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An Exploration of Construction Craftspeople Apprentice Training: Evidence from the UK

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Today, demographic data shows that the workforce in the construction sector is ageing. The prevalence of injuries, such as musculoskeletal problems, and low labour productivity have been linked to the ageing construction workforce. To improve the supply of young workers to the industry, stakeholders, i.e. government and the private sector, are investing in construction craftspeople apprenticeship programmes. These programmes address two key issues: (i) provide training to young workers for construction jobs and (ii) reduction in youth unemployment. This qualitative study explored the practice of mentoring during construction craftspeople apprenticeship within the UK. Eighteen people who are involved in the various stages of apprentice training were interviewed about mentoring practice. The data was transcribed and qualitatively analysed. The data highlights the prevalence of informal mentoring of proteges during the period of craftspeople apprenticeship. Lack of structured mentoring programme and inadequate support from mentors were identified as the main barriers to effective mentoring. Also, building strong relationship, patience, vast industry experience and good communication skills are attributes of effective mentors. The study concludes by providing insights into its theoretical contributions and practical implications for vocational training and the construction sector.

Keywords: Apprenticeship, UK, Mentoring, Construction Craftspeople, Workforce

Introduction

It is evident that the size of the workforce available to fill vacant job roles in several countries is decreasing due to the ageing of the population. According to the CIPD (2019), the average age of workers in the construction and manufacturing sectors of the economy is over 42 years. Furthermore, data from the US Bureau of Labour Statistics reveals that the median age in the construction and manufacturing sectors of the economy are 42.3 and 44.2, respectively. These figures suggest that the workforce is ageing in these critical sectors of the economy, which have implications. For instance, the shortage of workers could be attributed to the number of people retiring after long years of working. Additionally, older workers are more prone to safety hazards, such as an increased risk of falling (Verma et al., 2008; Scott et al., 2018). Furthermore, scarcity of skills is one of the main reasons for increasing project and production costs (Pathirana and Yarime, 2018). Consequently, for sustainable growth of the economy, it is imperative to develop strategies for attracting and retaining young people in any country's workforce.

To boost the supply of people who have the required skills and knowledge in the industry, several programmes are being implemented across the globe. For instance, the Enhanced Construction Manpower Training Scheme of Hong Kong (Chung et al, 2019), degree apprentice courses in the UK (Saville et al., 2020), the World Skills Programme South Africa (Construction Industry Development Board, 2017); the European alliance for Apprentice in Europe (European Commission, 2013) and co-op degree courses in North America are examples of programmes designed to train young people for industry jobs (Ingram et al., 2013). These programmes are designed to support work-based learning, which has been linked to improved students' academic performance, satisfaction, and employability, among other benefits (Hegarty and Johnson, 2008; Doss et al., 2021). The successful implementation of these training programmes would attract and provide young workers to replace the ageing workforce in the engineering sector (construction and manufacturing). Although these training programmes have existed for many years, with one of the earliest published studies on work-based learning in engineering reported by Myers and Keeler in 1961, the shortage of labour and ageing workforce remains a challenge for the industry.

Apprenticeships provide a platform for the training of young people for work in the construction sector. The 'Enhanced Construction Manpower Training Scheme' (Ho, 2016) and Construction Industry Training Board (CITB) funded programmes (Abdel-Wahab, 2012) are examples of apprenticeships for craftspeople training in Hong Kong and the UK, respectively. These apprenticeships increase the potential to earn an income among young people (Redfering and Cook, 1980). Apprenticeships address the youth unemployment problem, and this is one of its benefits. Despite the existence of apprenticeships in several countries, shortage and ageing workforce are still challenges faced by the construction sector. This situation could be attributed to the low completion rates associated with craftspeople apprenticeship (Bilginsoy, 2003; Snell and Hart, 2008). Studies have shown that mentoring of trainees could help to improve learning outcomes and completion rates (Campbell and Campbell, 1997; Tenenbaum et al., 2001). Thus, effective mentoring could improve the supply of workers to the construction industry. However, very little is known about how to effectively mentor trainees during training.

The current study fills the gap in the current knowledge by addressing three research questions: (i) *How is the current construction craftspeople apprentice training programme delivered in the United Kingdom?* (ii) *How can the construction craftspeople apprentice be mentored effectively in the United?* and (iii) *What are the factors hindering effective mentorship of construction craftspeople apprentice in the United Kingdom?* Due to the limited number of research on mentoring during apprenticeships, the data was collected using a qualitative research method, i.e. interviews. The study contributes to existing knowledge by providing insights into the mentoring of young people during an apprenticeship programme in the construction sector. This information is vital for improving completion rates of apprenticeships for craftspeople in the construction.

Literature Review

Apprenticeship programmes delivery approach

The models used for the training of craftspeople apprentices in the construction sector tend to vary from one country to another. A concise description of these models are presented in this section of this paper. In **Canada**, the apprentice training programme is made up of two main components:

classroom teaching and on-the-job training. The supervisor of an apprentice is expected to fill in a logbook, which describes the tasks done by each trainee (Fayek et al., 2003). Fayek et al. (2003) point out that adequate supervision ensures that an apprentice carries out each task safely and correctly. In British Columbia, the possession of certification is not mandatory for practicing some construction trades (Coe, 2013). However, the possession of Red Seal certification is vital for labour mobility within the provinces of Canada (Gunderson and Krashinsky, 2016). This certification indicates that a craftsman has passed the standardised interprovincial exam. In **the United State of America (USA)**, apprenticeship training for craftspeople are funded by the government, the private sector or both. These training programmes are delivered through classroom instruction and on-the-job work experience. The numbers of years it takes to complete the programme could vary from country to country and for different programmes (Glover and Bilginsoy, 2005), and Woods (2012) discloses that a “Certificate of Completion” is issued to trainees at the end of a training programme. The National Vocational Qualifications (NVQs) programme in the UK is highly regarded and respected. It is designed to help learners develop the knowledge, understanding and skills required to perform effectively in their chosen career (Arkani et al. 2003). To gain an NVQ, learners must demonstrate their competence through the assessment of a range of tasks and activities related to their vocational area of work (Hogarth and Gambin, 2014). The assessment process is rigorous and requires learners to demonstrate a high level of commitment and dedication. Furthermore, successful completion of an NVQ will result in the awarding of a nationally recognised qualification. The National Vocational Qualifications (NVQs) are used as a framework for certifying the training process. The NVQ framework provides insights into the level of competence and knowledge acquired by a craftsman to practice a trade. In **the UK**, it takes an average of two to three years to complete apprenticeship training for craftspeople (Hogarth and Gambin, 2014). Arkani et al. (2003) describe the various stages of training within the NVQ framework. In the first year, students can try their hand at numerous trades. Trainees are expected to complete the Level 2 NVQ within two years of training and Level 3 (fully skilled) in three years (Arkani et al., 2003).

In **Scotland**, unlike in England, the completion of an NVQ at Level 3 is the minimum qualification for practising a trade. Also, there has been a shift away from exams to competency-based assessment (Gordon et al., 2009). This approach is reliable and robust for evaluating the level of competence developed over time. Taken together, various models are used around the world for the training of apprentice craftspeople in the construction sector. Despite the variance in the training and certification requirements across countries, the models are seen to be effective.

Effective Mentoring: Barriers and Enablers

Mentoring

As stated earlier, mentoring has a positive impact on the completion rates of apprenticeship programmes. Mentoring is a teaching and learning tool, which could be formal or informal (Austin, 2007). It is a dyadic relationship in which an older individual coaches, guides, and helps a younger one (Hunt and Michael, 1983) or a relationship between two individuals whose nature changes over time (Kram, 1983). According to Corney and du Plessis (2010), mentoring is an intervention aimed at creating or facilitating a supportive relationship with a significant order. It is evident that mentors and mentees are working collaboratively to facilitate intellectual exchange, knowledge acquisition and career development. Stakeholders need to encourage the development of mentoring relationships between experienced craftspeople and trainees.

Factors hindering effective mentoring.

Numerous studies have attempted to understand the factors hindering effective mentoring. These factors can be classified into two groups: (i) personal barriers, and (ii) institutional barriers.

Personal barriers are factors within the control of the mentors and mentees. Studies (Allan, 2010; Allen et al., 2000; Stamm and Buddeberg-Fischer, 2011; Law et al., 2019; Leary et al., 2016; Liang et al., 2008; Liao et al., 2020) have shown that “cultural differences”, “trust”, “bullying”, “gender”, “unclear expectations”, “mentee’s inability to initiate discussion”, “mentee’s do not understand the purpose of mentoring”, “perceived potential of mentee”, “mentor capability”, “mismatch between the expectations of mentee and mentors” and “mentor’s motivation” are factors that have adverse effect on the outcomes of mentoring. Literature shows factors hindering mentoring tend to vary based on context and the characteristics of the study’s population. In the field of psychiatry, it was found that “lack of time to meet with mentee”, “mentee’s interest” and “personality conflict” are factors limiting the effectiveness of mentoring (Szabo et al., 2019). In contrast, Blickle et al. (2010) showed that “social-economic status”, “previous mentoring experience” and “positive affectivity” are personal barriers to the effectiveness of mentoring among individuals employed in administrative roles. Thus, there is a need to understand the personal barriers to effective mentoring among construction craftspeople apprentices. This information can be used to develop strategies for effective mentoring.

Institutional barriers are factors that are not within the control of the mentors and mentees. For instance, studies have shown that heavy workload reduces the time available to mentors to meet with their mentees (Szabo et al., 2019). The unavailability of time could be due to competing job demands, labour shortage, staffing problems or other issues which are not within the control of the mentors. Previous research shows that “organizational development culture”, geographic distance, short duration of training programs, limited opportunities for mentees to meet and interact with mentors, lack of formal mentoring programmes and lack of mentors (Stamm and Buddeberg-Fischer, 2011; Kilburg, 2007; Blickle et al., 2010; Leary et al., 2016; Veeramah, 2012; Ross and Edwards, 2016) as some of the institutional barriers. Literature indicates that a wide variety of factors are barriers reducing the effectiveness of mentoring. Despite the importance of mentoring, there is very little known about the personal barriers to effecting mentoring among construction craftspeople apprenticeship. The current study seeks to fill this gap in the existing knowledge.

Enablers of effective mentoring

The content of the preceding subsection shows that a range of factors have impact on the effectiveness of mentoring. This information is essential for the identification and implementation of strategies that can improve the effectiveness of mentoring.

Mentor capability – The mentor’s knowledge, skills and experience is essential for effective mentoring. Research has shown that a mentor should have excellent interpersonal and communication skills (Sospeter, et al.2022; Liao et al., 2020). Also, effective mentoring is largely dependent on the mentor’s ability to: (i) set clear goals, (ii) build a mentoring relationship based on trust and mutual respect, (iii) provide feedback, (iv) provide pastoral care, (v) participate in mentor training programs, (vi) let mentee make mistakes, (vii) be flexible and non-judgmental of mentees and (viii) develop an interest in mentoring others (Allen and Poteer, 1999; Eller et al.,

2014). Based on previous studies, this information highlights the key issues that can strengthen the relationship between mentees and mentors.

The availability of formal mentoring programs – The impact of formal mentoring programs on the effectiveness of mentoring has been a subject investigated in many previous studies. At an institutional or organizational level, the formalization of mentoring programs makes it easy to establish mentor-protégé relationships. However, the existence of a formal mentoring program does not guarantee effective mentoring. To achieve effective mentoring, a formal mentoring program needs to have the following: (i) a process of mentor-protégé matching; (ii) identify and train potential mentors; (iii) mentors should be motivated and rewarded; (iv) designed to address institutional/organizational needs and well resourced (Ramani et al., 2006; Cross et al., 2019; Liao et al., 2020). For instance, the workload of mentors could be reduced. This protected time will give mentors more space to provide support to mentees.

Research Method

Several data collection methods have been used in previous research on mentoring. The techniques deployed in previous studies include survey, focus group, interview, participant observation and case study, among others (Allen et al., 2008). Due to the paucity of research on the subject matter (i.e. mentoring of construction craft apprentice), a qualitative research approach was used to address the research objectives stated in the introduction section of this paper. Scholars stated the use of qualitative research methods provide fresh understanding of the subject matter beyond what has been stated in the literature (Maxwell, 2000; Creswell, 2014). The qualitative research approach provides an exploration of how mentoring could be improved among construction craftspeople.

The research reported in this paper forms part of a large study focused on improving the outcomes of construction craftspeople apprenticeship in the UK. At the inception of the study, a systematic literature review was conducted to highlight the gaps in the current knowledge on craft apprentice training in the construction sector. The literature review was reported in Daniel et al. (2019). The review showed that apprenticeship training exists at level 3, level 4, level 6 and level 7 for the UK construction sector. However, the study is focused on the apprenticeship at level 3. The rationale for selecting level 3 are: (i) years of existence (Richter, 1998) and (ii) completion of level 3 training ensures that the person can practice a trade in the UK.

Material and Procedure

The structure and content of the interview instrument were informed by the outcome of the literature review. The questions were piloted with apprentice's student, employers, training providers and regulatory agency. Following their feedback, the questions were refined, and relevant questions were included for the actual interview. The semi-structured interview questions were open-ended. The use of open-ended questions gave the interviewees the freedom to share their views which increased the quality of the evidence collected at this stage. The advantages of open-ended questions include: (i) interviewees respond to questions based on "their own terms" and (ii) the class of questions are useful for investigating new knowledge areas (Bryman, 2016).

Interviewees were purposively selected from a population of key stakeholders involved in construction craftspeople apprentice training. The stakeholders were drawn from the following groups of people: trainers (TR), employers (EM), apprentices (AP), non-completion apprentice (NCAP) and regulators of apprenticeship programme (RA). Apprentice who did not complete (NCAP) their training were also interviewed. This group of people were interviewed to gain a deep understanding of the subject matter being explored. The interview questions for all groups of interviewees were similar. However, the structure and tone of some of the question varied. Here is an example of questions posed to the stakeholders with different tone: **TR**-*What qualities make for a good mentor for an apprentice?* **EM**- *How do you mentor the apprentices working in your organisation?* **AP**-*As part of training please describe the how you are being mentored at work and school?* Some questions use similar tone for example: *Please describe what you think could be done to improve the current craftspeople apprenticeship training programme? Please describe how the current craftspeople apprenticeship programme is delivered in the UK?*

Participants

Semi-structured interviewees were conducted with 18 different stakeholders. The composition of stakeholders include: AP= 10; NCAP = 2; EM =3, TR = 2 and RA = 1. The information about the interviewees is presented in Table 1. The interviewees were drawn from various locations in the UK (nine from England; four from Scotland; three from Northern Ireland and two from Wales). The data presented in Table 1 shows that the interviewees are involved in various aspects of construction crafts apprentice training. The planned duration for the interview was 60 minutes per session. However, it must be stated that not all interviews went as planned. The duration of the shortest and longest interviews are 40 and 90 minutes, respectively. Harvey (2011) stated that several factors tend to affect the duration of interviews. Many interviews exceeded the 60 minutes duration, this observation could be attributed to the willingness of the interviewees to explore more.

Data analysis

The data collection was done using the face-to-face interview approach. The interviewees were carried out at various locations, including training schools, project site and offices. The research team had to travel to several locations to conduct the interviews. Using this approach was expensive, however, the research team was able to gather more evidence through follow-up questions and the observation of body language (Bampton and Cowton, 2002; Bryman, 2016). Meeting the interviewees in their space was beneficial to the study. It provided the research team with an opportunity to observe the interviewee's work environment and conditions.

The research project was approved by the faculty ethics committee and the interviewee's consent was sought at the start of each interview so that each session was recorded. The interviews were conducted until a saturation point was reached. Saturation is defined as the point at which no new information is generated from the interviews conducted (Urquhart, 2013). The saturation point adopted in the current study was data collection saturation, which Sanders et al. (2018, p.1897) describe as "the degree to which new data repeat what was expressed in previous data". It became evident in the interviews with the 17th and 18th respondents that data collection saturation had been achieved, and the data collection was therefore stopped.

The FTW Transcriber was used to transcribe the voice recordings from the interviews into text. The text was analysed with an inductive approach (Bryman and Burgess, 1994; Thomas, 2006). The dominant constructions that emerged from the 18 interviewees were classified into themes and subthemes. The quality of the analysis of qualitative data is dependent on the experience and integrity of the research team. The principal investigator, who is very experienced in qualitative research methods, analysed the interview transcripts. In addition, the themes and subthemes from the interview data were validated by other members of the research team, as suggested by Silverman (2013). The themes and subthemes that emerged from the interview are presented and discussed in subsequent sections of this paper.

Result and Discussion

Current Approaches used in the Delivery of Apprenticeship training programme

This section presents and discusses the current approaches used in the delivery of the apprentice-training programme that emerged from the interview themes.

Block release/ Day Release

In the UK, the apprentice's carryout the theory element of their training either by block release or day release. In block release, an apprentice will for instance work on-site for an employer for a long period and will then attend a training institution to learn the theory elements for a much shorter period, ranging from one day a week or 4 blocks per year. EM03 states

"It's a block, so it's on-site and then it's college work as in how to do specific things. They have to have sufficient maths and English, so they do that 4 times a year and then obviously the rest of the time they're on-site with people like me who supervise them" [EM03].

However, some employers do not like block release, for instance, RA01 highlights issues with bricklayers, stating *"they say why should we pay someone when they're not here for a whole week and they're not producing for us"* [RA01]. This would suggest that some employers do not understand how apprentice schemes are funded by the CITB. O'Connor (2006) also pointed out that when apprentices were away on block release training, the employer who paid the training levy could claim back monies paid to the apprentices while training whether on day release or block release (HM Government 2019a). Another reason given for employers using block release is that in some instances, few institutions in the country will train certain skills, for example, RA01 states that

"At the moment I think the furthest we're sending away is Dudley in Birmingham (...) and we send our groundworkers to Exeter". And RA01 further points out that *"CITB pay for accommodation and breakfast and evening meal for them"* [RA01]

In these circumstances, where apprentices must complete their training in a block, this can cause considerable disruption to the employers as they can be faced with having to cope without the apprentice for a long period. Callan et al. (2015) found that employers were concerned with using the block release as the training period had a significant impact on productivity. However, some apprentice's carryout the theory element on day release rather than block release which will simply involve the apprentices spending 1 day a week at a training institution learning the theory and 4 days of the week working on site for an employer. This meets the minimum training requirements of 20% off the job training (Gatsby Foundation, 2018). However, City and Guilds and ILM (2019)

found that 29% of employers felt that 20% of off-the-job training did not suit their business model. The method of day release training would appear to be less disruptive in comparison to block release as it is routine and accepted by some employers, EM01 stated

“Some go in on a Monday, some go in on a Friday, it doesn’t affect us at all because they’re apprentices and that is how the framework is set up. So, there’s no point in saying ‘oh I want him to work five days a week, I don’t want him to go to college’, it’s just taken as that’s what it takes to become a tradesperson” [EM01].

However, as already highlighted in some instances, this is not possible due to how some training schemes are delivered in different locations as well as the location of the work itself. Conversely, the location of the work itself can also pose problems with the day release format in that it would be impractical to send an apprentice away for one day per week when working away. For example, EM02 points out that *“if your company suddenly gets a job in Scotland, you do not want your day release, so you’ve suddenly got to do a block release if you’re based here”*. Therefore, both day release and block release have their merits and drawbacks.

Classroom theory and practical split

When apprentices are at the training institutions, their training focuses on the theory and practical elements, which ranges from a 50/50% to a 75/25% split. This highlights a small portion of the classroom element teaches theory, most of the training focuses on training the apprentices with the practical skills that they will require to carry out tasks onsite. However, AP01 pointed out that more time is spent in the classroom as exams approach so that they can focus on their revision. The theory and practical split observed in the UK is similar to those reported in the USA, Canada and Germany (Fayek et al. 2013; Glover and Bilginsoy, 2005). The consensus on the use of the theory and practical approach in the delivery of the apprenticeship training shows the importance of relating theory to practice. Woods (2012) pointed out that a craft cannot be learnt from full-time schooling alone and had summarised that the apprentice’s skills must be developed using a combination of both theory and practical learning to gain an integrated comprehension of the craft.

Assessment mode: Theoretical and practical assessments

The training providers assess on-the-job and off-the-job training. The theory elements are evaluated using exams and assignments. AP04 stated

“there were 10 exams (...) they were all multiple choice, but you had to get 100%, so if you get 80% then you go back in and they ask you questions on the ones you got wrong, or just to make sure you know what you got wrong and put you in” [AP04].

Although the excerpt from the interview shows that the bar appears to be set very high for the exams, the training institutions have an effective method of addressing and improving on areas that the apprentices did not fully understand. The apprentice practical skills were assessed on the work they did onsite, TR02 pointed out that:

“The NVQ element of an apprenticeship is students gathering evidence of the work they are doing on-site based on traditionally what an awarding body expects them to do on-site. An apprentice is expected to keep records in the form of photographic evidence which will prove to an assessor of how a certain task was completed, this is completed alongside site visits from an assessor in person”. [TR02]

In England, the framework system of assessment assessed apprentices by using theoretical exams as well as providing evidence of their practical work (HM Government 2019b). However, the issue with collecting photos of evidence is that it is unable to tell if the apprentice was the one who

carried out the work in the evidence, EM02 stated that: *“I have heard of places where you know, “ok we’ll prove the competency of being able to do a roof truss, stand up against that completed roof truss with a saw in your hand and we’ll take a picture. You’re competent at that”* [EM02] Problems such as this could arguably contribute to the withdrawal of frameworks and the introduction of standards in England. However, HM Government (2017a) pointed out that apprentices can achieve the qualifications without having the required skill set for that qualification.

Recruitment mode: Apprentice took through the supply chain as part of the bid requirement

As part of the NVQ, apprentices are required to work to gain practical experience in their chosen trade, this is achieved by apprentices working for employers within the supply chain. Main contractors are required to have apprentices on their site, this is part of the planning requirements, EM02 states that:

“Through planning obligations, we engage with the developer and then usually very quickly the main contractor (...) which will include new apprenticeships and it will also include existing apprentices that have been brought on to site by companies and apprenticeship completions” [EM02]

Previously, the recruitment of apprentices was employer-based and driven by demand, relying on employers voluntarily taking on apprentices and the training was more company-specific rather than being broad (Arkani et al., 2003). The bid requirements enable apprentices to be in continuous demand, allows apprentices to develop their practical skills within the supply chain and helps to resolve skills shortage in the construction industry.

Recruitment mode: Apprentice as part of employability skill

Where students have left school at age 16 and are not engaged with further education or employment, they are encouraged to take part in training courses to make them more attractive to an employer. For instance, RA01 stated that

“There’s lots of work experience programmes, especially in Hampshire at the moment, they’re going to be setting up help where they want to get 650 people through these 4-week training courses which is employability skills and just to re-engage with these people and it is going to be focused on construction”. [RA01]

These schemes and apprenticeship schemes provide skills that will make them attractive to employers. Studies have attributed ageing workforce to the decline in the number of apprentices entering the industry (Bosche et al., 2016, Davies, 2008). However, it has been pointed out that some of the training courses do not adequately prepare students for work in the construction sector, especially basic health, and safety matters (Bosche et al 2016). This suggests that some of the trainings do not meet the employability skills that employers expect. However, as the construction industry continues to adapt and change, employers will require a certain skill level to keep up with change. EM02 highlight the importance of having technically minded apprentices.

“We’re being told that roughly 60% of the jobs that people in school now will be in 5-10 years’ time don’t exist now. And we think that’s true of construction, that there’ll be all these new jobs that technically minded people will need to engage in and we need to get them ready”. [EM02]

Chang-Richards et al., (2009) highlight such changes in the construction sector technology in recent years, for example, building processes such as prefabrication, BIM and increase in design standards due to the call for sustainability have resulted in new skills emerging in the industry.

This demonstrates that construction is an industry that will utilise new technologies as they evolve and that apprentices will be needed to provide the industry with the necessary skills to keep up pace with new technologies emerging within the industry.

Challenges with the Current delivery of the Classroom Element

NVQ element too broad

The results revealed that sometimes the content of what the apprentices had been learning at the training institutions was not relevant to their trade. For example, **AP01** pointed out that *“I turn up at site and brick lay and stuff like that, whereas this is more reducing carbon footprint, which you do as a site manager”*. CITB (2019c) show that NVQ level 3 and upward has supervisory and management elements, therefore for the apprentice to further their knowledge and competency, the curriculum should be broader than a specific craft. This statement suggests that the apprentice’s view on the content of the curriculum is somewhat short-sighted in what knowledge will be useful or not in the future to the apprentice and employer. In the UK, an apprentice is considered adequately qualified in an occupational trade at NVQ level 2. RA01 points out that

“A lot of them want to progress onto level 3. That helps them more with ongoing careers in the industry if they get their level 3, they've seen that they can become a foreman or a site supervisor, or if they want to work abroad level 3 is recognised abroad as a tradesperson, but level 2 is not”.

This suggests that NVQ level 2 does not provide the apprentice with the breadth of knowledge and competency to practice in other countries. Albeit, in the UK, apprentices training is focused on a specific trade, in Germany, the curriculum is much broader which gives the apprentice the benefit of developing transferable skills (Clarke and Wall 2000).

Too many hours in the classroom

Apprentices can find the theoretical element that is delivered in the classroom particularly challenging and think they spend too much time in the classroom. For instance, TR01 stated that *“they’re not particularly academic, so they do prefer to be in the workshop compared to being in the classroom”*. People will naturally prefer to do what comes easiest and the human brain is designed to avoid thinking. The curriculum includes important theoretical elements, for instance, health and safety and some training institution recognise issues with the classroom elements and try to compensate to make learning more interesting and engaging. For instance, TR02 stated that

“we’ve got the same delivery materials and technologies in the workshops as we’ve got in the classrooms, so we’ve got the same media screens in there. So you can do ad-hoc sessions in the workshop. And we also try and bring the workshop into the classroom, so we’re at the moment we’re videoing lots of our sessions and we’re videoing lots of the demonstrations that [name] does and then we try and bring that back into the classroom about, say well did he do that right, did he do it wrong” [TR02].

The challenge for trainers is to be able to captivate and keep the learners interested when delivering a teaching session because learning can seem irrelevant and be inherently dull which can result in diminishing attention and lowers achievement (Hootstein, 1994). Hootstein, (1994) found that more successful outcomes are produced when motivating learners by stimulating their curiosity, the challenge of the assignment, making sessions more relevant and giving a sense of control to the learner.

Lack of stable tutors and tutor overburden

The lack of stable tutors had also been found to cause challenges for the apprentices' classroom element as this can disrupt the progress of learning. AP09 commented on the training institution that delivered the NVQ stating that:

“it definitely needs to be more organised and know what they're doing more, because it was very erm... no-one really knew what they were doing, tutors wouldn't turn up, erm.. our tutor got, our tutor got.. what's the word, when you get kicked out” [AP09].

This suggests that some training providers struggle to provide what is required to deliver adequate training to the apprentices which can have a detrimental effect on apprentices learning. Indeed, this aligns with Hammond and Kutsanedzie (2015) findings that learners morale and motivation and therefore their performance were negatively affected by the turnover of tutors. Recently, The Education Committee (2018) recommended that the government monitor training institutions to ensure they have adequate resources to meet what is expected of them and swiftly remedy any raised issues.

Mentoring in Craftspeople Apprentice Training Programme

This section presents the current mentoring practice, the issue with the current programme and strategies for improving the current mentoring programme.

Funder mentoring Practice.

The CITB provides an apprenticeship officer who will support the apprentice throughout their NVQ CITB (2019). In 2018, the CITB began a project which provides funding to train level 3 apprentices and industry representatives as mentors to help retain new apprentices and also produced guides for mentors and mentees (CITB, 2019d). For instance, RA04 gives an example of what the role entails

“That's where you become a good mentor. when I said you have to be approachable that they feel comfortable to ring you up and say “I'm not happy, I want to change things”. Like that, you know, so.. sometimes you can sit down with them and say ‘what is it you're not happy with’ find out what they're not happy with so you can sit down with the employer and them and discuss it and make some changes”.

It is the role of the apprenticeship officer to help apprentice make the right choices through the support they provide.

Training provider mentoring practice.

It is the training provider's role to deliver the off-the-job training element of apprenticeships. The findings are mixed in terms of mentoring in the classroom and being prepared for working on-site. A participant commented on the two elements, pointing out that while the classroom mentoring was good, more attention could have been focused on preparing the apprentices for work, AP03 stated that:

“He was quite good in the way that he showed me how he did things and that erm.. and showed me the practical side of the jobs. So he, yea he did mentor me pretty well yea”. And “I think they could be improved that.. I don't think that there's a lot of guidance from the college when it comes to on-site. I think they could be more involved.

Whereas another respondent pointed out that there seemed to be less than expected involvement from the training provider, AP10 stated that *“It's all on the computer and I prefer to be taught if*

you know what I mean". And "Yea there is a teacher, it's sort of like "here's what you need to do, you need to find it out yourself". From a dedicated apprentice training provider's point of view, there is a need for more involvement, as it is more than just teaching the apprentices, TR02 stated that: " So I think a good mentor has a good basis, so he's a time-served apprentice themselves, they're committed and passionate about their job, they keep an eye on the industry, but they're also empathic as well".

The emerging evidence presented above suggests that mentoring standards are inconsistent among training providers, however, there are research and guidance that are useful to training providers. Ofsted (2010) identified some best practices that will enable the successful training of apprentices which include; the training provider should aim to develop key skills which should be tailored into an individual learning plan so that achievable targets can be set, the training provider should carry out progress reviews to ensure assessments are on track and there should be continuous monitoring so that the welfare of apprentice is adequate. Moreover, Ofsted also pointed out that regular site visits from the same assessor helped with engaging the apprentice and employer. According to Wang and Odell, (2002); Austin, (2007), the role of mentors includes showing commitment to work with mentees, developing a deeper understanding of relevant knowledge, and connecting the knowledge with the needs and expectations of the mentees. However, the mentees must also respond adequately.

Employer mentoring

The findings highlight that mentoring from employers was consistently good throughout the sample interviewed, some mentors had been found to support apprentices training by giving good direction and properly taking the time to teach the trade skills, for instance, AP02 stated that:

"Well, I'm mentored by the supervisor so I like get to know everything. So I like it, because not only is just painting and what I do, I get to.. I know a bit more, so it's not like from the painter's put with a normal painter, they don't pay much attention because they're just like 'you're an apprentice, it's fine' or the supervisor I like it because it's like they actually take their time "

And in another example, a tradesman who was mentoring a participant ensured the apprentice was not being used as a labourer by other people in the same company. AP09 stated that *"my mentor he wouldn't let them do it, he stopped them, because I was there to do an apprenticeship and learn carpentry and not. I'm not a labourer, that wasn't my trade"*. It seems that interviewees are receiving some form of mentoring. However, there is no formal structure in place for mentoring of crafts apprentice. According to the Department of Education, Science and Training (2005), the benefits of informal or natural mentoring are associated with support given to young people in the areas of resilience, which is linked to an improved learning outcome. However, TUC (2014) found that there was a need for a formal structure, with clearly defined roles and responsibilities. The two positions presented shows the need to adopt both informal and formal approaches to mentoring an apprentice. The submission of this study is that the best model for mentoring an apprentice should be a combination of both formal and informal model.

Issues with the current mentoring approach

Not systematic and mentor not having the right job

In some circumstances, an inappropriate person had been the mentor for an apprentice, many participants referred to other tradespeople who were delivering the on the job training as their mentor. For instance, AP06 pointed out that *"The actual tradesmen that I work for are classed as*

my mentors". Sometimes the problem with this is that the apprentice training is not the priority because the tradespeople are often on price work which means they would not want to spare time to train the apprentice.

On price work, he hasn't got time to train the apprentice sat next to him. So unless the apprentice is very good, which is very unlikely they don't get the opportunity anymore. So I think bricklaying is the classic case, they're all self-employed bricklayers usually and they just have to lay 450 bricks a day, they get top whack if they... so if they fall behind they don't get the money, so then they blame the apprentice." [RA01]

However, in some instances the mentor was not directly involved in construction activities, for instance, EM01 stated that

"I think we have a one-to-one with them. I see my apprentices once a week generally, or twice a week depending on where I am, so it's actually keeping them included erm.. and if they've got any sort of issues, then they can bring it up with me. It's sort of mentoring them".

As the construction industry is so fragmented, it is likely that there will always be challenges with who would make an appropriate mentor for apprenticeships, in large companies such as in EM01's example, the job role allows him the opportunity to be a mentor that is not affected by onsite activities whereas in SME's the mentors are likely to have numerous priorities of which mentoring might not be one. However, TUC (2014) also pointed out that a mentor should be someone that is not part of the normal hierarchy in the workplace, which is not the case with some participants in this study as well as with some SME's this is not possible.

Inadequate support from the college or mentor

The finding revealed that colleges or trainers do not provide adequate support to the apprentices. Some pointed out that training providers were unable to provide support with finding employers whereas there was also a lack of support in teaching some of the theory, and some felt there was poor communication, lack of guidance and they made too few visits to the site, for instance, AP03 stated that: *"I don't think that there's a lot of guidance from the college when it comes to on-site. I think they could be more involved. The mentor would only come out every couple of months or so to see us, I think they could come out a bit more often"*.

It was suggested that training providers preferred to invest their resources in full-time students over apprentices, EM02 stated that:

"The apprenticeship within the college can become the poorer relation "oh we're only getting one day's payout of them a week", you know and so they don't again invest the quality into that".

In their most recent annual report that encompasses all apprentices and not those solely related to construction, OFSTED (2018) found that the number of independent learning providers (ILP) had more than doubled in 12 months due to the roll-out of the apprenticeship levy in 2017 meaning that 55% (normally 20%) of ILP were not inspected and 58% of these providers were found to be good or outstanding. However, the inspections reveal numerous problems, for instance; 'leaders did not monitor learners' progress effectively', and leaders and managers failed to implement safeguarding policies and practices' (OFSTED 2018). Indeed, this affirms that at present, some apprentices face the challenge of training providers being unable to deliver adequate support and because there has been a large increase of ILP's, the true picture of the performance of these providers will remain unknown. The place of providing adequate support for mentees cannot be overemphasised. According to Pawson (2004), there are different activities to perform in the

mentoring process and they include helping, coaching, tutoring, counselling, sponsoring, sharing experience and mutual learning. This implies that training providers and mentors must do more to provide all that the apprentice needs to succeed in their training and learning.

Quality expected of a mentor for an apprentice programme

The findings showed that the participants expect that a mentor should possess certain attributes. These characteristics bring out the best from an apprentice during the training period. Ideally, a mentor should have *sound professional experience*, i.e. completion of apprenticeship and years of practice as a tradesperson within the industry, as previously stated by TR02. Also, it was suggested that a good mentor should have *excellent communication skills*.

Signposting and presenting long term picture.

The study reveals that a good mentor should be one who will develop apprentices understanding and present the long-term picture to the apprentice. RA01 stated that:

“So it’s showing them the long-term goal: you’re going to get your qualification, this is the career path you could follow if you want to. But it’s just listening to their concerns and their worries. Acknowledging it and also signposting them to the right people if they need help”[RA01].

The ability to present this long-term picture and signposting of the apprentice is a key ingredient in sustaining the mentee throughout the training. This is very important because some of the apprentices are very young and at the same time short-sighted. However, the mentor with their wealth of experience would be able to provide the needed guidance when the thought to quit comes to the mentee because of the relationship that exists between them.

Patience, calm and good communication

The participant also suggested that mentors need to be patient and calm. This gives the apprentice more time to learn on-the-job. For instance, AP03 stated that:

“you need patience because apprentices sometimes make mistakes or they don’t know what they’re doing, so you need to have patience and good communication skills to get your point across to them on what you want them to do or how to do things”.

All apprentices are learners and are bound to make mistake. So a mentor must exhibit this attribute of patience and calmness with the mentee. However, to minimise the incidence of mistake, the mentor should communicate effectively with the mentee by clearly providing instruction and guidance on how things should be done. Clear targets and expectation should be set, and this should be communicated with the mentee adequately. According to Ensher and Murphy, (1997) a mentor is expected to pass on knowledge, experience and information to the mentee using various means of communication. However, the nature of communication here should be a two ways communication where both the mentor and the mentee communicate, share, and learn from each other. This is more of a natural and informal mentoring model. In this two way-communication, a decision is not imposed on the mentee, rather the mentees are involved in the entire communication process (Corney and Mackenzie, 2002).

Building a strong relationship

The study reveals building a strong relationship and mentors viewing apprentices as colleagues as qualities that benefited apprentices during their work element. For instance, AP09 stated that:

“He always erm.. pushed me along, he was quite.. really supportive, he was more like a really good mate than a mentor to me. He always pushed me on, backed me up. He’s always in.. always fought my corner, when there were aggravations like site managers and stuff like that.”

This is very crucial as studies have shown that the success of any mentoring programme depends on the relationship between the mentor and the mentee. Parker-Katz and Bay, (2008); Asada, (2012) found that the failure in the mentoring system is related to the quality of a mentor, and the mentoring relationship between the mentees and the mentor. Similarly, Rhodes, (2002) observed that the quality of the relationship between the mentee and the mentor is very crucial to the success of mentoring. This means adequate attention and time must be given to developing the relationship and developing trust between parties involved in the mentoring programme.

There is a need to remove the barriers between mentor and mentees, i.e., apprentice should be viewed as a colleague. This finding reflects those of an Australian study which showed that feelings of obligation by senior practitioners, strong relationships between staff, blurred work/social boundaries, lack of hierarchy, inter-professional practice and technology are ingredients for promoting mentoring (Bourke, Waite and Wright, 2014). When such hierarchical barrier is removed, the mentee would have the needed self-confidence to approach the mentor which would support their professional development and learning on the programme.

Sound professional experience

Moreover, it was suggested that mentors’ attributes should include having a good understanding of the processes and the standard. For instance, EM02 stated

“they’ve got to get an understanding of the process that the apprentice is in, otherwise the advice they’ll be giving, the supposed support will be taking that apprentice in the wrong direction. So they need to understand the standards that are going on to be able to mentor that apprentice through”.

TR02 noted that another attribute a mentor should have which will help the drive to develop the apprentices is to be *“someone that’s got a passion, a commitment for what they do but also someone that knows what’s going on in the sector”*. The need for the mentor to have sound technical knowledge on the subject and the apprentice training process was also echoed by **AP04** and **AP07**. This suggests that in addition to the soft skill, a mentor must also possess the requisite technical or hard skill to provide the needed experience for the mentee. According to Alboim, (2002), mentoring is essential to apprentices because the learners could observe, rehearse, learn, discuss, and share with the mentors who are more experienced. This means an apprentice will not be able to learn if the mentor lacks the technical and practical knowledge of the subject.

Approach to improve current mentoring programme

The findings revealed ways in which mentoring can be improved. As previously highlighted, apprentices *felt they would benefit from more involvement from the training institution with training*, mentors paying more visits to the site and some apprentices spoke about the benefits of *learning different skills and methods from different tradesmen* such as having a broader knowledge. An apprentice highlighted the issue with having only 1 tradesperson to learn from, AP07 stated that: *“Yea, I think if you’re working under someone for so long, or just with one single person like for three years, you are going to pick up some of their traits and some of their habits. Some of them obviously will be better than others”*.

As mentor and mentee's relationship develop, they may become peers, whilst developing a new relationship with a new mentor, the benefits of having multiple mentors results in attaining greater organizational commitment, increased job satisfaction and enhanced career progression as well as a stronger subsequent mentor relationship, (Baugh and Scandura 1999). Moreover, Baugh and Scandura (1999) also found negative effects of multiple mentoring namely, the variance between the mentors and attitudinal differences. However, it is these variables that **AP07** preferred to avoid and **AP06** also pointed out how these variables have been beneficial, stating that "*I've been now with another person, but then that's kind of helped because I've learnt a lot from him as well because he does some things slightly differently*". The emerging evidence suggests there is a need for flexibility in organising and setting up the mentoring arrangement. All parties involved should be consulted and the approach that suits their development should be adopted.

Practical Actionable Implication for Apprenticeship Training Programme in the UK

Based on the evidence gathered the study following actions should be considered by key stakeholders involved in the apprenticeship training programme in the UK.

- The current "block" and day release" approach used for delivering the apprenticeship training programme in the UK is good and should be sustained.
- The training providers and the employers should increase their capacity to provide adequate support for the learner.
- The inclusion of apprentices' recruitment as part of planning requirement for contractors should be sustained.
- There should be flexibility in making mentoring arrangements and the learner should be involved in the process.
- A structured mentoring programme should be incorporated into the apprenticeship training programme for quality assurance and standardisation.

Conclusion

This study was undertaken to understand how construction craftspeople apprentice training is delivered in the UK, to explore the current issues surrounding craftspeople apprentice mentoring and to suggest strategies for effective mentoring. The study found that in the UK, craftspeople apprenticeship schemes are commonly delivered through block release or day release. However, both methods have their pros and cons and are normally driven by factors relating to the employer's business needs. In term of delivery, the classroom element focuses on the theory while the site-based element provides on-the-job learning associated with the trade. It was revealed that the integration of theory and real-world scenarios in the classroom element has improved trainees motivation and learning outcomes. This approach ensures that apprentices can appreciate the applicability of the knowledge gained through the classroom. Additionally, the work elements gave the apprentice a healthy variety of tasks that had good links to the theoretical elements and the apprentices received monetary benefit enabling them to learn. However, some of the trainees feel that the pay could still be increased.

The current study has shown that craftspeople apprentice in the UK have three sets of mentors: funder, trainer, and employer. Typically, the employer acts as an impartial link between the training provider, employer, and apprentice. However, some mentors are not providing adequate support to the learner. The study confirmed that the mentoring model currently used in the UK is a mixture of formal and informal mode. Informal or formal mentoring is associated with support

given to young people in the areas of resilience, which is linked to an improved learning outcome. However, some form of formal mentoring is required to ensure that there is a uniform standard of delivery for quality assurance and control. Building a strong relationship between the protégé and the mentor is crucial to the successful mentoring of craftspeople apprentice. Also, a non-structured approach to mentoring and lack of commitment are factors that impede effective mentoring of apprenticeship. Overall, the study highlights the need to embed a structured mentoring programme into craftspeople apprenticeship.

The current research extends the knowledge on craftspeople apprenticeship within the construction sector in several ways. First, it exposes the current method used in the delivery of construction craftspeople apprenticeship. Second, it documents the attributes [i.e. *Patience, calm and good communication, Signposting and presenting long term picture, building a strong relationship and viewing apprentice as colleagues and sound professional experience*] of effective mentors. This information is essential for stakeholders who are keen to reduce attrition rate and improve completion rate. Finally, there is a need for flexibility in organising and setting up the mentoring arrangement. The study concludes that a mixture of the informal and formal mentoring model should be adopted in mentoring construction craftspeople apprentice.

Due to the qualitative nature of the study the findings emerging from the study are not generalizable. However, the study offers valuable insights which can inform the development of strategies for improving the outcomes of apprenticeship programmes. Further work, using longitudinal and quasi-experimental method, could shed more light on the impact of mentoring approaches on the outcome of construction craftspeople programmes.

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