



The United Kingdom's Construction Skill Shortage

JCT Student Competition

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DECLARATION

I hereby confirm this is my own work. There is an animated video to visually represent the essays idea's on improving apprenticeships. They both count as one entry. The video was written, narrated, directed and edited by me. I also drew the storyboard for the video. My friend Minky is credited with drawing the animations directly from my storyboard, as discussed in correspondence with JCT. The video is available at:

<https://www.youtube.com/watch?v=EagXMAMQrzQ>

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Introduction

This essay analyses the causes of the United Kingdom's current skills shortage in construction and proposes ideas for dealing with it. The essay analyses the recruits needed to fill the shortage and who the future workforce could be. While qualified migrants and older workers can address short-term needs, the long-term issues require vision that addresses the practicalities as well as the mentalities that constrain the industry. The essay's ideas are divided into three sections: Short Term Solutions, Long Term Solutions, and Women in Construction.

Skill shortages threat to construction

The UK is facing a housing shortage. According to Kate Barker's "Review of the Housing supply" (2004) about 250,000 homes need to be built each year to meet the current housing demands. In England in the 12 months to September 2015 only 135,050 were built (DCLG, 2015). The UK Commission for Employment and Skills (2012) suggests that in order to meet the 250,000 homes target, 434,000 new recruits will be needed between 2010 and 2020 just to replace the retiring workforce. It is not encouraging then, that according to the Department for Business, Innovation and Skills (DBIS), the 2014/2015 academic year saw only 24,850 students enrolled into construction related apprenticeships (2014). Although this is a welcome rise from the 2013/2014 figure (15,890), the CIOB has released an article warning of a decrease in the number of apprenticeships being completed (CIOB, 2015). So who is the future labour force?

Four labour sources: migrants, millennials, women and technology

An article by "The Economist" (2015) suggests that the UK will rely on alternative, labour-reducing methods of construction. Arguably, whilst labour-efficient technologies will be part of the solution, the industry still needs to attract workers to operate such technologies. This also emphasises the importance of training, as skilled workers will be needed. Migration is another

source that will play an integral role. Whilst migration can be a short-term solution, the industry should equally focus on training people nationally as there are currently 625,000 16-24 year olds unemployed (Delebarre, 2015).

Fluctuations in immigration, for example a “Brexit” could be damaging. An example can be found in a Wall Street Journal article (2015) when the US found a shortage after introducing stricter immigration laws in 2007, losing 570,000 Mexican born workers (1.8 million in 2007 to 1.3 million in 2015). A study by the CIOB (2015) argued that ‘tight regulation of migration would damage construction activity in the UK.’ Yet it also argued that it ‘reduces the incentive to invest in training UK citizens’. Thus a balance needs to be quickly found, especially if the industry should be affected by a new European situation. This essay will later argue the case for apprenticeship quotas. Finally women make a disproportionately low portion of the industry’s workforce. According to the Office of National Statistics women have made great gains in entering most other industries, yet only make up about 10% of construction workers (2013). Thus it is vital that construction develops strategies to recruit women.

Short Term Solutions

Recruiting from adjacent industries

Construction could deal with the short-term skills gap by recruiting from similar industries currently cutting workers. Schlumberber, an oil and gas company has had to cut around 10,000 jobs starting from 2016 (Oilandgaspeople, 2016). The Financial Times reported that the UK saw 5500 jobs being cut in the oil industry in 2015, predictions of lowering oil prices could result in more people looking for work (2015). The steel industry has seen cuts too, with Tata steel confirming 1,050 job-cuts (BBC, 2016). Although it is impossible to predict changing markets, construction would benefit from employing skilled unemployed workers whilst it can. However, companies should be allowed to protect themselves from predatory recruitment, where companies wait to snatch recruits once other companies have trained, via contract. The long-term aim should be to train young workers. But whilst there are unemployed workers, a thriving construction industry should recruit.

Keeping the older generation

Investing in apprentices will not be felt immediately as it takes time to train the numbers needed. The short-term skills gaps will have to be filled by migration, and keeping older workers working longer (CIOB, 2015). A report by 'S.p.a.r.c.' found that older workers would be willing to stay in industry but due to ill health they had to retire early (2008). Further research suggests that although 48% of CIOB members were against rising the retirement age, 59% were aware of employees extending their careers after retirement (2014). The aim is to make construction healthier for workers, so they do not need to retire early. Physical work can be relieved from older workers by putting them in supervisory roles. Their experience is invaluable to train younger workers. New technology could play the greatest role in helping older workers to stay on. Technologies like exoskeletons are already allowing workers to carry heavy loads with low health impacts (Bowdler, 2014). Furthermore a study published by Loughborough University found simple technologies such as low-vibration tools and tactful management that reorganises shifts to avoid repetitive strains, can lessen strains (Gibb *et rest*, 2013). Investing in such technologies will not only allow current older workers to retire later and in better health but allow future generations to do the same.

Environment for creating apprenticeships

The government hopes to encourage 3 million new apprenticeships in all industries between 2015 and 2020 through a £12 billion investment (Delebarre, 2015). There are other incentives such as Club 5, a voluntary pledge from companies to commit to 5% apprenticeship workforce (2015). 5% of the 2.93 million-construction workforce would be 146,000 apprentices, enough to significantly influence the skills gap (Department for Business, Innovation and Skills, 2013). As 26% of construction is within the public sector (Rhodes, 2015) government could make the 5% pledge as part of the bidding criteria for projects. As 74% of investment is private sector one could argue that 26% will not influence industry enough. However as most contractors bid for projects in both the public and private sector, the effect of complying with the public sector 5% rule transfers to the private sector too. A challenge could arise when

companies from outside Britain bid for jobs. Thus there would either have to be an agreement to have the 5% rule across all Europe's public sectors or oblige foreign companies to offer apprenticeship opportunities. The aim should be to give companies who invest in apprenticeships a business advantage, making recruiting apprentices the norm.

Transport

Speaking from personal experience in site recruitment, the hardest commissions came from sites in areas with few construction workers. At times it was hard to find workers from tradesmen-abundant areas to commute due to expense. Travels plans are used in the construction industry yet seem to be mostly used on big projects such as the Olympic stadium (Mayor of London, 2012) and sites in the countryside such as Preesall Underground Gas Storage Facility (Halite, 2011). In labour-scarce areas sites in close proximity to each other should collaborate rather than compete over workers. There is no reason sites could not split the costs of transporting workers from labour-abundant areas to scarce ones. Whilst this could raise costs, it surely cannot match the costs of late completions and slower economic growth.

Long Term Solutions – Changing mentalities

Encouraging and improving apprenticeships

A report published by Demos (2015) found that parents and schools greatly influence what a student chooses as a career path. Whilst parents considered apprenticeships to be positive, they viewed them as being suitable for someone else's children. There exists a mind-set that an academic path is more desirable than a technical one. The way apprenticeship schemes could counter this is by offering alternative qualifications equivalent to Bachelors (Level 6) and Masters (Level 7) degrees. Currently the highest apprenticeship in 2015 is an advanced (Level 3) with 181,800 enrolled. Compared to Level 4 apprenticeships, which only have 19,800 students enrolled (Delebarre, 2015). Naming the courses in terms that parents and schools can relate to, for example '**Bachelors Apprenticeship Degree** in Civil Engineering', may culturally ease them to

encourage students. Furthermore according to the Department of Business Innovation and Skills about 10% of apprenticeships are not completed (2013). A study from Warwick University suggested that one of the main reasons for non-completion was dropping out to return to University or School (2010). This study was based on data before the £9000 fee. Thus apprenticeships need to be seen as offering as high a qualification level to traditional paths. Only then, with the prestige of industry endorsement, will young people feel confident in enrolling.

Improving apprenticeships

Collaboration between Universities, Industry and Accrediting Bodies offers great opportunities to make training more efficient. Currently the most comparable arrangement is students studying and working part-time. An apprenticeship-based course means that industry will be directly involved with universities in drafting and updating the course syllabus. This in turn will make training far more relevant to what students are currently working on. Universities have the facilities to train students, but construction sites provide the experience. Thus in order to ensure the quality of training is 'industry integrated', academics will have to work closer with professionals and gather their own industry experience for teaching. Professional bodies can help balancing academia and training by making these apprenticeships part of their charter process. Furthermore, professionals could use the training of students as a route to get chartered themselves. The government is currently testing nine similar degree related apprenticeship schemes, but the only construction related degree is 'Chartered Surveying' (Department for Business, Innovation and Skills, 2015).

Cultural attitudes towards construction

How can construction be appealing to millennial men and women? An American study suggests technology could draw the attention of young people (FWCI, 2013). The industry is using Attractive technologies such as drones, 3D printed homes and virtual planning (Jone, 2014). Whilst not lacking in exciting toys, young people do not associate them with construction. Construction needs to

advertise itself better. Through social media, construction could associate itself with popular video games such as Minecraft, a game where gamers build worlds and structures within them. Or make inspiring drone video footage which can attract millions of views on sites such as YouTube or Facebook, showing off the technology and engineering involved in construction (Adams, 2015).

A further step is not to board up construction sites. Barriers could have Plexiglas windows, which may allow curious eyes to see the engineering and machines involved. This could also have a positive knock-on effect where sites cannot hide bad health and safety practices, advertising tidy sites with better work environments young people could consider joining. This deals with an issue by Capetra's market research team, who suggested that millennials considered construction an unpleasant and unsafe work environment (2014). Construction is too hidden and could benefit from some flaunting. To quote Oscar Wilde 'The only thing worse than being talked about is not being talked about.' (2015).

Women in construction

Encouraging Young Women to join construction

Whilst other industries have managed to attract women, they currently make up only 11% of construction's workforce. Shockingly, only 1% of tradespeople are women (RICS, 2014). The industry can draw on this untapped talent. Statistics presented by the Equal Opportunities Commission suggests more than a third of young women in school considered entering a non-traditional female workspace but only 14% of those would consider construction (2008). As discussed earlier, schools should present construction to women as an industry they can succeed in. Industry should directly encourage schools to take girls on site visits and whilst there, meet other female professionals. A report by MP Meg Munn stressed the importance of changing construction's image away from masculine (2014). Professional women could also be invited to schools as speakers, dispelling the image that construction consists of males only. Schools often have little knowledge of the industry, which discourages teachers from promoting

construction; female speakers could change those attitudes (Amaratunga et al, 2008).

Parental leave

To give the presented image substance, construction needs to be seen as an industry with women leaders. Women speakers need to be seen and heard by younger women. A paper found that countries such as Singapore had women playing roles crucial to the reorganisation of construction management. The study suggested that one of the greatest barriers concerned maternity leave (Toor et Ofori, 2011). One way industry can get over this is by offering both males and females equal parental leave, so companies cannot make female/male distinctions between parents taking time off. The UK has introduced transferable parental leave, but according to social research group 'Tavistock', fathers are slow to take leave from work. Countries such as Norway found a non-transferable parental leave system to be much more effective (2014). Thus industry should consider doing the same, and who knows? If a father working in construction takes more time off to bond with his daughter, she may be inspired to enter the same industry. Schemes such as 'bring your daughter to work day' could also make women feel more inclined to join the industry.

Flexibility and attitudes

Other unconventional ideas like childcare centres near sites could allow parents flexibility. Research conducted by Lisa Worrall found that the two greatest barriers to women in construction were 'attitudes, behaviors and perceptions' and 'inflexible working practices' which specifically applied for women between the ages of 25-45 (2012). A counter argument would be 'Why provide expensive childcare centres when there are few women working?' However, they provide both fathers and mothers flexibility. Once the centres are in place the transportation barriers both sexes face can be lessened. Furthermore, children raised in a construction environment may be more culturally inclined to consider construction as a career path. A reflection on women's attitude towards construction is discussed in an article by Building Magazine (2005). They asked 50 women if they would work in construction; 36 answered "no". Describing the work as 'dangerous' and 'macho'. As technology will inevitably ease

construction' physical demands, women may feel more inclined to consider construction as a career. Construction will still be seen as a tough industry, but 'tough' is not synonymous with 'male'.

Conclusion

In conclusion, construction does have resources to deal with its skills gap. Technology can be used to make work less labour intensive, improve workers' health resulting in their careers being extended and by making construction a more attractive industry to join. The industry has to deal with young people concerns, by presenting clear paths people can progress through successful careers. Immigration will play a significant role although industry should equally focus on training people from the UK, to deal with youth unemployment. Construction culture needs to be friendlier towards women by being a more flexible environment where women can thrive. Work flexibility will benefit men just as much as women. Regardless how industry and government choose to deal with the skills gap, resources need to be invested now if an economic slowdown caused by construction is to be avoided.

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