WEB-BASED SAFETY TRAINING FOR CONTRACTORS

Extended abstract

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Introduction

The use of contractors is extensive and wide-spread in Sweden and many other parts of the world. However, due to the complex nature of this form of labour, details and exact numbers are hard to establish (Mayhew et al., 1997). In Sweden there is limited scientific literature dealing with contractors in general, and even the literature dealing with contractors in specific areas (e.g. Blank et al., 1995) refers to ambiguous industry experts in estimating certain numbers. Suffice it to say, contractors stand out in the area of health and safety in terms of frequency and severity of injuries (Blank et al., 1995; Mayhew et al., 1997). To attempt to rectify this problem, special training programmes for contractors have been developed.

This paper builds on the empirical material of a 2013 study conducted by me, which sought to evaluate the effects of a particular web-based safety training programme for contractors (see Lööw, 2013), but takes a different focus than the original study. Here I am interested in the role this technology comes to have in the different companies, the effects on organisation, and the motivation behind using this kind of technology.

Burke et al. (2006) defined three categories of safety training based on their level of activity: low (e.g. lectures, films and video-based training), moderate (e.g. interactive computer programs, lectures with discussion), and high engagement (e.g. hands-on training in simulated or real environments). They found that although most methods will improve safety, the higher the engagement, the better the result. The evaluated training programme is computer-based, thus qualifying it as a moderate engagement method. The concept of the training programme is the following: User firms (i.e. companies that make use of contractors) put up requirements for the training programme. This means a contractor will have to complete the training programme before being allowed entrance to the user firm. Two versions of the programme are available: one general and one firm-specific variant. The general programme certifies for all user firms (for three years). However, a user firm might also require the specific variant, in which case the contractor has to complete that variant as well. The firm specific variant only certifies for the one firm (usually for three years as well, but it is up to the user firm). The programme is entirely web-based, consisting of programmed instructions with some simpler interactivity, followed by an electronically issued exam.

Method

The empirical material for this study comes from an interview study and a survey. All empirical material was gathered during the summer of 2013. In the interview study, ten interviews were conducted – five at user firms and five at contractor firms. The selection of user firms was limited by temporal and logistical constraints, but it nevertheless came to include the two different versions of the training programme. For the contractor firms, selection criteria were
The selection was to include small enterprises and SMEs as well as white- and blue-collar companies. To be considered eligible, 75% of the company’s workforce had to have completed the training programme. The respondent for every type of company was a person with responsibility for health and safety, who thus frequently came into contact with the training programme in question. The interviews were semi-structured and conducted over phone and in person. The interview guide was based on previous research on for example contractor health and safety and safety training programmes. A bottom-up analysis was performed on the interviews.

The survey was also based on previous research. It was sent out to every person who had completed the training programme since February 2013 (2980 people; the training programme was updated in February). The survey registered 400 responses during a period of two weeks.

Results

The study yielded several interesting results, but in this extended abstract I limit these to two major points as there is not enough room for a detailed account of the findings. The results presented here include both the empirical results from the interviews and the survey as well as the results of the analysis.

The perceived effect of the training programme

While there is evidence suggesting that the training programme affects both behaviour and attitude, the interview and survey results point towards knowledge and awareness – including knowledge and understanding of requirements, roles and responsibility – as the factors that are most strongly affected by the training programme. This can be exemplified by the fact that a majority of the survey’s respondents claim that the training programme has increased their knowledge about how to execute a task safely, but most also claim they do not actually do this (i.e. put the knowledge into practice). Granted, the respondents might already execute tasks safely, but this would assume that they already know how to do so; this is not reflected in the survey answers. Cohen et al. (1998) use the term transfer-to-jobsite, i.e. if the acquired knowledge can (or is chosen to) be applied at the actual jobsite. The lack of such a transfer might explain the phenomena observed here. Although there might be several potential reasons for the lack of transfer, only one was brought up in the interviews: norms, and more specifically macho attitude. (See, among others, Abrahamsson and Somerville, 2007, for an example of some of the effects of this attitude. In general, although perhaps not only due to this attitude, men are more often involved in workplace accidents; see for example Swedish Work Environment Authority, 2016.) However, only one respondent raised this issue. On the other hand, speaking in its favour, is the fact that 80% of those who complete the training programme are men.

It is also possible that the lack of change in behaviour is due to the requested competence not being the same competence as the one actually required, as argued by Ellström (1992). The training programme is primarily designed for contractors, but the requirement usually includes both contractors and consultants. The survey answers suggest that blue-collar respondents are more likely to perceive the training programme as having positively affected knowledge about
safe behaviour and actual behaviour. However, this difference does not seem to be enough to fully explain the lack of changes in behaviour.

It might also be the case that actual change in behaviour is dependent on the attitude towards safety. The interview answers suggest that the accidents that do happen are due to prioritising short terms gain (e.g. a longer break) over safety. While the interview respondents argue that health and safety is a prioritised area and that a majority of the survey respondents answer that their employer shows an interest in the area, this might not be true for the employee. The survey answers show that a majority do not perceive the training programme as having changed their interest – thought this does not exclude the scenario where the respondent already has an interest in the area. The interview answers give no clear indication either; some claim there has been no effect, others claim there is a clear effect. The literature (Cohen et al., 1998) suggests that the work in changing these factors also will have to happen outside of the training programme, which also seems to be recognised by several interview respondents.

None of the interviewed respondents claimed the training programme had directly contributed to fewer accidents; many noted the national trend of increasing workplace accidents. Such results are in line with the findings by Burke et al. (2006): safety training programmes do not have their prominent effect on accidents. Management’s role in preventing accidents was also mentioned several times as important, if not crucial.

An advantage of the training programme frequently mentioned by the interview respondents relates to economic aspects. For the user firms this advantage is usually due to not having to spend money on in-house training programmes as well as lessening the administrative burden. For the contractor firms the advantage is not as clear, but still present. Here time is saved by offering the possibility of completing the training programme outside of working hours or during periods of less activity.

**Complements and the training programme as an education vis-à-vis a requirement**

According to Burke et al. (2006), moderately engaging training methods (the investigated training programme is classified as such) require complements. The interview respondents – from both categories, but mainly from user firms – agree. Some user firms do provide complementary material, but usually not in the form of activities that require active participation, which is what Burke et al. (2006) found to be preferable. In the majority of the cases, actually providing complementary training falls on the contractor firms. And there is a problem in this. One respondent from a contractor firm argued that unless required to do so – by law or user firms – it is unlikely that they would conduct any additional training. In this there are two additional dilemmas. One interview respondent argued that some contractors firms might consider the investigated training programme as a complete safety training programme that does not require additions. The other dilemma is that it qualifies as a safety training programme in certain ISO certifications, which also has the possibility of discouraging further investments in safety training. All this seems to be true not only for this training programme but for others as well, judging by the interview answers. This suggests that the training programme is viewed, in some cases, as a requirement and not as a competence development intervention. This can be positive in that it forces otherwise unwilling contractors firms to have some sort of safety training. For other contractor firms this has the
potential of decreasing the effect of the training; Wilkins (2011), for example, showed that voluntary safety training yielded better results than mandatory ones.

It should also be noted that some interview respondents argue that there is a symbolic value in the requirement of the safety training. They argue that it is a way for the user firms to show that they prioritise safety. Other answers suggest that this signal can be of importance in influencing contractors and their safety.

Discussion

I am going conclude this paper with a discussion on the motivations behind the implementation and the role of this particular technology. For this purpose I make use of two theoretical perspectives presented by Røvik (2000): a tool and a symbol perspective. The tool perspective assumes organisation will strive for efficiency and act rationally in doing so. For the user firms, the sought-after effect would here be contractor safety. The interview results indicate that, when a safety training programme was used before the investigated one, it normally consisted of lectures. According to the literature (Burke et al., 2006), an improvement in safety can be expected when using, instead, a moderately engaging method. The empirical material also seems to point towards the training programme being both time and cost saving, so in this sense the choice of this particular programme over others seems motivated and in accordance with the tool perspective.

However, the perceived effects of the training programme amongst the interview respondents are not major (or at least not directly tangible) nor do they seem to be at the core for the reasons of using the training programme. Rather, other functions of the technology seem more important: accessibility, ease of use, less time consuming, cheaper, and so on. In this it is perhaps possible to argue that the technology presents an opportunity further outsource health and safety – or at the least its costs and responsibility.

In the symbolic perspective, the training programme would be implemented because of the increased focus on safety. Both the symbolic value of the programme and the societal trends of increased focus on safety are mentioned in the interviews. Thus, actual effects are less important than what values the technology reflects. But this perspective does not take into consideration the advantages of time- and cost-savings frequently mentioned in the interview. It seems likely that one perspective alone is not enough to explain the companies’ actions, a shortcoming of the strict adherence to the perspectives that Røvik (2000) notes.

The reasoning above does, however, only apply to the user firms; the contractors are required to make use of the training programme regardless, which in itself might be a problem: there is no guarantee that the contractor company considers the programme to be efficient (assuming the tool perspective) or consider it to be institutionalised (assuming the symbol perspective). Normally, this would result in a rejection of the concept (Røvik, 2000), but that is not possible in this case. The effects of the relationship that the contractor has to develop with the training programme in this case will probably be complex and can have negative effects.

Finally, the certification time is grounds for a similar but separate discussion. It is currently set to three years. Burke et al. (2006) found some indication that the effect of moderately
engaging training (e.g. knowledge) deteriorated around 15% over four weeks. Furthermore, several things in the area of safety are likely to change in a three year span, especially on a local level. While an increased frequency of certification may not negatively affect the user firms, the same might not be true for the contractors companies. It was noted, for example, that the infrequency of the training programme might even be an advantage.

Perhaps most important of all, also tying into this, is that the method is preferred. This is indicated by the interview answers as well as a customer satisfaction survey. Thus it does not seem likely that a similar, technology-based solution will not be used, regardless of shortcomings. Improvements or developments seem to have to happen within the technology and its application.

References


