Why they come, what they learn, how they change: Measuring the effectiveness of health and safety training

BESAFE REPORT FOR AKO AOTEAROA

Jason Braithwaite & Claudette Mayuga

Edited by Cath Fraser

This project was funded through the Ako Aotearoa Regional Hub Project Fund. More information is available at https://ako.ac.nz/knowledge-centre/measuring-the-effectiveness-of-health-and-safety-training/

Published by
Ako Aotearoa National Centre for Tertiary Teaching Excellence | www.ako.ac.nz

Date: August 2020

EXECUTIVE SUMMARY

In 2018, Besafe Training Ltd (Besafe) - supported by funding and guidance from the Northern Regional Hub of Ako Aotearoa - embarked on a research inquiry to gauge the impact their health and safety courses were having on trainees and the workplaces they returned to. This report describes the Private Training Provider (PTE)'s research journey, from project inception to outcomes. The focus throughout has been on the learner: why they come, what they learn, and how they change.

The report provides a brief overview of the literature related to health and safety training, including causes and prevention of workplace accidents, adult learning theory, and the principles of effective training delivery as a backdrop to this study.

A mixed methods approach included a number of data sources to triangulate findings and add validity. First, the link to an online survey (Appendix A) was sent to approximately 900 workers who had completed one or more training courses with Besafe over the past 18 months. The survey asked these past trainees about their employer organization's health and safety procedures and practice, their own attitude to health and safety before and after training, and areas in which they would like to receive more training. Ninety responses were received. A second source of data was organisational records including: 1151 trainee evaluations completed on the day; student enrolment demographic data; success and completion data reported to the Tertiary Education Commission; email correspondence from employers; and Besafe's External Evaluation Review (EER) Report (NZQA, 2017). Third, semi-structured interviews (Appendix B) were conducted by phone, with three groups of stakeholders: tutors (4), employers (3) and trainees (4). In all, feedback from 1254 participants was reviewed for this report (Figure 5).

Key findings included:

- Positive attitudes to health and safety improved markedly after training for many survey participants (75% to 93%) – Figure 12
- 92% of participants considered Besafe courses were valuable for improving attitudes and raising awareness of hazards, risks and responsibilities – Figure 13
- 97% of participants saw course learning as relevant and useful to implement in the workplace (97% of survey participants) – Figure 14
- The successful delivery model comprises curricula, pedagogy and trainer expertise. Use of NZQA Unit Standards allowed employers and trainees to build individual Record of Achievements (ROAs) that suited their workplace setting and needs and was nationally recognised. Adult learning principles promoted engagement and achievement. Tutors with industry experience and education qualifications offered credibility and encouragement.

The story which has emerged from the findings offers a dual narrative, both strands of which will have resonance with other training and education providers. First is the teaching and learning account of winning hearts and minds to a compliance-directed subject through well-crafted courses and delivery, focused on client needs and aligned with trainees' workplaces. Second is the educator-industry partnership, ensuring sustainability through repeat bookings and a solid reputation.

Finally, six transferable reflections/recommendations are offered, which cover a provider's role in course delivery, in industry liaison and in research (as here), to ensure an evidence-base for their operations.

CONTENTS

SOME BACKGROUND TO THE STUDY

Who are Besafe? Who are their learners?

Besafe Training Ltd (Besafe) is a Private Training Establishment (PTE) based in Rosedale, on Auckland's North Shore. First registered with New Zealand Qualification Authority (NZQA) in 1999, it was purchased by the current owners, Jason and Peter Braithwaite, in 2013. Besafe delivers a wide range of one-two day full unit standard courses and refresher courses either in-house for client organisations, or as public courses. Most client organisations are small-to-medium sized enterprises (SMEs), and account for approximately 60% of courses delivered, but Besafe also delivers health and safety training and management to larger, national organisations as well. Client venues are predominantly on-site; public courses in Auckland use the three classrooms and/or warehouse space at the Rosedale premises, or elsewhere in North Island, public or community clubrooms. Besafe also delivers training for Unitec and Manukau Institute of Technology for the health and safety components of their managed apprenticeships.

Figures 1 and 2. Besafe's Rosedale premises

Courses are based on NZQA Unit Standards, mostly Levels 2-4, and include:

- First Aid
- Confined Space Entry
- Working at Heights
- MEWP (Mobile elevated work platforms)
- Asbestos Removal
- Hazard ID Risk Assessment
- Breathing Apparatus
- Cranes
- Gas Detector
- Health and Safety Representative
- HSNO (Hazardous substances and new organisms)
- Pathogens
- ICAM (Incident Causation Analysis Method)

NZQA's quality assurance system regularly reviews the performance of non-university tertiary education organisations (TEOs) as fitting into one of four categories, based on their External Evaluation and Review (EER) statement of confidence. The categories are 1 (highest) to 4 (lowest). In 2017, NZQA's Report following a two-day site visit with Besafe, awarded the organisation a Category 1 ranking: "Highly Confident in educational performance; Highly Confident in capability in self-assessment" (NZQA, 2017).

Besafe learners, or trainees*, are people employed in industry roles which require health and safety training either for a workplace compliance requirement (for example, to enable them to enter a workplace) or for raising awareness of safety matters (for example, where there is no legislated requirement for specific training). In 2019, Besafe had 1908 graduates. In terms of demographics, there is a huge age-range: trainees include school-leaver apprentices up to those with decades of experience. The large majority (93%) are men, which is not surprising given that nationwide, a staggering 97% of workers in the construction and engineering related trades are male (RNZ, 2020). Ethnically, Besafe trainees represent the growing diversity of the wider population: in 2019, based on the 1267 (of 1908 in total) trainees who supplied this data on their enrolment forms, 44% of trainees were New Zealand European; 12% were Māori, 13% were Pasifika, 19% Asian, and 12% were 'Other', made up of smaller nationality groups (Figure 3).

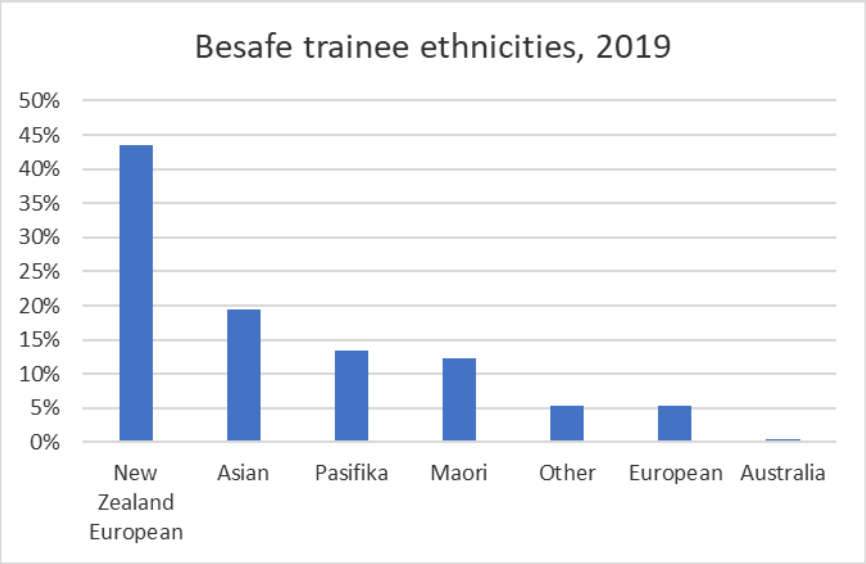


Figure 3. Besafe trainee ethnicities, 2019

In a normal operating (i.e. pre-CoVid) environment, Besafe delivers up to 25 health and safety courses a week in Auckland, equating to approximately 200 trainees. Most trainees complete three – four courses in a week.

Besafe also assists in accident investigations, provides a health and safety consultancy service, and supports clients to set up health and safety policies and systems. It is a member of several professional national and international health and safety associations including New Zealand Safety Council.

*As both NZQA and industry commonly use the term 'trainee' for adults engaged in this form of workplace-related higher education, this term has been adopted throughout the report.

Purpose of this study

Since the current owners took over in 2013, performance indicators have been positive. Besafe's NZQA rating has improved, enrolments have increased, trainee achievement records are 100% for 2019, and

client feedback is encouraging. And all this has occurred in a notoriously challenging, compliance-driven and frequently low-engagement (Namian, et al., 2016) learning environment. Discussions with Ako Aotearoa's Northern Hub office indicated that there was a story to tell here, and potential learnings which would likely be of interest and use to other providers in this area.

Ako Aotearoa is New Zealand's National Centre for Tertiary Teaching Excellence. Established in 2006, the Centre is the Ministry of Education's central vehicle for improving the quality of teaching and learning in all branches of the post-school education sector. Ako Aotearoa administers a number of funding streams in partnership with organisations who are demonstrating successful outcomes for learners – or trainees. Funding grants allow such stories to be told, and effective practice to be shared, in the interests of producing the best possible educational outcomes for all learners and the nation. A key starting point is that different adult learners need different solutions. Good practice and excellence in education comes in many forms, and the short, intensive, mandated courses offered by Besafe are an example of work-oriented teaching and learning which is often overlooked.

A jointly resourced proposal was developed to investigate and capture whether and how Besafe's training was making a change in industry and helping people to work safer. Were participants of the training courses making the necessary paradigm shifts to apply what they learnt sufficiently to change their attitudes and actions to health and safety matters in their workplace?

Evolution (and limitations) of the research project

Originally, the research design was to select 10-15 client organisations, and compare health and safety records before and after training, followed by some interviews with the person in charge of training, and some randomly selected trainees. However, once the project was underway it became clear that the sample size that could be achieved through this approach was going to be smaller than expected. Training managers were busy and not always available, health and safety record keeping practices varied so that comparison would be problematic, and some client organisations were in potentially competitive sectors and needed to limit access to internal documents. Interviews would provide rich individual testimonies, certainly, but alone would not furnish the overarching measure of training impact the authors were seeking.

Besafe realised that they already held a large database of material from their self-assessment practices, including trainee evaluations of each course attended, and student success and completion data. There was also correspondence from employers about the effectiveness of training – mostly in the form of emails. It was decided to incorporate these sources of information with a survey of training participants, and interviews – but to include three groups of stakeholders: trainees, training managers, and training tutors.

This then is the trade-off of the study: it provides an account of the effectiveness of the training, and a multi-dimensional view of how a provider focused on quality and good practice can impact individual perceptions and practice of workplace health and safety. It does not offer hard data about longitudinal changes in organisational health and safety incidents.

A further challenge for Besafe should also be noted here: from inception of the research proposal to its conclusion with this report, two of the three original authors left the organisation. When the project commenced in late 2018, the intention was to have this report completed and the project signed off by the end of 2019. The loss of team members has certainly contributed to a pushed-out timeline, as have the pressures of the CoVid lock-down in March-April 2020, and the need to develop online

versions of training under urgency. It is unlikely, though, that the findings reported here have any less significance or validity arising from this slight delay.

Contribution and reporting

Many of the success factors which are outlined in the following report will be transferable beyond the confines of the PTE and courses described here. Work-related training which fits industry needs is an important focus for the post-compulsory higher education sector, and plenty of studies affirm employers' preference for work-ready staff who have practical skills and competence as well as theoretical knowledge (e.g. Ryan, 2006; Sung & Choi, 2018). There is also an extensive literature noting how diverse the 21st century adult learner population is: age, culture, ethnicity, previous learning experiences, learning styles and learning conditions, second language and second chance learners… (e.g. Honeyfield & Fraser, 2013; Sh!ft, 2018). Engaging a class of individuals rapidly for effective short course delivery and completion is no mean feat, and relies on a well-designed package of curricula, pedagogy and trainer expertise. Where Besafe has achieved success, others may find some resonance.

The remainder of this report is structured around answering three questions about Besafe's trainees: Why they come, what they learn, and how they change. The Introduction provides the context, outlining this country's health and safety environment, and overviews key literature related to health and safety training. It also summarises adult learning and motivation theory. Next, Besafe's learning culture and pedagogy are described, drawing on the shared experiences of those in the classroom by reflecting on the evidence from trainee and tutor interviews. The Findings section begins with a little more information about the survey instrument which has provided the quantitative data to complement participants' voices. Arranged by theme, the section continues by covering key learnings and high impact areas. The report concludes by reflecting on the organisation's progress to date, and possible future directions.

INTRODUCTION: WHY THEY COME

New Zealand's health and safety environment

New Zealand has unacceptably high rates of workplace fatalities and serious harm injuries (Neilsen, 2018), and this is nothing new. In 2012, McKessar stated:

> Earlier this year the Safer Workplaces report by the Independent Taskforce found the number of people who sustain workplace injuries in New Zealand each year would fill Eden Park four times over. Our workplace safety record is four times worse than Britain and twice as bad as Australia (para. 2).

Worksafe New Zealand, the government agency responsible for overseeing health and safety in the workplace, conducts an annual nationwide, self-completion survey of New Zealand workers and employers aged 18 years old and over. According to WorkSafe data, the four sectors that are major contributors to workplace deaths and injuries are Agriculture, Construction, Forestry and Manufacturing. The most recent published results note that while some positive changes in results occurred between 2014 and 2015 as workplaces prepared for the Health and Safety at Work Act 2015, by 2017 many of these results had plateaued or settled back to the levels observed in earlier years (Neilsen, 2018). Worksafe reports there were 113 recorded workplace fatalities from February 2019 to January 2020 and 31,365 reported workplace injuries from August 2018 – July 2019.

A notable feature of the annual survey of workers and employers' health and safety attitudes and behaviours is the discrepancy between these two groups' perceptions. For example, when asked about risky behaviours, "higher proportions of workers than employers [said] risky behaviour occurred 'from time to time' or 'a lot' in their workplace and employers were more likely to say that each risky behaviour 'never' happens than workers were" (Neilsen, 2018, p. 11). Many risky behaviours were generic – it was the environment that made them so hazardous. These included:

- working when sick or injured
- working when overtired
- making a mistake by being careless or not having their mind on the job
- working when hungover or stoned, unsafe processes
- inadequate supervision
- lack of appropriate skills
- working in inappropriate conditions

A second example of worker and employer differences as relevant – if not even more so – to Besafe's operations, related to the adequacy of health and safety training. The same report sates:

> The majority of workers and employers (87% and 93% respectively) agreed that workers had the tools and equipment to do their job safely. But while the majority of employers (89%) also thought that their workers had all the information they needed to work safely, workers were less likely to agree. Only three in four workers (73%) agreed that they were told everything they needed to know to work (p. 13).

Training is seen by both workers and employers as a crucial way of embedding and supporting health and safety practices in the workplace, creating what some commentators refer to as "safety capital" (Gołembski, Sobański, & Wojtkowiak, 2016, p. 7). Yet Neilsen's (2018) report for Worksafe points to gaps, noting that for the Manufacturing sector, for example, "nearly one in four workers said they had

'never' received health and safety training g, while one in three employers said 'none' of their workers had ever received health and safety training" (p. 13). Clearly, despite extensive and ongoing efforts by national agencies and organisations themselves, a considerable number of serious harm accidents continue to occur in New Zealand workplaces.

Health and safety training theory

Training and professional learning development are generally defined as a series of organized activities designed for behaviour change. Development of skilful human capital is a major strategic tool that is necessary to improve workplace performance and business development (Sung & Choi, 2018). Workplace training and development activities, including health and safety training, are generally deemed crucial to improve employee's knowledge, skills and abilities and reduce workplace accidents. An overview of the literature identified three contributing strands of discussion, briefly summarised below. These are (1) the cause and prevention of workplace accidents (2) the adult learner, or trainee profile, and (3) the principles of effective training delivery.

1. The cause and prevention of workplace accidents

In 1931, Herbert Heinrich published a study of the causes of industrial accidents, based on data from the large American insurance company for which he worked. His 'Five Domino' theory of preventable injury showed a series of events forming a sequence, which could be interrupted by the removal of a single domino, or contributing factor (Figure 3).

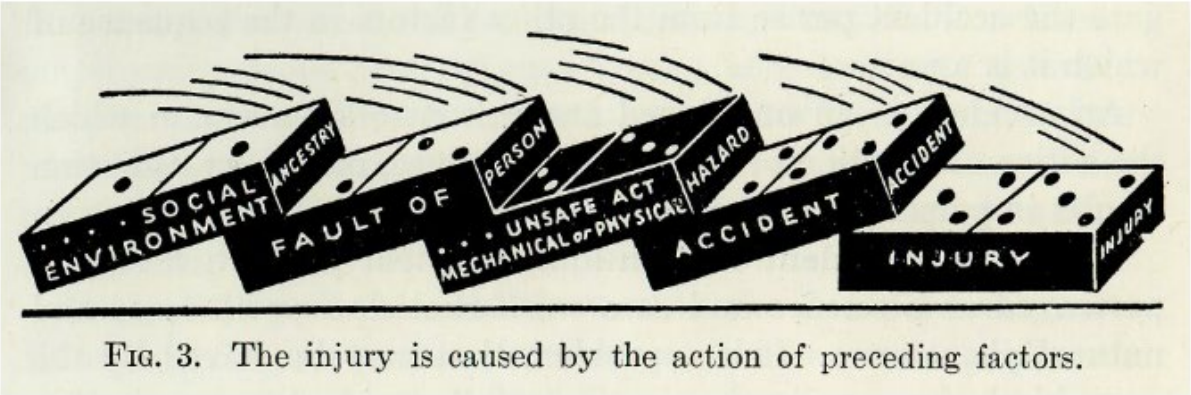


FIG. 3. The injury is caused by the action of preceding factors.

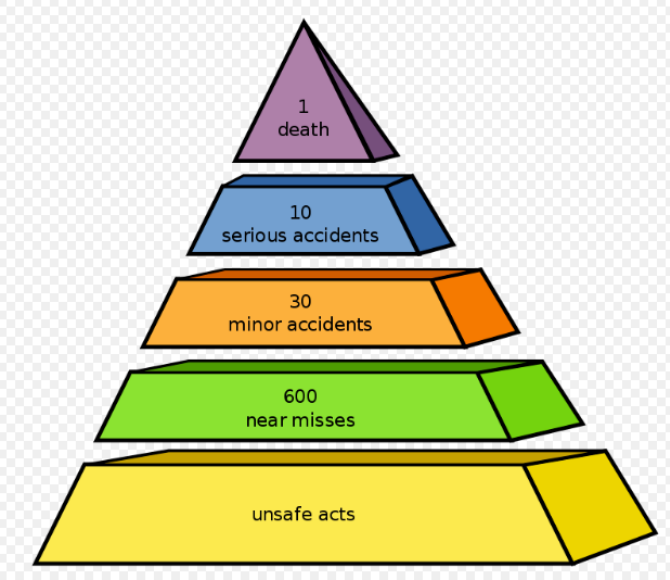
Figure 4. The domino model of accident causation, as depicted by H. Heinrich in the 1950 edition of his book 'Industrial Accident Prevention: A Scientific Approach' (Marsden, 2017).

Heinrich explained the phases as:

- domino 1: ancestry and the worker's social environment, which impact the worker's skills, beliefs and "traits of character" and thus the way in which they perform tasks (today discredited for its assertion that undesirable character flaws may be passed along through inheritance)
- domino 2: the worker's carelessness or personal faults, which lead them to pay insufficient attention to the task (today criticised for a reliance on now discredited "accident-proneness" theory)
- domino 3: an unsafe act or a mechanical/physical hazard, such as a worker error (e.g. standing under suspended loads, starting machinery without warning) or a technical equipment failure or insufficiently protected machinery

- domino 4: the accident
- domino 5: injuries or loss, the consequences of the accident

This easy metaphor has remained popular through numerous iterations, in which the labelling of the first two dominos is often replaced by factors such as planning, work organisation, management and leadership (Marsden, 2017). However, in modern complex workplaces, with a shift from individual blame to organisational systems and compliance, there is general acceptance that this model has considerable limitations.



In the 1960s, Frank Bird became widely recognised for his extension of Heinrich's original work on industrial accident prevention, with his 'Accident triangle' model (Figure 4). The model depicts the concept of a ratio between the number of accidents causing various levels of injuries, near misses, and unsafe acts in an industrial setting.

Again, this model still has both champions and detractors, but is generally questioned over the values depicted for each level, as well as the focus on minor accidents by addressing more common but less serious risks.

Figure 5. Bird's accident ratio triangle. (Image from Wikipedia, 2019, https://en.wikipedia.org/wiki/Accident_triangle)

There is still a literature that considers the role of ingrained individual actions as a foremost cause in accounting for occupational accidents, such as Tixier et al.'s (2014) study. These authors argue that that risk-taking behavior, originating mainly from inaccurate perception and unacceptable tolerance of safety risk, is a significant factor in a majority of construction injuries. They draw on psychology research to identify risk-taking types of people based on their different emotional states (fearful, anxious, and disgusted subjects; sad and unhappy; neutral; happy, amused, joyful, and interested). It is the neutral and positive groups who are more prone to accidents, apparently, as they perceive less risk in their daily work environment.

However, there are many other commentators who see the primary cause of workplace accidents as due to the lack of hazard recognition (e.g. Namian et al., 2016). For these authors, it is up to employers to provide a variety of training programs to improve hazard recognition and the accurate perception of safety risk. Lingard (2013) too believes that it is policy makers, industry employers, union groups and researchers who need to pay greater attention to management issues in the construction and similar industries, so that worker safety is improved.

Given the arguments made in these different strands of health and safety discourse, the approach of gathering data from both employers and workers adopted for the Worksafe surveys (Nielsen, 2018) seems only sensible.

(2) the adult learner, or trainee profile

The majority of Besafe trainees are in employment, attending between one and four one-to-two-day training courses a year, funded by their employer. However, some trainees attend prior to employment, and are self-funded; others come from apprenticeship programmes such as those offered by Manukau Institute of Technology, UNITEC and Industry Connection for Excellence (ICE). Many enrol as a prerequisite to working on a particular site, or progressing to a new role, so that the oft-cited distinction from learners in the compulsory (primary and secondary) sectors that they attend by choice, may not always apply. Another descriptor of adult learners is that adults learn differently from the way children do – firstly because their personality structure is now almost fully formed, and accompanied by a range of behaviours and practices they have acquired along the way; and secondly, because of the impact of previous learning and life experiences, as well as their current needs, interests and expectations (Honeyfield & Fraser, 2013). Many adult learners have extensive family and work responsibilities. External issues such as transport, finance, health, social and recreational roles, and relationships can also affect the learning process. There are biological factors associated with maturing into adulthood, and ingrained attitudes about previous educational experiences. Adult learners, therefore, have complex and multi-faceted lives (Cercone, 2008).

There is no one theory of learning that explains how adults learn, or applies across all adult learning environments, but a summary of commonly agreed principles with associated theories titled *Goalposts* and published by Ako Aotearoa lists ten items: (1) Prior knowledge and experience, (2) The importance of culture, (3) Respectful partnerships and relationships, (4) Autonomous and independent, (5) Goals and motivations, (6) Relevant and practical, (7) Learning styles and ways of thinking, (8) Critical reflection, (9) Environment for learning, (10) Change and transformative learning (Honeyfield & Fraser, 2013).

Perhaps the most problematic of these items in the context of the current study is that of goals and motivation – which can be intrinsic and/or extrinsic. Knowles, Holton III and Swanson (2005) say that motivation affects direction, intensity, persistence and quality of learning behaviours. They would argue that while adult learners respond to external motivators, internal motivation is more powerful and contributes to lifelong learning. External motivators might include salary increases, higher status, job titles and perks, incentive pay, academic credit, or promotions; but internal motivators, such as job satisfaction, the desire to grow, improved self-esteem, and quality of life, are usually more important to adults in their learning process, and must therefore be fostered by educators (Honeyfield & Fraser, 2013).

The issue of motivation is relevant to all of tertiary education, but when health and safety training is typically compliance-driven and mandated, it can be especially challenging to 'win hearts and minds' (McKessar, 2012). Often more is needed than simply emphasising the value to their long-term goals of what trainees are learning. And when the percentage of temporary, contract and leased employees is on the rise (Wilkins, 2011), and employment for industry workers is insecure and dynamic (Lingard, 2013) it is even more crucial to offer training programmes with high engagement and immediate impact.

(3) the principles of effective training delivery

People do want to learn. In a three-year research project conducted by Middlesex University's Institute for work-based learning, an average of 74% of the UK workers who participated felt they were not achieving their full potential at work with nine out of ten of people saying that training was important to them, particularly if delivered at work. Most popular amongst staff were short accredited training courses, both in-house or externally provided, that led to a recognised qualification (Woods, 2011).

People also know what they need to learn. As zero-accident cultures become part of organisational aspirations, says Wilkins (2011), knowledge and implementation of good practice health and safety practice have become priorities for construction and manufacturing organizations. His United States study showed that industry leaders were responding by increasing the frequency and range of health and safety training programmes, but that these were not always achieving the desired results. His data described a workforce dissatisfied with training (a huge 41%) in which the distinguishing characteristics of adult learning had not been addressed by qualified trainers. Such a situation can only lead to what Damian et al. (2016) call 'low-engagement training', resulting in lower levels of hazard recognition and safety risk perception once back in the workplace.

Again, there are multiple studies and ideas about what constitutes effective health and safety training. A key factor for Wilkins (2011) was that trainees who chose the training of their own volition typically performed better and achieved a higher score in the training than those whose name was selected by the employer for the training. Based on these findings, Wilkins stated that training and development programs are influenced by the attitude of the trainees.

Sh!ft, a learning design company, tell their clients about four factors closely aligned to the principles of adult learning outlined above. Effective training programmes must be aligned to the need for learning, that is, supplying answers to real-world, rather than hypothetical problems. Second, programme participants must be able to see progress and concrete proof of prowess, such as evidence of achievement. They need to trust the credibility and authenticity of the trainers, and the training organisation. Finally, training programmes should provide learning by exploring, NOT clicking through a course, or ticking boxes on an assessment (Sh!ft: Disruptive Learning, 2018).

Underpinning all these concepts is the need to be interesting, and fun. High-engagement training combines theory and practice, and includes a range of activities to suit diverse learning styles (Honeyfield & Fraser, 2013). Ultimately, training will only be effective if it can change attitudes toward health and safety from that of 'eye-rolling boredom' with what trainees perceive to be just another level of bureaucracy, to seeing it as a necessary part of not only keeping them and their co-workers safer, but also helping the company grow and improve (McKessar, 2012).

METHODOLOGY: HOW DO WE KNOW THE TRAINING IS WORKING?

As noted in a previous section ('Evolution (and limitations) of the research project'), the research design changed from a focus on pre and post training outcomes for client organisations, to a mixed methods study, including a wider range of data sources to triangulate findings and add validity. The different instruments were:

Document analysis.

Organisational records which were relevant to this study include trainee evaluations of each course attended, completed on the day, as well as student enrolment demographic data, and success and completion data reported to the Tertiary Education Commission. Email correspondence from employers about the effectiveness of training and sharing trainee feedback was also included. An additional source of evidence comes from NZQA's External Evaluation Review (EER) Report, published in 2017, in which Besafe received a Level One ranking as 'Highly Confident in educational performance' and 'Highly Confident in capability in self-assessment' (NZQA, 2017).

Document analysis involves reading source material, systematically searching for evidence to support the research objectives and shed light on emerging themes or commonalities. In this report, quotations and summaries of evidence from these sources are included in the Findings sections, to support and substantiate the quantitative data from the survey and the interview testimony around the efficacy of the training courses and the impact on participants.

Online survey

An online survey was developed by Besafe using open access software called Survey Monkey. The survey is composed of 26 questions divided into 3 parts (Appendix A). The first part asks simple closed questions to measure the participant's awareness of their employer organization's health and safety procedures, current health and safety training and workplace health and safety practice. The next set of questions measure the participant's attitude to health and safety before and after training. The final grouping inquires as to the list of additional health and safety courses the participant is required to, or wants to undertake for their specific jobs or career development – including awareness of asbestos requirements, as this is a topic Besafe has been receiving growing interest in. An open-ended question was used to conclude the survey and capture any unaddressed issues.

No demographic data was requested, as at the time the research team felt that their focus was on the training experience and the practical outcomes, rather than how these might be viewed through the lens of any particular sub-group of the sample. However, on analysis of the survey data, this may have been of use, since it would have allowed Besafe to consider how representative the survey sample was of the overall trainee profile. This is likely to be added to any future survey of trainees as an option to possibly add to the richness of the data.

A pilot test was conducted several times among Besafe Training Ltd staff members and students and questions were revised to meet the research purpose and aims.

Using trainee contact emails from enrolments over the past 18 months, all trainees who had attended one or more health and safety courses with Besafe were invited to participate. The email they received included a statement about the purpose of the research, and that they were not obliged to include their name and contact information unless they wanted to enter a draw for a $100 'Prezzy' card which was offered as an incentive to participate. They were assured that no names – either their own or

their organisation's – would be included in the final report, and that their contributions would be anonymous and confidential. Clicking on the link and completing the survey would be taken as consent for their data to be used.

Out of 900 invitations sent to viable email addresses, a total of 90 training graduates participated in the survey, with 87 requesting to be included in the prize draw. This 10% response rate falls short of the 29% which Lindemann (2019) says is the average for an online survey, although other sources note that survey response rates in the 5% to 30% range are far more typical (e.g. https://www.customerthermometer.com/customer-surveys/average-survey-response-rate/).

Survey Monkey collates the responses and summarises each item as a graph, or a list of comments which can then be reviewed for thematic analysis. Where these survey results are reported in this report, they are generally taken directly from the Survey Monkey question summaries, as percentages or direct quotes. In a few areas where a 5-point Likert scale was used, items such as 'satisfied' and 'very satisfied' have been collated for ease of reporting and readability.

Interviews

One-to-one semi-structured interviews were conducted by phone, with three groups of stakeholders: tutors, employers and trainees. An independent research assistant used contact details provided by Besafe to recruit potential participants by phone and email. The researcher introduced themselves and the research project and asked if they would be willing to speak briefly about their experiences related to Besafe's health and safety training courses. Participants were assured that neither their name, nor that of their organisation would be recorded in the generated transcript, or used in the final report, so that their contribution would be anonymous. Four tutors, three employers and four trainees contributed to this dataset. The prompt questions which encouraged participants to recount their experiences of training in their own words are included as Appendix B.

In addition, a meeting at Besafe premises in June 2020 with the manager and training coordinator, the independent research assistant and the Northern Hub Manager for Ako Aotearoa (the research sponsor) also contributed context and data to this report.

Total participants represented in this study

	Online survey	*On-the-day feedback*	*Interviews*	*Total*
Survey participants (trainees)	90			
Course evaluations (trainees)		1151		
Tutors			4	
Employers			3	
Trainees			4	
Besafe management			2	
				1254

Figure 6. Research / course evaluation participants

FINDINGS FROM INTERVIEWS AND REPORTS: WHAT THEY LEARN

Course curricula

As noted at the beginning of this report, Besafe's courses are all Unit Standards, mostly Level 2-4, and comprise a variety of workplace health and safety-related topics. The Word Cloud image (figure 6) shows the types of health and safety training survey participants listed as courses they require in their jobs and /or for career development. Word Cloud imagery is a useful way of visually representing relative frequency of selections. The largest space was occupied by "Health and Safety" which, in this diagram means that this was the most listed course by the participants, followed by "Confined Spaces" and "First Aid". Other listed "required" courses are MEWP (Mobile elevated work platforms), Working at Heights, Asbestos, Dangerous goods, ICAM (Incident Causation Analysis Method), Site Passport, Permit to Work and Firefighting. The "Upskilling" category spans all these courses, and covers the refresher and advanced courses offered, as expansions on introductory unit standards. Overall, 98% of survey participants agreed, or partly agreed to the proposition in question 14 (I would like to attend more health and safety courses to help me gain the knowledge to work safely within my workplace). Of course, responses here depend on the level of experience and workplace knowledge of the trainee. As one participant said: *"It's hard to know what you need when you don't know what I should have."*

Figure 7: Visual representation of most commonly requested health and safety training courses

The delivery framework of Unit Standards is often referred to as "competency-based" education, that is, a credit-based concept where a student has set criteria that they have to meet to be granted the Unit Standard. They either pass or fail. The alternative is "achievement-based", where students may receive a grade, or a category – such as excellence, merit or competence.

In New Zealand, most short courses such as those offered by Besafe, use NZQA-registered Unit Standards to deliver qualification credits that contribute to a trainee's Record of Achievement (ROA) on a national register, recognised nationally, regardless of where the training took place and who the provider was. There are other advantages: Unit Standards have clearly specified outcomes, which can be compared with other national and international qualifications. Also, governing or industry bodies often specify unit standards in legislation or Approved Codes of Practice as a recommended (or mandatory) minimum qualification for operating a certain machine or working in a certain environment. Unit Standards, as well as the providers who deliver them, are quality-assured. Learners are completely aware of what they are expected to know or be able to do, and employers can hold teachers and trainees accountable for progress (Ryan, 2009; Standard-Based Education: Definition & Importance, 2018).

However, Unit Standards also have some disadvantages: first, they may not be recognised internationally. Second, the prescriptive nature of Unit Standards limits the flexibility of the trainer to introduce creative activities into the classroom, as well as restricting options to tailor content to meet the specific requirements of trainees or work environments which fall outside generic site practices. Third, detractors often accuse standards-based assessment as de-motivational. The argument is that learners are not challenged with solving a problem and become excessively credit and "tick-box focussed": do I need to know this in order to complete the assessment and get the qualification? (Ryan, 2009). Ultimately it is up to the training provider to manage potential drawbacks and ensure that Unit Standard delivery meets both NZQA requirements, as well as those of customers – in this case, trainees and employers.

Evidence that this is occurring is noted in NZQA's External Evaluation Report in 2017 which cited high learner achievement success of 100%, high ratings in national external moderation though the standard-setting body, The Skills Organisation, and positive feedback and repeat business from client organisations (NZQA, 2017). Emailed comments from employers which validate this report included the following:

> *"Can you pass onto [tutor name] the guys really appreciated how he went about teaching the course"*
>
> *"What an excellent refresher course … 10 out of 10"*

Two employers interviewed for this report summarised their experience of working with Besafe as

> *"It was good training, very professional and well-organised. We used our equipment and they supplied some harnesses. Our rigging wasn't 100% and the Besafe tutor found it and re-rigged it for them"*
>
> *"We're a training organisation ourselves and one of our clients required "Working at Heights" which we don't offer. To be honest I just found them [Besafe] online. It was the first time we used them but our client was really pleased, so we will definitely be using them again"*

Still, no one gets it right all the time, and it is worth noting one proviso from another employer interview:

> *"I did their Confined Spaces for the first time, it was very good and the older tutor was great, really knew his stuff. But if anything, they need to work on the Heights training. They need to spend more time on the rescue methods, even if it's not strictly part of the course. They covered how to get up, how to hook on. But I wouldn't trust anyone on that course to be on a job and save me. It was a bit too relaxed. They needed to cover what to do if things went wrong, like*

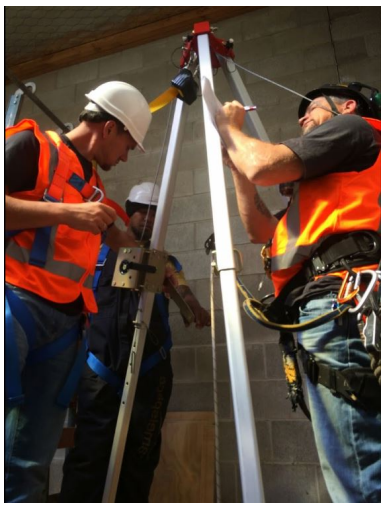
it can on commercial jobs. How to get up there, drop a second line, lower [the person needing rescuing]. It's dangerous giving them the confidence without the full picture."

Pedagogy and delivery

The previous section – "the principles of effective training delivery" – drew on the literature of adult learning principles to describe a pedagogy of 21st century learning which is active, engaging and learner-centred. Besafe's application of these core ideas is particularly evident in the mix of theory and practical tasks. Interestingly, the four tutors interviewed for this report all estimated the particular courses they delivered as comprising different ratios: from 80% theory: 20% practical, to 70:30, 60:40, and 50:50. Of course, the courses cannot really be directly compared, as they are different topics and Unit Standards, different levels, and some are delivered at Besafe premises while others are held at client organisation sites.

Figures 8 - 9. Teaching in the classroom, and in the warehouse

Examples of practical activities included both using client organisations' equipment so that trainees were training on the actual machinery and equipment they would be using in the role, and at Besafe, moving from classroom to the on-site warehouse. As one tutor commented, "*When the students walked into the warehouse, they were saying 'What a great set-up'. They said in their previous training, they didn't even get to go up a ladder.*" Besafe facilities include harnesses and rigging, ropes, an elevated working platform, a 'confined space' under-floor cubicle accessed through a trapdoor, and tracked excavator simulation technology. This way, trainees can practice safely in a managed-risk situation; as one tutor said: *"That's where we make a difference."* Another said, *"You wouldn't find these in other training centres."*



Figures 10 - 11. Setting up a tripod for Confined Spaces training; the tracked excavator full-scale training tool

Effective work-based pedagogy also includes an approach to teaching and learning that is authentic and relevant (Honeyfield & Fraser, 2013; Woods, 2011). At Besafe, tutors are industry experts, some with decades of experience, others who have come from other training environments. All have also completed some level of adult teaching qualification, such as NZQA Adult Education and Training unit standards:

> All tutors must gain the unit standard 4098 Use standards to assess candidate performance, and all have. Some are working towards completing the National Certificate in Education and Training (Level 5). Some tutors have extensive tutoring experience in other PTEs or government training establishments, and the trainee surveys include very complimentary comments on tutors' competence (NZQA, 2017, p. 11)

The four tutors interviewed all emphasised the importance of professional credibility in teaching health and safety topics:

> *"Stories are huge. I tell stories about horrific incidents I've seen or know of first-hand, to show how it's easy to misjudge, to take a shortcut."*

> *"It's easy to get buy-in, relating your own experiences from civil, trades, construction sites. I've been there and done that. I've been part of a bad culture. I can talk about how you are risking more than just your own health and safety, and why? Just to save your boss some money?!"*

With growing diversity in the workplace, being reflected in Besafe's trainee demographic profile, an understanding of personalised delivery is important. Tutors and management recognise there can be some tension between catering for a wide spectrum of learning needs while delivering a relatively prescribed programme, with set content to be covered around standards, laws and industry requirements. Sixty-two percent of trainees in 2019 identified as New Zealand European or Maori; of the remaining 38%, many are from non-English speaking backgrounds. Trainees also come from a range of previous learning experiences and educational achievement; some have difficulties with leaning. Tutors note that often trainees will require multiple opportunities to complete practical and written assessment to demonstrate that they would, indeed, be safe on the job:

> *When extra time is needed, nine times out of ten it's provided. It might be learning difficulties or language barriers. It's a strength of Besafe. We make sure to get the evidence, that the paperwork gets done."*

Trainee comments support this claim, and are appreciative:

> *"Our tutor was XXXX, and he explained everything to me until I understood every detail even if it took me a while to understand"*

> *"Trainer XXXX was very helpful as I had a bit of trouble with the theory side of things"*

Teaching and learning theory also emphasises the need for reflection, and effective self-assessment practice. NZQA's EER in 2017 noted "robust internal quality checks of assessment tools prior to use, and regular and robust moderation of assessment judgements" (p. 6). Monitors commented favourably on the regular trainee surveys and the way these were analysed to inform where changes might improve trainees' satisfaction and engagement in the training. They applauded the communication with employers, including a survey to check needs and satisfaction with training provided. They also observed "supportive, free sharing of ideas [and] all staff being involved in organisational self-assessment… an organisation that is actively reflecting on its performance and

exploring better ways of working and meeting internal and external stakeholder needs" (NZQA, 2017, p. 11).

In addition to reflective practice, Besafe has a culture of currency and facing forward. Clearly this is important in ensuring content reflects the latest legislation as well as workplace practice. It also means adopting new delivery approaches, such as the shift one tutor described as "*teacher to facilitator"* and looking to streamline processes, using tablets in class instead of printed texts. Another tutor described the response to CoVid 19, needing to deliver virtual training online, and communicate via Zoom technology.

> "*We were doing this on the fly, but it turned out we were quite busy, there's clearly a need and we learned to meet it. So something really good came about from [this challenge to normal operations]."*

FINDINGS FROM THE SURVEY: HOW THEY CHANGE

High levels of health and safety awareness

The first section of the online survey (Appendix A) included six 'closed' questions designed to quickly determine the participant's awareness of their organisation's health and safety procedures and culture, and previous exposure to training. Based on WorkSafe's 2017 survey (Nielsen, 2018), health and safety procedures in the workplace may be in the form of regular health and safety meetings and briefings, having an appointed health and safety representative, health and safety notice board, mentor and safety audits.

The vast majority of the 90 respondents (96%) said they were aware of the health and safety procedures of their organisation. Almost as many (93%) felt that their employers placed a high value on safety practices while undertaking work-related tasks, as measured by two items in the questionnaire, question 6 (Does your employer encourage you to engage in health and safety while undertaking work-related tasks?), and question 8 (Are you encouraged by your employer to report "near miss" events which could have potentially led to an accident?)

Awareness is certainly important, but as Nielsen (2018) notes, currency in training is essential both for updating knowledge of worksite equipment and conditions, and as a refresher, ensuring health and safety is top-of-mind. In his report for Worksafe, the author says that workers who had health and safety training in the last 12 months are confident that they know how to manage and/or report hazards, near misses or accidents to workmates and to management. Of the 90 survey participants, (89%) had current workplace health and safety training certificates, although for 11% of the participants, the health and safety certification had expired.

Improved attitudes following Besafe course(s)

For the second part of the survey, respondents were asked questions related to their attitude toward health and safety before and after health and safety training (Figure 11).

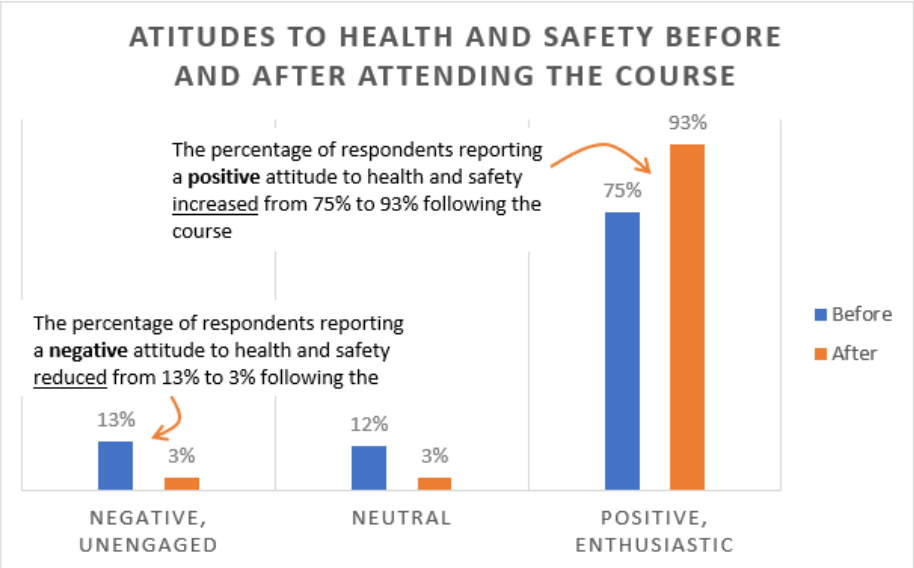


Figure 12. Pre and post course attitudes to health and safety

Comments from trainees who attended one or more courses with Besafe in the past 18 months further support the importance of training for awareness-raising and health and safety advocacy:

> *"Triggered my memory well"*
>
> *"Great comprehensive refresh of overall knowledge"*
>
> *"…refreshing myself after a few years away from it…how easy it is to lose life… the importance of why we are here"*
>
> *"It just keep us all aware of the risks we face every day"*
>
> *"Keeping track of any incidents or reporting any hazards to minimise the risk of injury"*
>
> *"It's not just about looking after ourselves, but how we can help and support our workmates with smarter safety working approaches"*

Supporting workmates and an awareness of how teams need mutual trust to operate effectively is an important of developing a safety work culture (Gołembski, Sobański, & Wojtkowiak, 2016). Such 'cultural conditions' in turn become one of the key motivations behind workplace health and safety and have the potential to contribute to wider organisational improvement through raised awareness, increased competence and cooperative learning across the wider staff (Lingard, 2013).

While such findings and commentary may be relatively generic and indicate the importance of training in general, survey and interview participants in this research, as well as those who completed on-the-day evaluations, also provided ample evidence that it was Besafe's courses in particular which had made such a strong impact (Figure 12).

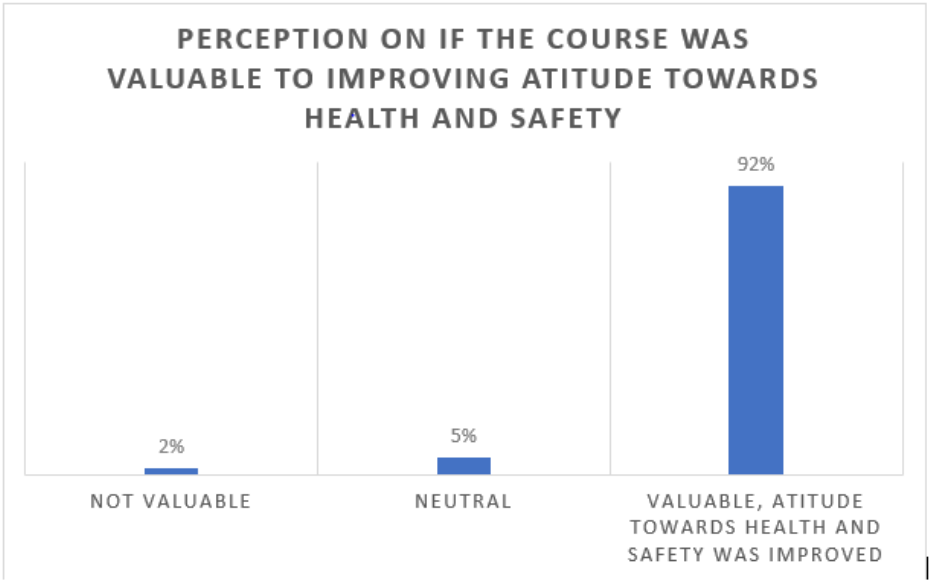


Figure 13. Value of Besafe training course(s)

Representative comments from interviews and evaluations relating to Besafe's training included:

> *"After this course I was more confident that I was doing everything correctly and safely"*

"Course has great information and well structured. I think the theory and practical are extremely beneficial."

"As a trainee I've come out learning more than I expected to with this course. I learned a fair bit I didn't know"

"Very informative, and in-depth course. I am taking away a lot of new skills"

The perceived value of the training is further supported by the high number of course attendees who saw immediate relevance to their own workplace and work role (Figure 13).

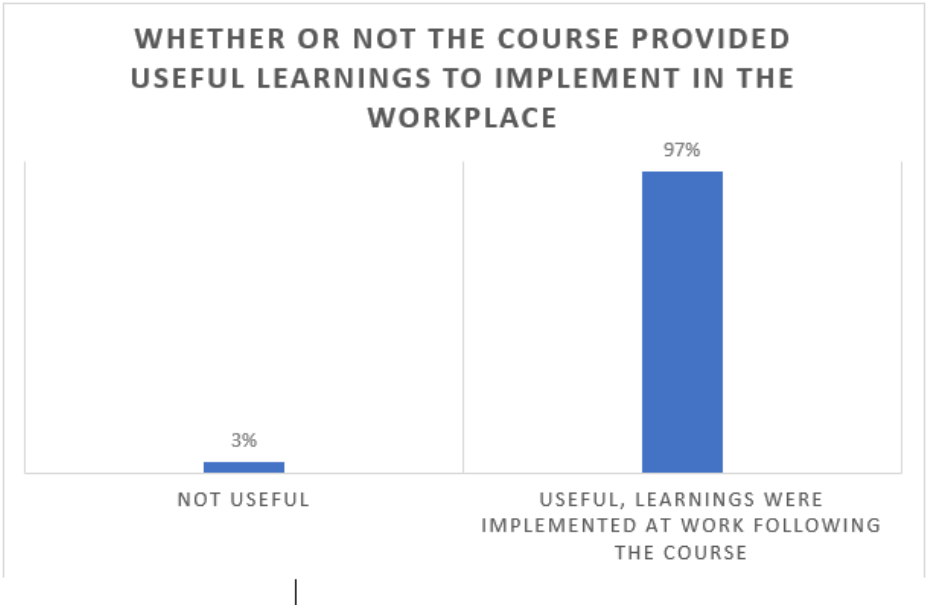


Figure 14. Transferability of course learning to the workplace

Representative comments from trainees and employers which relate to this topic are:

"This course has helped me open my eyes to safer ways to work at heights and better ways to look after others"

"The tutor was very knowledgeable and informative. He gave good clear examples and even advice and suggestions that were very relevant to my specific trade. He explained everything clearly and repeated anything where it was needed. I feel very confident leaving the classroom and ready to implement these things at work"

"In South Africa we seldom cross asbestos… it was never a hazard. I've learnt recently that asbestos is a no go in New Zealand. Which means we see asbestos we stop work"

"We've got a new reporting system now and every week we discuss what's been happening, where we might have any issues and generally update staff. It's been good to get feedback and hear more from some of those who have been doing the training. They've got more knowledge and they're more confident to contribute. They feel they can advise in some areas now"

The last comment from an employer is also important in support of two subsequent survey questions, question 20 (How interested was your employer in the course you had attended?) and question 21 (Were you provided with an opportunity to implement any of the learning into your workplace?) Eighty-one percent of survey participants felt their employer was interested in their training

experience and outcomes (19% said 'not very' or were unsure); 77% felt supported in applying new knowledge (but 3% said 'no' and 20% said only 'partly'). Although the trainees interviewed were not asked to comment on their own experience of employer support, and may indeed not have been part of this minority group, it is nonetheless easy to imagine that employer disinterest may well undermine the immediate positive impact of training. As one survey participant commented:

> "*Employers must enforce the policies and follow guidelines"*

Such an interpretation is supported by studies such as Gołembski et al.'s (2016) overview of the Polish construction industry which noted a considerable lack of congruence in stakeholder priorities. Their study found that while employees considered it was their safety which mattered most, employers often considered workplace safety compliance as an avenue to avoid the risk of additional costs. Employees talked about accidents, but employers whose focus was more on adhering to formal regulatory prescriptions rather than actual safety, cited situations in which occupational health and safety irregularity resulted in immediate cessation of all work, which had financial consequences. This, concluded the authors, made employees more reluctant to report any incidents or inform employers of possible hazards and subverted worker engagement and motivation fostered by training (Gołembski et al., 2016). The important take-away from reviewing international studies like this Polish example, is that health and safety needs to be a whole-of-organisation, and top-down concern. As one survey participant noted:

> *"Health and safety starts with clear communication. From what I have experienced health and safety fails when there's a breakdown in communication somewhere. Whether that's someone not speaking up or someone having the wrong information etc."*

Having the right people

Survey participants generally reflected the literature (e.g. Gołembski et al., 2016; McKessar, 2012; Neiman, 2017) which reports some ambivalence among workers – and employers – that often health and safety requirements can become over onerous and hinder work performance (question 15). In this research, 43% agreed, or agreed in part with this position. Besafe tutors also noted that some trainees can arrive in the classroom with preconceived ideas and may be initially reluctant to engage.

However, all four tutors said that once the course was underway, they encountered very little, if any resistance. As described earlier, they shared stories of their own experience, they delivered courses which combined theory and practical tasks and they made the training relevant to the trainees' roles and contexts. One tutor talked of the impact of being a female, providing training in a traditionally male-dominated field, and how it challenged trainees' assumptions: *"health and safety comes in all shapes and sizes!"* Others referred to consistency across delivery, using *"tried, true and tested"* material, but also enjoying Besafe management's interest in being up-to-date and embracing new technology.

Tutors spoke about the changes they observed in trainees when they learned something new, when they mastered a skill, had questions answered, and when *"the light went on".* A large proportion of trainee feedback related to the tutors, and their personalities, showed what they found made the training experience memorable and valued. Tutors were *"awesome", "informative", "interesting", "knowledgeable", "understanding", "kept it moving"* and *"made it fun"*. As is so widely accepted in 21st century pedagogy, learning is a social experience in which all parties learn from one another. The right facilitator can make, or break, the social contract (Cercone, 2008).

One example to conclude this section, is a paraphrased email from a trainee, received after a life changing First Aid course, and shared with permission:

> *To the CEO of Besafe Training*
>
> *On Saturday I attended a First Aid training course with one of your trainers XXXX. Well I must tell you that I was not looking forward to this as some 15 years ago my child's heart stopped beating and I performed CPR for a little over an hour but to no avail, sadly she passed away. Since that day I have questioned my ability and have been unable to act under pressure.*
>
> *So on Saturday when I had to work on the mannequin I was broken and XXXX could see that there was something amiss. I told him what had happened and that I had thought I had performed CPR incorrectly on my daughter. But in true Kiwi fashion said 'no worries mate' and made me go step by step and told me that I had not made any mistakes and that I had done it correctly and I was ok.*
>
> *This meant a lot to me as I have been beating myself up over this for the last 15 years. Thank you XXXX I will never forget you.*
>
> *Kind Regards*

REFLECTIONS AND RECOMMENDATIONS

Few would argue there is a relationship between workers having recent health and safety training, improved knowledge, engagement and participation, and reduced incidents of serious harm and near misses. When workers are trained in workplace health and safety, they become empowered to apply health and safety measures (Nielsen, 2018). The testimony provided in this report describes the training offered by the PTE Besafe training Ltd, and the value it has had for stakeholders. A summary of some of the key findings are:

- After attending Besafe health and safety training, 93% reported a positive attitude and agreed that courses were useful to keep and maintain health and safety in their workplaces
- After attending Besafe health and safety training, 97% noted valuable learnings they could implement immediately in their work environment
- 98% would like to attend more health and safety courses to gain the knowledge to work safely within their workplace

Given that the purpose of this research project has been is to provide evidence of the effectiveness of Besafe's suite of health and safety courses, these survey results, supported by interview accounts from tutors, trainees and employers, as well as organisational and TEC data, tell a positive story. In addition, such stakeholder accounts of the organisation's success and achievements are corroborated by NZQA's (2017) *External Evaluation Review* rating Besafe as "highly confident in educational performance."

Yet such results cannot be taken for granted: for individual trainee learning to be fully effective and help to build an organisational "safety culture" or "safety climate" (2013) a number of supporting factors need to be in place. The key reflections and/or recommendations which may be of interest to other health and safety and short term, adult learning course providers are both internal and external:

1. Trainees are more likely to respond positively to training programmes when adult learning theories are integrated into safety programmes (Wilkins, 2011). Trainees value authentic and relevant programmes, a mix of theory and practical activities, personalised approaches that cater for diversity, and flexible delivery options using up-to-date technology

2. Having the right trainer is critical for trainee engagement; for most attendees it is the first item commented on when asked for a general impression comment. Tutors need both industry and adult education credibility and skill sets. They need to be able to connect to the people in the room with respect and empathy, and they need to be interesting and interested

3. Employers need to model, even champion good practice in health and safety, prioritising safety promotion rather than procedural compliance. Managers need actual involvement in workplace risk management, rather than delegation (Gołembski et al., 2016), or employees soon perceive a lack of interest and a falling away of their post-training commitment to implementing new learning.

4. Organisational leaders and managers need to ensure that employees have the opportunity to participate in safety-related decision-making and share knowledge. When it is workers who

are most at risk of site accidents, who are the ones maintaining equipment and running machinery, they need to have a voice and they need to be listened to.

5. Effective training providers like Besafe have strong industry networks with their clients and have a role in conveying points 3 and 4 above so that they are supporting trainees not only in the classroom, but back in the workforce. This means educating employers, as well as employees!

6. Effective training providers both reflect on their current performance and look forward to predict changes in both the training environment and the workplace of the future. This means ongoing self-assessment through student and company feedback in a continual quest for self-improvement. Connection with stakeholders is critical, and research such as that recounted in this report is an integral part of ensuring agility and sustainability in a time of rapid change. Repeating this study on a regular two or three yearly cycle would assist Besafe retain its strong reputation and continue to build organisational data – for reporting and planning.

REFERENCES

Cercone, K. (2008). Characteristics of adult learners with implications for online learning design, *AACE Journal, 16(*2), 137-159.

Gołembski, M., Sobański, P., & Wojtkowiak, G. (2016). Employee Motivations in Maintaining Occupational Health and Safety (OHS) Compliance: Research on Nine Construction Firms in Poland. *Global Management Journal (8),* 94-100.

Honeyfield, J. & Fraser, C. (2013). *Goalposts: A professional development resource for new tertiary teachers in their first year.* [Handbook]. Retrieved from https://akoaotearoa.ac.nz/

Knowles, M. S., Holton III, E. F., & Swanson, R. A. (2005). *The adult learner* (6th ed.). London: Elsevier.

Lindemann, N. (2019). What's the average survey response rate? [2019 benchmark]. [Blog]. Retrieved from https://surveyanyplace.com/average-survey-response-rate/

Lingard, H. (2013). Occupational health and safety in the construction industry. *Construction management and economics, 31*(6), 505-514.

Marsden, E. (2017). *Heinrich's domino model of accident causation.* Retrieved from https://risk-engineering.org/concept/Heinrich-dominos

McKessar, M. (2012). *Learning / moving from a compliance culture to a leadership culture*. [Blog]. Retrieved from https://www.thelearningwave.com

Namian, M., Albert, A., Zuluaga, C. M., & Behm, M. (2016). Role of safety training: Impact on hazard recognition and safety risk perception. *Journal of construction engineering and management, 142*(12), 04016073.

Nielsen. (2018) *Health and safety attitudes and behaviours in the New Zealand workforce: A survey of workers and employers. 2017 Cross-sector report.* (A report to WorkSafe New Zealand). Wellington, New Zealand: Author.

NZQA. (2017). *Report of External Evaluation and Review Besafe Training Limited.* Wellington: Author. Available from https://www.nzqa.govt.nz/nqfdocs/provider-reports/8237.pdf

RNZ (Radio New Zealand). (2020). *Building up: recruiting more women into construction*. Retrieved from https://www.rnz.co.nz/national/programmes/ninetonoon/audio/2018731769/

Ryan, T. G. (2006). Performance assessment: Critics, criticism, and controversy. *International Journal of Testing, 6*(1), 97-104, DOI: 10.1207/s15327574ijt0601_6.

Sh!ft: Disruptive Learning. (2018). Breaking the Code: What Motivates Adult Learners? [Blog]. Retrieved from https://www.shiftelearning.com/blog/what-motivates-adult-learners

Standard-Based Education: Definition & Importance. (2018, June 5). Retrieved from https://study.com/academy/lesson/standard-based-education-definition-importance.html.

Sung, S. Y., & Choi, J. N. (2018). Effects of training and development on employee outcomes and firm innovative performance: Moderating roles of voluntary participation and evaluation. *Human Resource Management, 57*(6), 1339-1353.

Tixier, A. J. P., Hallowell, M. R., Albert, A., van Boven, L., & Kleiner, B. M. (2014). Psychological antecedents of risk-taking 27ehaviour in construction. *Journal of Construction Engineering and Management, 140*(11), doi 04014052.

Wilkins, J. R. (2011). Construction workers' perceptions of health and safety training programmes. *Construction Management and Economics, 29*(10), 1017-1026.

Woods, D. (2011). *Three quarters of employees want more training at work to fulfil their full potential, Middlesex University reports.* Retrieved from https://www.hrmagazine.co.uk/

APPENDIX A: THE BESAFE TRAINEE SURVEY

	Question	*Response type*
1	What is your organisation name?	Open comment
2	What is your name? (optional)	Open comment
3	What is your contact number or email? (required for draw purpose only)	Open comment
4	Are you aware of a health and safety policy or procedure within your employment?	Yes / No
5	Do you receive any form of formal workplace-related training regarding health and safety?	Yes / No
6	Does your employer encourage you to engage in health and safety while undertaking work-related tasks?	Yes / No / Sometimes
7	Are you aware of company related reporting processes in any event of a health and safety incident within the workplace?	Yes / No
8	Are you encouraged by your employer to report "near misses" events which could have been an accident?	Yes / No
9	How many courses or what have you participated in for health and safety training?	Open comment
10	You recently attended a health and safety training course. Before you attended this course what was your attitude to health and safety – Tick one (1 = poor 5 = excellent)	Likert-scale 1-5
11	After attending the health and safety training course what is your attitude to health and safety after the course – Tick one (1 = poor 5 = excellent)	Likert-scale 1-5
12	Did you find the health and safety training course worthwhile within the terms of your employment?	Yes / No / Partly
13	I found the health and safety course had too much theory content and insufficient practical content	I agree / I disagree / I agree in part
14	I would like to attend more health and safety courses to help me gain the knowledge to work safely within my workplace	I agree / I disagree / I agree in part
15	I consider health and safety too onerous and it hinders my work performance	I agree / I disagree / I agree in part
16	From the workplace, health and safety course/s attended, how valuable do you see this course in improving your attitude towards health and safety? Tick one (1 = poor 5 = excellent)	Likert-scale 1-5
17	From the workplace health and safety course/s attended, how valuable do you see this course in improving others' attitude towards health and safety in the workplace? Tick one (1 = poor 5 = excellent)	Likert-scale 1-5
18	I felt the course content to be relevant to my line of work – Tick one (1- poor, 5 excellent)	Likert-scale 1-5
19	I had reasonable opportunity to ensure I understood the delivered course content – Tick one (1- poor; 5- excellent)	Likert-scale 1-5
20	How interested was your employer in the course you had attended? Tick one (1- poor, 5 excellent)	Likert-scale 1-5

21	Were you provided with an opportunity to implement any of the learning into your workplace?	Yes / No / Partly
22	What further health and safety training do you think you require?	Open comment
23	Do you know about the asbestos legislation, policies and training requirements?	Yes / No
24	Do you know the PCBU responsibilities for Asbestos handling /removal?	Yes / No
25	Under the Health and Safety at Work (Asbestos) Regulations 2016, it is mandatory to have a minimum level of Asbestos awareness training to all staff who may contact/exposed with asbestos-contaminated material (ACM). Do you know these requirements?	Yes / No
26	Please add comments as to your opinions on health and safety training in order to assist you to measure your health and safety training	Open comment

APPENDIX B: PROMPT QUESTIONS FOR SEMI-STRUCTURED INTERVIEWS

Tutors.

1. About yourself - background, how long teaching, what you like most, what you find hardest?

2. About your learners - attitude, motivation, learning style, engagement in class, class management, any shifts you observe etc?

3. About your teaching - mix of theory and practical? activities? What works best and where do you get your ideas?

Employers/clients.

1. How imp is health and safety at their organisation - records etc, incidents reducing? How reported (i.e. what's their public exposure)

2. How do they select staff and units for training, and why choose Besafe as provider?

3. Any shifts they see in their staff after training - attitude and practice? leadership?

Learners.

1. Was this your first health and safety training? How did your attendance come about and did you want to do this?

2. How was your experience on the day? Any key learnings?

3. Do you think your attitude or practice of health and safety in the workplace has changed as a result of the training?