'optimum' ranking for each case. The statistical test performed for each case was a paired t-test for means. Table 12 and Figure 12 outline the results by pooling the data from the three providers.

The data show that there was some improvement on all three cases. Clearly the subjects began the training with somewhat of a reverse perception of effective controls for OHS problems than the optimum rank would suggest. The training was shown to shift this perception. While the scores are still negative, it must be remembered that the training was only five-days in duration and that the hazard management module which would be most likely to influence this type of test was approximately one day of the training. In this light, an improvement of the magnitude noted is substantial.

In summary, it is encouraging to note that the basic health and safety representative's training course led to a measurable shift in the approach to the prevention of injuries, from a distinctly safe-person approach toward the preferred safe-place approach. This shift

represents a change in the subjects paradigm about prevention from a short-term, behaviour modification focus, to a long-term systems focus, although unfortunately the paradigm remains in the area of the safe-person model.

Mean Scores and Summary Statistical Analysis (All Providers)								
t-Test: Paired Two Sample for Means								
	Case One		Case Two		Case Three			
	Pre	Post	Pre	Post	Pre	Post		
Mean Correlation	-0.50	-0.29	-0.57	-0.34	-0.44	-0.18		
Variance	0.10	0.33	0.22	0.32	0.21	0.34		
Observations	53	53	52	52	50	50		
df	52		51		49			
t Stat	-2.86		-3.06		-3.03			
P one-tail	0.00		0.00		0.00			
Significant (<0.05)	Yes		Yes		Yes			

Table 12 Correlation of Training Participants' Solution Ranking with an Optimum Ranking for Three Case Studies, Before and After All Providers' 'Basic' Level Training

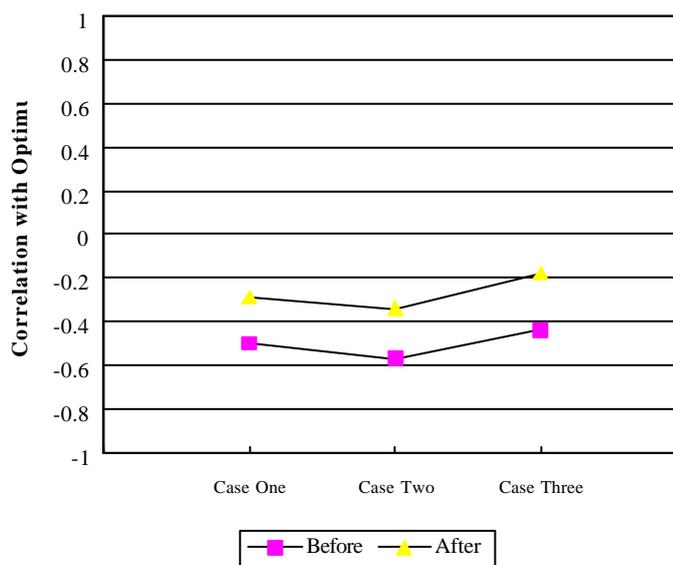


Figure 12 Correlation of Training Participants' Solution Ranking with an Optimum Ranking for Three Case Studies, Before and After All Providers' 'Basic' Level Training

6. Findings and Discussion

The findings of the project draw on the consultation with WorkCover and its stakeholders, the postal survey of health and safety representatives, and the observation of training during the field visits. The interpretation of the findings must consider; the composition of the stakeholder meetings; the sample size and response rate of the survey and the possibility of bias; and the limited sampling of actual training provision. In particular the response rate to the survey may be biased toward representatives who are successful and therefore positive about the training as those who are no longer active health and safety representatives are less likely to respond to the survey.

6.1 The Curricula

6.1.1 Value and Relevance

The health and safety representatives expressed the view that they are equipped with the knowledge and skills to undertake their role as a representative of their work group.

Through the postal survey it is apparent that the training is valued by the health and safety representatives who find it relevant to their own industries and workplaces. As such, it would appear that the curricula design is appropriate and useful. There is a clear statistically significant difference between the level of trained and untrained representatives in relation to their view of their abilities.

Observation of the training and meetings with stakeholders support the view that the curricula are appropriate.

6.1.2 Curriculum Development

The course curricula are proposed as models and provide a framework for delivery. However, there appears to be some perception amongst the trainers that the curricula are prescriptive and offer little room for flexibility at delivery stage. Such flexibility is desirable to account for the various needs of different groups of trainees. Also, such flexibility

allows for and encourages continuous improvement. Paradoxically the WorkCover Corporation believe that this flexibility is available within the model course framework and wish the providers to take a more proactive role in curricula development.

6.2 Training Delivery

6.2.1 Quality and inclusiveness

Observation of the training revealed that it is to be delivered in an appropriate and high quality manner with presenters engaging the learners and utilising appropriate adult learning techniques. The training is inclusive and the trainers seem to work hard at focussing on the specific interests and needs of individual trainees. The facilities used for training are generally adequate for this purpose.

The proportion of male verses female survey respondents confirmed the anecdotal information that there are slightly more males than females attending the basic training but many more males attending the advanced and continuing training. The authors were informed that a large proportion of working women are employed in smaller organisations and this research suggests that their access to training is therefore more restricted. Similar employment factors relate to workers from non-English speaking backgrounds and access to training is likely to be similarly restricted. There is a strong argument, therefore, for inclusion of issues relating to these groups at the basic level.

In the results of the postal survey there is some evidence to suggest that some specific aspects of the curricula are inadequately delivered although these were in particular in relation to knowing about functions of Worksafe Australia and the WorkCover Corporation and it could be argued that these issues are of less relevance than others which are more adequately covered. Similarly, there appeared to be less confidence in the health and safety representatives' knowledge of the OHS&W Act and the function of inspectors, but they are clearly confident in the knowledge of their own rights and responsibilities under the OHS&W Act.

Of more significance is the apparent confusion within the minds of the representatives over the causation of accidents and appropriate prevention strategies when assessed against contemporary philosophies. That is, the health and safety representatives who responded to the survey seemed to favour neither a safe-place nor safe-person approach in terms of accident causes (Q17). However when forced in to a decision about controls, overall the subjects tended towards a safe-person approach (Q18,19 & 20).

Of interest is that analysis of these data by training level reveals that those who have completed the continuing course program, tend more towards a safe-place approach. This is evident in the selection of controls (Q18, 20 & 21). It could be postulated, therefore, that the progressive acquisition of knowledge, interspersed with application and reflection in the workplace and annual reinforcement, results in an approach to OHS which is more closely aligned to the *control at source* philosophy of the legislation, and the *hierarchy of control* model outlined by the regulations.

From a traditional standpoint it could be argued that this has little significance if the representative's role is quite simply a questioner (Else 1992). However, in a climate of workplace change, formation of workplace teams and increasing expectations of employees by management for involvement in workplace decision making, the need for problem solving skills is greater. While not suggesting that the *responsibility* for OHS and OHS problem solving should fall to the health and safety representative, equipping them with the skills for suggesting solutions which fit within a contemporary framework appears to be increasingly appropriate. Similarly, equipping the representatives with the skills and knowledge to recognise an inappropriate solution when it is proposed and to successfully argue for alternative, higher order solutions is essential.

Mathews (1996) argued at the recent *Safe Odyssey 2001* Conference in South Australia that maximising productivity through quality and improved OHS is dependent upon empowerment in the workplace. He suggested that recognition of the workers' abilities

will improve creativity and lead to greater efficiencies, quality and productivity. The creative thinking Mathews refers to is directly linked to skills in OHS problem solving.

While the training does cause a shift within the health and safety representatives from a strong safe-person approach towards the safe-place approach, when measured at the start and the end of a program, the overall “flavour” is safe-person and there seems to be a lack of clarity. It is therefore essential that we instil within the health and safety representatives a clear understanding of what attitudes and strategies are most appropriate to control workplace risk.

While the philosophical debate over the relative merits of the safe place versus safe-person approaches continues in Australia, it should be remembered that the former is the approach embodied in the OHS legislation, including that in South Australia. Also, while the understanding remains fogged as it apparently does at present, the potential is less for improving the OHS of their work group and the productivity of the organisation.

6.3 Duration

There is little evidence that the duration of the training is inappropriate although there was considerable discussion about the educational value of five days delivered in a continuous block. However, while the data is equivocal (that is; no statistical significance), it appears that the OHS problem solving skills as measured by the case study tools, improve to a greater degree amongst trainees who attend a split course (2 and 3 days) than those who attend a five day block. If this indication in the data is correct, it would be consistent with the findings of Joyce and Showers (1982) who suggest that take-up of new practices is greater when there is the opportunity for on-site on-going support and reflection.

It was noted that greater use of applied learning techniques is made at advanced level training, for instance the requirement to research information at the WorkCover Resource

Centre. Unfortunately at times this demand seems to overload the facilities at the Resource Centre.

6.4 Delivery Format

There appears to be some room for greater flexibility in the delivery format for the programs, particularly at the basic level. This flexibility may include options to split a five day block to meet the variety of needs of employers and health and safety representatives. It may also address the increasing volume of educational literature which identifies the value of practical application of theory as an integral part of the learning process. Flexibility may also include a preparedness to offer some degree of Recognition of Prior Learning (RPL) as well as acknowledging at continuing level some training provided by individual employers. However, the complexities of the systems which will be necessary to administer an RPL program may be prohibitive.

6.5 Relevance

There was a strong view amongst survey respondents that the training was relevant to their own industry. Interestingly, the majority of respondents were from either the manufacturing or the community services sector, the latter having been suggested as a group where trainees often find the examples used in the course irrelevant. It is possible that the non-industrial based trainees find the industrial examples used during the training less relevant at the time of the training, but realise the relevance on return to work. There is, however, a case for flexibility in course offerings where trainers are able to attract a large enough group from a specific sector. This case can be made on the basis of making training delivery easier if not for ensuring that all trainees feel included at all times while attending a course. Given the survey result and anecdotal evidence of the benefits of cross fertilisation of ideas and exposure to the problems and solutions that other health and safety representatives experience in other sectors, there does not appear to be a strong case for forcing the delivery of industry sector focussed programs.

6.6 Access

In general, access to the courses does not seem to present a major problem although it could be that many of the survey non-respondents represented those who are unable to access training and are therefore unsuccessful and unmotivated as health and safety representatives. The survey results did show that employees from smaller employer organisations experienced more difficulty attending training and those from outside the Adelaide area found the location of the training less convenient. Many non-Adelaide residents indicated that the distance travelled to the training was “too far”. Given that the majority of survey respondents were from larger organisations, it could be argued that strategies are necessary to improve and ease access to courses for health and safety representatives from small workplaces and non-metropolitan areas.

Consideration was given to the use of emerging information technologies to reach health and safety representatives who are remote to Adelaide, but there seems to be little potential for their use, at least in the short term, given the availability of hardware. Additionally, the importance of meeting other health and safety representatives and establishing networks through the training was repeatedly emphasised during the research. Distance learning can lose the benefits of participant interaction.

6.7 Role and Function on Return to the Workplace

Associated with the access difficulties are the major problems associated with health and safety representatives’ limited ability to function on return to a workplace where management is unreceptive to new ideas and approaches. Greater training of management in the principles of OHS will provide an insight to the value of the representatives and their ideas. Additionally, and perhaps having greater potential for reaching a larger number of employers, is an improvement in the marketing of the health and safety representatives. Through promotion of health and safety representatives’ success stories, in case study format, management can be made increasingly aware of the benefits of the training and the value of the resource in the workplace. Simultaneous marketing may be used to

acknowledge and therefore reward the work of the health and safety representatives, and perhaps retain some in the position for longer and attract new people into the role.

Use of WorkCover approved OHS consultants who are registered to offer free advice to health and safety representatives is apparently limited. Exposure to consultants during the course may increase the use of these consultants and assist representatives in their work.

6.8 Quality Assurance

There is substantial evidence to suggest that a greater degree of training evaluation is required for the purposes of continuous improvement, assessment of trainers and marketing the courses to employers.

Amongst the providers there is consistent use of end of course evaluation sheets. These are sampled by WorkCover although there appears to be little follow up. The degree of follow up on the outcomes of course evaluation varies between providers.

None of the evaluations attempt to measure course outcomes and there is no follow up of participants in the workplace to assess the degree to which the training has been applied.

It seems there is room for formalising the evaluation of programs in such a way that they become part of a quality improvement cycle. This evaluation should include assessment of pre-course and post-course beliefs and attitudes, and an assessment of training value once the participants return to the workplace.

7. Conclusion

Under the Occupational Health, Safety and Welfare Act 1986 (SA) and the Occupational Health, Safety & Welfare Regulations, 1995 (Consolidated Regulations) health and safety representatives in South Australia are entitled to five days per year to attend training programs approved by the Minister on the advice of the Occupational Health, Safety and Welfare Advisory Committee. The criteria for the approval of providers and the model curricula for the training of health and safety representatives in South Australia is outlined by *Approval Criteria and Approved Model Course Curricula for Health and Safety Representative Training* (SAOHSC 1993). The three levels of training, are known as Basic, Advanced and Continuing. The program is designed to be a three-year program, with the continuing training being on-going beyond three years as necessary. The brief for this research was to conduct a field evaluation of the arrangements for health and safety representative training in South Australia against the criteria in this documentation.

The evaluation found that the trained health and safety representatives are generally satisfied with the delivery of programs and believe that the content is relevant, inclusive and appropriate to them in their roles in the workplace.

The training does not seem to provide the health and safety representatives with a clear understanding of contemporary thinking about accident causation and prevention. While it does cause an apparent shift in attitude from one of victim blaming and application of behaviour modifications for prevention (*safe-person*) towards one of focussing on system and equipment failure and prevention through higher order controls (*safe-place*), the health and safety representatives retain a bias towards the *safe-person*. The shift in emphasis towards the *safe-place* approach is greatest within health and safety representatives who have attended all three levels of training. Overall, however, there is not, however, a clear *safe-place* philosophy emerging.

The training appears to be relevant although there is possibly merit in offering specific industry-focussed programs where numbers of trainees permit.

The duration of the training is acceptable to most parties although the delivery of the basic level course in one five day block was discussed from an educational effectiveness point of perspective. Given the delivery techniques used by the various trainers, no clear conclusions can be drawn about the relative merits of different delivery patterns.

Access to the courses does not seem to present a major problem although it is reported to be more difficult for people from small workplaces and workplaces outside Adelaide to attend the programs.

There is a strong belief that health and safety representatives face difficulties on return to work where management is unreceptive to their new ideas.

Course outcomes are not adequately evaluated at present.

8. Recommendations

8.1 Curricula

1. The courses need to provide the trainees with a clearer understanding of the merits of a *safe-place* approach over a *safe-person* approach. A stronger emphasis is required at basic level and should be reinforced through subsequent training.
2. The WorkCover Corporation should give the providers a clearer understanding of the amount of freedom they have to develop and improve course curricula. Similarly, trainers need reassurance about the degree of flexibility that is acceptable during delivery to meet the needs of individual groups of trainees.
3. It is suggested that an annual meeting / conference of providers, trainers and WorkCover representatives be held. The meeting should be used to, for example:

- Update providers and trainers on OHS issues;
 - Update providers and trainers on WorkCover plans, initiatives and directions;
 - Explore curriculum development ideas and initiatives;
 - Exchange good ideas.
 - Resolve problems
4. Curriculum emphasis on issues relating to women and NESB people should be at the basic Level. It is recommended that the Working Women's Centre be consulted on related curriculum design matters.

8.2 Delivery

1. Greater flexibility should be introduced to the overall program and the rigid adherence to delivery of the basic program over five or two and three days reviewed. Opportunities for alternative patterns which will better meet the needs of specific employers and trainee groups should be explored.
2. Where training is delivered over five day blocks opportunities for practical application of the theory should be seized.
3. Where training is delivered over several smaller blocks, trainees should be encouraged to undertake practical course-related learning tasks in the intervening periods.
4. On return to work, the health and safety representatives should be encouraged to undertake learning tasks to force application and reflection. Learning tasks which bring about positive interaction with management should be encouraged².

² Several good examples of learning task were identified during the interview process; for example, some trainers encourage trainees to write a report on the course to discuss with their

5. The WorkCover Corporation and the providers should discuss the establishment of a formal process for recognition of prior learning (RPL).
6. The WorkCover Corporation should give consideration to the acceptance of individual employer training programs as having equal standing to some continuing training. A sophisticated means of vetting of this training will be required. It is not recommended that individual employers be permitted to deliver the equivalent of five days continuous training.
7. Industry sector focussed training should be encouraged where it is feasible, given number of participants, etcetera.
8. Training providers should attempt to increase delivery in non-metropolitan locations.
9. DIA inspectors and approved, approved consultants should be encouraged to contribute to courses and focus their delivery on the support they can offer to health and safety representatives in fulfilling their roles.
10. The WorkCover Corporation should ensure that its information resource is able to cope with peak demand via closer liaison with trainers who are encouraging its use.

8.3 Course Quality

1. Training providers should develop quality systems for managing course delivery. Embracing the quality improvement cycle, evaluation and reflection should be based on pre-course, end of course and post-course evaluations.

employer/manager on return to work, some trainees are encouraged to write plans for action on return to work which they discuss with management.

These evaluations should measure:

- attitude and attitude change,
- course success in meeting objectives,
- obstacles encountered by health and safety representatives in applying learnt principles
- general course and venue quality matters.

2. Post-course evaluations could usefully collect good examples of success stories from the health and safety representatives.
3. It seems logical that the WorkCover Corporation would play a role in the development of quality systems, in collaboration with the providers, and subsequently that role become one of auditor.

8.4 Other

1. Health and Safety Representatives should be marketed to management as valuable workplace resources. The marketing should use good examples of success stories which will need to be collected from health and safety representatives. Simultaneously, the role of the health and safety representative can be promoted to attract new health and safety representatives and retain elected representatives in their roles.
2. The magnitude and effects of illiteracy on the role and training of health and safety representatives should be investigated.

9. References

Biggins, D. & Phillips, M. 1991, *A Survey of Health and Safety Representatives in Queensland: Part 2: Beliefs about accident; comparisons of representatives and shop stewards*, Journal of Occupational Health and Safety-Australia NZ, vol. 7, no. 4, pp. 281-286.

Cowley, S. & Else, D. 1987, *Trade Union Health and Safety Representative Training Evaluation Report*, unpublished, Ballarat College of Advanced Education, Ballarat

Culvenor, J. 1996, *Breaking the Safety Barrier: Engineering New Paradigms in Safety Design*, PhD Thesis, University of Ballarat, (in progress).

Else, D. 1992, *Enhanced Cohesion and Co-ordination of Occupational Health and Safety Training in Australia: Report to the minister for industrial relations*, Ballarat University College, Ballarat.

Gaines, J. & Biggins, D. 1992, *A Survey of Health and Safety Representatives in the Northern Territory*, Journal of Occupational Health and Safety-Australia NZ, vol. 8, no. 5, pp. 421-428.

Joyce, B. & Showers, B. 1982, *The Coaching of Teaching*, Educational Leadership, vol. 40, no. 1, pp. 4-8.

Mathews, J. 1996, *More Innovative Workplaces=Safer Workplaces: Organisational innovation and the protection of workers' health and safety*, Keynote Address at the WorkCover, SA OHS Conference: 2001: A Safe Odyssey, Adelaide, 4 November 1996.

South Australian Occupational Health and Safety Commission (SAOHSC) (1993), *Approval Criteria and Approved Model Course Curricula for Health and Safety Representative Training*, SAOHSC, Adelaide.