

# The value proposition of construction apprenticeships in Ireland: a construction management university student perspective

Cathal Ryan, Darragh Faherty, John P. Spillane, Jim G. Bradley and Mohamed Issa

*Irish Construction Management Research Centre, University of Limerick, Limerick, Ireland, and*

*Elma McMahon*

*Irish Construction Management Research Centre, University of Limerick, Limerick, Ireland and*

*Regional Skills and Training Centre, Louth and Meath Education and Training Board, Dundalk, Ireland*

## Abstract

**Purpose** – To examine the perspective of third-level university students in the context of the value proposition of construction apprenticeships in Ireland.

**Design/methodology/approach** – The research uses a qualitative method, conducting semi-structured interviews with 20 third-level university students enrolled on a Bachelor of Science (Honours) degree program in Construction Management in Ireland.

**Findings** – The results highlight six themes. These include that society appears to be directly and/or indirectly steering students towards university. This is driven by what appears to be a prevailing stigma in that apprenticeships are not seen as an achievement by society. Also, apprenticeships are seen as a limited career choice, while also being one which appears to repel female entrants.

**Practical implications** – If the shortage of new skilled workers entering the construction industry continues, construction organisations will not have the necessary resources to tender for, and subsequently, complete new work.

**Social implications** – The perception of what could have been seen as potential new apprenticeship entrants, but ultimately chose university, is worth examining further with a view to industry addressing the shortcomings identified. This therefore can provide an opportunity to stem the tide of reducing apprenticeship numbers, while also providing a viable alternative to university for those who wish to pursue alternative routes of entering the sector.

**Originality/value** – The paper uniquely focuses on the third-level university student's perspectives and what influenced their decision to pursue third-level university education over that of an apprenticeship within the built environment; an area which has yet to be investigated.

**Keywords** Apprenticeships, Employer-university cooperation, Training, Vocational education and training, University students

**Paper type** Research paper



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## Introduction

An apprenticeship can be defined as a mutual arrangement where an individual works in return for experience from a professional tradesperson, supported by university tuition. It emphasises learning through working in a chosen discipline. This also aids in meeting the needs of the economy, supporting existing and future tradespeople, while doing so, preparing an individual, the apprentice, for a specific occupation. Apprenticeships involve being employed under a contract of employment, where there is an equal split of workplace-based training and university-led teaching.

In Ireland, standards-based systems, with a set time limit founded on completing seven alternating phases between on-site industry-led teaching and university-based modules (Bates, 2011), is the current apprenticeship training model used for craft trades. Apprenticeship trainees are predominantly males (97.8%), under the age of 25 (Irish Government Economic and Evaluation Service, 2019). Of the 64 apprenticeships in Ireland, 8 are built environment. These include brick and stone laying, electrical, plastering, stonecutting and masonry, wood manufacturing, painting and decorating, carpentry and joinery, and plumbing.

In contrast, Lawlor and Burke (2020) note that Ireland produces one of the European Union's (EU's) highest proportions of science, technology, engineering and mathematics (STEM) graduates. Soaring demand for these courses has left "third-level systems close to capacity", all while apprenticeships "remain in a state of disequilibrium" (O'Murchadha and Murphy, 2018). Wet trades, that is, trades that use dry materials mixed with water, are worst affected, due to many construction companies changing their business model, reducing direct employment in this area, pivoting towards subcontracting and/or short-term contracts (Murphy, 2020). Wet trades include brick and stone laying, plastering, stonecutting and masonry, and painting and decorating. Murphy (2020) documents that in 2019, less than 200 new applicants applied for a wet trade apprenticeship. To exemplify the issue, Eolas Magazine (2018) reports that 86% of Ireland's building companies have an "inadequate supply of qualified tradespeople" to meet the demands of both existing and new projects. Construction is dependent on human labour; thus, a shortage of skilled workers negatively affects project performance (Juricic *et al.*, 2021). Such limitations reduce building organisation's ability to tender for new work, thereby stagnating the construction sector and overall economy in the long-term.

In Ireland, the number of applications for built environment programs offered by universities increases year on year; however, the same interest is not apparent in applications for apprenticeship. In the last 15 years, apprenticeships have been examined from the perspective of stakeholders, employers, trade workers, current apprentices, second-level education students and parents (Misko *et al.*, 2007; O'Murchadha and Murphy, 2018; Burke, 2020), but not university students. Limited research has been done on the perspective of university students and why they chose third-level education. Callanan and Perri (2020) believe there has been limited scholarly attention on career decision-making, including the personal interests, values and abilities that drive these decisions. To address this, greater insight is needed on the specific factors that steer applicants away from a career in construction trades. This therefore raises the need to explain why there is such an influx of applications for university provided built environment programs over apprenticeships. The value proposition of an apprenticeship refers to the value that the apprenticeship model promises to deliver to the apprentice, should they choose to learn a trade. This paper aims to identify the perceived value university students have of apprenticeships, specifying factors leading them to dismiss such a career path, in favour of a third-level university program. The sample for the investigation is Years 1–4 students completing a Bachelor of Science (Honours) degree in Construction Management at university level in Ireland. To provide context internationally, a Bachelor of Science (Honours) degree program in Ireland is predominantly

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4 years long. Data is collected through 20 semi-structured interviews from student participants throughout the program. The findings should foster further debate on the significant disequilibrium between university graduate uptake in construction management programs and apprenticeships, by analysing the value proposition of what could have been built environment apprentices but are now third-level university students. Furthermore, the findings will help inform further research, which is lacking, while also aiding both industry and government, in stemming the tide in the declining trade apprenticeships in Ireland.

### **Apprenticeships in Ireland: a literature review**

In May 2021, The Irish Times (O'Brien, 2021) reported that the Central Applications Office (CAO), that is, the organisation responsible for overseeing undergraduate applications to universities in Ireland, received a record number of 84,000 applications for university places. Programs relating to construction and engineering have been overcapacity, due to limitations in laboratory space and placement opportunities (O'Brien, 2021). Amplifying this, grade inflation is now also a factor (Kehily, 2010), which raises the need for third-level universities to look at stemming increases, as many grades awarded are inflated (Mooney, 2021). This is of particular concern, where the entry requirements for programs is being eroded and reduced; thus, reducing the barrier to entry for applicants to many university programs (O'Brien, 2022). This, in addition to the dearth of built environment tradespeople, has encouraged the Irish Government to look at alternative education routes, with apprenticeships being one such option (Wall, 2021).

Misko *et al.* (2007) believe that people with high academic ability are simply not interested in pursuing an apprenticeship, because they believe pay of tradespeople to be too low, by comparison with pay for professionals. Low pay and inconsistent training are some of the most important problems faced within apprenticeship schemes today (Ryan and Lorinc, 2018). These ongoing challenges strengthen negative stereotypes, such as low pay and adverse working conditions, among some teachers, parents and young people (Mazenod, 2016). Mulkeen *et al.* (2017) suggest that degree and higher-level apprenticeships would encourage more people into pursuing this route. Co-creating a relevant curriculum would also require stakeholders, third-level universities and employers to have a close working relationship (Mulkeen *et al.*, 2017). Universities would have to alter their costing model, to allow for profit sharing amongst stakeholders. As of 2020, there are no "construction trade" apprenticeships in Ireland that go above an Ordinary Bachelor's Degree.

Amplifying the issue, construction unemployment rates have declined annually since 2013, with only a limited number of apprentices joining the labour market during this period (O'Murchadha and Murphy, 2018). In Ireland, the economic recession of 2008–2013 has negatively influenced people's opinion of construction apprenticeships (Murphy, 2020). During this recession, one in every two workers that lost their jobs was employed in construction (Conefrey and McIndoe-Calder, 2018). Mian and Sufi (2014) argue that this is amplified by the perception of job uncertainty within the sector. This is evident when examining apprenticeship completion rates for the years following the 2008 to 2013 recession. In 2011, 1,780 newly qualified apprentices completed apprenticeships in the construction family of trades, compared to 245 apprentices in 2016, because of dramatically lower registrations in the 4 years previous (Central Statistics Office, 2017). Between 2007 and 2015, every apprentice trade, with the exception of an electrician, suffered a 70% drop in the number of apprenticeship registrations (Construction Industry Federation, 2016). Despite the positive economic growth in the construction sector, there are key issues keeping the labour market "in a state of disequilibrium" (O'Murchadha and Murphy, 2018). Firstly, the level of unemployment and emigration caused by the recession has led to the perception that the

construction industry is one with “uncertain career opportunities” (O’Connell, 2017). Roche *et al.* (2011) argue that the fear of entering another recession restrains both an employer’s ability and willingness to recruit staff, particularly apprentices. Many apprentice programs were forced to stop, due to the sudden drop in participants (O’Murchadha and Murphy, 2018). This reduction of programs and enrolment within them has led to a scarcity in skilled workers and thus, an inability to meet the growing demands of employers. Murphy (2020) argues that apprenticeships within the built environment were worst affected, specifically wet trades, such as bricklaying and plastering, due to employers reducing direct employment in these areas, but outsourcing towards subcontracting and/or short-term contracts. Less than 500 apprentices were working in wet trades in 2019 in Ireland (Murphy, 2020). The shortage of new workers entering the market has caused the median age of the workforce to rise from 35.6 years in 2007, to 42.3 years in 2017 (Conefrey and McIndoe-Calder, 2018).

### *The Irish construction industry*

The construction industry is one of the most labour-intensive industries (Construction Industry Federation, 2016), making it highly dependent on human employment (Juricic *et al.*, 2021). It is an important contributor to job creation, as well as long-term productivity (Construction Industry Federation, 2016). Construction turnover for 2020 in Ireland amounted to €18 billion, which represents 5.4% of the total projected Gross Domestic Product for 2020 (Linesight, 2021). This means the construction industry can have a direct and indirect negative influence on the economic well-being of every country (Callanan and Perri, 2020). Unfortunately, skills deficit is a significant issue facing the industry (Linesight, 2021). The current skills gap has the potential to cause the long-term loss of skills in the construction industry (O’Murchadha and Murphy, 2018), significantly affecting the competitiveness and efficiency of the industry. This could result in Ireland becoming a less attractive centre for foreign direct investment. Growing pressure to deliver successful construction projects has forced employers to subcontract out work to unskilled workers instead of training apprentices (Murphy, 2020). To counter these challenges, the Construction Industry Federation (2016) recommends that the Irish Government and construction industry alike, engage with SOLAS, the Irish State agency tasked with building a further education and training sector, to deliver courses nationally with the aim of equipping unskilled workers with the skills they need to fill the current gap. The Irish Government should also work with SOLAS, to improve current apprenticeship schemes, as doing so should help increase employment, supplement revenue from taxes and lower social welfare outlays in the long-term (O’Murchadha and Murphy, 2018).

### *Career selection*

Ho and Law (2021) outline the influence of parents and friends on the decision-making process of students, when deciding on a future career. Throughout a youth’s adolescence, their career paths are shaped by decisions, sometimes made obliviously that will have lasting ramifications. For instance, “children and teenagers absorb their parents’ attitudes and expectations of them as they grow up” (Qualifax, 2022). Research also found that a parent’s career choice can impact their children’s views (Nawbi *et al.*, 2019). Students with parents in lower-level occupations are more likely to pursue an alternate education route, that is, apprenticeships, when compared to parents in higher-level occupations (Payne, 2001). Similarly, Brown and Berry’s (2005) research support the idea of “cyclical job patterns” in family’s where the parents work in trades, resulting in a high possibility of their siblings following a similar career path. An individual’s career decisions tend to be supported by their “family’s understanding of education”. Often, parents feel ill equipped to give advice on a

child's career, though they serve as a significant influence (Ho and Law, 2021). Therefore, Ryan and Lórinč (2018) recommend that a portal application process be introduced to provide young people, their parents and schools with reliable information on high-quality apprenticeships delivered by reputable providers.

Current apprentices receive discouraging reactions when suggesting enrolling on apprenticeship from schools, colleges, family, friends and work colleagues (Ryan and Lorinc, 2018). Akomah *et al.* (2020) point out “technically inclined young people should be motivated/encouraged by parents and local government agencies to follow their dreams”. Further research by Misko *et al.* (2007) report current apprentices had received a tainted perception of trades through a socially misinformed image drawn by the public. This includes “the risk of poor treatment by employers and work colleagues and the prospect of dirty, unappealing or uninteresting work”. New generations need to be inspired, as they could have the “talent to succeed in the workforce”; therefore providing information and education will uproot many disincentives sown in the past (Smith, 2022). Unfortunately, secondary schools (second level) tend to focus on Central Applications Office (CAO) applications and provide little to no information to students on apprenticeships (Burke, 2020). They are partly to blame as they tend to direct students towards university (O'Halloran, 2021), instead of meeting their diverse needs. Burke (2020) suggests that schools make a guidance plan, explaining how students can be supported in making key decisions in their education and careers (Department of Education and Skills, 2017).

This extensive literature review demonstrates that past research has focused on collecting the viewpoints of construction apprenticeships from secondary school students (second level), parents, schools, employers, training/qualified apprentices and the government. However, research on the perspective of university students is lacking, hence the gap that this paper proposes to address. Based on this the critique of the literature provides further justification and consolidation of the gap in knowledge that exists, without providing clarity on the critical factors that are present. In addressing this, qualitative interviews are now undertaken with 20 third-level construction management university students, to gain their perspective on the subject. Prior to this, the method and its justification are outlined, as follows.

## Method

The aim of this investigation is to examine Irish third-level university students' perspective on apprenticeships and why they chose not to pursue this career path. To address this, qualitative research is carried out, in the form of semi-structured interviews with a selection of third-level university students. This format is chosen to allow participants to express their views of apprenticeships at length, with little restrictions to both time and scope. No predetermined questions are made before beginning the interviews, to avoid skewing the data and researcher bias in the study. This also gives the interviewee an opportunity to speak at will about their perceptions rather than those perceived by the interviewer. The interview format allows for the gathering of primary data directly from the students; thus, ensuring that this information is authentic and relevant. The following six themes emerge throughout the literature review: (1) social status, (2) economic factors, (3) influence of educators, (4) personal influence, (5) gender and (6) hardship. Based on these themes, subsequent interviews with students on a Bachelor of Science (Honours) Degree in Construction Management program in Ireland are conducted. The themes are used as a basis for discussion development, with factors catalogued under each theme, when raised by the respective interviewee. This subsequently aids in the development of an exhaustive list of factors, catalogued under their respective theme, based on the findings of the literature review and subsequently, the interviews. These interviews aim to identify factors that have led those

interviewed to choose a construction-related university course, over an apprenticeship in a construction trade. This approach is similar to the one used by [Mulkeen et al. \(2017\)](#).

Selection criteria for inclusion in the study include the participant being a fulltime registered student on the Bachelor of Science (Honours) Degree in Construction Management program at the University of Limerick, being an Irish citizen, and willing to partake in the study. To get a broad perspective, participants from all four years of the program are identified and invited to partake in the research. In total, 20 students come forward to participate. The sample of participants include four first-year students; five, second-year students; six, third-year students; and five, fourth-year students. All participants agree to take part in the research anonymously and without penalty for either nonparticipation or for withdrawal mid-participation. Prior to commencing the investigation, this research was ethically reviewed and approved by the University of Limerick's School of Engineering, Research Ethics Board. All participants are given an information sheet, making them aware of the interviewers' identity and contact details, the rationale behind the study, how resultant data will be used and the criteria for participating in the interviews. The identities of all participants remain anonymous, to safeguard the contributors and their viewpoints.

The interview protocol is tested via internal piloting between researchers, prior to being rolled out to interview. This enables the researchers to perfect the approach, while also improving on both the shorthand notetaking exercise adopted and the subsequent cross-checking and production of the record of the subsequent interview; similar to that proposed by [Harwood et al. \(2015\)](#). All resultant information gathered is stored on a password protected server and drive, to comply with all ethical procedures and best practices for the handling and storage of potentially sensitive data. Participants are also informed that they can withdraw from the investigation at any time. Each interview lasts approximately 20 min and due to Covid-19 protocols at the time of the data collection, are conducted by voice over Internet protocol (VOIP). The interviews are not video, nor audio recorded; instead, a record of the conversation taken via shorthand note taking by two interviewers. This is done as [Al-Yateem \(2012\)](#) argues that this safeguards the participants reluctance to give permission for recording, while also addressing the finding that interviewees are less comfortable and more formal when being recorded. Researchers note that making assumptions due to language used, choice of words, tone of voice and other non-verbal cues ([Talja and McKenzie, 2007](#)), are not observed nor recorded, due to such characteristics being linked to emotion ([Lo Iacono et al., 2016](#)), which can lead to misinterpreting meaning on the part of the data collection exercise.

To ensure the comprehensiveness and transparency of the data collected, two interviewers are present throughout all interviews, both of whom take notes and cross-check, post interview. [Rutakumwa et al. \(2019\)](#) highlight that shorthand note taking and subsequent cross-checking post interview results in the accuracy of record as being comparable in the detail obtained with that of audio recorded interviews. The resultant data from the interviews is gathered, collated between both interviewers, and thematically coded collectively, based on the six themes identified through the literature review. In addressing the validity but more so, the trustworthiness of the interpretation of the data collected, two approaches are adopted. First, regardless of the interviewee profile, repeated factors emerge, be they first-, second-, third- or fourth-year students, verifying the factors identified are a true representation. Secondly, to ensure that the data collection method measures actuality, the interview records produced by the two researchers are cross-checked, for accuracy, completeness and reliability. For further validity, 10% of interview records are cross-checked with the respective interviewee, who then confirms that the notes taken are an accurate and true representation of the interview previously conducted.

The interviews are coded based on themes that emerge from the factors identified in the literature review and subsequent interviews. Coding is done using NVivo in a practice similar



to that prescribed by [Vaughn and Turner \(2015\)](#), who outline the practical method of organising and classifying qualitative data through the use of thematic coding. Subsequent to this, and to provide further clarity, open coding is undertaken using an inductive approach, to aid in theory development and subsequently, construct meaningful conclusions from the data unearthed ([Williams and Moser, 2019](#)).

To synopsis the results, both from the literature and the thematic coding of the interviews, both the themes and subsequent factors identified are compiled and displayed in tabular format. To avoid researcher bias in the presentation of the results, the researchers did not make preference to highlight communality in the data nor unusual contributions, but focus on presenting the findings as they emerge, both in the literature and the interviews conducted. The table illustrates the factors identified from either/both the literature and/or the interviews along with their associated theme in which they have been allocated. In total, 28 factors are identified. The factors are categorised into six themes, based on the influence they relate to. The themes include Personal, Social, Education, Economy, Gender and Hardship.

### **Results and analysis**

In total, 20 interviews are conducted; four of which are with female participants. This is an appropriate ratio as it represents the gender distribution within the program, that is one female student for every four male students. The data pool appears to be sufficient, as the last 20% of interviews did not reveal new information, indicating data saturation.

### **Discussion**

Based on the results of the literature reviewed, six themes emerge with associated factors outlined. Subsequent to this, 20 interviews are undertaken, with factors identified tabulated accordingly in conjunction with those identified in the literature review undertaken earlier. This results in the emergence of themes, based on the perspective of 20 Construction Management third-level university students and their viewpoint of the value proposition that construction apprenticeships offer in Ireland. As a result, each of the themes is discussed, in turn, as follows.

#### *Personal*

This theme refers to both the interviewees' own individual opinions about the apprenticeship model, as well as factors that influenced their decision to go to university. These personal factors are internal and thus not affected by external influences. Of those interviewed, 55% considered doing an apprenticeship. Similarly, half of the interviewees agreed that university programs need more "onsite learning", in line with the apprenticeship model. Sixty per cent of participants suggested that, in hindsight, site experience needs to become an essential part of the university program and was thus a significant factor, mostly for the fourth-year students surveyed. Thus, after gaining site experience, many students notice flaws within the university model, such as a lack of significant site exposure, relevance of material delivered to industry needs and exposure to emerging technologies, which is not an issue in apprenticeships, given the significant work placement element within them. One interviewee described their knowledge as "not nearly good enough", due to the lack of significant work placement element of university programs. Similarly, [Callanan and Perri \(2020\)](#) note that "many students well-suited to a career in construction are encouraged to complete college degrees that lack appropriate preparation for jobs in the construction industry, but also potentially leaves them saddled with financial debt". Participants found that work placements helped them develop a better understanding of construction procedures and provided, like apprenticeship programs, a "hands on" approach that

helped them learn quicker. Three interviewees described themselves as non-academic, but as having to adapt to succeed within their course. Akomah *et al.* (2020) suggest that such individuals may have been better placed to practice a trade instead of undertaking a university degree program they are not suited to. Other interviewees, all with site experience, claimed there were no positive incentives that would encourage them to pursue an apprenticeship, such as higher pay, better working conditions and working reduced hours. As published in Eolas magazine (2018) “this downward trend (of qualified tradespeople) will only be reversed on the back of incentives from government for apprentices”.

### *Social*

Factors within this theme refer to society’s viewpoint as well as influences from the individual’s primary social circle; that is, family and friends. 90% of participants had close family and/or friends currently working in construction. Sixty per cent noted a stigma related to “apprenticeships not being seen as an achievement”. Such views can lower apprenticeship applications and enrolment rates and thus the subsequent emergence of skilled, qualified tradespeople. An interviewee admitted that “families/guardians today expect their children to go to university as apprenticeships are not seen as impressive”. As shown in Ryan and Lórinic (2018), “individuals become inundated with the idea from parents and teachers that successful careers are only pursued through college degrees”. In contrast, some participants noted that some individuals attend university for the social aspect. One respondent explained that “lots of people go to college for the sake of it” and not necessarily to gain a qualification.

Interestingly one participant stated “your surroundings influence your decisions”. For example, students near industry hubs, such as Shannon Airport, receive greater insight into available apprenticeships. Research suggests that school type, that is public or private, and subject availability, for example, woodwork, metalwork and technical graphics subjects, play a role in apprenticeship uptake (Laird, 2004). This conclusion is reinforced by two interviewees, one of whom explained that “after paying for six years of private education, a university degree is expected”.

### *Education*

Education refers to any guidance participants may have received while in second-level school from their teachers and/or career guidance counsellors. Comparably with Burke’s (2020) findings, 90% of interviewees claimed that “Central Application Office (CAO) submission to university was their school’s priority and not submission to apprenticeships. 20% of participants explained they had received high grades in their leaving certificate; thus, pursuing a trade “seemed like a waste of CAO points”. Their reasoning coincides with that of Misko *et al.* (2007) who commented that “trades are not for high academic achievers”. One interviewee points out that they “felt pressure in school relating to points achieved; students were encouraged to match their points to a university course and disregard their possible fondness for practical learning”. The percentage of interviewees that noted this factor decreased with each descending year, from 4th year to 1st year. However, the year an individual begins university does not necessarily correlate with the year they sat their leaving certificate examinations. For example, a mature student participant who sat their second-level (Leaving Certificate) examinations around 2008 recalls apprenticeships being encouraged in school, possibly because this is “when the lack of apprentices began to become noticeable”. In hindsight, this trend did not continue in most schools. One interviewee suggests that “schools may have been influenced by the 2008 recession to alter their viewpoint and subsequently, push students to university for more stable career opportunities”.



35% of interviewees reported receiving questionable career guidance from their school's career guidance counsellor. 30% of interviewees admitted they had no idea how to apply for an apprenticeship as the process was never explained to them. They felt that they could not discuss the option of apprenticeships with their families, primarily due to their lack of knowledge on the topic. Interestingly [Misko et al. \(2007\)](#) identified the "lack of information as a key reason students would not enter an apprenticeship". This lack of information is such that students who choose to do an apprenticeship "often do not know what they are getting into", leading to increased attrition rates. These points are in line with [Burke \(2020\)](#) who believe that "in terms of guidance counselling in schools, the dearth in the provision of apprenticeship information is evident". [Burke \(2020\)](#) continues with recommendations on how to improve the preparation of students interested in apprenticeships. These include lessons on how to find an employer that approves to train apprentices, as well as hosting "mock interviews" within school, to increase the students' chances of securing an apprenticeship in their selected trade.

### *Economy*

Of those surveyed, 95% undertook an economic analysis of possible upcoming careers available to them, to help them decide on the education route to pursue. Further analysis shows that 50% of the students who considered an apprenticeship, had the perception that this route would lead to a career with low job security. One interviewee recalled their second-level school teachers advising them not to make the same mistake as past students, who had pursued apprenticeships but were affected negatively by the economic downturn. Students were encouraged to continue with their education and get a third-level university degree.

The cycles of economic prosperity and recession directly affecting construction, as did the mass closure of construction projects during the Covid-19 pandemic, are also referenced by interviewees. This has provided little incentive to steer upcoming youth towards a career in construction trades. Furthermore, 90% of the interviewees assumed a university degree would provide a better income and greater future opportunities for both career development and increase financial security.

### *Gender*

Gender was the least mentioned theme across all interviews. While gender-related factors were discussed by all female interviewees, they only featured in 40% of the interviews with male participants. This could be an indication that most men do not see the scarcity of women within the construction industry as a concern. When debating if apprenticeships are a viable career for women, only four interviewees thought they were; three of who were male. This suggests that much of the female population, including those studying the Construction Management third-level university degree under observation, are of the view that construction apprenticeships are not a plausible education route. Female interviewees did not think apprenticeships were suitable for women because "trades are predominately dominated by older men and thus maybe seen as intimidating" and because "there is little to no work for women in construction". Female participants felt they "would not be taken seriously if they had taken the apprenticeship route". One participant believed there is still a stigma in construction regarding women, regardless of whether these women pursue a third-level university degree or an apprenticeship. They explained that in their experience, typically older men and foreign men tend not to value a woman's opinion.

Likewise, [Arcand \(2016\)](#), cited in [Callanan and Perri \(2020\)](#), feels that "discriminatory practices are a possible obstacle that women might need to overcome to establish

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construction-based occupations”. Alternatively, female interviewees note that for women, building trades provide a chance to enter occupations where organisations are looking to hire people from traditionally underutilised or untapped labour pools.

### *Hardship*

This theme emerges due extensive reviewing of the literature on the subject, together with over half of the interviewees repeatedly referencing two reoccurring factors; the increased physical hardship inherent in a trade career, and working on-site in adverse weather conditions. Both issues are raised by [Callanan and Perri \(2020\)](#) as negative aspects of the industry. [Holte et al. \(2015\)](#) also note that workers are more likely to face injury in a construction trade apprenticeship when compared to other professions. In support of this, one interviewee recalled experiencing such hardship whilst labouring on site. This became “the main driving factor for going to university”. Another participant explained that “nobody wants to be out in the cold, wet environments, when you could have a cosy office job”.

### **Conclusion**

The spiralling decline of construction trade apprenticeship enrolment in the built environment in Ireland continues at an alarming rate. To get a perspective of why this is the case, this study investigates the perceptions of those that could have been tradespeople but decided to enrol in a university degree in the built environment instead. To address this, the perception of 20 third-level university students attending a Bachelor of Science (Honours) degree program in Construction Management is ascertained through individual semi-structured interviews in conjunction with factors identified in the literature. Through an interview analysis and thematic coding, six themes are acknowledged to have impacted the participants decision and ultimately each chose a university degree over an apprenticeship in the built environment. The key themes which emerge are Personal, Social, Education, Economy, Gender and Hardship.

The results show that over 50% of our participants considered an apprenticeship prior to enrolling and subsequently attending a third-level university built environment program. Though the sample of students interviewed make up 10% of the overall construction management student cohort enrolled on the program, the results appear to be exhaustive, given that the last 20% of interviews did not reveal any new data. On a positive note, those interviewed suggest there is still an interest within society for the apprenticeship route despite reservations by some about it and several barriers facing those who consider it.

Half of those interviewed would prefer more practical, site-based learning in a university course, which would make it similar to the apprenticeship model. This site experience is identified as the main advantage apprenticeships have over a university degree. Young people tend to develop an interest in the construction industry because of family and/or friends who work in the sector. Unfortunately, these young people are being pushed towards a university degree, as this is “the norm and what is expected of them”. This raises the question of whether second-level schools should be responsible for educating both students and their parents on all possible future education routes, including apprenticeships instead of just focusing on university degrees. The impact the 2008 economic recession has had on construction trades has made families and schools reluctant to encourage apprenticeships, given the perceived volatility and limited job security that a career in the trade offers.

Also, there is a perception amongst university students interviewed that apprenticeships limit future career opportunities, whereas having a degree allows individuals to progress

towards higher positions and provides better financial opportunities in the future. Alarming, this research has shown that three out of four female interviewees, do not see an apprenticeship in the built environment as a viable career opportunity. Even female participants who describe themselves as “hands on learners” believe they may not progress within the industry like their male counterparts, primarily due to the perception that they will not be taken seriously within a trade profession.

Of note, a career in a construction trade via the apprenticeship route is dismissed by participants, due to the discomfort associated with related occupations. Having to work in adverse weather conditions and the physical demands placed on many tradespersons can be a problem. Therefore, all interviewees agreed there is a need to further incentivise apprenticeships, to encourage more people to pursue a trade profession. Sixty-five per cent said that they would have chosen an apprenticeship over a university degree if further incentives and support had been available.

In terms of future research, it would be interesting to assess the actual experiences of graduates of apprenticeship programs and how those agree or disagree with their expectations of those apprenticeships before starting them. It would also be valuable to interview career guidance counsellors across Ireland, to investigate the extent to which they promote apprenticeships as a possible education route to second-level school students. In addition to the above, the perspective of the value proposition of those outside of the higher education system is worth considering, to again begin to address and subsequently stem the reduction in apprenticeship uptake. Lastly, future research should extend the sample interviewed to students in other universities across Ireland, to determine whether the perspectives of those other students align or contradict that of the students within this study. This could then draw on the findings as represented in [Table 1](#), in the development of a subsequent model and/or flowchart, whereby a more holistic overview is garnered with the inclusion of numerous Irish third-level university student perspectives are ascertained.

One of the key problems of apprenticeships is that traditionally there was little promotion of them, which leads to people not knowing enough about them. For university degrees, third-level institutions host open days, to provide individuals an opportunity to visit a particular school, university or other institution to see what it is like. Their representatives visit schools, appear on radio and television, and maintain a strong social media presence. Larger financial support from the government would help SOLAS and the new National Apprenticeship Office improve their promotion of apprenticeships. But these efforts must be backed by second-level schools presenting construction trades in a positive light and as a viable option, for both male and female pupils, and not just a “back up plan”. SOLAS has adapted a stronger social media presence recently and apprenticeships feature on the CAO for the first time in 2022. The new Action Plan for Apprenticeships which along with the appointment of a new Minister for Further and Higher Education, puts the focus firmly on apprenticeship. Finally, employers should be more willing to take on apprentices and help them get their qualifications. All these efforts should improve the attractiveness of apprenticeships in the built environment, which should result in higher apprenticeship registrations, lower apprenticeship attrition and stem the decline in qualified tradespeople. Most importantly, it will help individuals make an informed decision about the education route and career that are best suited to their skills and abilities, instead of automatically going for a third-level university degree. In a wider context, this research will aid government, policy makers, potential apprenticeship employers, but also, prospective apprentices in their respective decision making. Ultimately, the research could potentially aid in finding solutions to the problems currently facing the industry in attracting individuals into apprenticeships in the built environment.

Factor	Literature	4th Year				3rd Year				2nd Year				1st Year			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Personal	Site experience	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Considered doing an apprenticeship	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Apprenticeships suited to non-academic people		X			X	X	X	X	X	X	X	X	X	X	X	X
	University course improved by more onsite learning	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Social	No positive incentives for apprentices	X				X				X				X			
	Family/Friends work in construction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Stigma: "trade not seen as an achievement"	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Parents wanted university	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Education	University pushed via work colleagues/friends	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Sociable aspect of university									X	X	X	X	X	X	X	X
	Close proximity of university					X	X	X	X	X	X	X	X	X	X	X	X
	School focused on Central Applications Office results	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	School not encouraging apprenticeships	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Lack of information on apprenticeships									X	X	X	X	X	X	X	X
	Questionable career guidance	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Comparable NFQ Level with degree	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	No support for less-academic students	X				X				X				X			
	Excelling in academic learning (trade considered a waste)	Misko <i>et al.</i> (2007), Payne (2001)					X	X	X	X	X	X	X	X	X	X	X

(continued)

**Table 1.** Themes, factors, literature and interview results

Factor	Literature	4th Year				3rd Year				2nd Year				1st Year			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Economy	Assumed better income from a university degree	X	X			X	X	X	X	X	X	X	X	X	X	X	X
	Perceived better future opportunities with a degree	X	X			X	X	X	X	X				X			
	Uncertain job security of apprentices																
	Affordability of university	X	X			X	X	X	X	X				X	X	X	X
	Cultural change: Economic prosperity versus recession	X	X			X	X	X	X	X				X			
Gender	Question whether a viable career for woman				X	X	X			X				X	X		
	Stigma regarding woman in apprenticeships				X	X	X			X							
	Apprenticeship appear less accessible due to gender				X	X	X			X				X	X	X	X
Hardship	Increased physicality and toll in apprenticeships	X	X			X	X	X	X	X	X	X	X	X	X	X	X
	Working in adverse weather conditions	X				X				X				X	X	X	X

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### About the authors

Cathal Ryan is a graduate of the University of Limerick's (UL) Bachelor of Science (Honours) degree in Construction Management and Engineering. During his time, Cathal was awarded the Chartered Association of Building Engineers (CABE) first-year construction student of the year award. Cathal worked with Roadbridge Ltd. as part of his co-operative education, from March to August 2021. During this period Cathal worked as a Junior Site Engineer, setting out assigned tasks for workers, checking the progress of said tasks and resolving any issues that may arise. Before completing his placement, Cathal was part of the successful opening on the Collooney to Castlebaldwin N4 dual carriageway. Cathal is in the process of commencing a PhD in Construction Management, beginning September 2022.

Darragh Faherty is a graduate of the University of Limerick (UL) Bachelor of Science in Construction Management and Engineering honours degree. Presently Darragh is a member of CIOB and Engineers Ireland and has two years site experience in a broad range of multimillion-euro projects within Ireland. Past professions have included site technician, junior engineer and general labourer. Darragh hopes to gain international experience within the construction industry with a long-term goal of completing a master's degree in project management.

Dr John P. Spillane is founder and director of the Irish Construction Management Research Centre, at the University of Limerick. He has extensive experience in industry engaged research, focusing on digital technologies, sustainability, fire safety, certification and systems development/integration into the built environment. He has more than twenty years' experience working in both higher education and the construction industry. As a Chartered Construction Manager and Chartered Building Engineer, he is currently working on several research projects, while supervising numerous postgraduate researchers on various topics such as conflict management, strategic planning, modern methods of construction, apprenticeships in the built environment, communication, among other topics. John P. Spillane is the corresponding author and can be contacted at: [john.spillane@ul.ie](mailto:john.spillane@ul.ie)

Dr Jim G. Bradley is a lecturer at the University of Limerick with 25 years industry experience. He lectures on the Construction Management + Engineering honours degree programme in the School of Engineering, delivering modules on the areas of project management, compliance and innovation. Jim gained his PhD in 1988 and his M.B.A. in 1992. He is involved with the Irish Construction Management Research Centre (ICMRC) in UL and his areas of research interest include mental health in construction, strategy in SMEs and knowledge management.

Dr Mohamed Issa is a lecturer in Construction Management and Engineering and a member of the Irish Construction Management Research Centre at the University of Limerick. He has more than 15 years' experience working in academia, research and the government in Canada. His research focuses on appraising the actual economic (e.g. life cycle costs), environmental (e.g. energy and indoor environmental quality) and social (e.g. occupant behaviour and well-being) performance of healthful, sustainable commercial, institutional and residential buildings. His other research interests include occupational safety in construction, construction disability management, design management and building information modelling.

Elma McMahon is a Senior Training Adviser at Louth and Meath Education and Training Board–Regional Skills and Training Centre. She is currently undertaking a Doctorate in Engineering at University of Limerick. She holds a degree in Environmental Science and Technology and a Masters in Education. She has over 25 years' experience in further education and training, most recently 6 years dedicated to the area of apprenticeships. Her current research focuses on factors affecting apprenticeship completion in Ireland.