



Strengthening Competency Claims of Trades in the Construction Industry

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Introduction

The Construction Industry Training Board (CITB) forecasted modest growth in the construction industry between 2019 and 2023 and that 6,550 new workers will be needed (Lilley, 2019). Currently there is a reported 2.4million jobs in the construction industry (Rhodes, 2019). Yet many within the industry are still reporting there being a skills shortage in the construction industry.

The Construction Skills Certification Scheme (CSCS) withdrew the construction site operative card in 2014 and urged employers to ensure that the right card is applied for when they are renewed. To be able to obtain a skilled worker CSCS card, the applicant must complete the relevant training and the health, safety, and environment touchscreen test. The main training routes in the construction industry are apprenticeships and vocational qualifications (NVQs and SVQs) but both routes have come under fire by Qualifications Wales, suggesting that these types of courses are not creating competent workers.

The aim of this research was to strengthen competency claims for trades in the construction industry by exploring the following objectives.

- To identify Key worker skill levels
- To evaluate perceived importance of evidencing competency by leading training provider CITB
- To improve a competency framework for the construction industry

Research Strategy

During the time that this research was being carried out, a global pandemic was declared and the restrictions that were put in place meant it was not possible to conduct surveys of the planned focus group. This affected the depth of the case study as it only considered the perceived views of those in a supervisory/managerial role. This research has illustrated the current problem with determining the competency levels of trades of construction sites from the viewpoint of managers and supervisors. The views of trades would need to be considered in future research to fully form the case study.



Research Method

The research consisted of 4 interviews on an active construction site to create a case study of a typical construction site. Interviews were semi structured as this offered "a great deal of flexibility" and also allowed "additional probing so that you can get more details about participants' thoughts, feelings, and opinions" (Statistics Solutions, 2020). The interviewees in this research were the following:

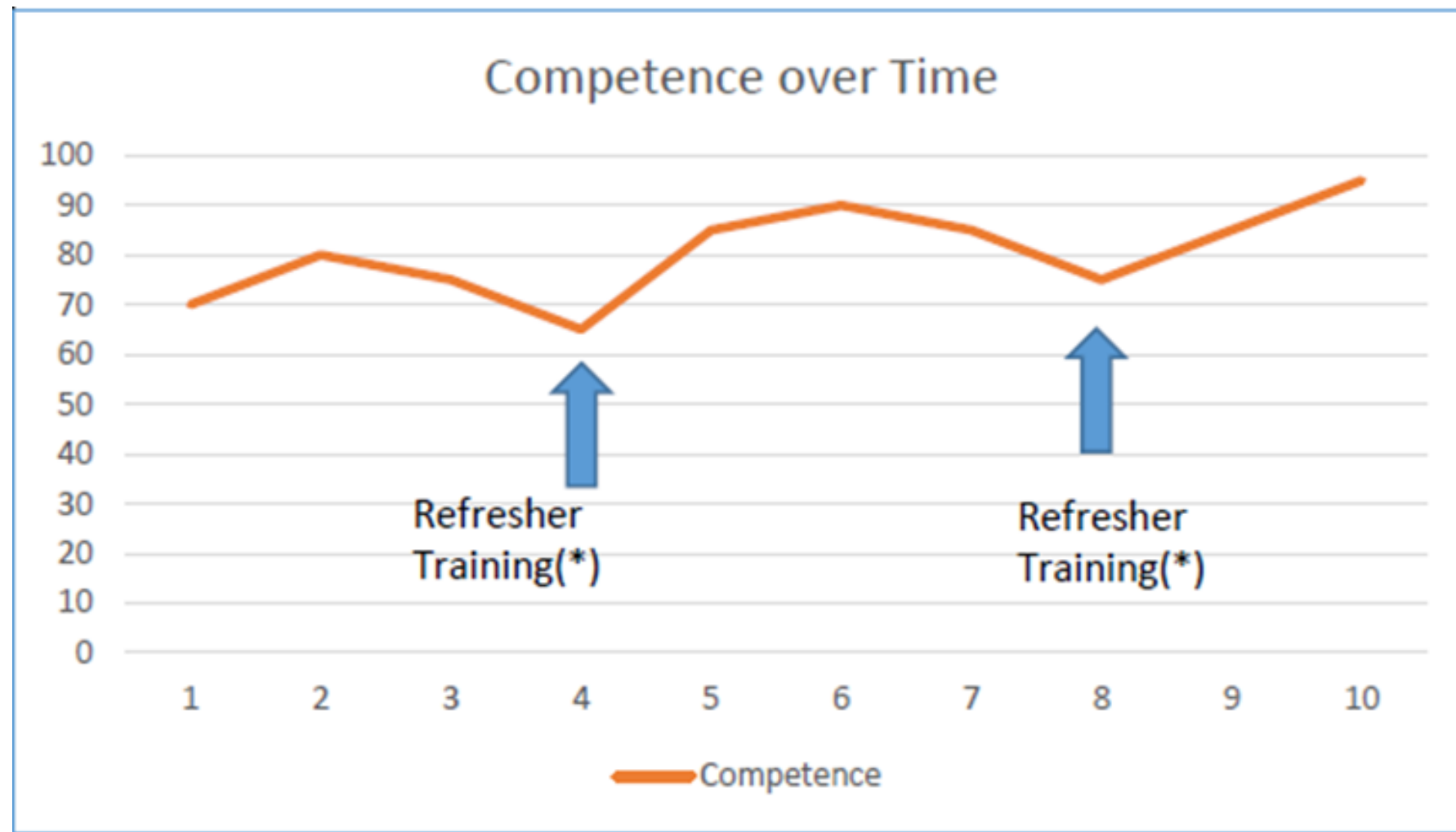
- Construction company A Training Manager
- Recruitment agency
- Project Manager A Construction company A
- Project Manager B Construction Company A

These were chosen as they would be able to create the case study of a typical construction site and see how the current systems are working and where they could be improved from a managers/supervisory viewpoint.

The interviews were made up of 7 open ended questions that was the same for all interviewees. Further questions were developed around their responses when required to get more detail. This method enabled the responses to be kept valid and direct with the required amount of detail.

The interviews consisted of questions that were deemed important from the literature review. With it being argued in the Building the Future report (Blaker and Taylor, 2018) that training courses were too short and, in some cases, assessed incorrectly it was important to see how individuals working in the industry felt. It was felt that these questions were important especially with CSCS integrating NVQ courses into the requirements to obtain one of their cards (CSCS, 2019). With the CDM Regulations, and Pye Tait reports (Pye and Pye, 2014 and Pye et al, 2011) stressing the importance of efficient evidence of experiences, interviewees were asked for their views on current systems to collect records of positive work experiences and whether they were good enough or not.

The interviews were carried out in the construction site offices, focusing on persons in a managers/supervisor role or office based. The interviews were set to be between 45mins to 1 hour, but this depended on how stimulated the interviewee became. Those who are very talkative caused the interview to last longer so it was important to not let them deviate off topic. By having a set of base questions it made it easier to do this and keep the interviews on track and extract the required information from the interviewee. The case study is based on an active construction site carrying out a range of civil engineering activities. The site had a combination of individuals who had entered the industry through different routes and were at different stages of their working lives. The individuals had different levels of skills and varying amounts of experience, which would give a good range upon which to build the case study.



(*) this should include informal training as well as formal, courses and in-house, manufacturer training and so on.

Figure 1 (Pye and Pye, 2014 pg. 2)

What is Competence?

It is argued by some that there is no real definition of what competence is and instead it is interpreted differently by different people depending on the industry that they operate in (Pye and Pye, 2014). Competency is comprised of four fundamentals.

- Occupational skills & knowledge (including functional skills)
- Health & Safety (skills and knowledge)
- Human factors (including self, situational – and risk awareness. And communications)
- Continuous improvement (including positive experience)

These fundamentals are supported by the Health and Safety Executive as "the combination of training, skills, experience and knowledge that a person has and their ability to apply them to perform a task safely" (HSE, 2019). The need for continuous improvement is supported in the Pye Tait report by saying that competence is not forever due to the human factor. The report highlights even if the relevant training is provided, firstly "human memory and capability can also degrade over time" and secondly "Complacency is another issue that can impact on competence especially as experience increases or where tasks are repetitive" (Pye and Pye, 2014 pg. 20). This brings the need for refresher training at set intervals as shown in figure 1.

(Pye and Pye, 2014 pg. 8)

Results and Analysis

All of those interviewed agreed that it was important to record the positive experiences of individuals working on construction sites. However, it was identified that this could be difficult and any system would require the engagement of individuals. Both of these are part of the fundamentals of competency as suggested in the Competence in Construction report (Pye and Pye, 2014). The interviews pushed these fundamentals further by suggesting that an individuals negative experiences should also be recorded as a mechanism to determine training requirements and also as a benchmark to measure improvements against. The project managers also agreed that records of positive and negative experiences should be used to determine an individual's training requirements and should not revert to automatic refresher training.

There is a system that is used with the Construction Plant Competence Scheme (CPCS) where plant operators complete log books indicating how they have used plant that they are trained to operate. It is a requirement of this scheme to complete a log book to be able to renew the CPCS card. This is not a requirement for the current CSCS card scheme, and yet many people use the achieved cards as a measure of competency.



Even with the CPCS system already being used within the industry, the project managers interviewed indicated that they preferred an online database, where site managers would be able to access an individuals work record as they pass to different sites. This could be an advantage when working with someone new to the company. Construction company A utilises a database called My Compliance, which is a database that keeps a log of what training an individual has, when it needs to be renewed and what training they require for their job role within the company. It does not keep any record of the individual using the skills learned.

Limitations

The research carried out only considered the views and opinions of those at a management level and not from trades on site. Only a brief analysis was completed of a single construction company where the workforce was spread over two sites. It was intended to seek the views of the trades working on these sites to see if they felt a system of logging their working experiences would influence their competency claims, whether it be positive or negative. It was felt that this was important especially as the recruitment agency suggested that they believed 70% of individuals may not support this new system. Also, the views of the CITB could have given an insight on how the courses they provide could incorporate this system of logging work experience after completing courses to strengthen their training and competency claims. It would have been an opportunity to see if they agree with the information collected from this research such as the importance of experience in an individual's training and whether more needs to be done before issuing cards/certificates.

The information in this research came from a limited number of sources due to time constraints and the global pandemic. The opinions of the CITB and other training providers are important to obtain the full picture of the position that the industry has. This research from the offset only considered the views of individuals working on two construction sites.

Due to the limitations of this research, it is important that any future research of this subject should start with the completion of this study. It is important that the views of trades are considered. These are the min beneficiaries of this new system and its successfulness is dependent on their engagement. If they are not willing to engage then this system would fail. The views of the trades could be collected through a focus group.

Insights from previous surveys

Build UK carried out a survey of their members during the second and third quarter of 2019. These surveys were carried out to "assess the provision of training, issues around recruitment and the skills needs of the industry" (Lyons, 2019a pg. 2). The survey carried out in the second quarter found that

- 53% of members felt that the recruitment of skilled workers was harder than in the previous quarter
- 49% of members were unable to expand their business due to shortfalls of skilled staff
- 60% of members felt there was a shortfall of apprentices to meet industry demands.

(Lyons, 2019a pg. 2)

The survey carried out in the third quarter targeted the same areas and found that

- 72% of specialist sectors believe there are not enough apprentices to fill their vacancies.
- 62% of employers are struggling to recruit because of a lack of candidates.
- 53% of employers are seeing wage inflation as a result of challenging recruitment issues.
- 36% of employers found recruitment this quarter even harder than in quarter two.

(Lyons, 2019b pg. 2)

All the surveys identified that their members felt there was an issue with the recruitment of skilled workers in the construction industry. A summary of the survey results to this question can be seen in figure 2.



Figure 2 (Lyons, 2019b pg. 2)

Conclusions

This research was completed in a manner that was not planned from the start. As it has been discussed previously, the global pandemic was declared at the point where personal research was due to take place. This made it impossible to complete all the aims set out at the start. This obviously affected the conclusions that could have been drawn from the research.

However, it was possible to complete a review of relevant literature around the study area and conduct a selection of the intended interviews. This meant that it was possible to identify traces between the interviews and identify areas of interest that warranted further research. The review of the literature highlighted some concerns with the way that the industry currently completes qualifications and the number of skilled workers within the industry. Build UK completed surveys of their members and released quarterly updates. These updates showed that over there was little improvement on the recruitment of skilled workers over the four reports with the majority facing problems with recruitment. With the duration of NVQ qualifications, as well as apprenticeships coming under scrutiny for not being relevant and having a short duration, the evidence to support the leaning of skills does not appear to be enough. There is a need to improve how evidence is collected to support training of individuals and understand that training is not completed over short periods of time. The HSE said that competence needs an element of experience. This point was agreed with by both project managers and by the competence in construction report. Both project managers agreed that experience was an important consideration to be made when assessing an individual's competence and that negative work experiences should also be considered.

The negative experiences could prove important when identifying training requirements for individuals on construction sites. The current system used to keep track of training within the construction company is called My Compliance. My Compliance is a tool used to record training, for gap analysis and expiries of training. Individuals are assigned a job role and training is assigned to that role.

As individuals move from site to site it can become difficult to quickly assess the skill levels they have. This goes against the fundamentals identified in the competence in construction report where it says that continuous improvement and positive experience is a key element in a competence definition. What this means is that there is a call from site management for an easy to use system that can identify workers skills and their competence levels in these skills. It was argued that their competence levels can only be accurately assessed by logging their experiences. With there being a number of different training methods available, it is important that the appropriate course is selected for each individual. Current competence level of an individual needs to be clear so the site manager can determine whether refresher training is required or if the competency level is low and therefore the individual will need to complete the training again.

References

- Blaker, P. and Taylor, C. (2018). *Building the Future*. Sector Review of Qualifications and the Qualification system in Construction and the Built Environment. [online] Newport: Qualification Wales, p91. Available at: <https://www.qualificationswales.org/media/3176/building-the-future.pdf> [Accessed 14 Jan. 2020].
- Construction Skills Certification Scheme | Official CSCS Website. 2019. *Construction Skills Certification Scheme | Official CSCS Website - Skilled Worker*. [online] Available at: <https://www.cscs.uk.com/card-type/skilled-worker/> [Accessed 15 October 2019].
- HSE, 2015. *Managing health and safety in construction – Guidance on Regulations*, p 90
- Hse.gov.uk. (2019). *What is Competence? - Competence in health and safety*. [online] Available at: <https://www.hse.gov.uk/competence/what-is-competence.htm> [Accessed 17 November. 2019].
- Statistics Solutions. (2020). *Choosing an Interview Type for Qualitative Research - Statistics Solutions*. [online] Available at: <https://www.statisticsolutions.com/choosing-an-interview-type-for-qualitative-research/> [Accessed 12 Feb. 2020].
- Pye, K., Pye, M. and Legard, J. (2011). *A commentary on routes to competence in the construction sector*. London: HSE Books, p118.
- Pye, K. and Pye, M. (2014). *Competence in Construction*. Harrogate: Pye Tait Consulting, p117