

# Summer Skills Bulletin 2020

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Employment Profile Of Persons With  
Post-Secondary Qualifications, Quarter 4, 2019



# EMPLOYMENT PROFILE OF PERSONS WITH POST-SECONDARY QUALIFICATIONS

## Introduction

This report examines the employment profiles of those with qualifications beyond the Leaving Certificate in Ireland.<sup>1</sup> The focus is on individuals whose highest educational attainment is at post-secondary level qualification, either at FET (NFQ 4-6) or third level.<sup>2</sup> As such this analysis excludes upper secondary or equivalent education, even when completed through second chance opportunities in the FET sector. The primary aim of this report is to establish the number of persons aged 15-64 years in Ireland who held FET or third level qualifications, their levels of employment and the extent to which patterns in employment differ depending on a person's education level and field.

## Persons in Ireland with post-secondary education attainment

Of the 3.23 million persons aged between 15 and 64 years in quarter 4 2019, more than one half (amounting to 1.71 million persons) held either FET or third level qualifications. Table 1 provides further detail on the education level and NFQ level of these 1.71 million persons.<sup>3</sup>

Of the 1.71 million persons holding qualifications beyond Leaving Certificate level,

- more than a third had a level 8 qualification (equivalent to an honours bachelor degree)
- a quarter had a FET qualification (at levels 4-6 on the NFQ)
- a fifth had a postgraduate qualification at level 9 or 10
- level 7 award holders are almost equally divided between those who hold ordinary degrees and those who hold undergraduate diplomas.

**Table 1.** Persons aged 15-64 years by highest level of education attained (ISCED & NFQ), quarter 4 2019

Level	NFQ Level	Persons aged 15-64	%
FET	Level 4/5*	208,900	12%
	Level 6	214,600	13%
Third level	Level 6 (HE)	36,500	2%
	Level 7	260,700	15%
	Level 8	643,500	38%
	Level 9	305,200	18%
	Level 10	36,900	2%
<b>Total post-secondary (FET + 3rd Level)</b>		<b>1,706,300</b>	<b>100%</b>

Source: SOLAS (SLMRU) analysis of CSO (LFS) data

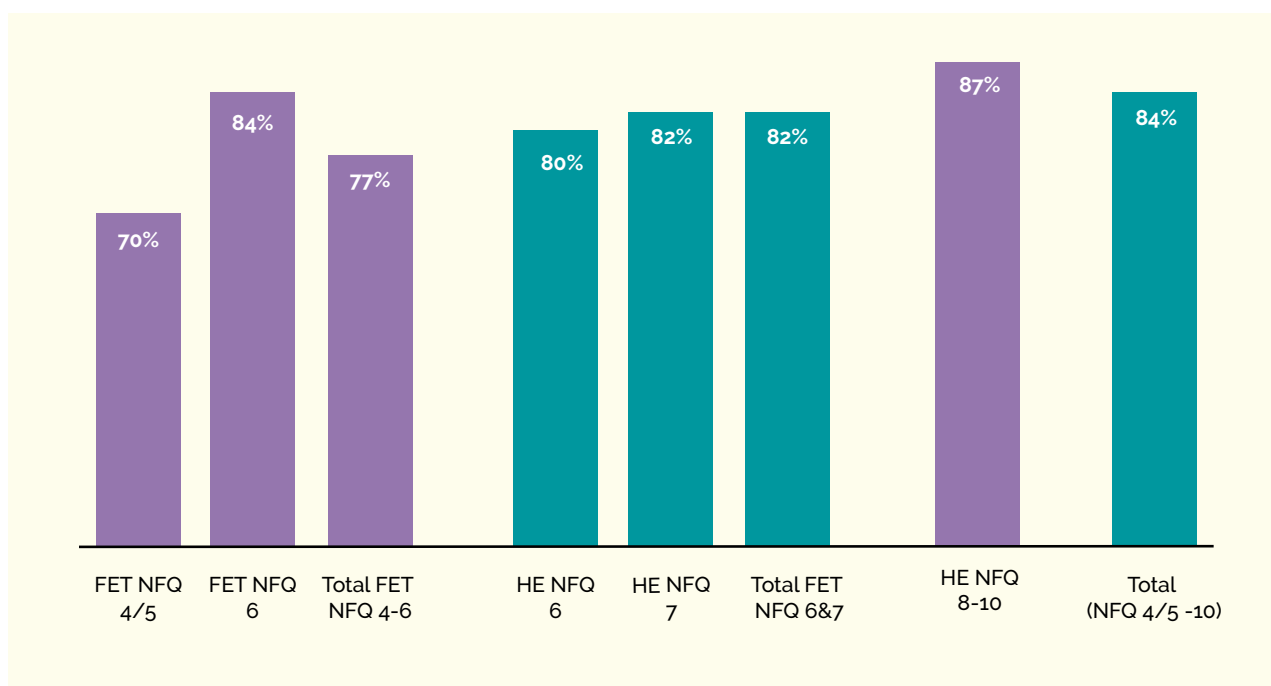
\*While NFQ levels 4 and 5 span two sectors in Ireland (upper secondary and FET), only the FET awards at these levels are included in this analysis.

- 1 We are grateful to our colleagues at QQI, in particular John O'Connor and Arancha Oviedo, and to colleagues at SOLAS for their helpful and insightful comments on an earlier draft of this paper. Any shortcomings of course are the author's own.
- 2 The CSO uses the International Standard Classification of Education (Levels) to categorise education levels. Please see Appendix 1 for details on each of the ISCED levels, the typical programmes at each ISCED level and possible awards.
- 3 ISCED levels of education refer to the programme of studies; NFQ levels refer to the award achieved by the learner.

## Employment profile of those with post-secondary education attainment

The share of persons with post-secondary education attainment (combined FET and third level) who were in employment was 84%, with the highest share at 87% being for those with level 8 or higher qualifications (i.e. at least an honours bachelor's degree). In general, the higher the level, the greater the share in employment, with the exception of those with FET level 6 qualifications where the share in employment was higher than either the HE level 6 or level 7 awards holders<sup>4</sup> (Figure 2).

**Figure 2.** Share of those in employment by NFAQ level for persons aged 15-64 years, quarter 4 2019



Source: SLMRU analysis of CSO (LFS) data

## What have post-secondary award holders in employment studied?

The ISCED fields of education and training classification has traditionally served as the basis for national (e.g. QQI, HEA, CSO) and international (e.g. Eurostat, OECD) statistics on education. The ISCED classification system identifies 10 broad fields of learning (see Appendix 1). However, where numbers tend to be too small to allow for analysis, we have grouped two or more fields (e.g. science with ICT for FET qualification holders; social science, journalism & information with and business, administration & law across all NFAQ levels). In addition, for ease of reading, we have shortened some of the names (also detailed in Appendix 1).

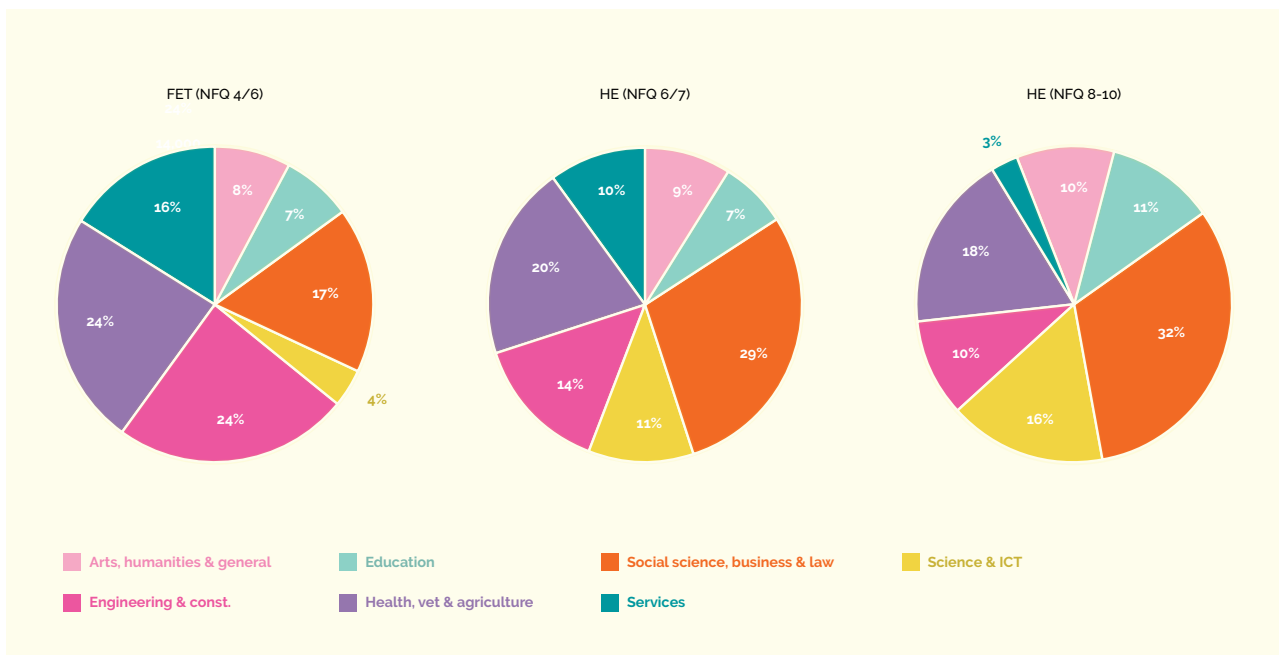
The field in which persons in the workforce held qualifications differs between those with FET and those with higher education qualifications (Figure 3).

- For FET, almost half (48%) held qualifications in either the **engineering, construction or health, vet & agriculture fields of learning**.

<sup>4</sup> FET programmes, especially at levels 4/5, and higher education programmes leading to level 6/7 awards are often intended to form pathways to progression to higher levels of study, rather than directly to employment, and this may partially explain the comparatively low employment shares and high inactivity shares, in particular for those with FET qualifications.

- For HE, both at NFQ 6/7 and NFQ 8, the highest share of qualification holders **was in social science, business and law (SSBL)**, followed by **health, agriculture and vet**; combined these two fields accounted for at least 49% of all persons with NFQ 6/7 or NFQ 8-10 awards.
- While employed persons who had studied **science or ICT** made up 4% of those with a FET qualification (amounting to 14,000 persons), they made up nearly three times that share (11%, amounting to 26,000 persons) at HE levels 6-7, and four times that share (16%, amounting to 134,200 persons) at levels 8-10.

**Figure 3.** Persons aged 15-64 in employment by NFQ level and field of learning, quarter 4 2019



Source: SLMRU analysis of CSO (LFS) data  
Excludes those where field of learning was not stated or unknown

## Post-secondary award holders in employment by field of learning

In this section, we look more closely at post-secondary qualification holders by the field of learning of their studies (refers to the field of their highest level of education, not the most recent).

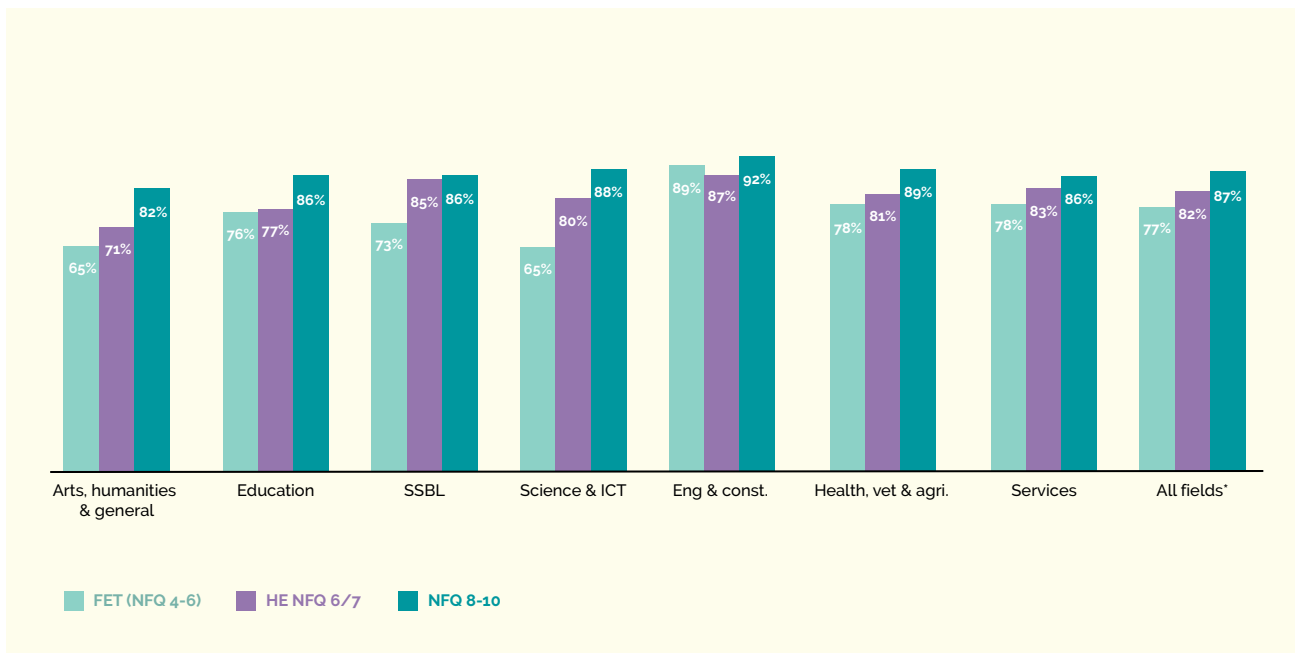
**Share in employment by level:** except for the engineering and construction field, the higher the NFQ level, the greater the share of persons in employment, regardless of field of learning. However, FET qualification holders in engineering and construction were more likely than NFQ 6/7 award holders to be in employment (89% compared to 87%).

**Share in employment by field:** for each of the three NFQ level categories (FET, NFQ 6 (HE) & 7, and NFQ 8-10),

- the highest share of persons in employment was observed for those with qualifications in engineering and construction
- the lowest shares were in arts, humanities and general learning. In addition; for persons with FET qualifications in science & ICT, the share in employment was also low (at 65%, it was identical to arts, humanities etc at that level), although the number of persons with qualifications in ICT/science is small.<sup>5</sup>

<sup>5</sup> Until recently, science/ICT programmes tended not to feature strongly in FET provision and so the fact that there have been steady increases in the number of persons receiving awards in this sector is not yet reflected in this data.

**Figure 4.** Share of persons in employment by NFAQ level and field of learning, quarter 4 2019



Source: SLMRU analysis of CSO (LFS) data  
 \*Excludes those where field of learning was not stated or unknown

## What occupations do post-secondary award holders work in?

Of the almost 1,424,600 qualification holders in employment who stated an occupation,

- over a half (56%, or 793,000 persons) were working in **high skilled** (i.e. managerial, professional or associate professional) occupations
- more than a third (35%, or 495,000 persons) worked in **medium skilled** (i.e. administrative, skilled trades, caring services and sales) occupations
- the remainder (less than 10%, or over 137,000 persons) worked in **lower skilled** (i.e. operative or elementary) occupations.

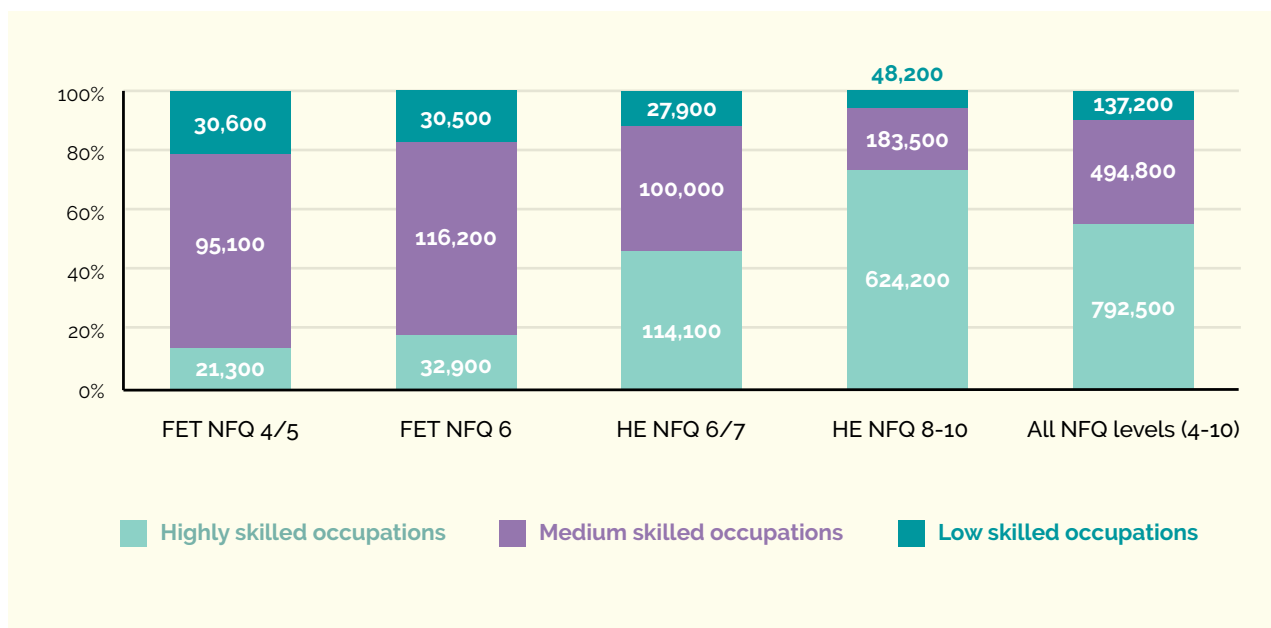
## Post secondary award holders by occupational group and NFAQ level

However, the distribution of employment by occupational skill level differed by NFAQ level (Figure 5), with the shares working in high skilled occupations increasing the higher an individual's qualification level.

- **FET level 4 & 5 and FET level 6:** almost two thirds of qualification holders at these levels worked in medium skilled occupations, which is a reflection of the fact that entry to medium skilled occupations is typically a FET qualification (e.g. electrician, cook, child and health care assistant and hairdresser).
- HE level 6/7: the shares working in high and medium skilled occupations were similar at 47% and 41% respectively; **the 12% working in low skilled occupations represented almost 30,000 people.**
- HE level 8-10: almost three quarters were working in high skilled occupations, mostly because entry to professional occupations, such as nurses and teachers, tends to require at least an honours bachelor's degree (e.g. NFAQ 8).

- Nonetheless, more than a quarter of those holding level 8 qualifications and above were working in medium (e.g. administrative, sales) or low skilled (e.g. elementary) occupations, representing approximately a quarter of a million people. **Such a large volume of highly qualified individuals working in occupations for which their education level might not be required points to possible skills underutilization and over qualification in the labour market.**

**Figure 5.** Distribution of persons in employment by NFQ level and occupation skill level, quarter 4 2019



Source: SLMRU analysis of CSO (LFS) data

## Post-secondary qualification holders by occupational group and field of learning

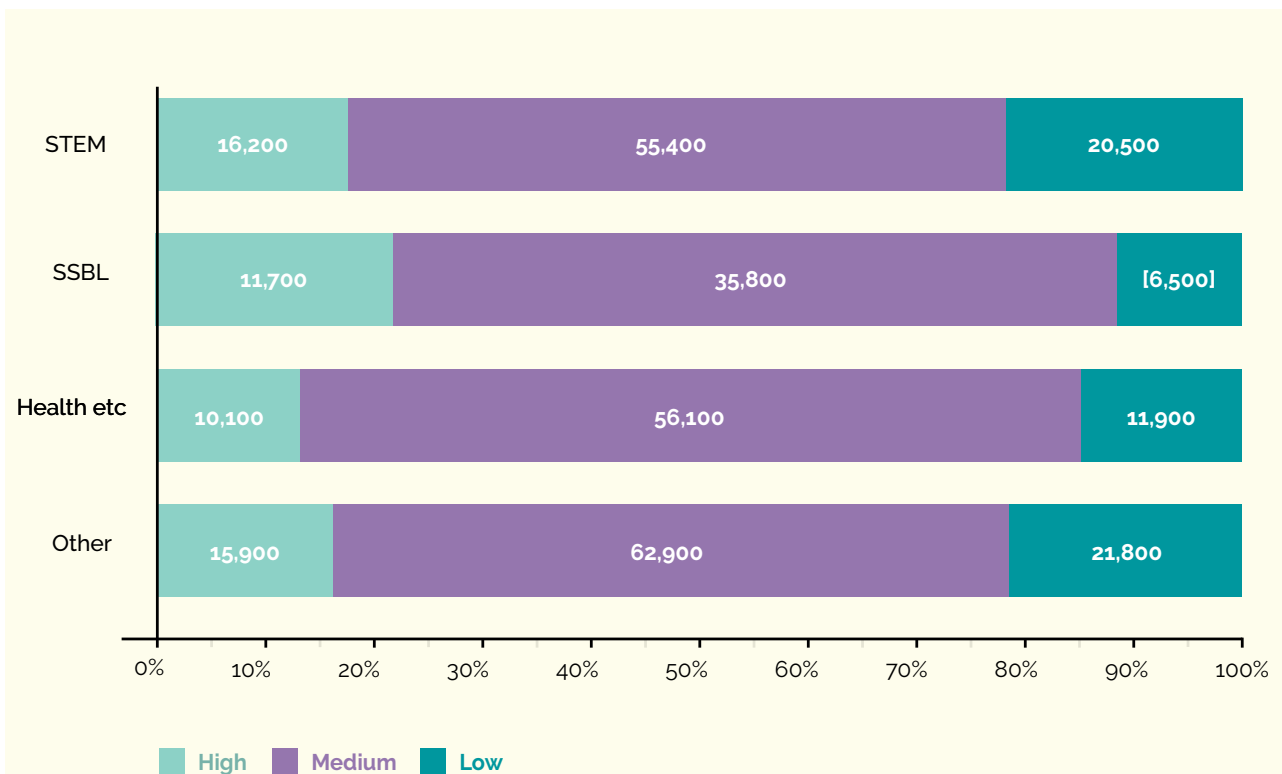
The distribution of employment by occupational skill level differed by field and level (Figures 6-8):

- the health, vet & agriculture and STEM fields had the largest proportion of workers in high skilled occupations across most NFQ levels (the exception is at FET level 4-6, where SSBL, followed by STEM had the largest shares).
- the STEM field had the largest share working in low skilled occupations across all NFQ levels, although at FET 4-6, the share for the 'other' fields was only marginally smaller (22.3% compared to 21.7%).

In terms of occupations, Ireland's labour market is such that a qualification in one field of learning or level does not necessarily preclude an individual from working in a job in a different field or level. Teaching, health and engineering related occupations aside, this is partly the reason we find relatively large shares of people with, for example, SSBL qualifications at level 4-6, working in high skilled occupations (where a third level qualification might be typical, but not compulsory, and where experience may be in demand).

However, such mobility across fields and levels may also be the reason large numbers of highly educated (NFQ 8+) persons, in STEM and SSBL in particular, were working in low skilled occupations. In fact, of all those working in low skilled occupations holding SSBL qualifications, the number of persons with level 8-10 qualifications was higher (albeit slightly) than the combined total with qualifications at FET 4-6 or HE 6/7 (14,200 compared to 13,200).

**Figure 6.** FET level 4-6 qualification holders by field of learning & occupational skills group, quarter 4 2019



**High skilled** occupations: at 18% and 22% respectively, people who had studied **STEM or social science, business and law (SSBL) fields at this level had the largest shares** (and numbers) working in high skilled occupations. This compares to 13% for the health & vet field

**Medium skilled** occupations: 72% of those with health & vet qualifications worked in medium skilled occupations, the largest of all fields; this compares to 60% for STEM

**Low skilled** occupations: at 22% each, the shares working in low skilled occupations was greatest for STEM and other fields qualification holders.

Occupations with the highest numbers at this level

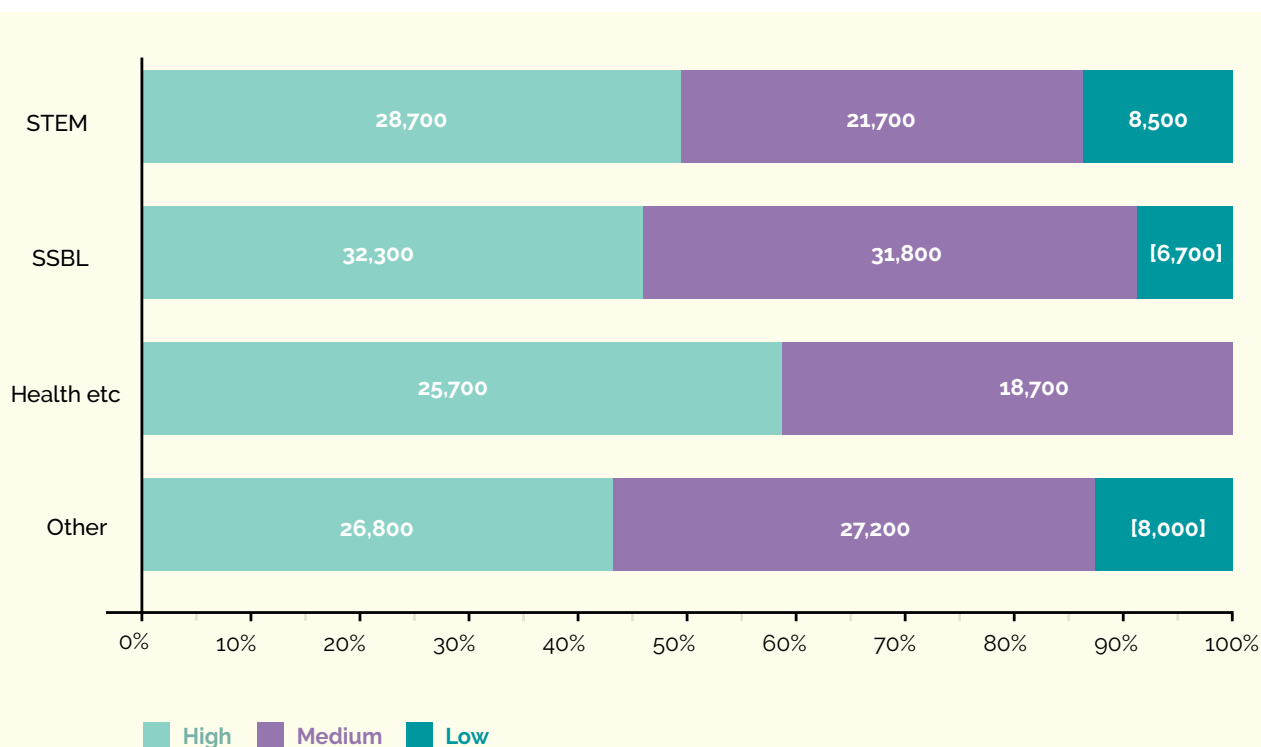
- **STEM:** Construction trades, electricians & skilled metal trades, accounting for over 40% of the total in this field
- **SSBL:** financial, records & other admin workers, and sales etc workers, accounting for a third of the total in this field
- **Health & vet etc:** healthcare workers, agricultural workers & childcare workers, making up 57% of the total in this field
- **Other fields<sup>6</sup>:** childcare workers, sales workers & hairdressers/beauticians, accounting for 28% of the total in this field.

Source: SLMRU analysis of CSO (LFS) data

[ ] numbers in square brackets are small and should be interpreted with caution

6 Includes general programmes, education, arts/humanities and services.

**Figure 7.** HE level 6/7 qualification holders by field of learning & occupational skills group, quarter 4 2019



**High skilled** occupations: health & vet (58% or almost 26,000 persons) and STEM (49%, or almost 29,000 persons) had the largest shares.

**Medium skilled** occupations: 45% of those who had studied SSBL were in medium skilled occupations; compared to 37% for STEM.

**Low skilled** occupations: the share was highest for STEM (14%), although the numbers involved are small with fewer than 10,000 in each field, and numbers were too small to report for health & vet.

Occupations with the highest numbers by field

- **STEM:** science, engineering & ICT professionals, and electrical trades, making up a fifth of the total
- **SSBL:** financial, records and other admin workers, sales/customer service workers, and legal professionals, making up 30% of the total
- **Health & vet etc:** nurses<sup>7</sup>, healthcare & childcare workers, accounting for almost half (47%)
- **Other fields**<sup>8</sup>: teaching professionals, healthcare & childcare workers, and sales/customer service workers, making up almost a third of the total.

Source: SLMRU analysis of CSO (LFS) data

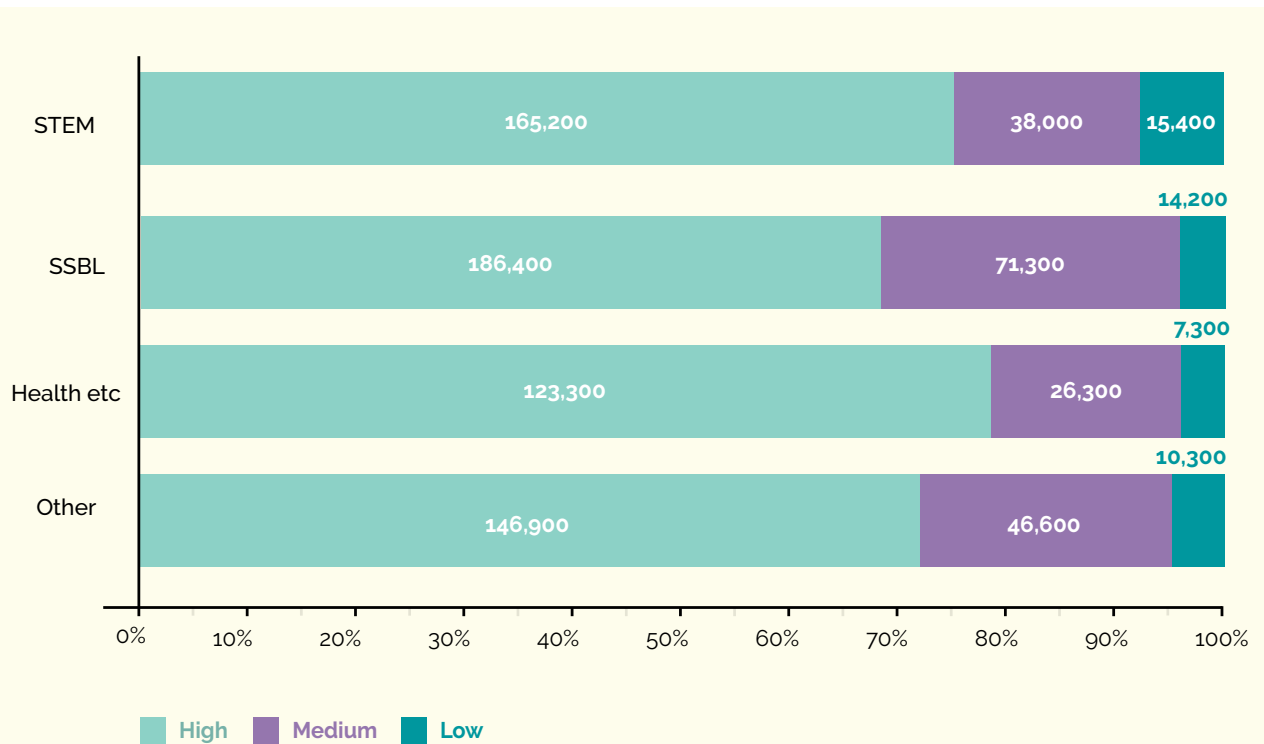
[ ] numbers in square brackets are small and should be interpreted with caution

7 Prior to the introduction of a 4-year level 8 programme for nursing in the early 2000s, entry to nursing occupations required a level 7 qualification.

8 Includes general programmes, education, arts/humanities and services.



**Figure 8.** HE level 8-10 qualification holders by field of learning & occupational skills group, quarter 4 2019



**High skilled** occupations: health & vet had the largest share working, at 79%.

**Medium skilled** occupations: at 26%, SSBL had the largest share (71,300 people), followed by the other fields, at 23%.

**Low skilled** occupations: shares were relatively small, at 7% or less for each field. However, due partly to the large number of qualification holders at this level, the number who had studied SSBL at levels 8-10 and who were working in low skilled occupations was larger than any other level (at 14,200, the number was more than that of the other FET 4-6 and HE 6/7 combined).

Occupations with the highest numbers by field

- **STEM:** ICT professionals, engineers, making up nearly a fifth of the total.
- **SSBL:** accountants, business and sales/marketing associate professionals, making up almost a third
- **Health & vet etc:** nurses, health & therapy professionals, healthcare/childcare workers, making up more than a half
- **Other fields:** teaching professionals, culture/media associate professionals, and financial, records and other admin occupations, accounting for more than a half.

Source: SLMRU analysis of CSO (LFS) data

[ ] numbers in square brackets are small and should be interpreted with caution

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## Conclusion

While it is generally the case that the higher the NFQ level, the greater the share in employment, field of learning also plays a role in determining employment outcomes. Fields of learning where the share of persons in employment tends to be below average (for each NFQ level group) also tend to be the fields for which there are relatively high numbers of graduates each year (e.g. social science, business and law accounts for the largest number of awards at third level yet the share in employment for most third level qualification holders in this field is below average).

Level 8-10 qualification holders dominate in high skilled occupations; however, the large number of level 8-10 qualification holders working in the low skilled or administrative occupations raises the question of whether there is an over-supply of level 8-10 graduates, or whether there are other factors such as individual choice involved. In terms of fields, it is of particular note that of all those holding SSBL qualifications working in low skilled occupations, the highest numbers had level 8-10 qualifications, more than the other two levels (FET 5-6 and HE 6/7).

The issue of overqualification has a number of policy implications. CEDEFOP estimates that 33% of Ireland's 25-34 year-old third level graduates are overqualified<sup>9</sup>. Aside from the financial burden to the individual and the State, education and qualification mismatches have other consequence, including for example a link to greater incidence of job dissatisfaction (CEDEFOP *ibid*). However, interventions, if any, need to be carefully considered. People whose qualifications are higher than what their job requires tend to find it easier to change jobs (Sloane & Mavromaras 2020)<sup>10</sup>, and such flexibility in the workforce, particularly in times of economic crisis, can be valuable.

This data in this report highlights the fact that qualifications at higher levels of the NFQ do not always lead to employment in high skilled occupations. The data also shows that for a small proportion of the workforce, medium-level qualifications can indeed lead to work in high skilled jobs. Continued engagement with employers will play an important role in helping Ireland's education and training system respond appropriately to the skills needs of the economy across all occupation skill and qualification levels.

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9 <https://skillspanorama.cedefop.europa.eu/en/indicators/over-qualification-rate-tertiary-graduates>

10 Sloane, P., Mavromaras, K. (2020). Overeducation, skill mismatches, and labor market outcomes for college graduates. IZA World of Labor 2020: 88.v2 <https://wol.iza.org/articles/overeducation-skill-mismatches-and-labor-market-outcomes-for-college-graduates/long>

## APPENDIX 1 ISCED LEVELS AND FIELDS OF EDUCATION

### Levels of Education

ISCED 2011 Level	Corresponds to	Typical award made on completion	Award NFQ Level
0 Pre-primary education	Early Start and other pre-primary	QQI Certificate	Level 1-2
1 Primary education	Primary education		
2 Lower secondary	2nd level education – Junior Cycle	Junior Certificate	Level 3
3 Upper secondary	2nd level education – Senior Cycle	Leaving Certificate	Level 4
4 Post-secondary non-tertiary	Apprenticeship, PLC courses, other FET <sup>11</sup>	QQI Level 4 Certificate QQI Level 5 Certificate	Level 5
		QQI Advanced Certificate	
5 Short-cycle tertiary education	Third level – higher certificate/university diploma	Higher Certificate	Level 6
6 Bachelor's degree or equivalent	Third level – ordinary & honours bachelor degree/higher diploma	Ordinary Degree	Level 7
		Honours Bachelor Degree	Level 8
		Higher Diploma	Level 8
7 Master's degree or equivalent	Third level – master's degree and postgraduate certs/diplomas	Postgraduate Diploma Master's degree	Level 9
8 Doctor or equivalent	PhD	PhD	Level 10

11 Some FET programmes (e.g. some specific skills training) also lead to awards at level 3 or 4 on the NFQ.

## Fields of Education

ISCED broad field	Grouped in this document to	
Generic programmes and qualifications	Arts, humanities and general	Other
Arts and humanities		
Education	Education	Other
Social sciences, journalism and information	Social science, business and law (SSBL)	SSBL
Business, administration and law		
Natural sciences, mathematics and statistics	Science and ICT	STEM
Information and communication technology		
Engineering, manufacturing and construction	Engineering and construction	
Agriculture, forestry, fisheries and veterinary	Agriculture and vet	Health, vet & agriculture
Health and welfare	Health	
Services	Services	Other

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