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**Title: Harmonised health and safety legislation in Australia: Confusion and complexity for training remains.**

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**Title: Harmonised health and safety legislation in Australia: Confusion and complexity for training remains**

**ABSTRACT**

This paper presents findings from a study that examined the impact of the national Work Health and Safety Act 2011 on training delivery for safety professionals and their perceptions of what assisted in reducing industrial accidents. The study identified an increased uptake of safety training including high risk licensing and post-graduate degrees and the inclusion of safety elements across many courses in TAFE and universities. In addition industry is calling for safety professionals with a formal tertiary qualification in the discipline. However, national and state regulators are limited in their understanding of the complex training framework. The paper concludes by calling for further research that evaluates safety training that meets quality delivery standards and effective transferability of the learning.

**Key Words:** Work health and safety legislation, health and safety training, safety culture, work-related injury.

**INTRODUCTION**

The 2002-2012 National (Occupational Health and Safety) OHS Strategy set national targets for the reduction of industrial accidents that lead to injury, death and disease. During this decade regulatory changes and training initiatives have been implemented to improve work culture and individual action to reduce accidents in the workplace. However, the number of incidents still exceeds the desired targets that were set. The recent move to the national harmonisation of OHS legislation has been a major initiative to reduce complexity and encourage improvement in workplace safety culture. Our study sought key stakeholder perspectives about what mechanisms had made the most positive impact on reducing industrial accidents, how the current harmonisation of legislation was impacting on training in safety, and what future initiatives and strategies were needed to further reduce accidents in the workplace.

The majority of States and Territories in Australia have supported the harmonisation of work health and safety legislation enacting the Work Health and Safety (WHS) Act and Regulations from January 2012. However, in 2012, South Australia and Victoria decided retain their individual state based health and safety legislation and Western Australia is yet to decide how they will proceed. One of the issues that have arisen from the national review of the legislation has been the burden on business in relation to the additional training they may require in order to comply with the harmonised legislative framework. This paper presents the findings of a 2011-12 research study that investigated the impact of the new legislation on OHS training for safety professionals in Australia. Training in its various forms has been identified by a wide range of stakeholders as a key support mechanism in the reduction of work-related injuries. While recent OHS initiatives such as pre-site safety training have played a role in the general reduction in accident statistics nationally (Bahn & Barratt-Pugh, 2012), the national targets set ten years ago have not yet been met. The harmonisation of OHS legislation nationally was one of the initiatives aimed at supporting the reduction of industrial accidents. Our study sought to examine what mechanisms had been contributing to the reduction in workplace accidents, how harmonisation was impacting on training delivery, and what changes to OHS training for safety professionals could be made to further reduce industrial accidents.

## **BACKGROUND**

In the continuing battle to reduce work-related injuries, research indicates that effective safety training assists in the reduction of such events leading to an improvement in organisational safety cultures (Kinn, Khuder, Bisesi & Whoolley, 2000; Dong, Entzel, Men, Chowdhury & Schneider, 2004; Gillen, Baltz, Gassel, Kirsch & Vaccaro, 2002; Varonen & Mattila, 2000; Zohar, 1980). However, there is a paucity of research that evaluates the effectiveness of safety training in regards to the relevance of training content, the quality of delivery and the subsequent transferability of training and learning to the work environment particularly in Australia. Research in this area is frustrated by the complexity of the relationship between training and subsequent workplace incidents as there are many interwoven mediating factors.

Training in Australia has over the past two decades been developed from a disparate State-based system into an integrated national system orchestrated at first by the Australian National Training Authority until 2005, and then by the Department of Education, Employment and Workplace Relations through a range of advisory and regulatory bodies. All vocational training in Australia, by universities, training colleges and private training companies is required to conform to the Australian Quality Training Framework (AQTC, 2011).

The delivery of training associated with work health and safety in Australia is delivered within a nationally regulated system that has been constructed to stipulate standards, regulate training organisations and audit training delivery. All training to nearly two million trainees within the (Vocational Education and Training) VET sector is delivered by Registered Training Organisations (RTOs), who must conform to the standards published by the Australian Quality Training Council (2011). Vocational training is delivered by RTOs by State managed technical colleges, institutes and polytechnics as well as a wide range commercial training organisations with a specific training focus such on work health and safety integrated into nearly every vocational qualification, and the primary focus of several management qualifications. In addition, the rapid expansion of the university system has generated significant emphasis on vocational courses and qualifications at both undergraduate and postgraduate levels. Learning about safety and health procedures, processes and management takes place in a wide range of professionally orientated courses.

The recent work of Burke, Salvador, Smith-Crowe, Chan-Serafin, Smith and Sonesh (2011) noted that safety-related problems in organisations are often training related or training relevant. Their qualitative study investigated the impact of safety training and workplace hazards on safety knowledge and safety performance. They found that the method of safety training delivery had an effect and was more effective when it was engaging. Their argument shines a critical light on the mode of delivery of training offered by RTOs.

In Australia, Bahn and Barratt-Pugh (2012) completed a two phase evaluation of the Construction Induction Training<sup>1</sup> (CIT) in Western Australia in 2010-11 to find that 96% of construction companies from small to very large in size believed this training improved their business through more robust safety awareness of their staff contributing to a reduction in work-related injuries. However, there is little evidence in the construction lost time injury statistics to support this perception, and at the time of this study other safety interventions were occurring such as a strengthening of legislation leading to the WHS Act and a greater uptake of professional safety training. The two phases of the study collected survey responses and interviewed 86 workers, managers and key stakeholders responsible for the delivery of this safety induction programme. Although the sample agreed that the CIT had a positive effect on safety culture, they questioned whether participants actually really learned anything. The importance of learning that has the power to change practice is supported by the studies of Goldstein and Ford (2002) and Pidd (2004) who argued the importance of the positive transfer of training to the job, which leads to relevant changes in work performance, and as a key criterion for evaluating the effectiveness of training programmes.

There have been some evaluations of safety training in the US, including a study by Sokas, Nickels, Rankin, Gittleman and Trahan (2007), who evaluated Smart Mark (a Union-based ten-hour hazard-awareness training program for the construction sector). They assessed the strengths and weaknesses of the training materials, determined the most commonly encountered hazards and the impact the training may have had, and investigated whether interactive instruction and the inclusion of supervisors impacted the training transference into the workplace using interviews with trainers and trainees. They found that a little over half of the work sites improved safety practices by either changing their safety policies or work practices and supervisors included in the training had no impact in supporting the learning or change. The researchers recommended that this last aspect of the evaluation requires further exploration. Furthermore, Kinn et al (2000) conducted a study using a mixed methodology with plumbers and pipe fitters in Ohio and found that workers who had received a site specific safety induction, carried out at the individual work place to address the hazards specific

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<sup>1</sup> CIT = Mandatory induction training required for workers before they begin work on a construction site in Australia.

to that context, had fewer injuries, although interestingly the impact of the safety awareness training could not be determined. In addition, in 2001, Goldenhar, Moran and Colligan, evaluated health and safety training in open-shop construction companies to find that one hundred per cent of their forty five participants interviewed agreed that the safety of their work environment had increased due to safety training. Finally, in 2010, Shaikh using a mixed methodology studied the impacts of safety training on Newfoundland fishermen's knowledge and attitudes toward safety and found that the group moved from a general aversion to support for continual training in safety. Safety training may therefore be evaluated through mixed research approaches using both statistical incidents and perceptions of culture change to gauge impact.

Although all of the studies above indicate that the *perception* of the participants moved to that of supporting training and indicating that they believed that training improved their safety culture there is no statistical evidence to indicate that the training transferred into the workplace had an effect on reducing work-related injury. Booth (1986) echoed this argument and countered the generally positive research findings around safety training, when he noted the uncertainty of the effectiveness of safety training and the difficulties in gaining any meaningful or robust measurement. Furthermore, Cooper and Cotton (2000) point out, it is difficult to determine safety performance when indicators such as workers compensation accident data are generally the preferred tool used to measure success and is only available retrospectively. In addition, the formal evaluation of health and safety training programmes is not mandated by law and as Vojtecky and Schmitz (1986) argue this does not encourage organisations or RTOs to determine the quality of the training they receive or deliver. Indeed in an increasingly competitive and commercial training environment there may well be an emphasis on providing evidence that supports continued contractual relationships rather than investigating quality delivery concerns. In general, an environment of compliance and the complexity of causal relations mediate positive and surface evaluation of OHS training.

In 2012, the Safety Institute of Australia launched the OHS Core Body of Knowledge for Tertiary OHS Courses project. The OHS Body of Knowledge 2012 describes the core knowledge expected of health and safety professionals, and provides a basis for accrediting OHS education

programs and underpinning professional certification in Australia (SIA, 2012). The purpose of the OHS Body of Knowledge is to provide a sound basis for understanding the causation and control of work-related fatality, injury, disease and ill-health. It contains key concepts and language, core theories and related empirical evidence, and the application of these to facilitate a safe and healthy workplace. Safety training programme designers, managers and facilitators have been assessing and adjusting to the twin impacts of national legislative harmonisation and the production of this core curriculum body of knowledge. This study set out to assess the impact of these strategic changes on training delivery nationally and to place them in the broader context of what mechanisms have been contributing most to the reduction of industrial accidents nationally and what is still required. As national statistics are only able to indicate broad accident trends, we decided that our study should focus on a range of key stakeholders to provide their perspectives on: which OHS mechanisms had been most effective in reducing industrial accidents, how the OHS legislative changes were impacting on their training design and delivery, and what mechanisms would be most likely to further reduce industrial accidents in the future to meet current government targets.

## METHODOLOGY

This study was framed from a critical realist perspective to explore *what* was happening in the national OHS training network and to try to understand *why it was happening*. A critical realist perspective (Sayer, 1992; Archer, Bhaskar, Collier, Lawson & Norrie, 1998) informed the study. The “realist asserts that organisations are real. They have form, structures, boundaries, purposes and goals, resources, and members whose behaviours result from structured relations among them” (Dubin, 1982:372). Sayer (1992) defines organisational structures as sets of internally related objects and mechanisms as ways of acting. These objects are internally linked to the structure and their identity depends on their relationship with the other components of the structure. People are therefore co-creators of their reality and have some power to frame their experiences and understandings of their world. Human experience is viewed from this perspective as complex, and human behaviour is unpredictable, although generally explicable. The meanings, actions and processes of the other people with whom they interact, impact upon each individual’s experience of everyday life (Clark, 2008).

However in organisations, structures exist which are beyond a person's control, impacting upon the capacity of individuals to construct their own sense of reality. From this perspective regulations such as the national OHS legislative changes are *structures*; safe work practice is the *mechanism* and *action* of those structures in the workplace. Actions are mediated by the structures of regulation, and also by training interaction and the maturity of the safety culture. Structures in organisations can be changed and are changed; however, whether these changes permeate to individuals to create a change in their behaviour is of interest to this study. The harmonisation of OHS legislation in Australia has created heavier penalties for non-compliance and is producing a regulatory *structure* that will impact on organisations and managers, and mediate the mechanisms they utilise. Many organisations operating under the new legislation are endeavouring to produce processes for their organisations so that they will adhere to the new regulations, including engaging in additional or amended training to support compliance and reduce work-related injury.

Our interest is specifically in how the new regulatory framework is impacting upon training organisations, specifically in terms of safety training mechanisms. The purpose of this study is to determine how the harmonisation of work health and safety legislation in Australia is impacting upon organisations and what training mechanisms appear to have the *greatest utility* in terms of impacting upon work-related injury rates. We chose a qualitative methodology to gain deeper insight into how the changes to the harmonised legislation would impact on safety training were being perceived and why these perceptions were occurring. We felt that a survey of perceptions would not reveal enough detail and specificity. The interview structure was based upon investigating participant awareness and knowledge of the national harmonisation of the regulatory framework and then on exploring what impact previous safety training had made upon organisational performance and what safety training was being constructed as a future mechanism for organisational change. The study sought to answer the following three broad questions:

1. What training initiatives have had the most impact in reducing work-related injuries in the past 10 years?
2. What additional training initiatives could reduce work-related injuries in the future?
3. What impact does the national harmonisation of WHS have on training in Australia?

**Sample**

The sample for the study consisted of eighteen semi-structured 30-60 minute interviews (Fontana & Frey, 2008) with multiple key stakeholders in the field of practice. They were conducted with representatives from four RTOs, four advisory and regulatory organisations, three Unions, three universities, one TAFE and one Health and Safety Manager in a large Australian resources company, across WA, SA, NSW, Victoria and Queensland. Eight interviews were conducted face-to-face with a further ten interviews by telephone. The interviews were conducted between October 2011 and April 2012. The interviews were audio recorded, fully transcribed and checked for errors and paralinguistic information. The data was analysed using a template approach (Miles & Huberman, 1994), which entails analysing the text through the use of a 'guide' consisting of a number of relevant themes including future training needs, training delivery issues and quality of training, supported by NVivo (Grbich, 2007). Verbatim quotes of individual participants are used throughout this report as examples of these recurring themes.

**FINDINGS**

The findings for this study are the basis for further research and are indicative of two areas of focus. First they indicate some possible the impacts of the harmonisation of the OHS legislation on training for the safety professional; and second they highlight stakeholder perspectives of the OHS mechanisms that may have utility in reducing industrial accidents and might contribute towards improving safety culture and reducing incident rates in the future. The following sections focus on the main themes emerging from the multiple interviews, especially highlighting those that were expressed by several interviewees with differing professional roles.

**Impact of harmonised health and safety legislation**

For organisations in Australian states who have adopted the national WHS Act several changes to health and safety documentation will be required. Many interviewees expressed doubts about the limited funds that are available to bring systems into line with the new legislation. There appears to be a general dissatisfaction among those sampled about the costs they expect to incur. This is particularly the cry from small business.

*Not only will companies need to work through their normal kind of training systems, general systems, they'll also be looking at their agreements and revising their agreements in line with the new requirements and that will take time, it's intensive.*

*So some of the bigger firms are very pro-active in what they're doing about it and they're getting on top of everything but they've got safety professionals. Small businesses that don't have that that, you know, aren't getting things done because they don't know or understand it as much.*

For organisations who deliver health and safety training there will be a requirement to update their course content to reflect changes to the title of the harmonised act and to incorporate changes to the legislation. For training organisations where health and safety content appears throughout their training packages the move to the WHS Act and to subsequently update their supporting documentation and materials is viewed as onerous by some and minor by others.

*Re-writing our course, re-writing all the OHS components of it. So the re-write of our courses is going to be big.*

*In regards to training, it's going to create a lot of work for us, a lot of new regulations and new bits of legislation we're all going to have to learn about and understand, we should do that anyhow, but for the training package it's going to be difficult.*

*If you look at the university level they will have to review their courses to make sure that where it's appropriate they've put things in the context of the new legislation, updated references, that sort of thing, but I don't see it as a major re-writing of courses or whatever because the education shouldn't be totally legislation driven.*

### **Health and safety training that's made a difference**

Australian business and individuals place significant trust in RTOs, TAFES and Universities to deliver training that provides an increase in the skills of their staff. Some questioned if the training that they had invested in provided quality outcomes.

*The training world is in flux in terms of trying to get quality outcomes and that really is what it's all about. There probably is still some questions out there about could the quality of what's been delivered by training providers be improved.*

*It's like in Western Australia we introduced fork lift licences and when we looked around the country to say is it better to be licensed we couldn't find evidence to suggest it was safer if we had fork lift licensing.*

Others noted that training needed additional support from structures and managers in the workplace to encourage positive changes to the safety culture by using the new knowledge of recent trainees:

*You end up with this dilemma where your safety and health rep comes out from five days of training and if the training's being done by a trained provider they're gonna be pumped. They walk away on a Friday and all of a sudden they've got all of this new knowledge, they're enthusiastic and often zealous, sometimes overzealous, and then they get into the workplace and bump straight into a cross old supervisor who bangs them straight into a box and you know. If you're gonna insist on reps then you've got to have all the other workplace structures that are gonna support them.*

Some have called for higher levels of training for health and safety professionals:

*In the early days of the harmonisation when public comment was called for there were several groups that threw in the hat and said "look, it's time now to mandate what are the correct qualifications for practice".*

*Certainly the commission for occupational health and safety has taken a stance that tertiary qualifications are not necessary for understanding the safety message. I don't see the need, the strong need for tertiary qualification to... for people to understand that message.*

In order to determine the impact of safety training programmes in Australia research that provides a critical evaluation is needed. The paucity of such evaluations was identified by the participants in this study:

*If you're talking about training initiatives that had the most impact I don't believe we've had any structured research that really gives much answer to that.*

*I'd be really interested to see some systematic structured research that has occurred where we can say, you know, there was an intervention and there was an evaluation so you know I think we know the state of decent research in Australia is pretty limited.*

Several training programmes were identified as having a marked impact on safety culture within Australian organisations and industry sectors including the CIT (colloquially known as the White Card), MARCSTA induction training for the mining sector and high risk licensing.

*Well basically the involvement of the local hazard authorities or Worksafe body has contributed considerably in that fact by enforcing the construction industry White Card; that's had a major impact in a generic context.*

*I think probably the MARCSTA training is the most effective because in the Western Australian mining industry since they've had that everyone has a basic knowledge of health and safety and the number of fatalities and severe injuries have actually gone down and if you have a look in the workers compensation statistics although it higher for the number of employees when you look at the hours of work it's much lower than the average.*

*I think it's a pretty good initiative that they've put in place where people have got licenses to perform high-risk work and people are no longer employing you unless you have that licence.*

### **Future training to reduce work related injury**

The study participants identified a number of training related activities that they felt could have an impact to reduce work related injuries in Australian organisations. Accurate paperwork that adequately reflects the tasks employees undertake was noted as a fundamental support mechanism to good safety culture. This includes procedures, policies and other related documentation.

*So the best way forward would be to use industry buddies to develop and be part of the development of more specific assistance to industry. You want to go somewhere and you want to get a safe work meta-statement for an activity it's going to cost you a hundred and thirty dollars and you've just got a lot of paperwork but it's not specific to you.*

*One of the biggest problems is getting accurate information. There's got to be a more concerted effort to capture accidents on the industry site.*

Training of workplace representatives, supervisors and managers was mentioned as a positive step forward:

*Training of the work place representatives.*

*I really think mandatory supervisor and manager training. I really do.*

*Unionised trained health and safety reps and union trained health and safety reps so that one of the key factors that affect work place health and safety performance and that in the jurisdictions where there have been strong and active health and safety rep systems and structures and training for, you know, the last couple of decades here in Australia then there have been measurable improvements and there is stuff internationally that I think in the US that says that if you've got an iron working area or whatever if you've got a trained safety rep on a number of measures you're actually safer than if you're not trained.*

Specific training in hazard identification in the work environment that includes refresher training was identified by the participants as a strong influence on safety performance. These two training themes have been identified in the work of Bahn (2012) and Bahn and Barratt-Pugh (forthcoming).

*You know the people who suffer the injuries are not jut new people who haven't understood them or don't know them or haven't been trained, there are some of those particularly in some industry sectors, but it's certainly people who've been there for some time and so they need to have refresher training and what are the risks and hazards at work and how to work um avoid them.*

*I think repetitive training or what we call refresher training because employees get slacker after a while and we find that going around and doing refresher training on oc. health and safety actually helped organisations. Where we haven't done this they've had major injuries in the workplace.*

*So when we talk about training and training initiatives I think that we need to single out behavioural safety training as being antithetical to the objects of legislation and inconsistent with employer duties and that the resources spent on behavioural safety systems would be far better spent on a hazard elimination or reduction program.*

There were suggestions for a greater focus on business compliance of the legislation through better relationships with industry associations and the state safety regulators.

*The training needs to move from having a regulator focus on enforcement from what the regulator has or can do and focus on what businesses need to be doing. The real messages need to be about what a business needs to do. The message can be provided via joint partnerships with trusted employer associations funded to assist.*

Finally, accurate measurement of training outcomes to determine the uptake of individual training initiatives was called for:

*And into the future and also to perhaps count what do we know about training and how many people get trained and we have to be cautious in terms of how we actually measure training outcomes.*

## CONCLUSION

This study has highlighted a number of issues about current health and safety training in Australia including the quality of training delivery and the transferability of learned skills into the workplace. The research has shown that due to the variety of training providers, the multiple levels of skills taught and the different delivery modes, evaluating the impact of training on organisational safety cultures is complex and difficult. Participants questioned the value of such training and are seeking confirmation that the time and money spent is worthwhile. We believe that a critical assessment of safety training and the transferability into the workplace will assist organisations and regulators to better target their training budgets and thereby have a greater impact on reducing work-related injury. While evaluation in this area is complex, failure to evaluate may result in maintaining flawed training programmes and restrict the improvement of organisational safety performance.

Training evaluation may well be the critical mechanism in reducing industrial incidents further by ensuring that actions with the greatest utility are known, supported and implemented.

Further complicating the issue of safety training impact is the lack of harmonisation of health and safety legislation and the incomplete uptake by some states in Australia. For multi-jurisdictional firms and training organisations navigating across the national WHS Act and individual state legislation is complex and onerous. Training organisations often support their courses with a number of text books and teach with numerous legislative regulations. The Council of Australian Governments (COAG) sought to reduce this complexity through harmonisation of health and safety legislation in Australia, however Victoria and South Australia have decided to remain with their state legislation and Western Australia is undecided. This has impeded a unified national approach to training and the subsequent associated improvements in workplace safety culture and accident reduction.

Work is needed in the area of consultation and communication between the regulatory authorities, training organisations and industry. There is evidence from this study that both national and state regulators are limited in their understanding of the complex training framework in Australia and that unnecessary roadblocks are occurring when RTOs are delivering training as in the case of high risk licensing training in response to industry demands. This study has provided the basis for further research on this topic.

The study has identified an increased uptake of health and safety training including high risk licensing, inclusion in post-graduate degrees, as well as the inclusion of health and safety elements across many courses and disciplines in TAFE and universities. In addition industry is calling for, and recognising the benefits of, having safety professionals with a formal tertiary qualification in the discipline. This is a positive step forward in promoting increased organisational safety performance in Australia.

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