

## **CONSTRUCTION ENGINEERING MASTERS DISSERTATION ABSTRACT**

### **Investigating the Relevance of Management and Leadership Training for Construction Site Supervisors**

Productivity in the UK construction industry is in decline and lags behind neighbouring EU countries and the US. One of the main influencers in productivity during construction is the performance of construction supervision. In recent decades construction trade supervisors have faced challenges such as managing a transient workforce who lack basic trade skills, in addition to the challenges of managing a migrant workforce with a limited grasp of the English language. Furthermore, the industry has for decades failed to actively train supervisors in order to meet the increased demand for supervision and to support industry growth. The resultant effect is that the UK construction industry is facing a supervisor skills deficit, which if unresolved will have a negative impact on the UK Construction Industry's ability to deliver new projects efficiently.

This research identifies the root causes of the supervisor skills shortage through direct engagement with the workforce and provides proposals to bridge this skills deficit. A lack of supervisor specific, formal training has been identified as a barrier to the career progression of construction operatives. This research also identifies these training gaps and defines the type of training which construction operatives and existing supervisors would most benefit from, in order to develop their supervisory skills.

A mixed research method identifies the multiple factors which define the root causes of these issues from a 360 degree perspective. This research includes: a desktop study of the existing courses and accreditation schemes available to construction trade supervisors, a questionnaire answered by 70 industry professionals, structured interviews with 17 operatives, 18 construction trade supervisors and 8 of their managers, finally a time and motion study that recorded over 5000 observations of construction trade supervisors working on live construction sites, over a total period of 39 hours.

This research identifies the need to provide a monetary reward system that offsets current demotivating factors such as the additional pressure and stress associated with taking on a supervisory role, if construction operatives are to be enticed to progress forward and take on this additional responsibility. The solution proposed is to link supervisor performance to their monetary reward. However the challenge with this proposal is that currently the industry has no standard method of benchmarking supervisor performance. The results of the time and motion study carried out in this research, provide a potential solution from which a baseline of supervisor performance could be measured. The development of this solution is beyond the scope of this research, but provides a compelling opportunity for future research.

Finally, effective communication was identified as the most significant skill required of the supervisor in order to enable them to effectively direct the workforce. During the time and motion study over 85% of the working week observed included direct communication with the workforce, other supervisors and managers. Many foreign construction operatives with the potential to become a construction trade supervisor are prevented from doing so because of their poor English language skills. This research recommends communication skills and in particular, language training for these construction operatives, in order to bridge the skills deficit with the quality of supervision that is needed.

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