Unemployment of the built environment graduates

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Abstract.
The challenge of unemployment of built environment graduates is recurrent and this paper aims at presenting findings on the inherent factors therein and make recommendations towards ameliorating this challenge. A quantitative method was adopted for the data collection and the data was organized, analyzed and presented with descriptive statistics. The population sample was limited to the Nelson Mandela University Built Environment Graduates. The study discovered that there were difficulties in securing employment as a result of lack of practical experience, current curriculum and the dearth of skills. The study provides information towards resolving this challenge arising from the factors identified as causative for unemployability and identifies the need for taught and practical skill and experience to be embedded in the curriculum to stimulate the level of employability.

Keywords: built environment, built environment graduate, employment, skills, education.

1. Introduction
The global economic recession in combination with an expansion in higher education capacity has resulted in an excessive number of college graduates. In return, this has led to a high graduate unemployment rate and a competitive labour market. These outcomes contribute to current undergraduate anxieties over the transition from school to working life [1]. An unemployed person is defined as a person who is not employed and has searched recently for a job [2]. Employability of an individual depends upon assets such as expertise, abilities and attitudes and the way they are used and deployed; their presentation to prospective employers, and context within which the individual operates [3]. It is also suggested that the issue of graduate employability has been a source of major concern all over the world as to whether our educational institutions are meeting their needs for their establishment [4].
Graduate entrepreneurship is increasingly seen as a crucial source of competitiveness and an engine for economic growth and development in the United Kingdom and around the world. In several countries, higher education is generating a growing number of graduates and government policy seeks to encourage self-small business employment as a viable career choice because of the fierce competition in the labour market for "big company" jobs [5]. Also, the unemployment rate in Nigeria is as high as 23.1% across the 25 - 29 age group and is 41.6% and 15.7% in Ghana and Kenya respectively [6]. The figures are estimated on average as it takes university graduate 5 years to secure a job in Kenya.
South Africa’s unemployment rate is said to be one of the highest in the world and it is consistently measured above 29% [7]. This was underpinned with the fact that under apartheid there was an oversupply of cheap black labour mostly in mining and agriculture, but these industries became more mechanized and capital intensive and less labour intensive. He further argues that historical reasons are not sufficient to explain high current unemployment rates.
Youth aged 15-24 are the most vulnerable in South Africa’s labour markets as the unemployment rates among this age group was 55% in the 1st quarter of 2019. South Africa has a high unemployment rate among youth people aged 15-30 at the 4th quarter of 2018 unemployment was at 27.1% and constituted 1.7% of unemployed graduates, Unemployment in the first quarter of 2019 is 29.6% and it is said to have raised from 27.6%. It is stated that after a decrease of 70 000 in the number of unemployed persons in Q4:2018, the number of unemployed persons increased by 62 000 in Q1:2019. In 2019 there were 6.2 million unemployed persons in Q1:2019, almost 56% had an education level below matric, followed by those with matric at 34%. Only 2.1% of the unemployed persons were graduates while 6.9% had other tertiary qualifications as their highest level of education[8].

Many degree programs aim to prepare students for the workplace. Students of professional studies have what can be regarded as an additional benefit as they are expected to join a particular profession and have an identified career path [9]. Among other factors, the unemployed youth tend to demonstrate, inadequate and inappropriate skills which accrue from a mismatch between graduate’s discipline-specific knowledge and business requirements as well as soft skills. Effect of these negative attributes is further exacerbated by other factors like race, gender and inability to make seamless transitions from student to working [10]. Analysts agree that South Africa’s unemployment is structural as the unemployed generally possess lower skills that are required by the economy, hence, increasing demand for skilled workers because of technological changes and the need to become globally more competitive [11]. The Construction Industry Development Board, cidb, South Africa also acceded that the country has an abundance of low and unskilled labour and unemployment is high amongst youth without experience[12]. Data from the quarterly labour force shows that the formal sector employs 11.3 million people of which the construction sector counts for 11% of total employment[8]. This research focuses on the unemployment of graduates in the built environment and tries to solve the problems that graduates encounter in securing jobs and also adds to the body of knowledge.

2. Review of the literature

The success of the construction industry depends on the national economy; therefore, if there is an increase in government expenditure there will be a direct increase in the growth of the economy the fiscal policy growth. The increase in government spending leads to mass production and this can lead to an increase in demand which will eventually have a positive effect on the GDP. The construction industry can influence economic growth as it can affect other sectors of the economy through development [13]. It is also worthy of note that that during their higher education, European students spend an average of 30 months engaging in other activities where they learn a skill or gain some experience[14]. It is also suggested that graduates should have exposure to work experience as it is an important factor which will allow graduates to link theory from higher education and also practical knowledge[15] and for example Nigerian graduates are expected to have hand-on-skills in the industry and this allows them to function effectively in their roles [16]. Moreover, career advancements are unclear in the construction industry as there are no defined career paths, hence, youth tend to have trouble in choosing a career path in the industry[17].

Also, the inability of graduates to identify job opportunities is directly linked to their unfamiliarity with the general construction environment [18]. This suggests that the education system must produce the required quality of graduates through the continuous transfer of knowledge from experienced mentors to fresh graduate mentees.

Governments in many developed countries are strengthening the role of higher education institutions to contribute to the national economy by ensuring that the universities are fulfilling the moral purpose of higher education to meet the changing requirements of the industry [19]. [19] also indicated that performance-based funding of universities is one of the means used by governments to ensure that the outcomes of higher education contribute to long term sustainability that is economically beneficial to the national economy and higher education provides socially responsible education.

Graduate entrepreneurship around the world is rapidly a key source of productivity and a driving force for economic development and growth [5]. [20] further underpinned that entrepreneurship is the main vector of economic development and competitive play and gives the possibility of social climbing to
various segments of the population. It also plays an important role in the economy as the driver of innovation and job creation. The South African construction sector is a significant player in the local economy, employing around 1.1 million people and the prevalent view is that improving skills has a direct positive correlation to economic growth, employment creation, and reduction of poverty and inequality [21].

Asides the foregoing, soft skills are also important as they are capable of improving the chances of employee performance and career prospects. Such soft skills help students to develop their employability skills and make them confident to work in a performance-orientated work environment as a critical lifelong learner.

According to [22], there is a misalignment in the curricula and market demands and this makes graduates unemployed. He adduced this to a misalignment over the qualification required for a vacancy and explained that there is a gap between employers’ expectations concerning graduate skills and the educational training they get from school. He recommended the need to engage practical knowledge in the educational curriculum.

3. Research

3.1 Research method and sample stratum

The research employed the quantitative method and data was gathered utilizing questionnaires administered to the built environment graduates from the Nelson Mandela University. The collected data was interpreted in percentages and mean scores and presented in tables. Google® form was used in administering the questionnaire and the link was sent to the NMU built environment graduates that are registered for Honors in 2019. Twenty-five responses were received from the forty questions sent out.

The paper reports inclusively on the findings obtained from this case study, by including the viewpoints of all the respondents and using the following decision rule for the mean scores:

- $<1.00 \leq 1.44$ Strongly disagree/Never
- $<1.45 \leq 2.44$ Disagree / Rarely
- $<2.45 \leq 3.44$ Neutral / Undecided / Sometimes
- $<3.45 \leq 4.44$ Agree / Often
- $<4.45 \leq 5.00$ Strongly agree / Always

4. Limitation

The study is limited to the unemployment of the built environment graduates and the focus was on Nelson Mandela University built environment graduates.
5. Discussion of findings

Table 1 presents the respondents' level of agreement on a scale of 1 to 5 (or Strongly disagree, SD; Disagree, D; Neutral, N; Agree, A; Strongly agree, SA and Undecided, U) to the fact that there is difficulty in securing jobs in the construction industry. 4% strongly disagreed, 16% were unsure while 28% and 52% agreed and strongly agreed respectively that there was difficulty in securing jobs. With the mean score at 4.24, this indicates that there is a strong agreement that there is difficulty in securing jobs.

Table 1: Difficulty in securing employment

| SD | D | N | A | SA | U | Mean |
|----|---|---|---|----|---|------|
| 1  | 2 | 3 | 4 | 5  |  | 4.24 |

When asked about sources of job advertisements on social media, respondents ranked LinkedIn® with a mean score of 4.08 as the best social media platform to receive job adverts while company website with 3.64 ranked second. Facebook and Instagram have mean scores below 2.5 indicating the respondents' disagreement that these platforms were avenues for securing or accessing job adverts. All these are illustrated in table 2

Table 2 Social media platform for job advertisements

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Table 3 as presented shows that graduates agree that all the listed factors are important during interviews.

Taking the collective ranking, “confidence” (MS 4.76) is ranked first followed by “being punctual” (MS 4.72), “appropriate language” (MS 4.64), “appropriate dressing” (MS 4.56), “being attentive” (MS 4.56), “body language” (MS 4.44) and “conveying soft skills” (MS 4.00). The MS scores and rankings are captured in the respective columns in table 3.

The ranges of the mean score provide further insight to the importance of these factors during job interviews as it revealed that the top five factors have MS ≥ 4.56 ≤ 4.76 which is within the range of strongly agree while the last two factors with MS ≥ 4.00 ≤ 4.44 are within the agreed range. Inference can thus be drawn from this finding that body language, appropriately dressing, confidence, appropriate language, being attentive, being punctual and conveying soft skills are important during job interviews.
Table 3: Factors that are important during an interview

| Factors                        | SD | D  | N  | A  | SA | U  | Mean Scores | Ranking |
|-------------------------------|----|----|----|----|----|----|-------------|---------|
| Frequency (%)                 |    |    |    |    |    |    |             |         |
| Body language                 | 4.0| 0.0| 0.0| 40.0| 56.0| 0.0| 4.44        | 5       |
| Appropriately Dressing       | 4.0| 0.0| 0.0| 28.0| 68.0| 0.0| 4.56        | 4       |
| Confidence                    | 4.0| 0.0| 0.0| 8.0 | 88.0| 0.0| 4.76        | 1       |
| Appropriate language         | 4.0| 0.0| 0.0| 20.0| 76.0| 0.0| 4.64        | 3       |
| Being attentive               | 4.0| 0.0| 0.0| 20.0| 72.0| 0.0| 4.56        | 4       |
| Being punctual                | 4.0| 0.0| 0.0| 12.0| 84.0| 0.0| 4.72        | 2       |
| Conveying soft skills        | 4.0| 0.0| 20.0| 44.0| 32.0| 0.0| 4.00        | 6       |

Table 4 indicates the extent of agreement of the respondents to the factors that lead to difficulty in securing employment. The mean scores of the factors are ranging from 2.00 to 3.96.

In terms of the collective ranking, “no real-world experience” (MS 3.96) is ranked first followed by “not following up” (MS 3.84), “companies are over selective” (MS 3.68), “relying on job adverts” (MS 3.50), “poor interview skills” (MS 3.40), “unrealistic expectations” (MS 3.28), “outdated resume” (MS 3.04), “unsure salary expectation” (MS 3.04), “lack of direction” (MS 2.92), “relocation” (MS 2.48) and “applying for wrong jobs” (MS 2.00). The MS scores and rankings are captured in the respective columns in Table 4.

A further review of the ranges of the mean score provides further insight into difficulty factors. It is revealed that the top four factors; no real-world experience, not following up, companies are over selective and relying on job adverts; with MS ≥ 3.50 ≤ 3.96 is within the range of agree. The remaining factors with MS ≥ 2.48 ≤ 3.40 are within the neutral range save for applying for wrong jobs with MS 2.00 which indicates disagree. Hence it can be inferred from this finding that no real-world experience, not following up, companies are over selective and relying on job adverts are the main difficulties in securing employment.

Table 4: Factors that lead to difficulty in securing employment

| Factors                      | SD | D  | N  | A  | SA | U  | Mean Scores | Ranking |
|------------------------------|----|----|----|----|----|----|-------------|---------|
| Frequency (%)                |    |    |    |    |    |    |             |         |
| Outdated resume              | 12.0| 24.0| 32.0| 12.0| 20.0| 0.0| 3.04        | 7       |
| Companies are over selective | 4.0 | 12.0| 20.0| 40.0| 24  | 0.0| 3.68        | 3       |
| Applying for wrong jobs      | 32.0| 24.0| 36.0| 0.0 | 8.0 | 0.0| 2.00        | 11      |
| Poor interview skills        | 16.0| 8.0 | 16.0| 40.0| 20.0| 0.0| 3.40        | 5       |
| No real-world experience     | 8.0 | 0.0 | 20.0| 32.0| 40.0| 0.0| 3.96        | 1       |
| Relocation                   | 20.0| 32.0| 32.0| 12.0| 4.0 | 0.0| 2.48        | 10      |
| Unrealistic expectation      | 16.0| 16.0| 20.0| 20.0| 28.0| 0.0| 3.28        | 6       |
| Unsure salary expectation    | 16.0| 16.0| 32.0| 20.0| 16.0| 0.0| 3.04        | 7       |
| Relying on job adverts       | 16.0| 12.0| 16.0| 24.0| 32.0| 0.0| 3.50        | 4       |
| Lack of direction            | 16.0| 20.0| 32.0| 20.0| 12.0| 0.0| 2.92        | 9       |
| Not following up             | 12.0| 0.0 | 24.0| 20.0| 44.0| 0.0| 3.84        | 2       |

Respondents were neutral in terms of whether the current curriculum was effective or ineffective as indicated in Table 5.
Table 5: Effectiveness of the current curriculum

| Mean | Frequency (%) |
|------|---------------|
| SD   | D  | N  | A  | SA | U |
| 1    | 2  | 3  | 4  | 5  |   |
| 3.0  | 100 | 0  | 0  | 0  | 0  |

The respondents, however, indicated that the effectiveness of the current curriculum can be improved towards industry needs and the results are shown in Table 6. The responses ranked introduction of an industry-oriented curriculum (MS 4.36) and industry collaborating with higher education institutions (MS 4.36) as first. Next to them is the need for skilled focus learning (MS 4.32) followed by Offering work-based learning (MS 4.24). Ranking fifth is the use of new and emerging technology (MS 4.12) and sixth is in-service training for a year (MS 4.00). The respondents were however neutral as to the factor of encouraging digital literacy with a MS of 3.00. The interpretation of this is that with the top six factors with MS ≥ 4.00 ≤ 4.36, the respondents agree these factors are important to improve the current curriculum towards employability of graduates while they were neutral with the seventh factor on encouraging digital literacy with MS = 3.00. This could be an indication that they already have sufficient tutelage on this.

Table 6: Factors that can improve the current curriculum

| Mean | Frequency (%) |
|------|---------------|
| SD   | D  | N  | A  | SA | U |
| 1    | 2  | 3  | 4  | 5  |   |
| 4.24 | 16.0 | 28.0 | 52.0 | 0.0 |
| 4.32 | 16.0 | 20.0 | 60.0 | 0.0 |
| 4.36 | 8.0 | 32.0 | 56.0 | 0.0 |
| 4.00 | 28.0 | 12.0 | 52.0 | 0.0 |
| 3.00 | 100 | 0.0 | 0.0 | 0.0 |
| 4.12 | 24.0 | 24.0 | 48.0 | 0.0 |
| 4.36 | 8.0 | 8.0 | 4.0 | 76.0 | 0.0 |

64% of the respondents strongly agreed and 24% agreed that entrepreneurial education is important for employment while 8% were neutral and 4% strongly disagreed. However, the indication of the MS of 4.44 indicates that the respondents agree to the importance of entrepreneurial education for employability and all this is shown in table 7.

Table 7: Importance of entrepreneurial education

| Mean | Frequency (%) |
|------|---------------|
| SD   | D  | N  | A  | SA | U |
| 1    | 2  | 3  | 4  | 5  |   |
| 4.44 | 24.0 | 64.0 | 0.0 |   |
The respondents all agree that different soft skill sets are vital for employment with table 8 showing the MS of ≥ 4.20 ≤ 4.64.

In order of importance, the respondents indicated that problem-solving (MS 4.64) was the most vital and it ranked first whereas leadership skills (MS 4.60) and integrity (MS 4.56) ranked second and third respectively. Flexibility (MS 4.52) ranked fourth while adaptability and interpersonal skills with MSs’ of 4.48 ranks fifth. Ranking seventh and eight respectively are interpersonal skills (MS 4.40) and work ethics (MS 4.34) and creativity (MS 4.28) ranks ninth. Dependability with the lowest mean score of 4.20 ranked tenth.

Table 8: Important skills for employment

| SD | D  | N  | A  | SA | U  | Mean | Ranking |
|----|----|----|----|----|----|------|---------|
|    |    | 1  | 2  | 3  | 4  | 5    |         |
| Adaptablety | 4.0 | 0.0 | 0.0 | 36.0 | 60.0 | 0.0  | 4.48    | 5 |
| Creativity   | 4.0 | 4.0 | 4.0 | 36.0 | 52.0 | 0.0  | 4.28    | 9 |
| Problem solving | 4.0 | 0.0 | 0.0 | 20.0 | 76.0 | 0.0  | 4.64    | 1 |
| Work ethics  | 4.0 | 0.0 | 12.0 | 20.0 | 56.0 | 8.0  | 4.34    | 8 |
| Interpersonal skills | 4.0 | 0.0 | 16.0 | 12.0 | 68.0 | 0.0  | 4.40    | 7 |
| Time management | 4.0 | 0.0 | 8.0 | 20.0 | 68.0 | 0.0  | 4.48    | 5 |
| Integrity    | 4.0 | 0.0 | 4.0 | 20.0 | 72.0 | 0.0  | 4.56    | 3 |
| Dependability | 4.0 | 4.0 | 20.0 | 12.0 | 60.0 | 0.0  | 4.20    | 10|
| Leadership   | 4.0 | 0.0 | 4.0 | 16.0 | 76.0 | 0.0  | 4.60    | 2 |
| Flexibility  | 4.0 | 0.0 | 8.0 | 16.0 | 72.0 | 0.0  | 4.52    | 4 |

6. Conclusion and recommendation

Given the significance of employment in a nation's development, it can be concluded that it is no longer a case of churning out graduates but rather readily employable graduates. Given that the perception of the respondents on the importance of entrepreneurial education is rated at MS of 4.44 and the importance of soft skills has MS ≥4.20 ≤4.64, it can be concluded that the employability is a function of these factors and beyond academic certification. These results reinforce that an individual's employability depends on assets in terms of expertise, skills and attitudes.

This study hence recommends that improving the skills of graduates and offering proper training could benefit them with skills that are only learned through experience. Also, mentorship would be a way of to help graduates get knowledge from well-experienced people in their chosen field and universities should encourage this while emphasizing the importance of skills and experience in graduates by incorporating them in the study curriculum.

Furthermore, the construction industry should create further opportunities that would equip students with skills while they are studying as this will give them a better chance at securing employment as well as charting a career path.

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