Regional Tertiary Provision Pathfinders:

- **What provision looks like in the Northeast and the South of Scotland**
- **How it has changed since 2011-12**

SCOTTISH FUNDING COUNCIL

UNITED KINGDOM + IRELAND +
INTERNATIONAL

AAB

CONTENTS

TABLE OF FIGURES AND TABLES

SUMMARY

This report, produced in 2022 by AAB Consulting, examines:

- Tertiary education and skills provision in the North East and South of Scotland in academic year 2020-21; and
- Changes in tertiary education and skills provision in the North East and South of Scotland between academic years 2011-12 and 2020-21.

The report was produced using secondary (quantitative) data, provided by the Scottish Funding Council. This was supported by conducting interviews with colleagues in the tertiary education sector in the North East and South of Scotland.

The report and supporting analysis were produced solely for the Scottish Funding Council within the specific scope of AAB Consulting's engagement with them and not for any other purpose. AAB Consulting accepts no responsibility to any other organisation or individual in relation to this report.

EXECUTIVE SUMMARY

This report forms part of the Regional Tertiary Provision Pathfinder Programme and describes tertiary education and skills provision in the North East and South of Scotland in 2020-21 and changes since 2011-12. It is primarily a quantitative report drawing on Higher Education Statistics Authority (HESA) data for universities and Further Education Statistics (FES) data collected by the Scottish Funding Council (SFC) on college students and staff. The primary value of this report is the summation of provision information to a regional level, rather than by individual institutions.

The report also contains qualitative input that describes changing work practices and approaches, provided in the form of case studies provided by colleges and universities in the two regions.

UNDERSTANDING THE TOTAL PROVISION IN EACH REGION

- **How many enrolments?** In academic year 2020-21, there were 30,690 enrolments (62% of all regional enrolments) to universities in the North East and 18,980 enrolments (38% of the regional total) to North East colleges. In the South of Scotland, there were 1,715 enrolments to universities (16%) and 8,990 to colleges (84%). Unlike the North East, the South of Scotland does not have a university with a main campus in the region.
- **Which type of institution?** 66% of university students domiciled in the North East chose to attend a North East university and did so on a full-time basis (76%). Similarly, college students domiciled in the South of Scotland choose to attend a South of Scotland college (74%).
- **Which subjects?** The top five subject areas (by enrolment volume) studied in North East colleges are: health care / medicine, health and safety; engineering; family care / personal development / personal care and appearance; business / management / office studies; information technology and information; the top five courses studied in north east universities are: subjects allied to medicine, business and management, engineering and technology, education and teaching and law. The top five courses studied on South of Scotland colleges are: health care / medicine, health and safety, agriculture, horticulture and animal care, construction and property (built environment), engineering and family care/personal development/personal care and appearance; the top five courses studied in South of Scotland universities are: design, creative and performing arts, subjects allied to medicine, education and teaching, agriculture, food and related studies and social sciences.
- **Who is studying?** In North East and South of Scotland colleges, 60% of enrolments are a combination of those aged 17 years and under and those aged 30 years and over.
- Of the 30,690 enrolments in North East universities, 10,425 (34%) were from those domiciled in the North East and 20,265 (66%) came from outside of the North East to study.
- Of the 1,715 enrolments in South of Scotland universities, 655 (38%) were from those domiciled in the South of Scotland and 1,060 (62%) came from outside of the South of Scotland to study.

CHANGES IN PROVISION BETWEEN ACADEMIC YEAR 2011-12 AND 2020-21

- **Changes in volume:** there was an 8% drop in overall enrolments in the North East. This comprised of a 26% drop in college enrolments and an 8% increase in university enrolments. In the South of Scotland, there was a 29% drop in overall enrolments, reflecting a 33% drop in college enrolments and a 10% increase in university enrolments. There is no doubt that COVID had an impact in recent years, particularly in relation to the number of part-time enrolments and with a focus on full time provision.
- **Changes in subjects:** enrolments in information technology-related subjects at college dropped by c1,900 in North East and c1,200 in the South of Scotland. Enrolments in the same subject area at universities in the North East increased by c500. These changes may reflect the technology trends observed over the past 10 years as the industry moves towards digital solutions that demand capabilities in design, machine learning and AI and cyber security. Similarly, engineering enrolments in North East colleges dropped by c1,400 and in universities they dropped by c200. Again, this decrease could be indicative of the challenges faced by the oil and gas industry in recent years and students deciding to focus on alternative study options.
- **Changes in student populations:** there was a 44% increase in taught postgraduate enrolments (from c6,400 to c9,200) in the North East. Contributing factors may include COVID, improvements in first

degree classifications and economic diversification. In the North East, there was a 26% drop in college enrolments overall and a 21% drop in the population of those aged 16-24. This drop in enrolments included a 42% drop of all those enrolling in college aged 17 years and under. There was an 11% decrease in enrolments of those aged 16-24 in the South of Scotland; this includes a 16% drop in colleges and a 3% increase in universities.

CHANGING APPROACHES BY COLLEGES AND UNIVERSITIES

- Institutions pursue engagement and collaborative practices across both regions. These characteristics are increasingly common in tertiary education providers, recognising that no single organisation has all the levers for significant change and to address national and regional priorities. Collaborative working practices are helping to shape provision in response to employer and societal needs in both regions.
- Partnership working is embedded across the institutions. For example, the relationship between North East Scotland College (NESCol) and Robert Gordon University (RGU) to create clear pathways, align curricula and smooth the application process. Collaboration is a feature of working practice between bodies in the south. Regional Outcome Agreements introduced in 2012-13 have strengthened the collaborative work between institutions and a range of public and private sector partners.
- Institutions are taking different and creative approaches to integrate employability skills throughout their provision.
- Efforts are being made to make provision more accessible to those from more deprived areas, helping those furthest from education and employment. This includes strengthening articulation links between institutions providing a pathway for college students into university.
- Developing soft skills in learners (e.g., meta skills and communication skills) is increasingly a focus for institutions. This is positive as we heard directly from employers that soft skills are amongst the most important for work readiness.
- Work placements and work-based learning were also highlighted by employers and learners as good methods of building employability skills. The number of industrial placements offered to students varies between and within institutions; those currently offering fewer placements recognise a need to do more.
- Institutions are also increasingly focussed on improving student employability and after graduation, through a range of means.

INTRODUCTION

OBJECTIVE

This report explores:

- Tertiary education and skills provision in the North East and South of Scotland in 2020-21; and
- Changes in tertiary education and skills provision in the North East and South of Scotland since 2011-12.

This report forms part of the Regional Tertiary Provision Pathfinder Programme (Annex A), providing a breakdown of provision, including work-based learning opportunities, offered across both regions. This report also explores – via case studies from colleges and universities - how course content has evolved alongside changing skills demands.

A description of the methodology is included at Annex B.

CONTEXT

THE TERTIARY EDUCATION SYSTEM

The tertiary education sector is a complex eco-system of bodies and institutions with various roles and responsibilities across several different organisations, including – though not limited to – colleges, universities, non-departmental public bodies (like the Scottish Funding Council (SFC) and Skills Development Scotland (SDS)), Scottish Government Executive Agencies (like Education Scotland), local authorities, regulators, standards agencies, industry, industry bodies, unions, and statistics agencies. The interdependencies across organisations require close working, some of which is described in this report in the case studies.

These organisations are influenced by a range of global and national events, leading to the creation of a web of local, regional and national strategies and policies. Some of these policies and events are shown in Figure 1. These events and policies, coupled with a local and global outlook, impact the shaping of tertiary education provision by institutions.

It would also be remiss not to mention the impact of COVID on all aspects of life during 2020 and 2021. The tertiary education system was no exception, and the impact can be seen in the trends discussed in this report.

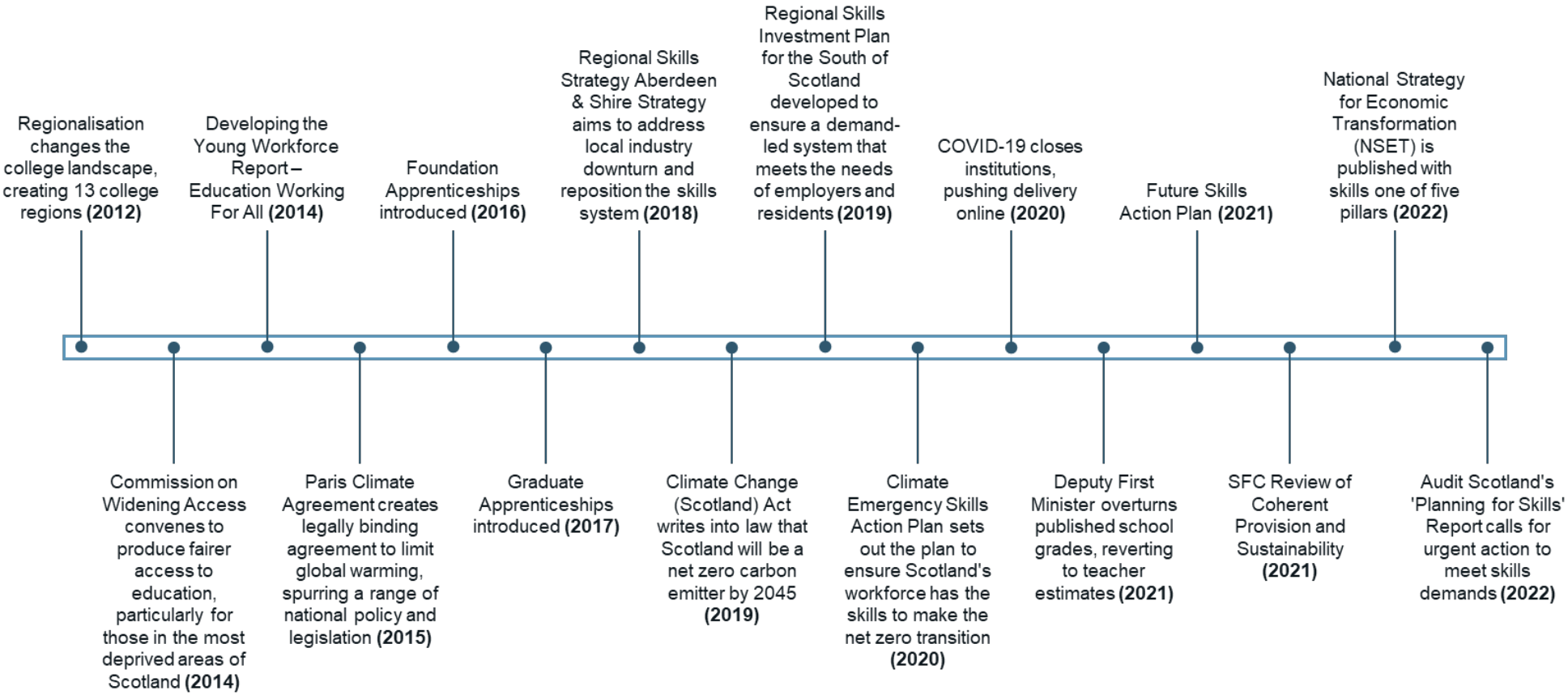


Figure 1: timelines depicting some global, national and regional events, policies and strategies shaping tertiary education provision

WHAT TERTIARY EDUCATION AND SKILLS PROVISION LOOKS LIKE

This section describes tertiary education and skills provision in the North East and South of Scotland. It draws upon quantitative data from academic year 2020-21 and includes total enrolments (total students and student full time equivalents (FTEs)), qualification levels, and subjects studied.

Whilst this report is primarily quantitative, interviews were also held with institutional staff, employers, and learners and the outcomes of these interviews have been captured via several case studies (included in Annex C). The case studies provide insights into how institutions are:

- collaborating with their stakeholders to plan, develop and deliver changes to provision;
- changing programme design (for example, introducing technological changes or creating more industrial placements) to support the needs of learners, employers, and society; and
- changing aspects to the curriculum to support the employability of learners.

NORTH EAST SCOTLAND

This section sets out what education and skills provision looked like in the academic year 2020-21 in North East institutions. It covers enrolments (unless specified which include all levels, modes and domiciles of study), subjects, qualification levels, awarding bodies, and demographic information on the student population including age and Scottish Index of Multiple Deprivation (SIMD)[1] data. SIMD looks at the extent to which an area is deprived across seven domains: income, employment, education, health, access to services, crime and housing.

For the college sector, we have drawn upon data and evidence from North East Scotland College (NESCol) and Scotland's Rural College (SRUC) – college enrolments. For the university sector, we have looked at data and evidence from the University of Aberdeen (UoA), Robert Gordon University (RGU) and university enrolments at SRUC.

[1] https://www.gov.scot/collections/scottish-index-of-multiple-deprivation-2020/

TERTIARY EDUCATION PROVISION IN NORTHEAST OF SCOTLAND – 2020-21

50K
ENROLMENTS 2020-21

19K COLLEGE

31K UNIVERSITY

Enrolments by subject in colleges and universities throughout Northeast Scotland in 2020-21

HEALTHCARE SUBJECTS

9K	5K	4K
ENROLMENTS	UNIVERSITY	COLLEGE

ENGINEERING

5K	2K	3K
ENROLMENTS	UNIVERSITY	COLLEGE

INFORMATION TECHNOLOGY

3K	1.5K	1.5K
ENROLMENTS	UNIVERSITY	COLLEGE

BUSINESS

6.5K	5K	1.5K
ENROLMENTS	UNIVERSITY	COLLEGE

EDUCATION & TEACHING

5K	2K	3K
ENROLMENTS	UNIVERSITY	COLLEGE

College qualification levels

18%	82%
ADVANCED QUALIFICATIONS	NON-ADVANCED QUALIFICATIONS

University qualification levels

61%	30%	5%	4%
UNDERGRADUATE	POSTGRADUATE (TAUGHT)	UNDERGRADUATE (OTHER)	POSTGRADUATE (RESEARCH)

Figure 2: Summary of Northeast provision

NORTH EAST SUMMARY FACTS

- There were 49,670 enrolments in North East institutions; 30,690 to universities (62%) and 18,980 to colleges (38%)
- The share of enrolments was spread quite evenly across NESCol (38%), UoA (32%), and RGU (29%)
- The top five subject areas in colleges and universities were in healthcare-related subjects (excluding medicine), business, engineering, information technology, and education and teaching.
- 66% of university students domiciled in the North East chose to attend a North East university (with the remaining university students attending university elsewhere in Scotland). Enrolments by subject and by HE/FE in North East colleges are depicted in Figure 3.
- Of the 30,690 university enrolments, 10,425 (34%) were from those domiciled in the North East and 20,265 (66%) came from outside of the North East to study.
- The majority of enrolments in North East colleges were part-time (66%) whereas most university enrolments were full time (76%).
- 56% of university enrolments were aged 18-24 years compared with 31% of college enrolments in the same age group. Colleges had a significantly higher proportion of students aged 30 years and over (39% for colleges compared with 27% for universities).
- 82% of college enrolments were towards non-advanced qualifications. In universities, 61% of enrolments were towards first degree qualifications and 30% in taught postgraduate programmes.
- Whilst not the focus of this work, there are some observations on SIMD data worth noting. In the North East the proportion of the population in SIMD quintile 1 is 6%. The proportion of students in SIMD quintile 1 enrolled into colleges was 9% and into universities was 5%.

SUBJECTS STUDIED AND QUALIFICATIONS

COLLEGE ENROLMENTS

Of the 18,980 college enrolments, the top five subject areas by enrolments in North East colleges were:

- Health care / medicine, health and safety (4,195)
- Engineering (3,395)
- Family care / personal development / personal care and appearance (2,015)
- Business / management / office studies (1,520)
- Information technology and information (1,330).

Of the c19,000 college enrolments, 82% (c16,000) were towards non advanced qualifications. Non-advanced qualifications include national certificates, non-advanced accredited qualifications not specified elsewhere; and programmes not leading to recognised qualifications (fully non-assessed courses including most non-vocational programmes). Non-advanced qualifications cover further education level study (e.g. Scottish Credit and Qualifications Framework[2], SCQF, level 6 and below), whereas advanced level qualifications are considered higher education level study (SCQF level 7 and above). Over half of all advanced qualification enrolments were towards Higher National Diplomas or equivalent or Higher National Certificate or equivalent.

Almost a fifth (19%) of students domiciled in the North East choose to go to college elsewhere in Scotland.

[2] https://scqf.org.uk/about-the-framework/

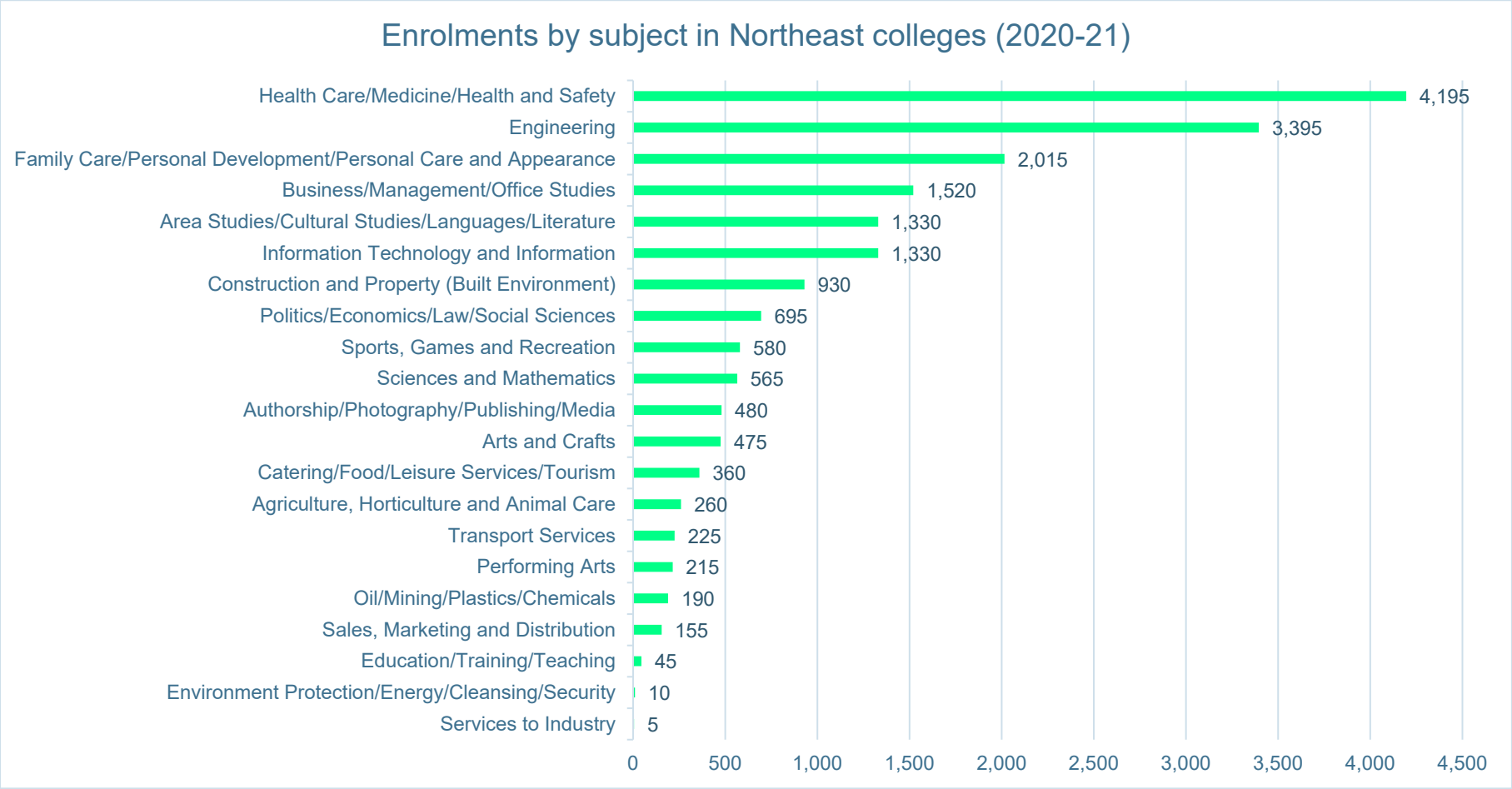


Figure 3: Enrolments by subject in North East colleges (2020-21)

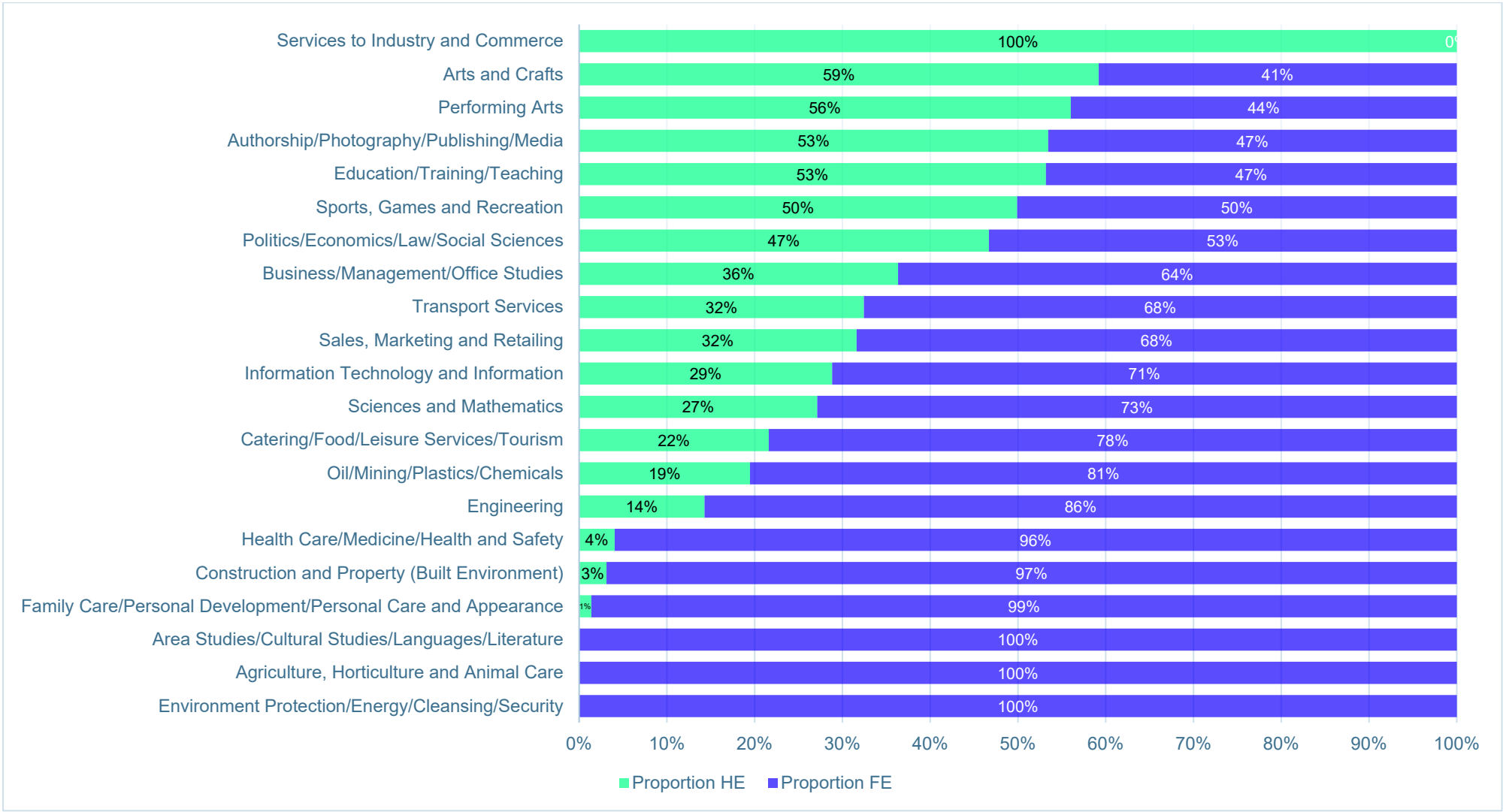


Figure 4: Enrolments by subject and proportion HE/FE in colleges in the North East (2020-21)

UNIVERSITY ENROLMENTS

Of the 30,690 enrolments to universities, the following subjects accounted for 66% of enrolments (Figure 5):

- Subjects allied to medicine (4,880)
- Business and management (4,850)
- Engineering and technology (2,280)
- Education and teaching (2,190)
- Law (2,080)
- Social sciences (2,050)
- Combined and general studies (2,025).

Most subjects have 60%+ of enrolments at a first-degree qualification level (Figure 6). There are a number of exceptions that may reflect in part the nature of the subject, for example, teaching qualifications being acquired after a first degree or the research strengths of individual institutions:

- Agriculture, food and related studies - 45% (155 enrolments) in other undergraduate qualifications
- Geography, earth and environmental studies - 45% (235 enrolments) in first degree qualifications with a further 28% in postgraduate taught and 21% in postgraduate research
- Education and teaching - 58% (1,270 enrolments) in postgraduate taught programmes
- Combined and general studies (the description used to describe courses which do not specify a subject specialism) – 74% (1,505 enrolments) were in taught postgraduate programmes with no first-degree programmes.

There were 485 Graduate Apprenticeship enrolments across business and management, engineering and technology, computing and architecture and building and planning.

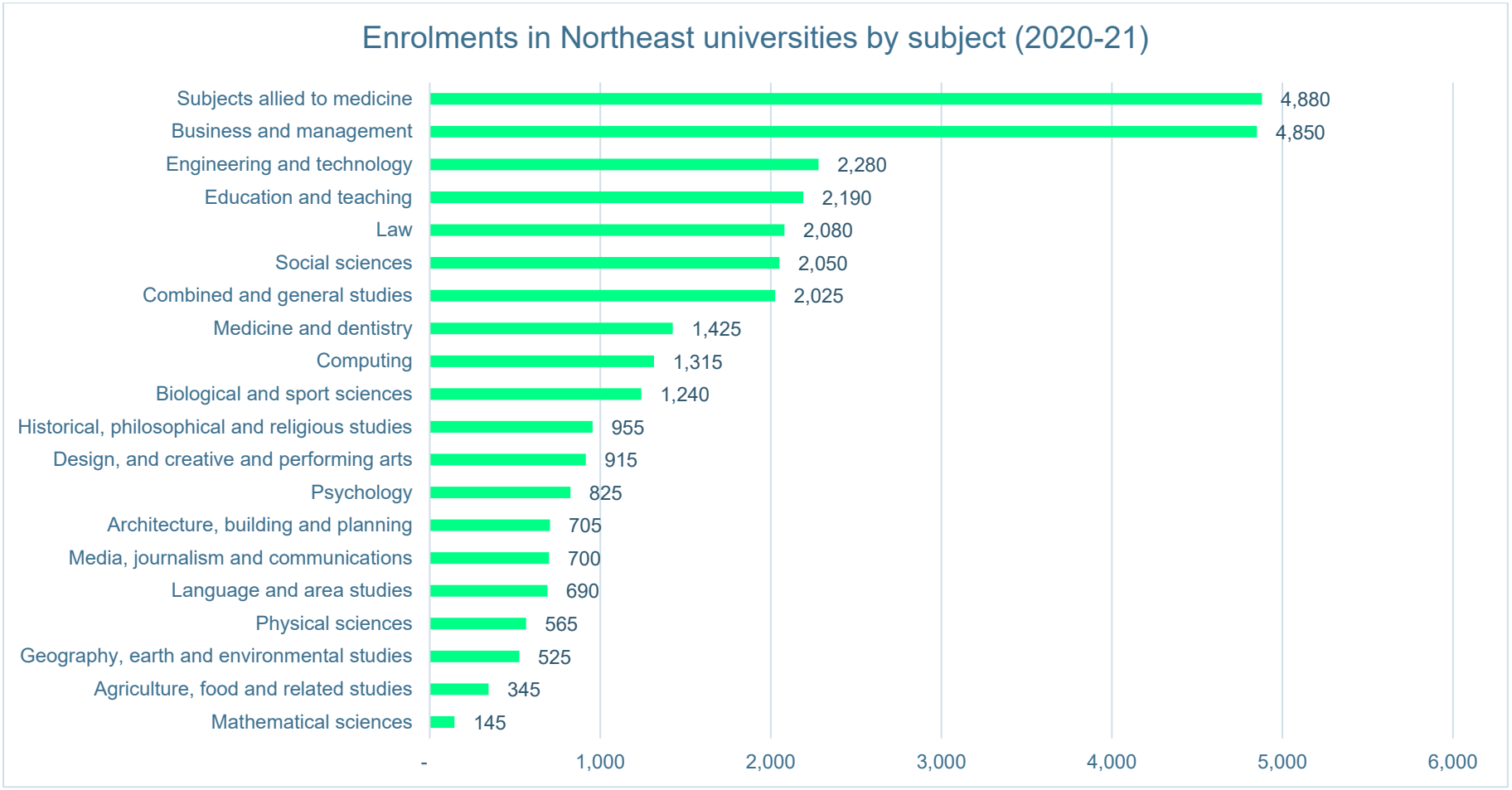


Figure 5: Enrolments by subject in North East universities (2020-21)

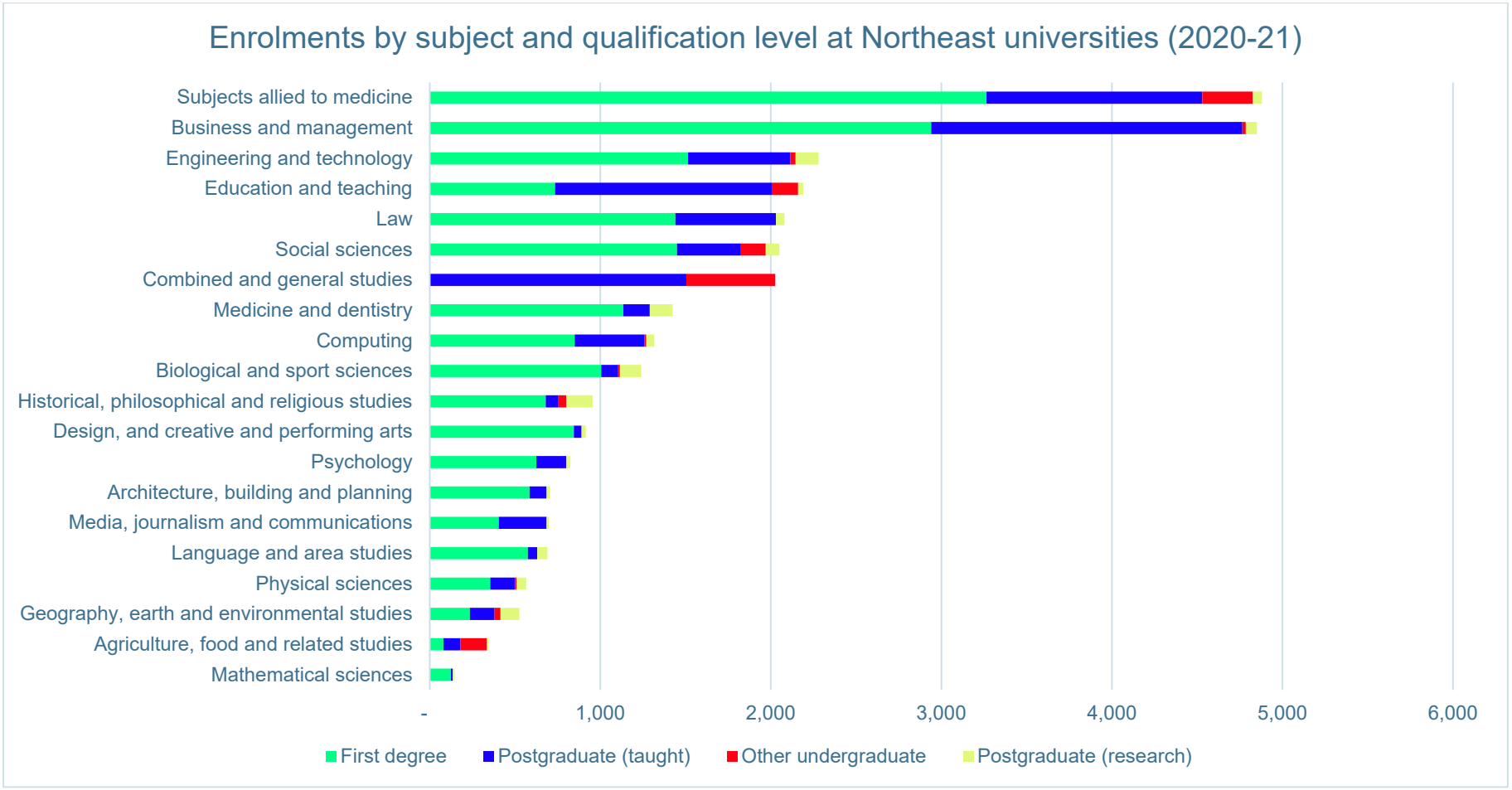


Figure 6: Enrolments by subject and qualification level at North East universities (2020-21)

ACCESS TO PROVISION

Whilst not the focus of this exercise, a short commentary on the analysis of the SIMD data is included as broader context.

The North East is relatively less deprived compared with the rest of the country (6% of North East areas in the bottom quintile; 27% in the top quintile). This compares with 20% of areas in each quintile nationally. Students from the most deprived areas (SIMD quintile 1) made up 5% of university enrolments and 9% of college enrolments against a population of 6% of people living in these areas. By contrast, 38% of university enrolments come from the least deprived areas (SIMD quintile 5) compared with 33% of people living in these areas (Figure 7). The analysis recognises that SIMD operating on a post code basis is less geared to capture deprivation in more dispersed and rural communities. The 2016 Scottish Government Rural Deprivation[3] report identified that rural areas do have deprivation however individuals in the most dispersed postcodes can be dispersed, and therefore other measures as subsequently identified by the Scottish Government Access Data Short Life Working Group, such as Free School Meals and Scottish Child Payments would be useful additional indicators to compliment the use of SIMD.

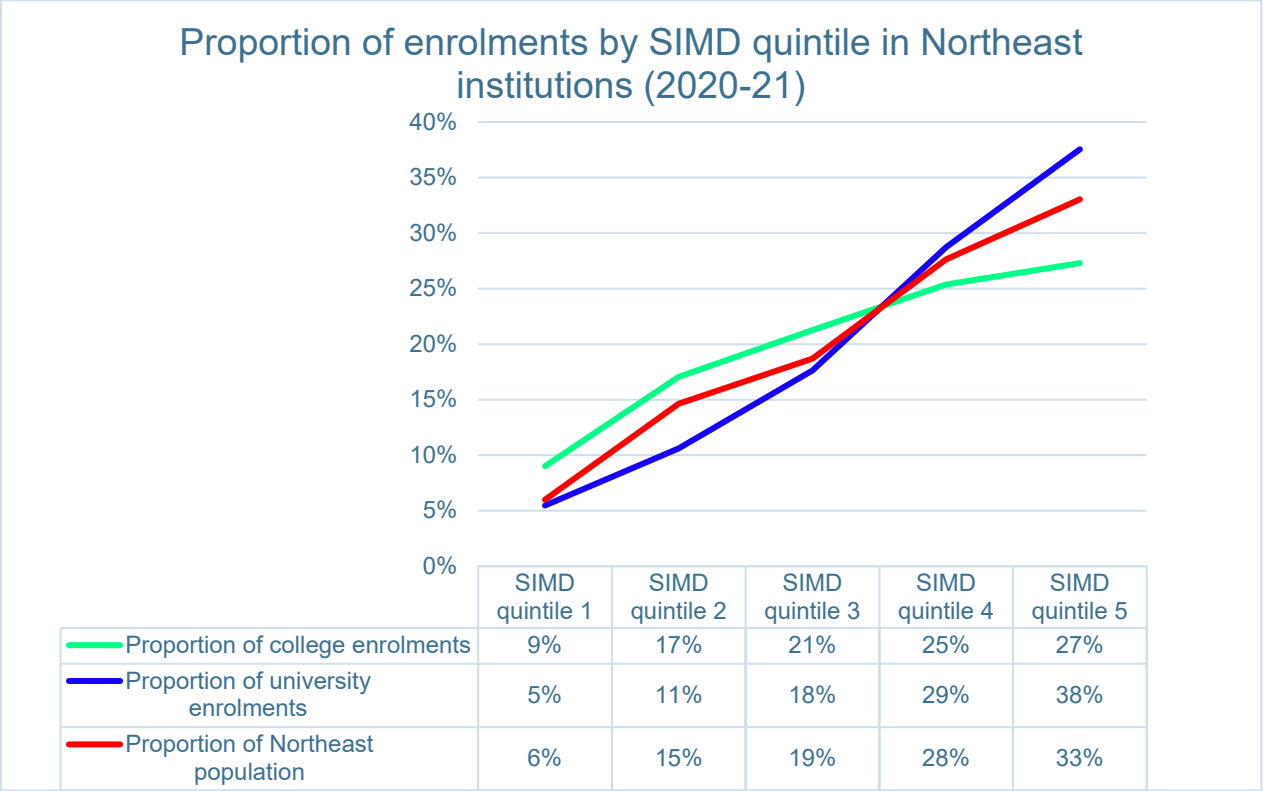
Figure 9 shows that almost half (46%) of university enrolments in combined and general studies are from SIMD quintile 5. Business and management (44%), medicine and dentistry (44%), engineering and technology (42%), mathematical sciences (40%), and law (40%) each have greater than 40% of enrolments from SIMD quintile 5.

The subjects with the highest proportion of university enrolments in SIMD quintile 1, as shown in Figure 9 (and proportionately higher when compared with the population) are:

- Historical, philosophical, and religious studies (9%)
- Psychology (9%)
- Medicine and dentistry (8%)
- Physical sciences (8%), and
- Language and area studies (7%).

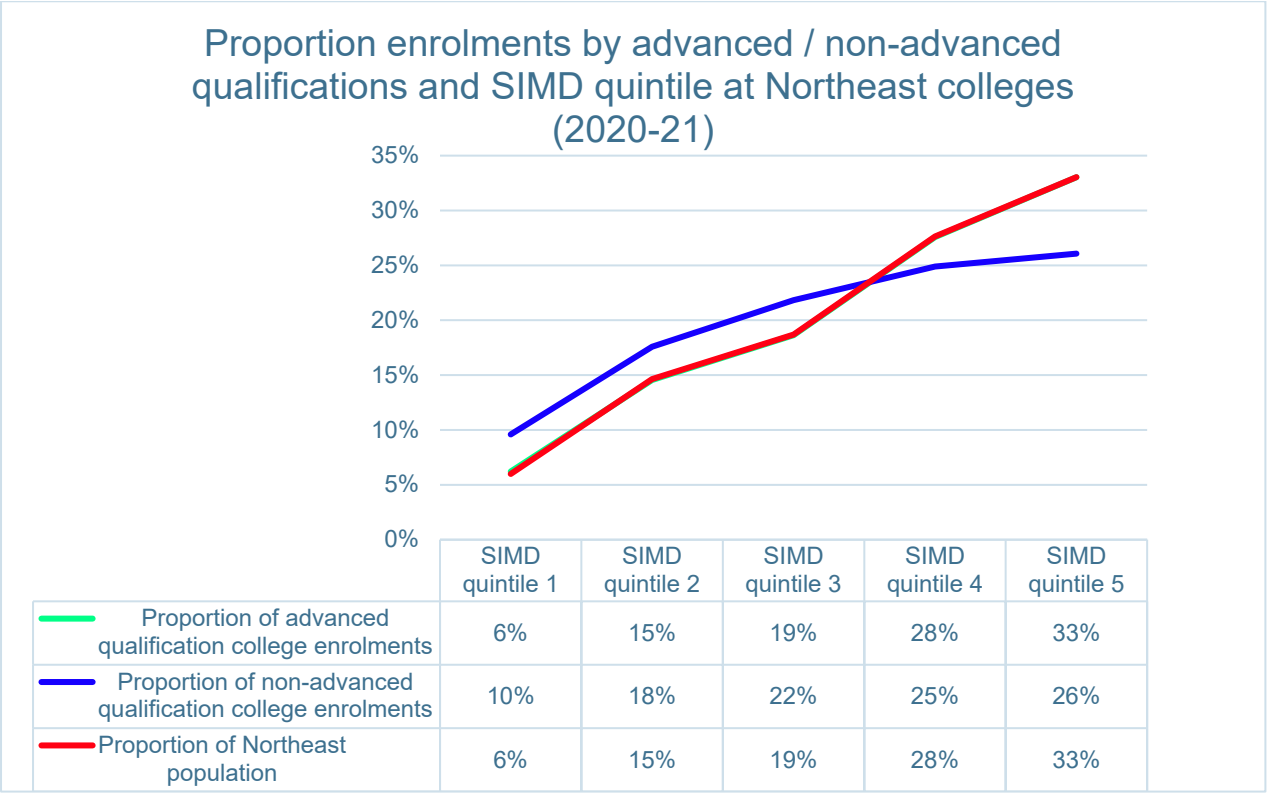
These choices may reflect subjects that were of interest to students at school or subjects that are widely recognised as being a route to good employment opportunities.

[3] SIMD Rural Deprivation, 2016



	SIMD quintile 1	SIMD quintile 2	SIMD quintile 3	SIMD quintile 4	SIMD quintile 5
Proportion of college enrolments	9%	17%	21%	25%	27%
Proportion of university enrolments	5%	11%	18%	29%	38%
Proportion of Northeast population	6%	15%	19%	28%	33%

Figure 7: Proportion of enrolments by SIMD quintile in North East institutions (2020-21)



	SIMD quintile 1	SIMD quintile 2	SIMD quintile 3	SIMD quintile 4	SIMD quintile 5
Proportion of advanced qualification college enrolments	6%	15%	19%	28%	33%
Proportion of non-advanced qualification college enrolments	10%	18%	22%	25%	26%
Proportion of Northeast population	6%	15%	19%	28%	33%

Figure 8: Proportion enrolments by advanced / non-advanced qualifications and SIMD quintile at North East colleges (2020-21)

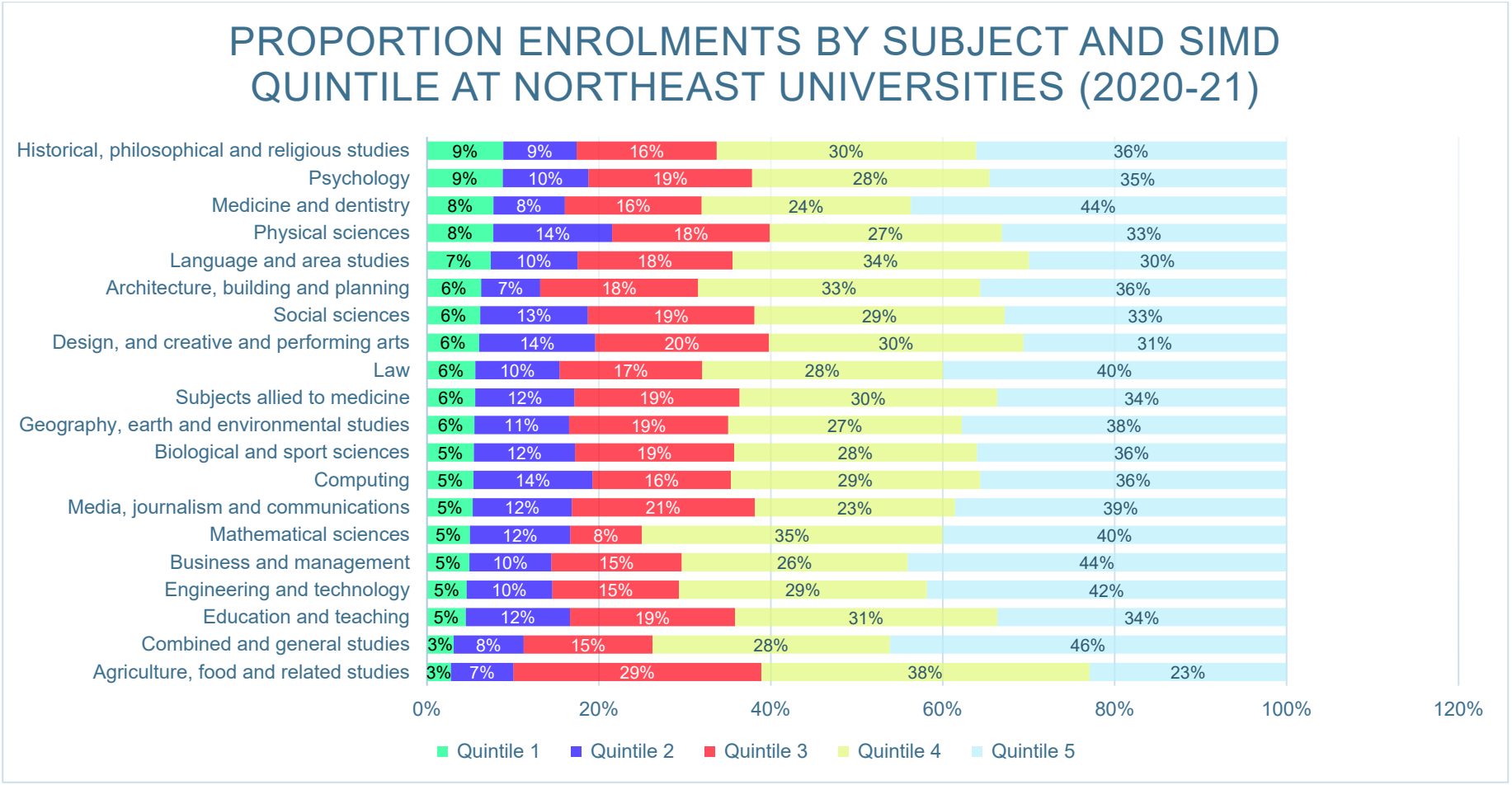


Figure 9: Proportion of enrolments by subject and SIMD quintile at North East universities

ACTIVITIES AND APPROACHES ENABLING PROVISION PLANNING, DEVELOPMENT AND DELIVERY IN COLLEGES AND UNIVERSITIES

In addition to the quantitative analysis of data, interviews and focus groups were held to elicit qualitative information from education providers, learners and employers. These conversations were focused on the activities being taken to enable provision planning, development and delivery within institutions and in partnership with others.

LOCAL PROVISION SHAPING THROUGH ENGAGEMENT AND COLLABORATION

- Institutions in the North East are highly locally engaged and use this engagement to shape provision.
- At UoA, a new role (Vice-Principal, Regional Engagement and Regional Recovery), was created recognising the need to balance the focus on being a global, research-led university with its civic responsibilities locally.
- RGU has had local engagement arrangements in place for some time. This includes articulation agreements with NESCol, which has led to an increase in students entering the university in second and third years.
- Examples:
    - UoA, RGU, NESCol, SDS, the Energy Transition Zone Ltd (ETZ) and the National Energy Skills Accelerator (NESA) worked together to understand the education and skills needed to support the Net Zero Transition. This included identifying the skills requirements for graduates; and the long and short courses needed. This helped establish a workforce plan with clear skills requirements for the next 5-10 years, including the requirements for the supply chain.
    - There are strong articulation agreements in place between RGU and NESCol, which supports provision alignment. The institutions work jointly to support smoother articulation with an ongoing focus on developing partnerships and alignment of boards and senior teams **(see case study C1 in Annex C).**
    - NESCol is working closely with Aberdeen City and Aberdeenshire Councils on Foundation Apprenticeships and, collectively, there is joint work underway to build pathways.

RESPONSIVENESS OF PROVISION

There are differences in how institutions respond to changes that drive provision planning and development. RGU and SRUC have well-established processes for managing changes to provision that take information from a wide range of sources.

Examples:

- RGU has a Marketing Insights and Planning Team that analyses data from internal and external sources such as HESA and SDS to ensure that decisions are evidence based. This helps RGU assess demand for provision based on future student numbers and demand from employers for new skills.
- Other institutions explained that due to capacity constraints, provision planning, and development is part of business as usual for academic teaching staff. This reinforces the need for Curriculum Managers and teaching staff to be well-connected, able to take a systems-level view of provision to avoid duplication and identify gaps, and horizon scan to ensure that they can reflect emerging trends in the future provision.
- Both UoA and RGU referenced the significant changes to computing science and engineering degrees over the past decade. This evolution will inevitably continue given the NESA work cited earlier. However, given the association with the oil and gas industry, a series of oil price shocks, and the climate emergency, institutions are increasingly having to re-position their offerings to ensure that they appeal to an increasingly socially conscious, sustainably minded audience.

We explored with institutions how long it takes to develop a new course and implement it into the curriculum. The responses ranged from ‘very quickly’ to ‘a long time’. The variance can be attributed to the type of new provision (full time degree or short upskilling module), associated financial viability, whether it is the creation of entirely new provision or modification of existing programmes, prioritisation of the provision

and available staffing capacity within the institution. Developing new provision involves collaboration across bodies. For example, undergraduate (UG) courses at university depends on funding from the Scottish Funding Council and college qualifications are developed in collaboration with the SQA. UoA and RGU mentioned that postgraduate (PG) courses were quicker because there can be less risk and fewer interdependencies than UG courses. This means PG courses can be more responsive to emerging demands.

CURRICULUM CHANGES

Recognising that students will move into new sectors and industries during their working life, RGU has focussed on introducing interdisciplinary studies to the curriculum. For example, tying the links between architecture and health or ensuring that data and analytics are taught across several of their schools.

MODES OF DELIVERY

There is increasing focus on the learner experience, employability prospects and workplace readiness that is shaping modes of delivery within institutions.

Examples at RGU:

- The mode of delivery considers the age of students, first language, etc. This focus on the learner journey meant that RGU had well-established online and distance learning programmes, which helped it adapt to COVID-19. This ability to flex delivery supports accessibility for those in rural areas or those furthest from the labour market.
- Graduate Apprenticeships (GA) introduced in 2016 were considered a growth area for RGU.
- Feedback from learners from RGU outlined the importance of industrial placements in supporting future employability and helping secure positions following graduation.

Example at UoA:

- Industrial placements are increasingly common and UoA is looking at ways to expand provision following feedback from students and employers – from short internships over the summer through to one-year placements as part of a degree programme. Increasingly, visiting lecturers are brought in from industry with deep industry expertise who can support the employability skills of students.

EMPLOYABILITY SKILLS

The institutions are all increasingly focussed on boosting the employability skills of their students. UoA shared their work on graduate attributes (descriptions of the wide range of skills and attributes required of graduates to benefit future study, employment, and citizenship). Before 2008-09, there was a less well articulated concept of graduate attributes. UoA engaged stakeholders including employers and professional bodies to develop a list of attributes that they would expect to see in graduates. This helped shape what the curriculum should look like and made clear what would be expected of students. In addition to technical skills, graduate attributes relate to core employability skills like communication, leadership, and teamwork. Once developed, degree programmes then had to demonstrate how they aligned with the attributes. UoA is now in the process of revisiting and refreshing their graduate attributes. **See case study C2 in annex C.**

During interviews with employers and institutions, it was highlighted that graduates do not always recognise the transferability of their skills from their studies and do not always know how to highlight their skills, knowledge, experience, and personal attitudes during interviews. Institutions are working hard to ensure that graduates are addressing this to have the best chance of gaining employment after education.

Examples:

- RGU has included reflective modules throughout course curriculum to ensure that students recognise the benefits of the knowledge and skills they are learning throughout their academic journey. RGU hopes that this will help graduates as they communicate their relevant skills and experience to prospective employers.
- If an RGU graduate has not found employment 6 months after graduating, the Careers Support Team reaches out to offer support and careers related guidance. This can include interview skills, help to prepare cover letters, CVs, and discussion of career options.

See **annex C** for case studies illustrating a range of institutional approaches to curriculum development including embedding graduate attributes.

SOUTH OF SCOTLAND

This section sets out what education and skills provision looked like for the academic year 2020-21 in South of Scotland institutions. It covers total enrolments, where students domiciled in the South of Scotland go to study, modes of attendance, qualification levels, awarding bodies, subjects, and demographic information (which includes the age ranges of students and SIMD data).

For the college sector, we have drawn upon data and evidence from Borders College, Dumfries and Galloway College (DGC), and Scotland's Rural College (SRUC, Dumfries campus only)[4]. For the university sector, we have looked at data and evidence from the University of Glasgow (UoG, Dumfries campus only)[5], Heriot-Watt (HW, Dumfries campus only)[6], University of West of Scotland[7] (UWS, Dumfries campus only), and SRUC (Dumfries campus only). As universities in the South of Scotland are all satellite campuses, with main campuses located elsewhere, provision offerings tend to be narrower.

[4] In academic year 2012-13, Barony College, Elmwood College and Oatridge College merged with the Scottish Agricultural College to form SRUC. Data from the Barony campus only shown in figures.
[5] Data shows enrolments against the Dumfries campus at University of Glasgow only.
[6] Data shows enrolments against the Scottish Borders campus at Heriot-Watt University only.
[7] Data shows enrolments against the Dumfries campus at University of the West of Scotland only.

TERTIARY EDUCATION PROVISION IN SOUTH OF SCOTLAND – 2020-21

10.6K
ENROLMENTS 2020-21

8.9K
COLLEGE

1.7K
UNIVERSITY

Enrolments by subject in colleges and universities throughout South of Scotland in 2020-21

HEALTHCARE SUBJECTS

2.8K ENROLMENTS | **200** UNIVERSITY | **2.6K** COLLEGE

ENGINEERING

800
COLLEGE

LAND-BASED*

1.2K ENROLMENTS | **100** UNIVERSITY | **1.1K** COLLEGE

* E.g., agriculture, food, animal care

FAMILY & PERSONAL CARE

700
COLLEGE

CONSTRUCTION & PROPERTY

900
COLLEGE

College qualification levels

12% ADVANCED QUALIFICATIONS

88% NON-ADVANCED QUALIFICATIONS

University qualification levels

79% UNDERGRADUATE

9% POSTGRADUATE (TAUGHT)

10% UNDERGRADUATE (OTHER)

2% POSTGRADUATE (RESEARCH)

Figure 10: Summary of South of Scotland provision

SOUTH OF SCOTLAND SUMMARY FACTS

- There were 10,705 enrolments in South of Scotland institutions: 1,715 to universities (16%) and 8,990 to colleges (84%). Unlike the North East, the South of Scotland does not have a university with its main campus in the region, so college enrolments constitute more of the provision.
- Enrolments were distributed between Dumfries and Galloway College (42%), Borders College (35%), SRUC college enrolments (7%), Heriot-Watt University (6%), University of Glasgow (4%), University of the West of Scotland (4%) and SRUC university enrolments (2%).
- The top five subject areas by enrolments in South of Scotland colleges are: health care/medicine/health and safety; agriculture, horticulture and animal care; construction and property (built environment); engineering; and family care/personal development/personal care and appearance.
- There were no college enrolments in performing arts; oil/mining/plastics/chemicals; humanities (history/archaeology/religious studies/philosophy); politics/economics/law/social sciences; environmental protection/energy/cleansing/security largely as these subject areas are not offered by the institutions.
- 74% of college students domiciled in the South of Scotland chose to attend a college in the South of Scotland (with the remaining college students attending a college elsewhere in Scotland). 89% of students domiciled in the South of Scotland attended university elsewhere in Scotland.
- Of the 1,715 university enrolments, 655 (38%) were from those domiciled in the South of Scotland, and 1,060 (62%) came from outside of the South of Scotland to study.
- The majority of enrolments in South of Scotland colleges were part-time (71%) whereas most university enrolments were full time (94%).
- 63% of university enrolments were aged 18-24 years compared with 27% of college enrolments in the same age group.
- 33% of all college enrolments were of students aged 17 years and under; reflecting those still in school or working towards a Foundation Apprenticeship.
- 88% of college enrolments were towards non-advanced qualifications. In universities, 79% of enrolments were towards first degree qualifications and 10% were taught postgraduate programmes.
- In the South of Scotland, the proportion of the population in SIMD quintile 1 is 8%. The proportion of students in SIMD quintile 1 enrolled into colleges was 11% and into universities was 13%.

SUBJECTS STUDIED AND QUALIFICATIONS

COLLEGE ENROLMENTS

Of the 8,990 college enrolments, the top five subject *areas* by enrolments in South of Scotland colleges were (Figure 11):

- Health care / medicine, health and safety (2,555).
- Agriculture, horticulture and animal care (1,085).
- Construction and property (built environment) (930).
- Engineering (765).
- Family care/personal development/personal care and appearance (745).

There were no college enrolments in performing arts; oil/mining/plastics/chemicals; humanities (history/archaeology/religious studies/philosophy); politics/economics/law/social sciences; environmental protection/energy/cleansing/security largely as these subject areas are not offered by the institutions.

Of the c9,000 college enrolments, 88% (c8,000) were towards non advanced qualifications. non-advanced qualifications include national certificates, non-advanced accredited qualifications not specified elsewhere; and programmes not leading to recognised qualifications (fully non-assessed courses including most non-vocational programmes). Approximately one third of all advanced qualification enrolments were towards Higher National Diplomas or equivalent or Higher National Certificate or equivalent.

Almost a fifth (19%) of students domiciled in the South of Scotland choose to go to college elsewhere in Scotland.

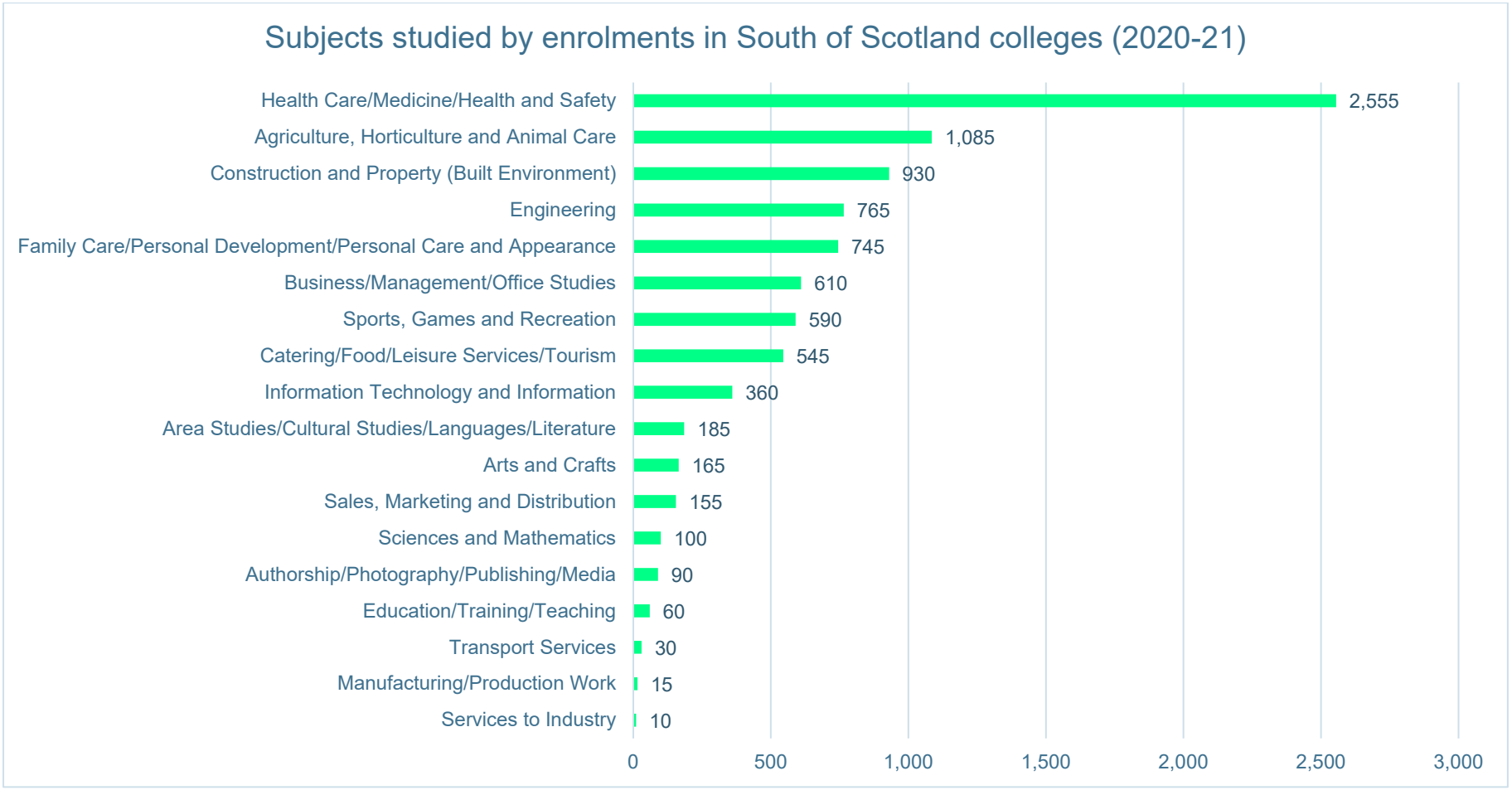


Figure 11: Enrolments by subject in South of Scotland colleges (2020-21)

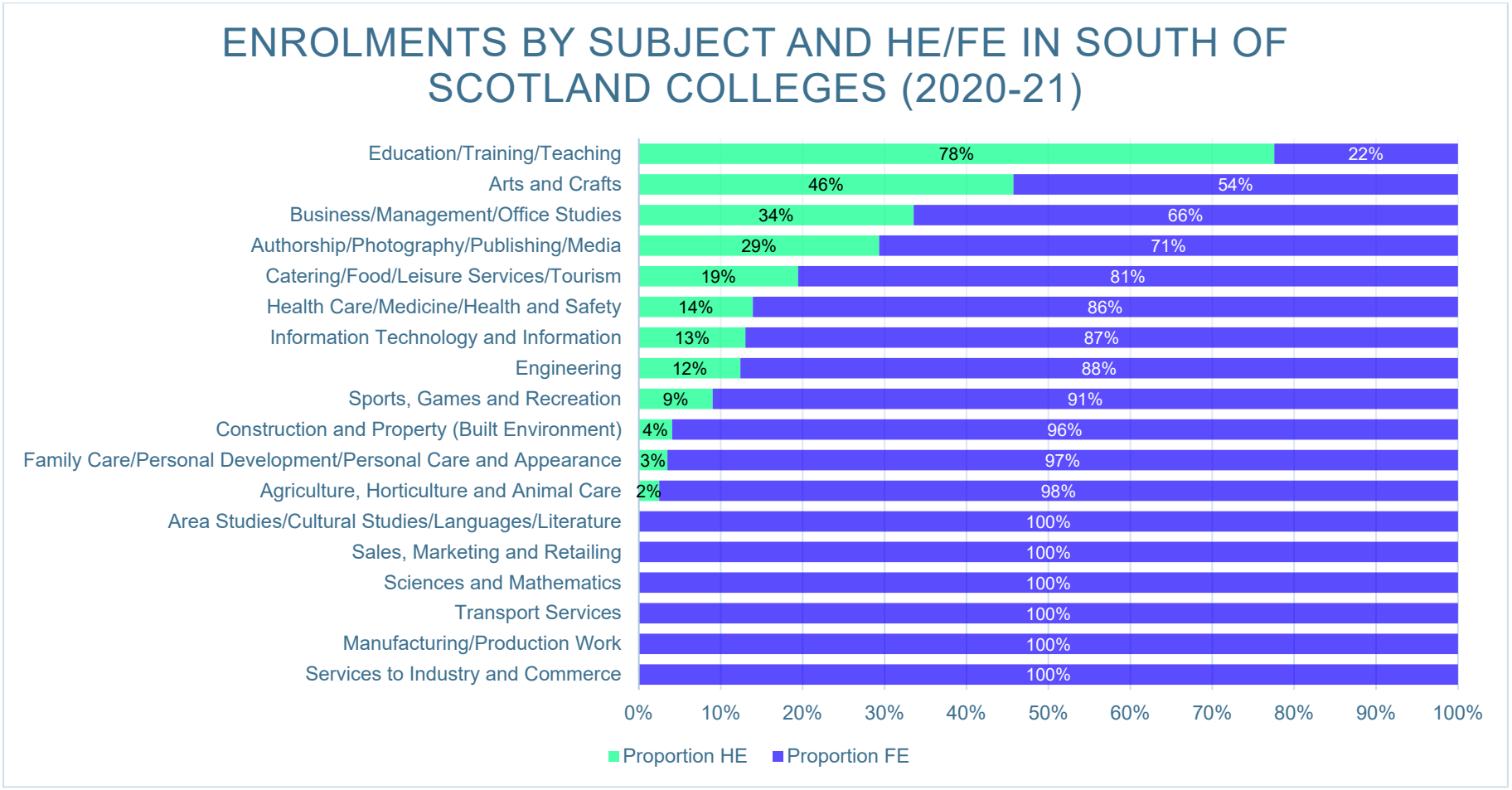


Figure 12: Enrolments by subject and proportion HE/FE in colleges in the South of Scotland (2020-21)

SOUTH OF SCOTLAND UNIVERSITY ENROLMENTS

Of the 1,715 enrolments to universities, the following subjects accounted for 81% of enrolments (Figure 13):

- Design, creative and performing arts (660)
- Subjects allied to medicine (245)
- Education and teaching (240)
- Agriculture, food and related studies (130) and
- Social sciences (105).

Most subjects have 70%+ of enrolments at a first-degree qualification level (Figure 14). There are several exceptions that may reflect in part the nature of the subject and the research strengths of individual institutions:

- Agriculture, food and related studies - 23% in first degree and 77% in taught postgraduate.
- Historical, philosophical and religious studies – 100% (60) in postgraduate research.

There were no enrolments in the following subject areas: combined and general studies; mathematical sciences; language and area studies; engineering and technology; architecture, building and planning; biological, sports sciences and psychology; law; media, journalism, mass communication and documentation; medicine and dentistry. As stated above, universities in the South of Scotland are all satellite campuses, with centrally located campuses elsewhere. This means that provision tends to be narrower.

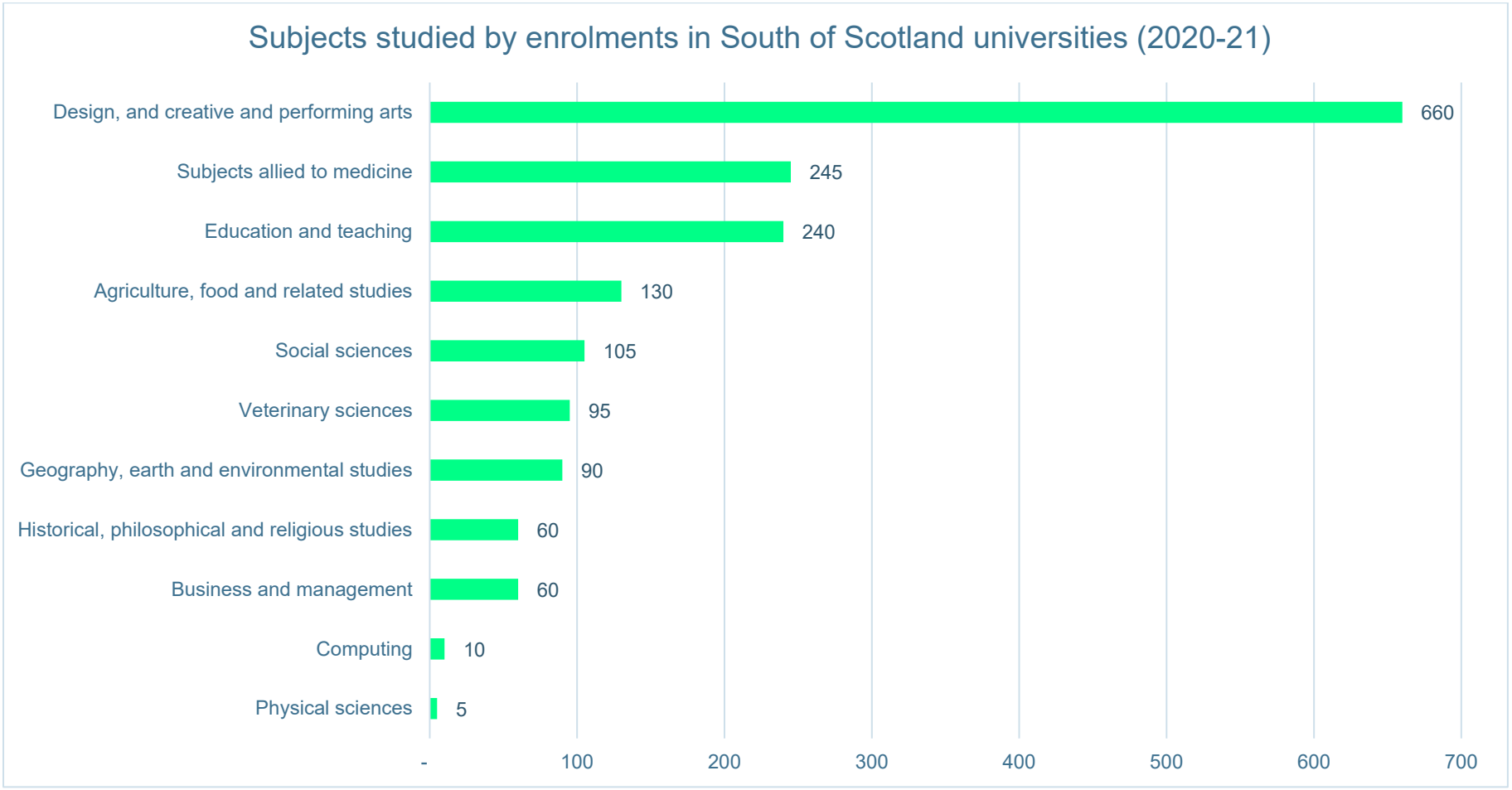


Figure 13: Enrolments by subject in South of Scotland universities (2020-21)

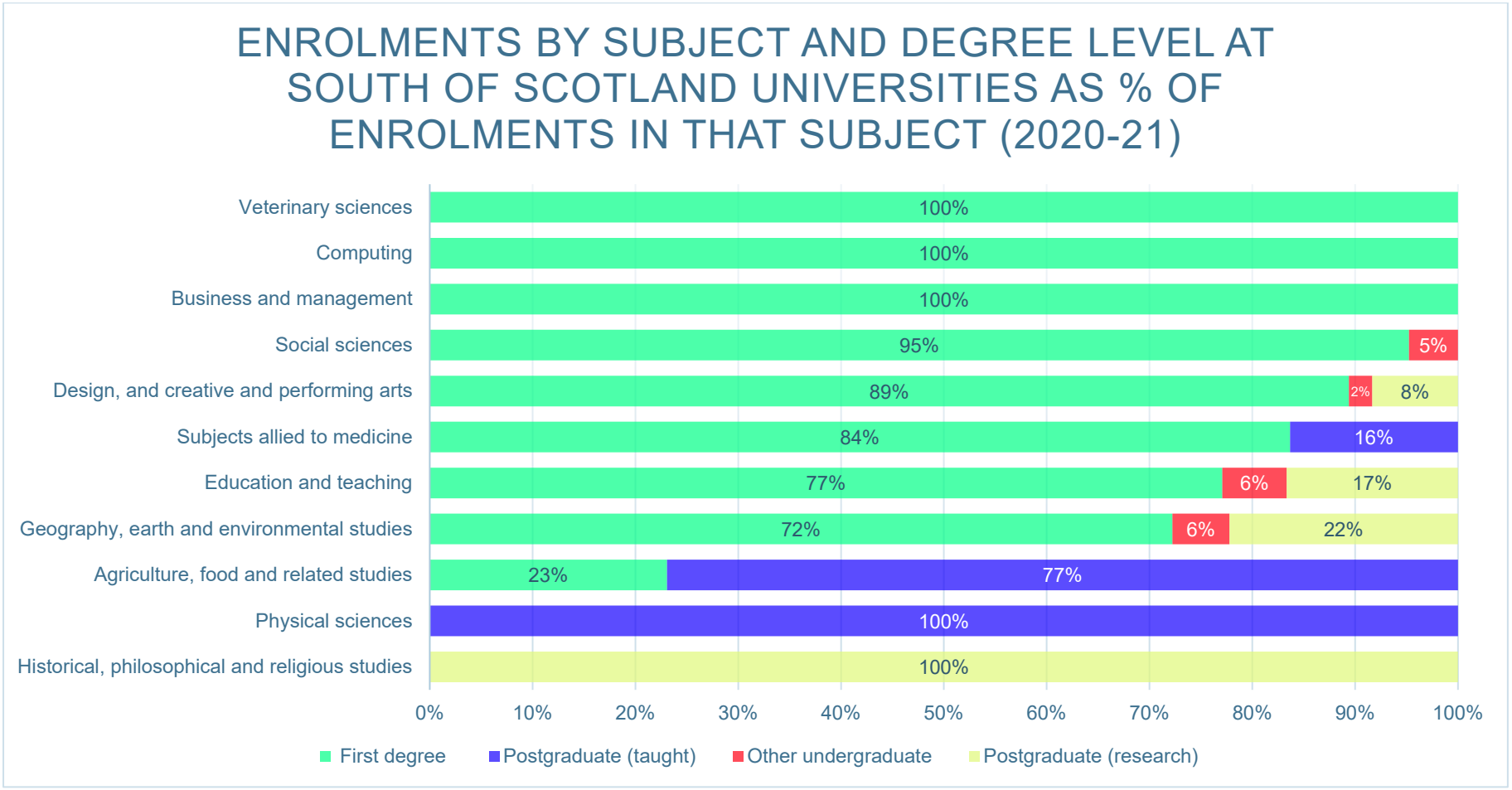


Figure 14: Enrolments by subject and qualification level at South of Scotland universities (2020-21)

ACCESS TO PROVISION

While not the focus of this study, a short summary of analysis undertaken using SIMD data for the South of Scotland is covered below as broader context.

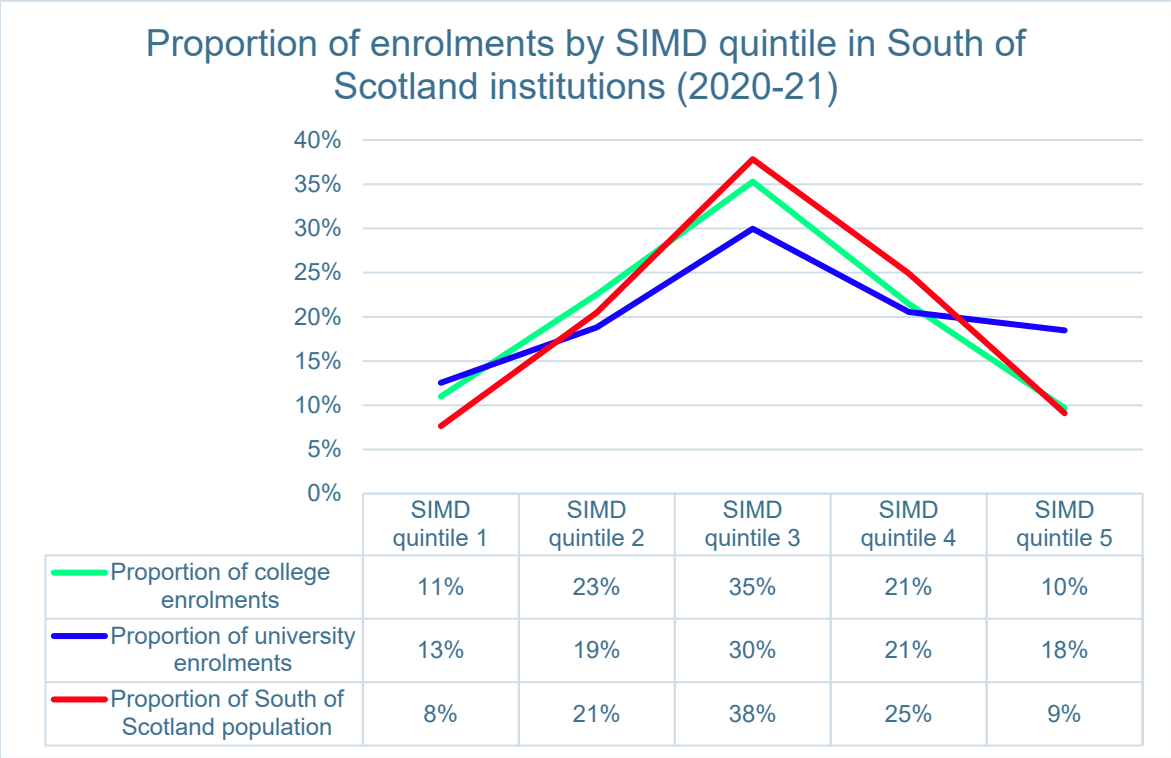
Unlike the North East, the South of Scotland has fewer people living in the top quintile and proportionately more than in the bottom quintile (8% of South of Scotland areas in the bottom quintile; 9% in the top quintile). This compares with 20% of areas in each quintile nationally. Students from the most deprived areas (SIMD quintile 1) made up 13% of university enrolments and 11% of college enrolments against a population of 8% of people living in these areas. By contrast, 18% of university enrolments come from the least deprived areas (SIMD quintile 5) compared with 9% of people living in these areas (Figure 15)

Figure 17 shows that 26% of university enrolments were in business and management and 25% of enrolments in design, creative and performing arts are from SIMD quintile 5.

The subjects with the highest proportion of university enrolments in SIMD quintile 1 (and proportionately higher when compared with the population) are (See Figure 17):

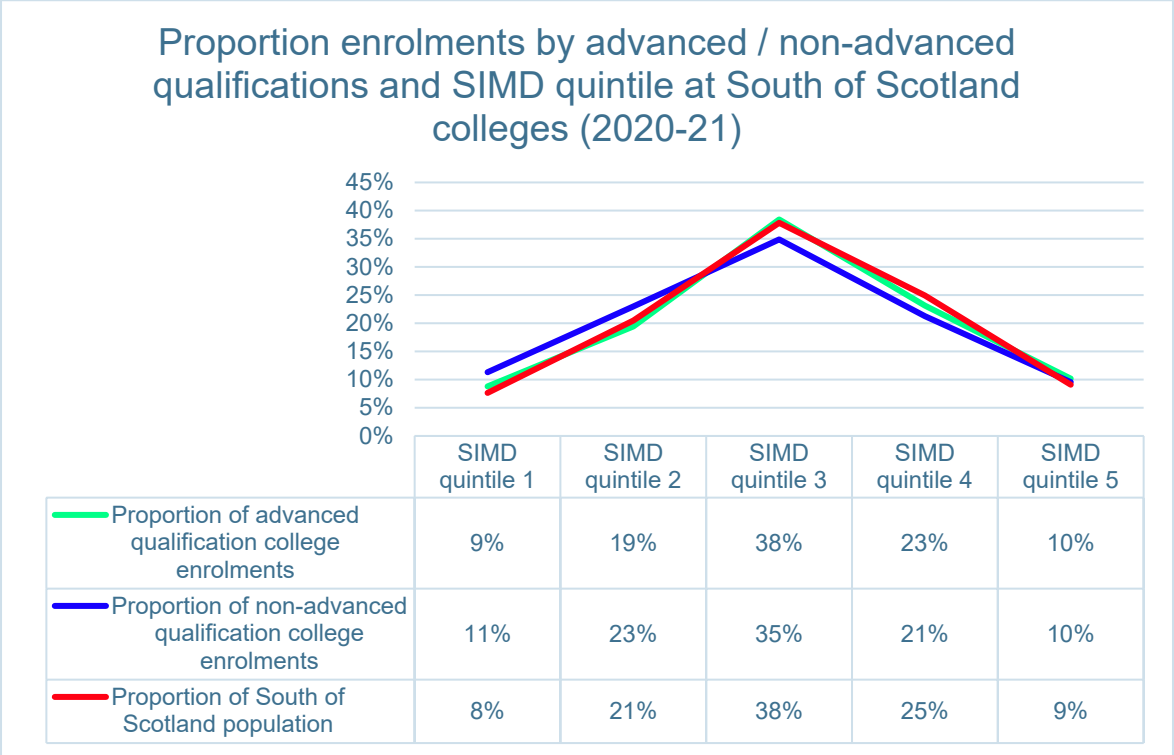
- Physical sciences (33%)
- Design, creative and performing arts (16%)
- Business and management (14%)
- Social sciences (14%)
- Veterinary sciences (12%)
- Subjects allied to medicine (12%), and
- Agriculture, food and related studies (12%).

These choices may reflect subjects that were of interest to students at school or subjects that are widely recognised as being a route to good employment opportunities.



	SIMD quintile 1	SIMD quintile 2	SIMD quintile 3	SIMD quintile 4	SIMD quintile 5
Proportion of college enrolments	11%	23%	35%	21%	10%
Proportion of university enrolments	13%	19%	30%	21%	18%
Proportion of South of Scotland population	8%	21%	38%	25%	9%

Figure 15: Proportion of enrolments by SIMD quintile in South of Scotland institutions (2020-21)



	SIMD quintile 1	SIMD quintile 2	SIMD quintile 3	SIMD quintile 4	SIMD quintile 5
Proportion of advanced qualification college enrolments	9%	19%	38%	23%	10%
Proportion of non-advanced qualification college enrolments	11%	23%	35%	21%	10%
Proportion of South of Scotland population	8%	21%	38%	25%	9%

Figure 16: Proportion of enrolments by advanced / non-advanced qualifications and SIMD quintile at South of Scotland colleges (2020-21)

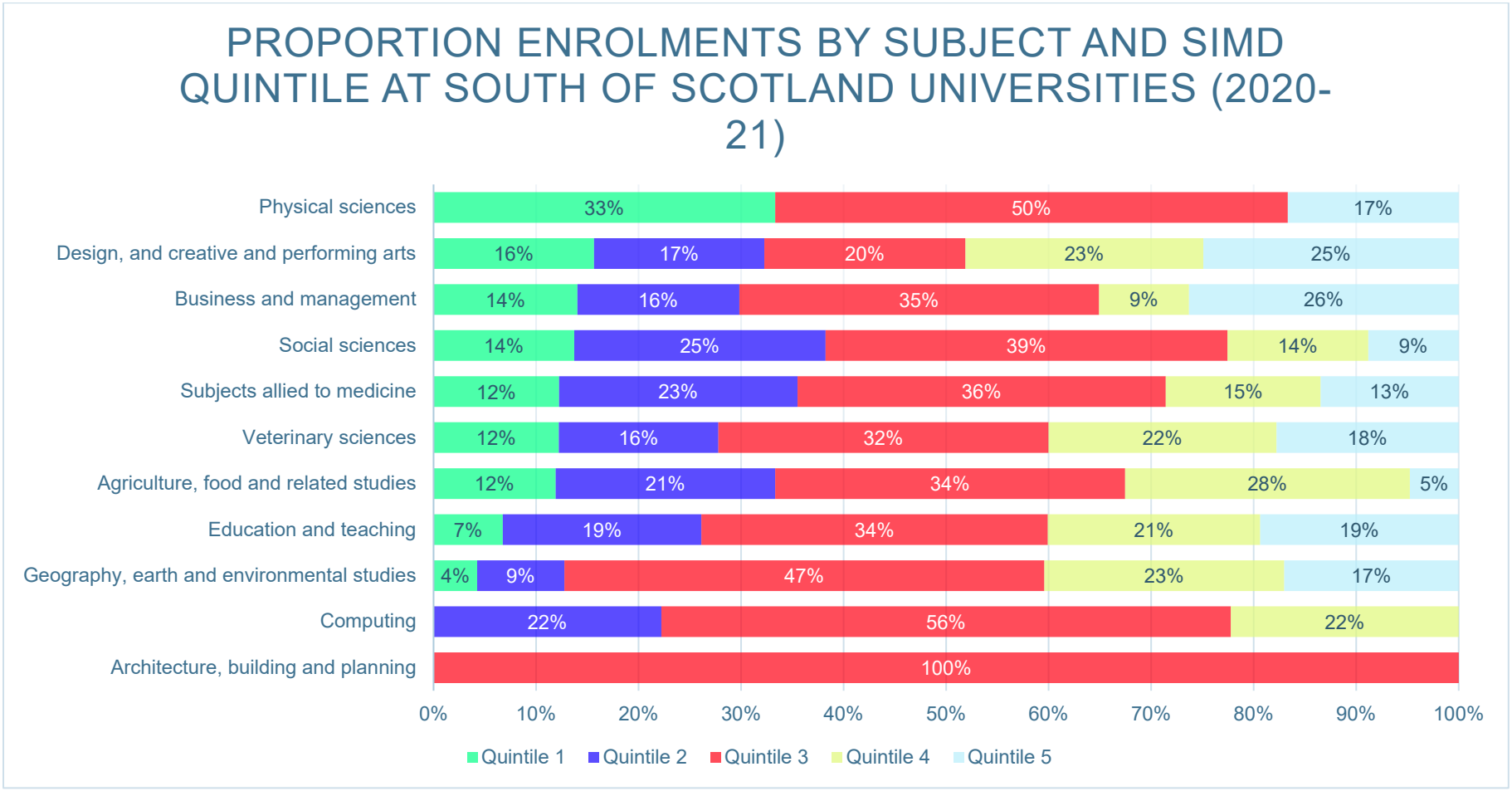


Figure 17: Proportion of enrolments by subject and SIMD quintile at South of Scotland universities

ACTIVITIES AND APPROACHES ENABLING PROVISION PLANNING, DEVELOPMENT AND DELIVERY IN COLLEGES AND UNIVERSITIES

As in the North East region, in addition to the quantitative analysis of data, interviews and focus groups were held in the South of Scotland to elicit qualitative information from education providers, learners and employers. These conversations were focused on the activities being taken to enable provision planning, development and delivery within institutions and in partnership with others.

LOCAL PROVISION SHAPING THROUGH ENGAGEMENT AND COLLABORATION

Regionalisation in the South of Scotland further strengthened collaborative working with Regional Outcome Agreements introduced for the two colleges. In the south west, partners also collaborate on the Crichton Campus[8] to share ideas, minimise duplication and support learner pathways. More recently, the Enterprise and Skills Review in 2017 led to the establishment of South of Scotland Enterprise (SOSE) in 2020. SOSE work closely with both institutions and across partners in the education and skills system in the south. This includes work through the Regional Economic Partnership and the Regional Economic Strategy.

Institutions in the South of Scotland recognise the need for local engagement and broader to help shape provision and are actively connected to local industry and employers.

Examples:

- As discussed in the North East, computing science provision has changed significantly over the past decade. UWS is working with schools to help adapt to the demands emerging around cyber security and DGC is working with schools and Dumfries and Galloway Council to ensure that information is shared with school leavers to ensure they understand and have awareness of future labour demand areas and what qualifications they need to access different pathways.
- In engineering, DGC works with industry partners to assess their needs and help shape the curriculum and offer work-based learning. DGC is working with Developing the Young Workforce Dumfries and Galloway (DYW D&G) to support this and see how to drive curriculum forward.
- UWS has established several knowledge transfer partnerships (KTPs) – a partnership between UWS, an associate / expert, and industry – forging strong connections between industry and the sector.
- UWS and DGC now share a physical campus in Dumfries, strengthening the links between the two and improving articulation routes.

RESPONSIVENESS OF PROVISION

DGC recognised that it needed to focus and adapt its broad curriculum, striking the balance between specialising on aspects of provision whilst being attractive to a wide audience. It has deployed Curriculum Managers (CMs) who take a system-level view of provision and associated trends, working closely with a range of stakeholders to support the continued development of the curriculum. This approach has resulted in the development of a digital care hub, providing students with practical experience of working in care and helping close the known skills gaps in the region. CMs also engage in an annual review of their portfolios as part of a whole college quality review process. It has also resulted in advanced manufacturing workshops for local manufacturing firms, helping push boundaries in the application of new technologies. **See case study C5 in annex C**.

At UWS, each programme undergoes an annual cycle of review and content. UWS also takes account of national policy initiatives e.g. the establishment of the National Care Service and the need to create parity for those employed by the care sector with health workers. It is using this insight to assess the potential for a care degree programme in the future.

At UoG, there is an evolution of their environmental science and sustainability offering, focussed on the climate emergency. UoG has developed a management and sustainable tourism programme to help address the impact that tourism has on the environment, educating students on the cultural and

[8] Crichton Campus partnership and Leadership Group was created in 2013 to facilitate a shared understanding of the skills, education and training needs of Dumfries and Galloway through effective engagement with all the key stakeholders by collaborating and having efficient communication and planning activity in a coherent manner, avoiding duplication of activity. See the Crichton Campus Statement of Ambition.

environmental issues whilst developing innovative and practical solutions. This course includes an industrial placement, often working with micro businesses in the tourism sector who do not have the resources to research and implement innovative practices. This allows students to practice sustainable tourism and gain valuable experience. **See case study C7 in Annex C.**

Borders College (BC) is adapting to regional priorities and global mega trends. Carbon literacy is taught across its provision in response to the climate crisis and digital science has been added across the curriculum to help students become more digitally enabled.

CURRICULUM CHANGES

DGC is making better use of data to adapt its curriculum. Utilising "future skills" information (from SFC and SDS) has enabled DGC to look forward and see how the curriculum can be shaped to meet the needs of learners and employers. This change of curriculum has helped sharpen provision in areas such as renewables and digital healthcare; areas where the region has a distinctive competitive advantage.

SRUC recognised that if they are to equip students with the skills required for future demands, it was time for a refresh of curriculum and teaching. In 2020, SRUC launched their new Learning and Teaching Enhancement Strategy 2020-2025. The strategy comprised of two pillars and ten principles to which all new and existing provision should align, and a plan for implementation. The strategy sets out to ensure 'All learning, teaching and assessment at SRUC will enable 'learning for change and learning for all'. An example of some of the ten principles are: working with learners as partners, embedding global challenges and building learning communities. **See case study C6 in annex C.**

MODES OF DELIVERY

As in the North East, effort is being made by institutions like UoG to integrate employability aspects including work placements, internships and the introduction of guest lecturers into programmes.

South of Scotland institutions have observed a drop in demand for part-time provision. They are increasingly introducing new technologies to attract more students.

Examples:

- Borders College has introduced virtual reality and simulation as part of care provision, providing students with practical experience of dealing with patients with dementia.
- DGC has partnered with health and social care stakeholders to launch a Digital Care Hub.
- The development of advanced manufacturing labs in DGC to show employers the art of the possible
- UWS is creating seamless pathways, working in partnership with DGC, local authorities, and UCAS. This involves developing a single application that smooths the pathway from DGC with articulation into UWS to get more people to 'live local, learn local, stay local'. 15 students per course at UWS is considered viable but the geography of the South of Scotland means that this is challenging. At DGC, they plan to offer HNCs during sixth year to take students straight into second year at an HE institution.

Articulation arrangements are varied in the South of Scotland.

Examples:

- Borders College has articulation arrangements with partners in neighbouring regions, which means that their students who undertake HNC level qualifications often have to travel out of the region to start in first year at university and in a small number of cases articulate into second year.
- DGC has articulation pathways at a local level with UWS. The institutions are seeking to strengthen this through a 'one application' process with a focus on business and cyber provision.

EMPLOYABILITY SKILLS

Institutions in the South of Scotland are regularly looking at ways to boost the employability skills of their students.

Examples:

- ASPIRE – a new and core module for UWS undergraduates – helps to develop more employable students, build networks, become more reflective, self-aware, adaptable, and resilient. This is particularly important given the diverse nature of the student body at UWS (e.g. highest proportion of students in SIMD20, many students articulate from college or via some other form of advanced entry, e.g. recognition of prior learning). ASPIRE is therefore designed to help close the attainment gap and boost the skills of graduates beyond the technical skills they pick up during their studies. Students consider and implement their personal development plan; work in groups to develop discipline specific skills as well as transferable skills like teamwork and communication; and identify a list of meta skills that they want to develop throughout their programme. ASPIRE is backed up by industrial placement and / or work-based simulated learning. **See case study C8 in Annex C.**
- Borders College has introduced leadership training in care provision. It has also recently launched 'Global Citizenship' to help boost employability skills, expanding provision from typical soft skills (e.g. communication) to a focus on environmental responsibility, resilience, cultural diversity, and digital skills. Resilience training is offered to all students at Borders College, recognising the increasing importance of mental wellbeing. Additionally, virtual reality (VR) at Borders provides a safe space to experiment / work in different industries e.g. dealing with dementia; or working in engineering and other health and safety critical industries. **See case study C4 in Annex C.**

CHANGES IN TERTIARY EDUCATION AND SKILLS PROVISION BETWEEN 2011-12 AND 2020-21

This section describes the changes in tertiary education and skills provision in the North East and South of Scotland between 2011-12 and 2020-21. This snapshot period was picked to cover the period prior to the reform of college regionalisation up to the point when data was available at the time of writing. It draws upon quantitative data from the academic years 2011-12 and 2020-21 and includes total enrolments (total students and student full time equivalents (FTEs), qualification levels, and subjects studied.

Investigating any changes in data over time demands context. There are several factors to be considered over the 10-year period investigated in this section including (though not limited to) the impact of COVID in recent years, changes in demography, global trends e.g. the climate crisis and government policies.

NORTH EAST

We have summarised the changes in provision below.

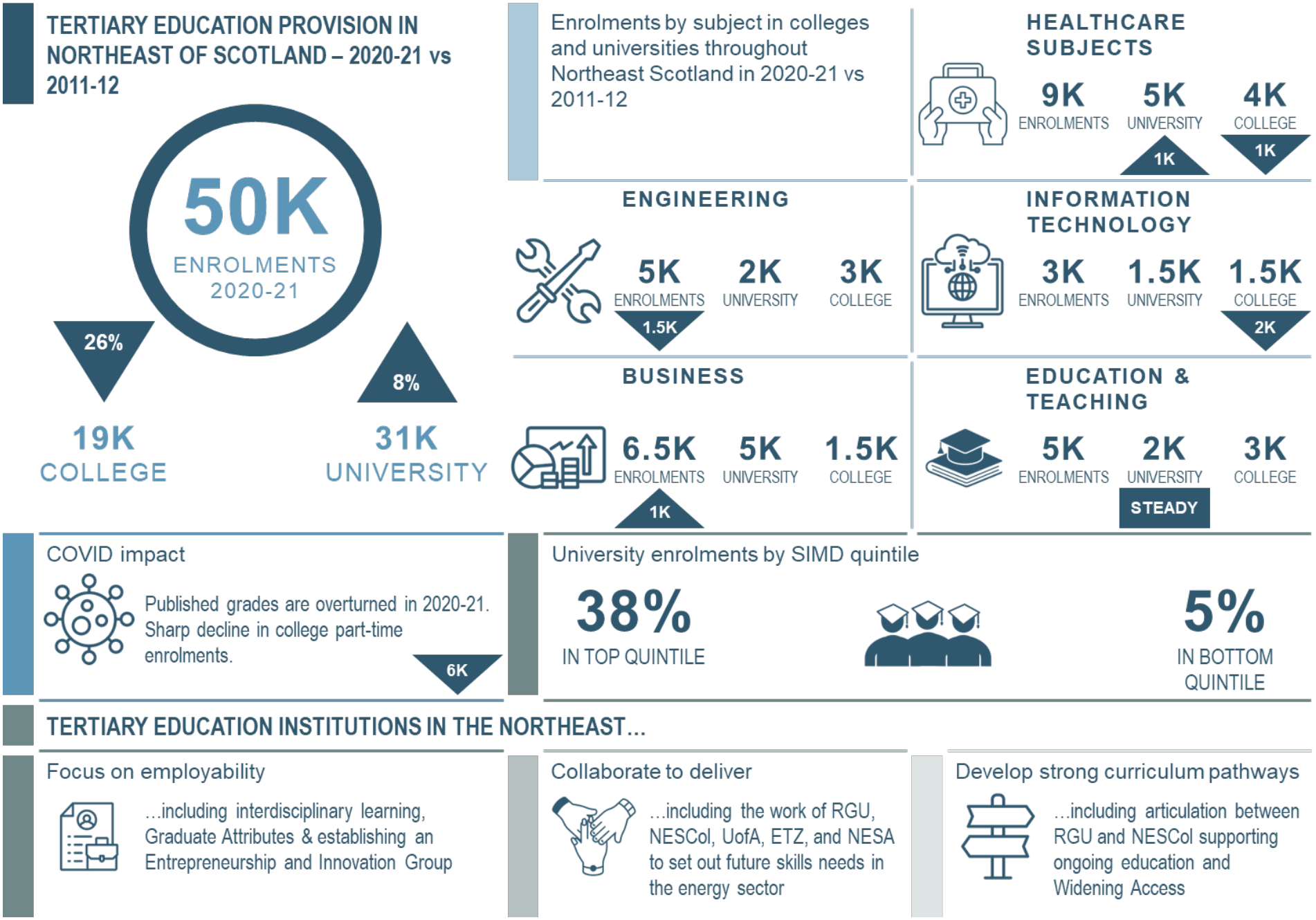


Figure 18: Summary of changes in North East provision between 2011-12 and 2020-21

SUBJECTS

Enrolments to colleges and universities in the North East declined by 8% in 2020-21 when compared with 2011-12. Total enrolments dropped 4% between 2019-20 and 2020-21; undoubtedly a direct and immediate impact of COVID. However, this overall decrease masks an 8% increase in university enrolments (from 28,460 to 30,695) due to a 28% decrease in college enrolments from 20,415 in 2011-12 to 14,620 in 2020-21, in part this reflects a move towards more full-time provision.

In North East colleges, there were decreases in the number of enrolments in information technology and information (c1,900); engineering (c1,400); health care/medicine/health and safety (c1,100) and catering/food/leisure services/tourism (c1,400). Collectively, these subjects account for nearly all the c6,000 drop in enrolments across North East colleges (Figure 19). Reasons cited for some of these decreases included:

- Engineering enrolments decreased 29%. During interviews, college representatives advised that since the oil price crash in 2014-16, studying engineering has become less attractive to students.
- Interviewees advised that the 20% reduction in health care/ medicine/ health and safety is the impact of improved school leaver grades and widening access policies which meant that some students were able to bypass college and go straight to university. The increase of 900 university enrolments in subjects allied to medicine would appear to substantiate this.
- The potential reasons for the 27% drop in catering/ food/ leisure services/ tourism enrolments relate to the impact of COVID-19 with a reduction in employment opportunities and with content more difficult to adapt to online learning.

Subjects with the highest absolute increases in college enrolments between 2011-12 and 2020-21 (Figure 20) were:

- Sports, games and recreation (+175)
- Construction and property (built environment) (+155)
- Area studies/ cultural studies/ languages/ literature (+155)
- Family care/ personal development/ personal care and appearance (+150)
- Oil/ mining/ plastics/ chemicals (+85) and
- Politics/ economics/ law/ social sciences (+85).

In North East universities (Table 1 and Figure 21), there were decreases in a number of subjects including:

- Language and area studies (-37% to 690)
- Social studies (-24% to 2,050)
- Geography, earth, environmental studies and physical studies (-23% to 1,090) and
- Architecture, building and planning (-21% to 700)
- Business, management, and administrative studies was the most popular subject choice in 2011-12 It remained popular in 2020-21 with total enrolments of 4,855 just trailing those of Subjects allied to medicine (4,880).

There were significant percentage increases in combined and general studies (+463%), agriculture, food, veterinary science, and related studies (+127%) and in Computing (+74%). Computing degrees have changed significantly over the past decade which may be reflected in the switch from college to university computing provision. For example, the industry is moving towards digital solutions that demand capabilities in design, machine learning, artificial intelligence and cyber security.

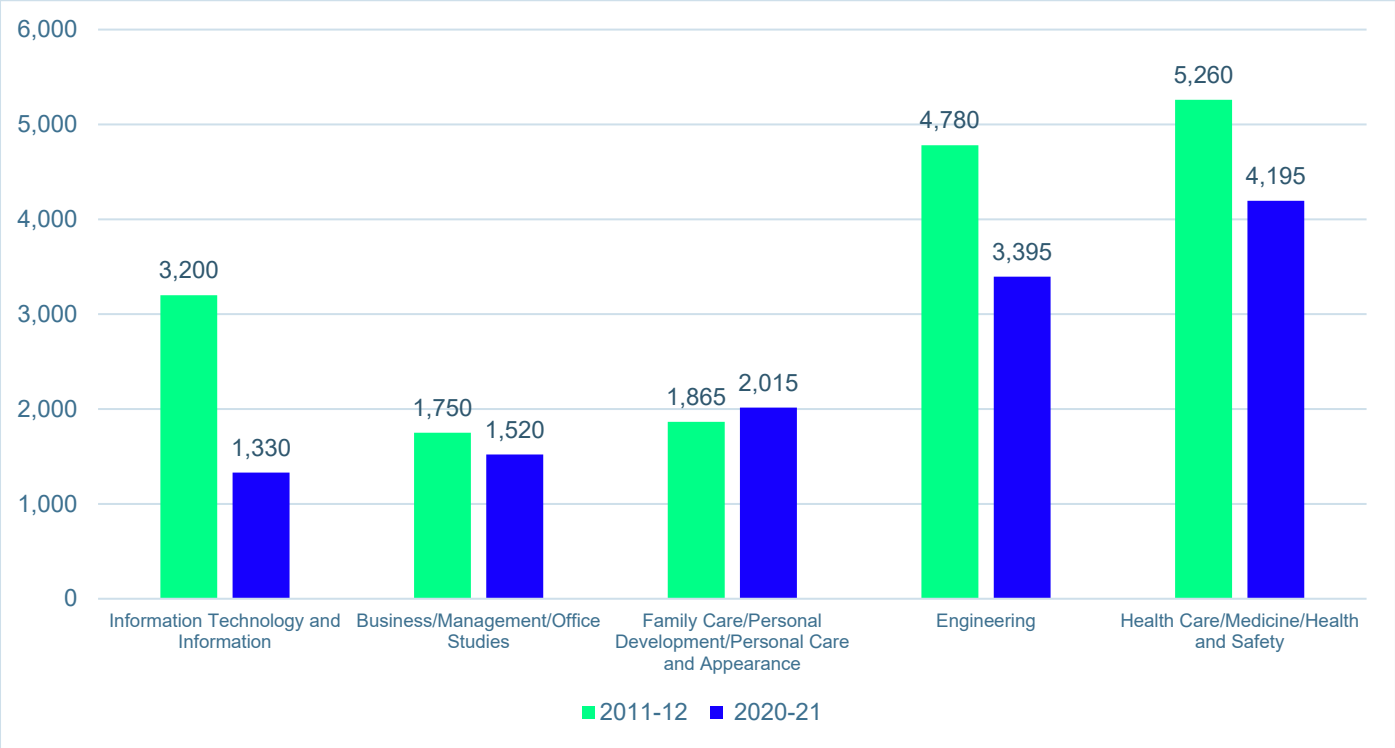


Figure 19: Enrolments by subject (top five) in North East colleges

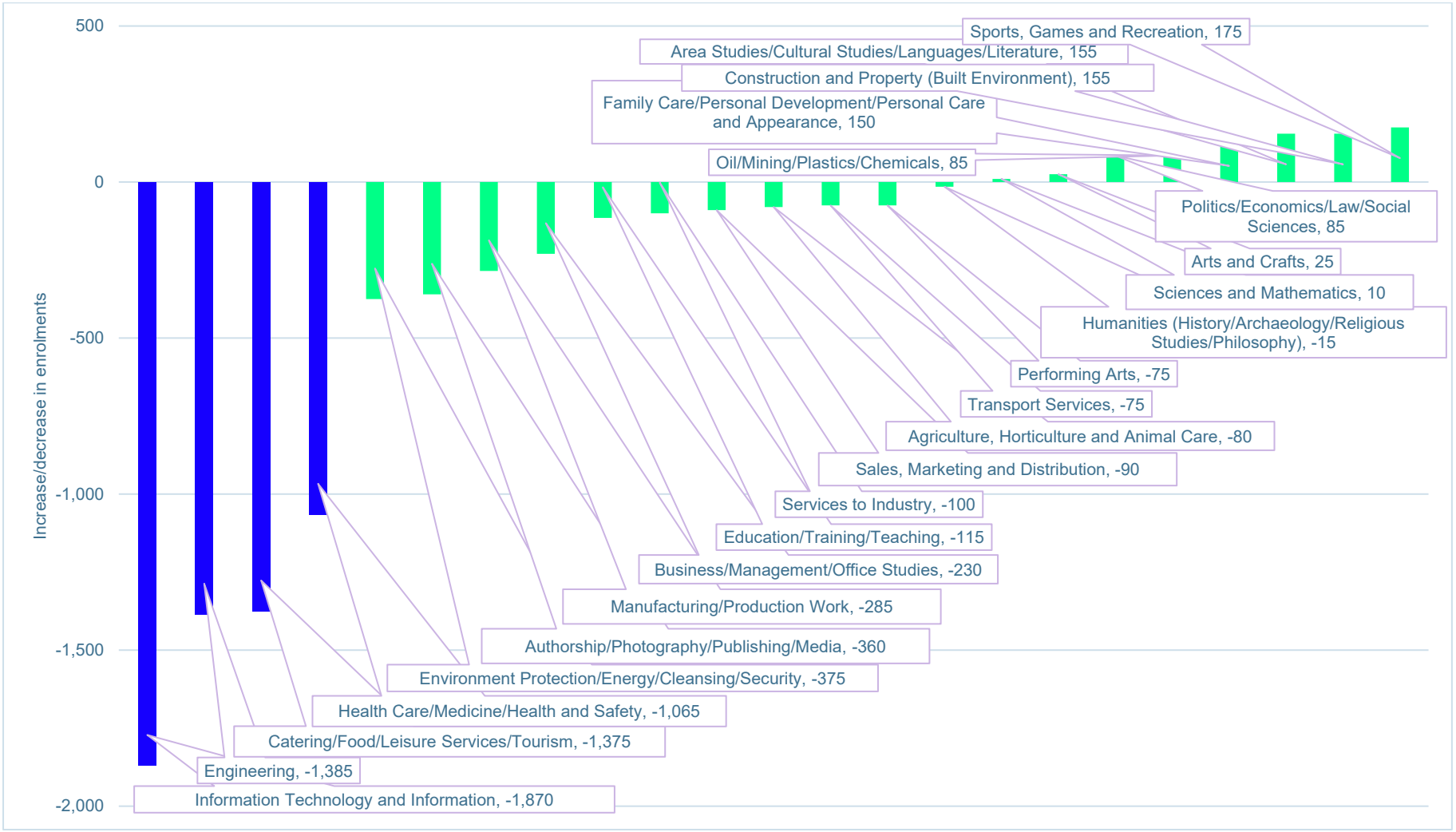


Figure 20: Changes in enrolments in North East colleges between 2011-12 and 2020-21 by subject

NORTH EAST ENROLMENTS BY SUBJECT (UNIVERSITY)	2011-12	2020-21	%age change
Subjects allied to medicine	3,980	4,880	23%
Business, management, and administrative studies	4,205	4,855	15%
Engineering and technology	2,445	2,285	-7%
Education and teaching	2,335	2,190	-6%
Law	2,040	2,080	2%
Biological, sport sciences and psychology	2,080	2,065	-1%
Social studies	2,700	2,050	-24%
Combined and general studies	360	2,025	463%
Medicine and dentistry	1,125	1,430	27%
Computing	755	1,310	74%
Geography, earth, environmental studies, and physical studies	1,415	1,090	-23%
Historical, philosophical, and religious studies	1,155	955	-17%
Design, and creative and performing arts	1,035	915	-12%
Architecture, building and planning	885	700	-21%
Media, journalism, mass communications and documentation	570	695	22%
Language and area studies	1,095	690	-37%
Agriculture, food, veterinary science, and related studies	150	340	127%
Mathematical sciences	130	140	8%
TOTAL	28,460	30,695	8%

Table 1: Enrolments by subject at North East universities for academic year 2020-21

Note that 2011-12 data used the JACS coding system, and 2020-21 data use the HECoS system. We have merged certain subjects and shown the above “new” classification in Annex B.

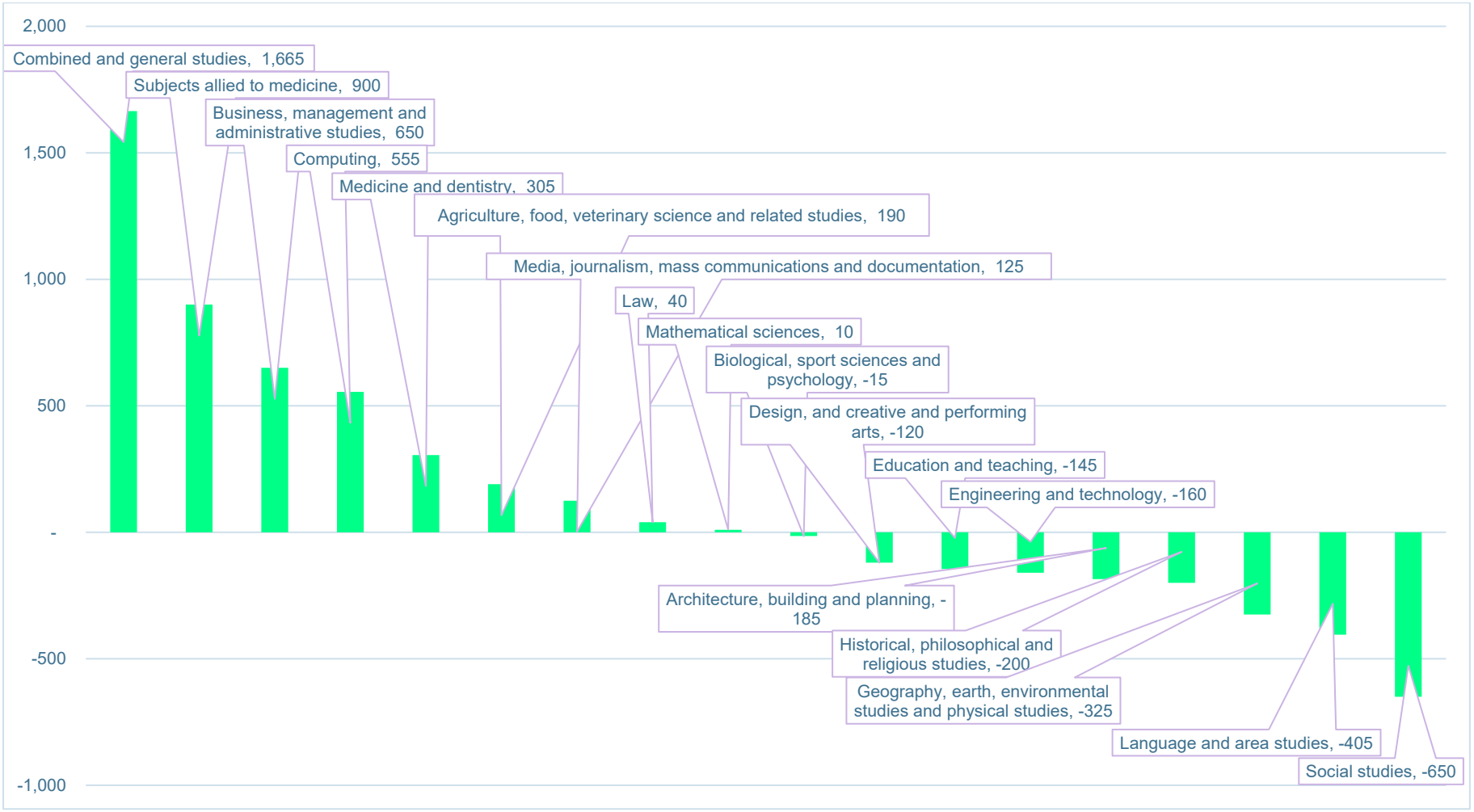


Figure 21: Changes in enrolments in North East universities between 2011-12 and 2020-21 by subject

MODES OF DELIVERY

With many campuses inaccessible during the lockdowns in 2020 and 2021, there was an inevitable decrease in the number of part-time enrolments in part due to lack of access to practical vocational experience (See Figure 22 below). Of the c6,600 drop in college enrolments, c6,200 were part-time enrolments (and included a c1,300 drop in short courses of less than ten hours). COVID-19 limited students from attending courses with a practical element and made it more difficult for learners to attend in-person access or self-funded non-vocational courses[9].

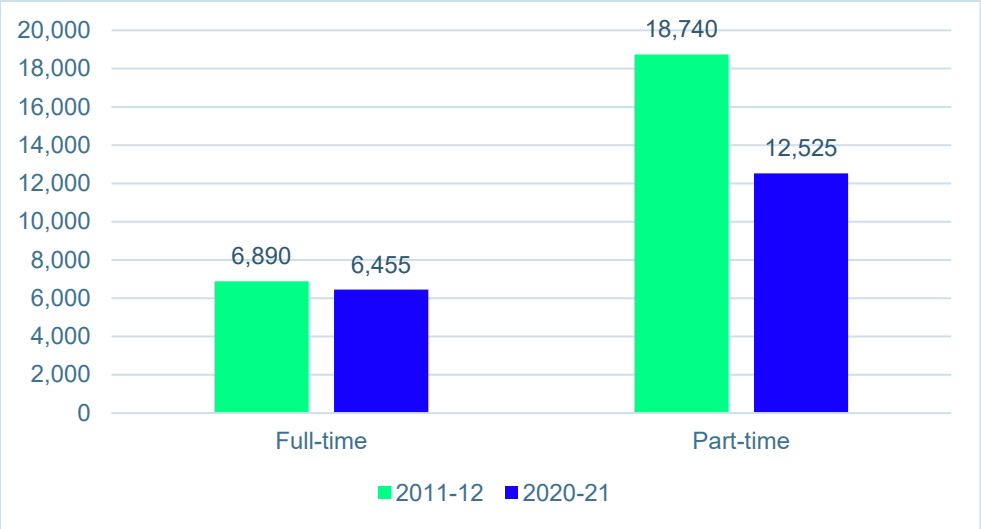


Figure 22: Enrolments to North East colleges by mode of attendance and academic year

This means that although there was an overall 26% drop in college enrolments, this equates to a 5% drop in enrolments when expressed as full-time equivalents (FTEs) and therefore is not reflective of a sizeable drop in interest or student demand. See Figure 23 below.

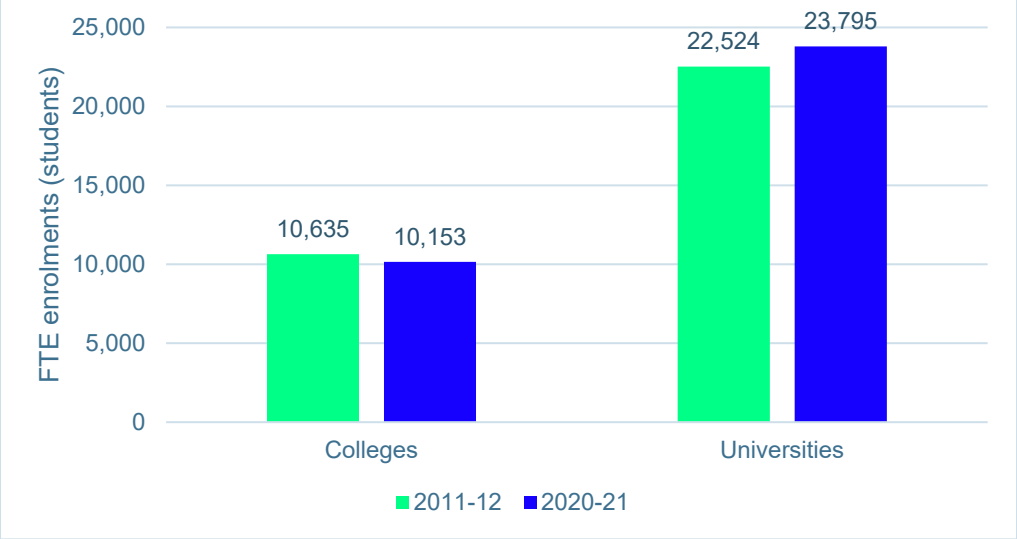


Figure 23: Enrolments expressed as FTE to North East colleges and universities by academic year

CHANGING STUDENT POPULATIONS

There are several interesting observations when comparing snapshot data on student populations in the North East between academic years 2011-12 and 2020-21:

- For enrolments of those aged 16-24 (Figure 24), there was a 5% increase in overall enrolments. This was comprised of a 16% drop in college enrolments and a 21% increase in university enrolments.

[9] https://www.sfc.ac.uk/publications-statistics/statistical-publications/2022/SFCST012022.aspx

- In comparison to 2011, 2021 saw 19% fewer 16-24-year-olds staying in the North East. In 2011-12, 66% (18,930) of those enrolling in university were aged 16-24, as opposed to 60% (18.355) during 2020-21. There has been a 12% drop in university enrolments between the ages of 16-20, which may suggest that more people are starting university later. 2020-21 saw 69% of enrolments coming from applicants aged 21 and over, compared to 61% in 2011-12 (Figure 24).
- The number of advanced qualifications decreased by 27% and represented 18% of enrolments in 2021-22, compared with 17% in 2011-12. There is approximately the same proportion of enrolments in HNC and HND qualifications across both academic years: HNCs represented 5% (1,235) of enrolments in academic year 2011-12 and 4% (790) in 2020-21; HNDs represented 8% (2,045) of enrolments in academic year 2011-12 and 10% (1,975) in 2020-21. This data reflects some feedback received during interviews with representatives from institutions that colleges and universities can find themselves in competition with each other targeting particular groups due to recruitment pressures and widening access activities (Figure 25That said, not all HN activity is undertaken by SIMD20 or widening access students and other system developments such as more apprenticeship pathways and school attainment may have a bearing on the trend.
- There was an 8% increase (2,235) in university enrolments compared with 2011-12. **.** Figure 26 details the decreases in enrolments to first degree (-195, -1%), other undergraduate (-315, -18%), and postgraduate research programmes (-40, -3%) whilst taught postgraduate enrolments increased by 44% (2,800)
- There was a significant improvement in first degree classifications from 2011-12 to 2020-21: 15% of students graduating in 2011-12 achieved a first-class honours degree compared with 39% in 2020-21. Furthermore, 84% of students in 2020-21 achieved either a first- or upper second-class honours degree, compared with 67% in 2011-12. .
- There was a 44% increase in taught postgraduate enrolments (from c6,400 to c9,200). Since most (if not all) postgraduate enrolments are likely to be by those aged 21 and over, this is also likely to be a contributing factor. COVID-19 may have resulted in more people deciding to continue or return to studies. In addition, improvements in first degree classifications from 2011-12 to 2020-21 may have contributed to the increase in further study.
- For college enrolments, there was a similar pattern of a drop in the proportion of younger students and an increase in the proportion of older student enrolments (26% drop in college enrolments overall and a 21% drop in the population of those aged 16-24). Potential reasons for this decrease could be students continuing to study at school in the face of COVID-19 instead of going to college. Another factor may be the decline in school-link students studying vocational programmes, whereby school pupils undertake classes delivered at colleges, often filling in gaps in the secondary school provision (e.g. ‘Intro to STEM' courses or practical elements the school cannot provide).
- Economic diversification may be impacting many of the decisions reflected in the data discussed in this section.
- People may be choosing to skill themselves in different industries or reskilling for the same industry to provide more flexibility in work (particularly for those working in the oil and gas industry). By 2030, it is projected that the offshore energy sector in the UK will require 200,000 employees (directly and indirectly)[10]. The representatives from institutions we spoke with explained that in addition to changing the content of engineering courses (e.g. focussing on renewables), they are also looking at the positioning of future offerings. In other words, the marketing and external relations departments will be critical in helping the region manage the net zero transition and encourage more young people into the energy (renewable) sector.
- The energy transition has created a shift in the North East Scotland employment market and the skills required for employees working in the industry. Research by the Energy Transition Institute at RGU predicted that by 2030, around 80% of jobs in the oil and gas industry will be across nine different job families (including business operations, technicians and engineers, HR, and health). This has caused RGU to increase and adapt its provision of interdisciplinary studies. **See C3 in annex C for case study**.

[10] https://www.rgu.ac.uk/news/news-2021/4157-majority-of-uk-offshore-workforce-to-be-delivering-low-carbon-energy-by-2030

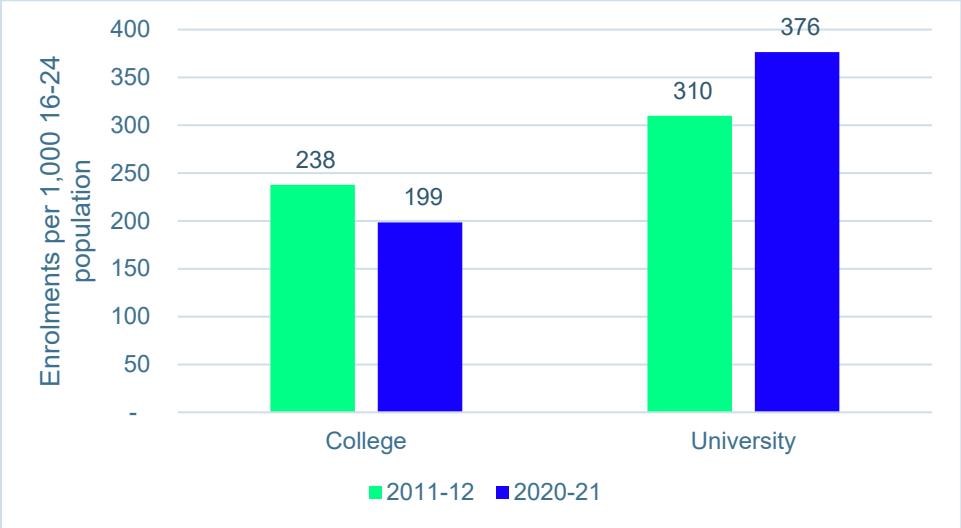


Figure 24: Enrolments by those aged 16-24 in North East institutions per 1,000 of 16-24 population

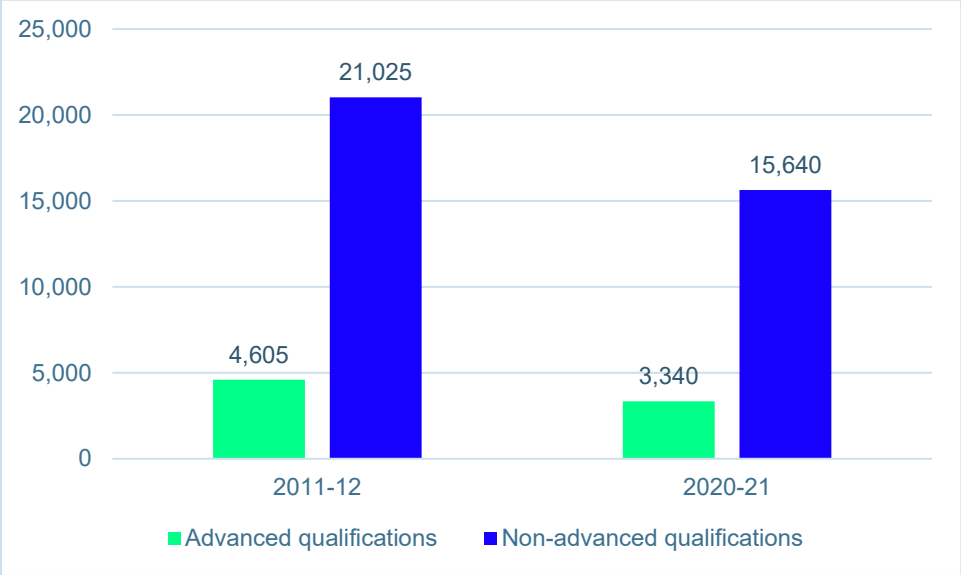


Figure 25: Enrolments by advanced and non-advanced qualifications in North East colleges and by academic year

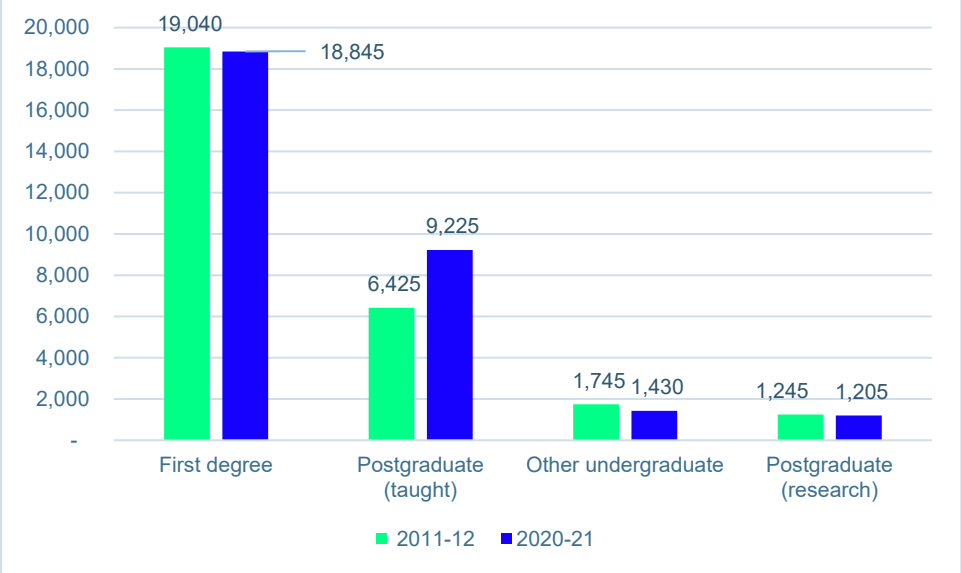


Figure 26: Enrolments in North East universities by qualification level for academic years 2011-12 and 2020-21

SOUTH OF SCOTLAND

We have summarised the changes in provision below.

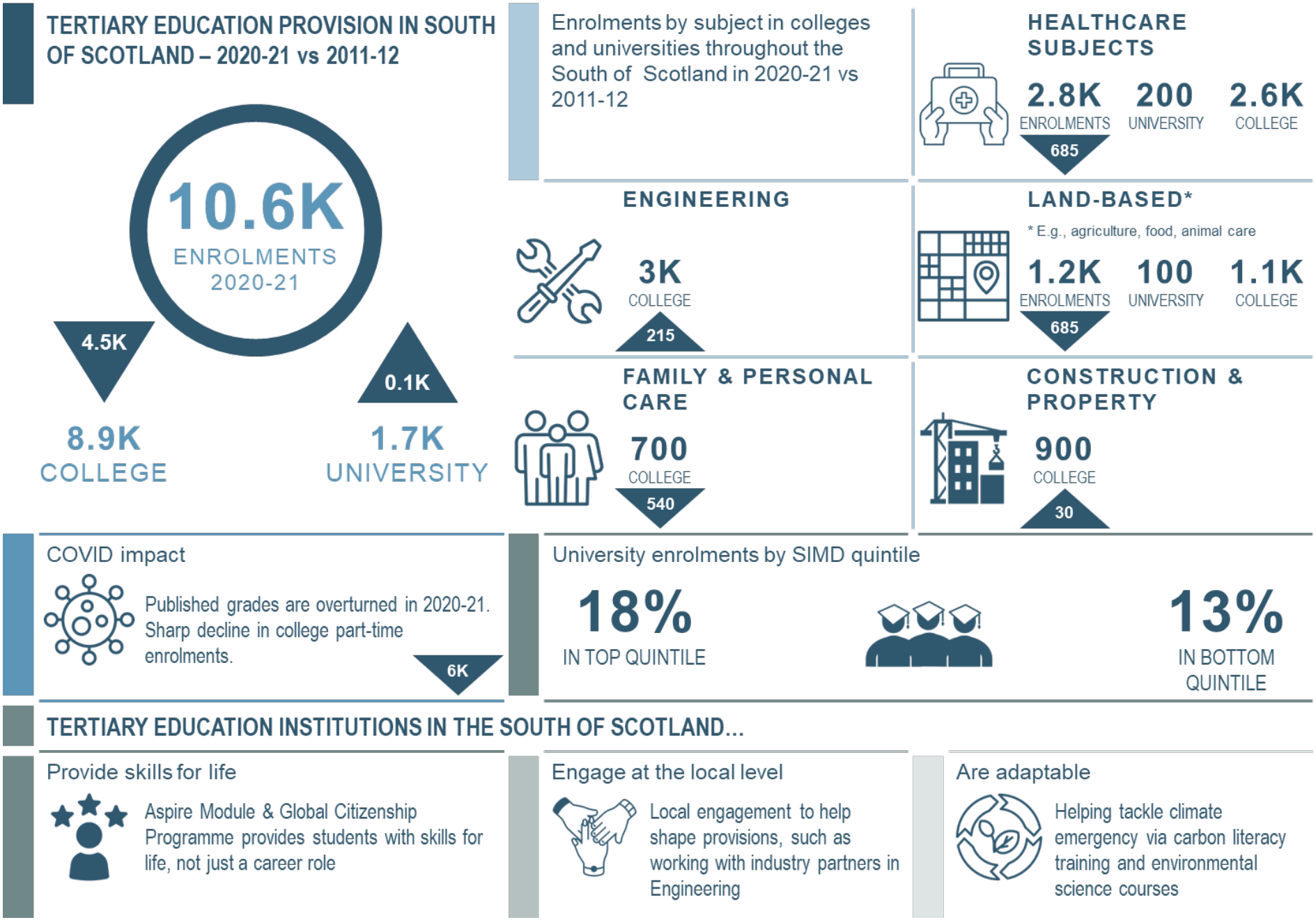


Figure 27: Summary of changes in South of Scotland provision between 2011-12 and 2020-21

SUBJECTS

Enrolments to colleges and universities in the South of Scotland declined by 29% between academic years 2011-12 and 2020-21 (Figure 28). Total enrolments dropped 9% between 2019-20 and 2020-21; again, undoubtedly a direct and immediate impact of COVID-19. Both decreases were sharper in percentage terms than experienced in the North East. The overall decrease is driven by a 33% drop (4,475) in college enrolments, offset slightly by a 10% increase (155) in the number of university enrolments (Figure 28)

In South of Scotland colleges (Table 3 and figure 29there were decreases in a number of subjects but those of most interest are agriculture, horticulture and animal care (c1,400); information technology and information (c1,200); health care/ medicine/ health and safety (c600) , family care/ personal development/ personal care and appearance (c500) and catering/ food/ leisure services/ tourism (c500). Collectively, these subjects account for nearly all of the 4,400 drop in enrolments across South of Scotland colleges. These decreases raise some interesting questions for the region:

Impact of a 57% reduction in agriculture, horticulture and animal care given the rural/land-based nature of the South of Scotland economy.

It was noted in the North East analysis that computing qualifications have changed significantly over the past 10 years and the South of Scotland witnessed a 77% drop in information technology and information enrolments. This decrease is perhaps even more acute for the South of Scotland given the region's proximity to Edinburgh and its shared ambition to be the data capital of Europe.

As in the North East, the 20% reduction in health care/ medicine/ health and safety may reflect the impact of improved school leaver grades in the region increasing the range of learner options for future study, including progressing straight to university.

The potential reasons for the 46% drop in catering/ food/ leisure services/ tourism enrolments relate to the impact of COVID-19 with a reduction in employment opportunities and with content more difficult to adapt to online learning. This is perhaps more of a challenge for the South of Scotland given the importance of tourism to the region.

Enrolments to sports, games and recreation increased by 219% from 185 in 2011-12 to 590 in 2020-21. This was also a growth area in the North East but to a lesser degree. The increase may reflect the interest in mountain sports, adventure tourism and cycling in the South of Scotland.

The South of Scotland does not have a university with a main campus in the region and the numbers relating to university enrolments are smaller and therefore changes must be treated with some caution. In South of Scotland university enrolments (Figure 30), there were increases in several subjects including:

- Design, creative and performing arts (up 55)
- Geography, earth, environmental studies and physical studies (up 100)
- Education and teaching (up 155)
- Agriculture, food, veterinary science and related studies (up 200).

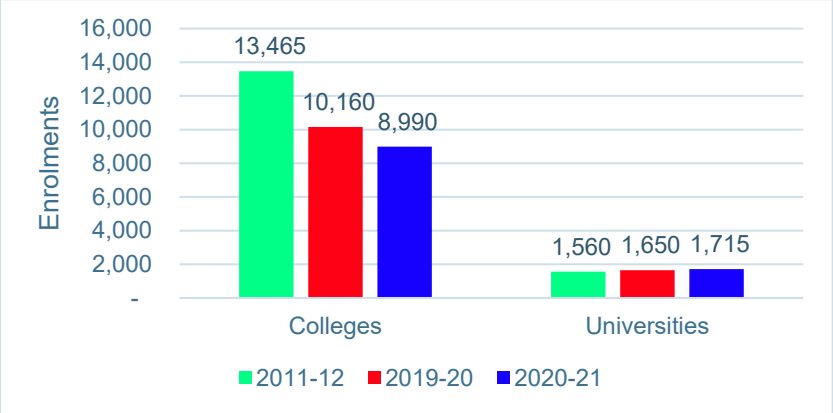


Figure 28: Enrolments to South of Scotland colleges and universities by academic year

SOUTH OF SCOTLAND ENROLMENTS BY SUBJECT (COLLEGE)	2011-12	2020-21	%age change
Health Care/Medicine/Health and Safety	3,195	2,555	-20%
Agriculture, Horticulture and Animal Care	2,500	1,085	-57%
Construction and Property (Built Environment)	870	930	7%
Engineering	585	765	31%
Family Care/Personal Development/Personal Care and Appearance	1,240	745	-40%
Business/Management/Office Studies	655	610	-7%
Sports, Games and Recreation	185	590	219%
Catering/Food/Leisure Services/Tourism	1,010	545	-46%
Information Technology and Information	1,560	360	-77%
Area Studies/Cultural Studies/Languages/Literature	425	185	-56%
Arts and Crafts	330	165	-50%
Sales, Marketing and Distribution	140	155	11%
Sciences and Mathematics	165	100	-39%
Authorship/Photography/Publishing/Media	245	90	-63%
Education/Training/Teaching	160	60	-63%
Transport Services	60	30	-50%
Manufacturing/Production Work	65	15	-77%
Services to Industry	0	10	-
Politics/Economics/Law/Social Sciences	25	0	-100%
Performing Arts	0	0	-
Oil/Mining/Plastics/Chemicals	0	0	-
Humanities (History/Archaeology/Religious Studies/Philosophy)	20	0	-100%
Environment Protection/Energy/Cleansing/Security	25	0	-100%
TOTAL	**13,460**	**8,995**	**-33%**

Table 2: Enrolments by subjects and academic year in South of Scotland colleges

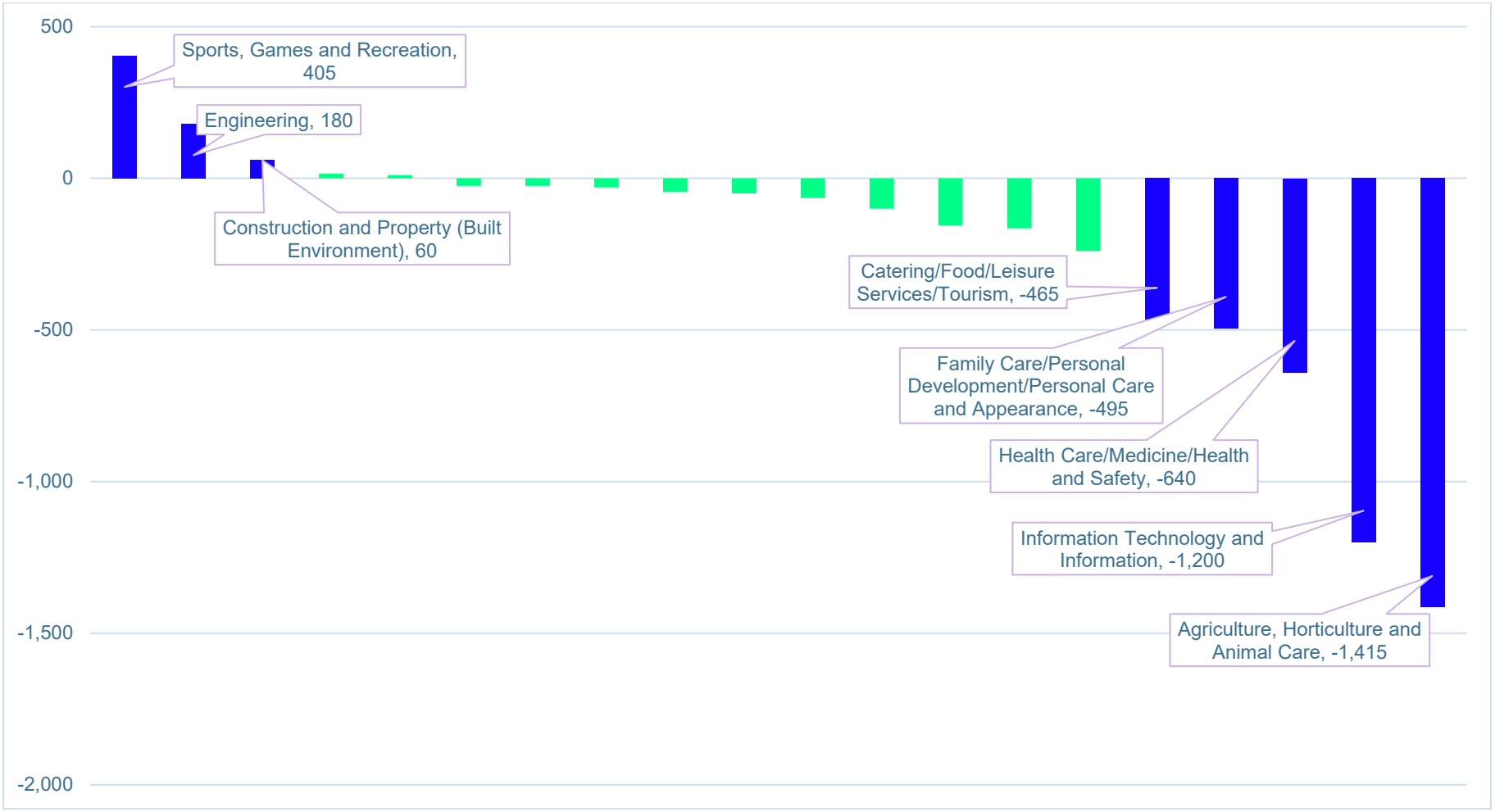


Figure 29: Changes in enrolments in South of Scotland colleges between 2011-12 and 2020-21 by subject

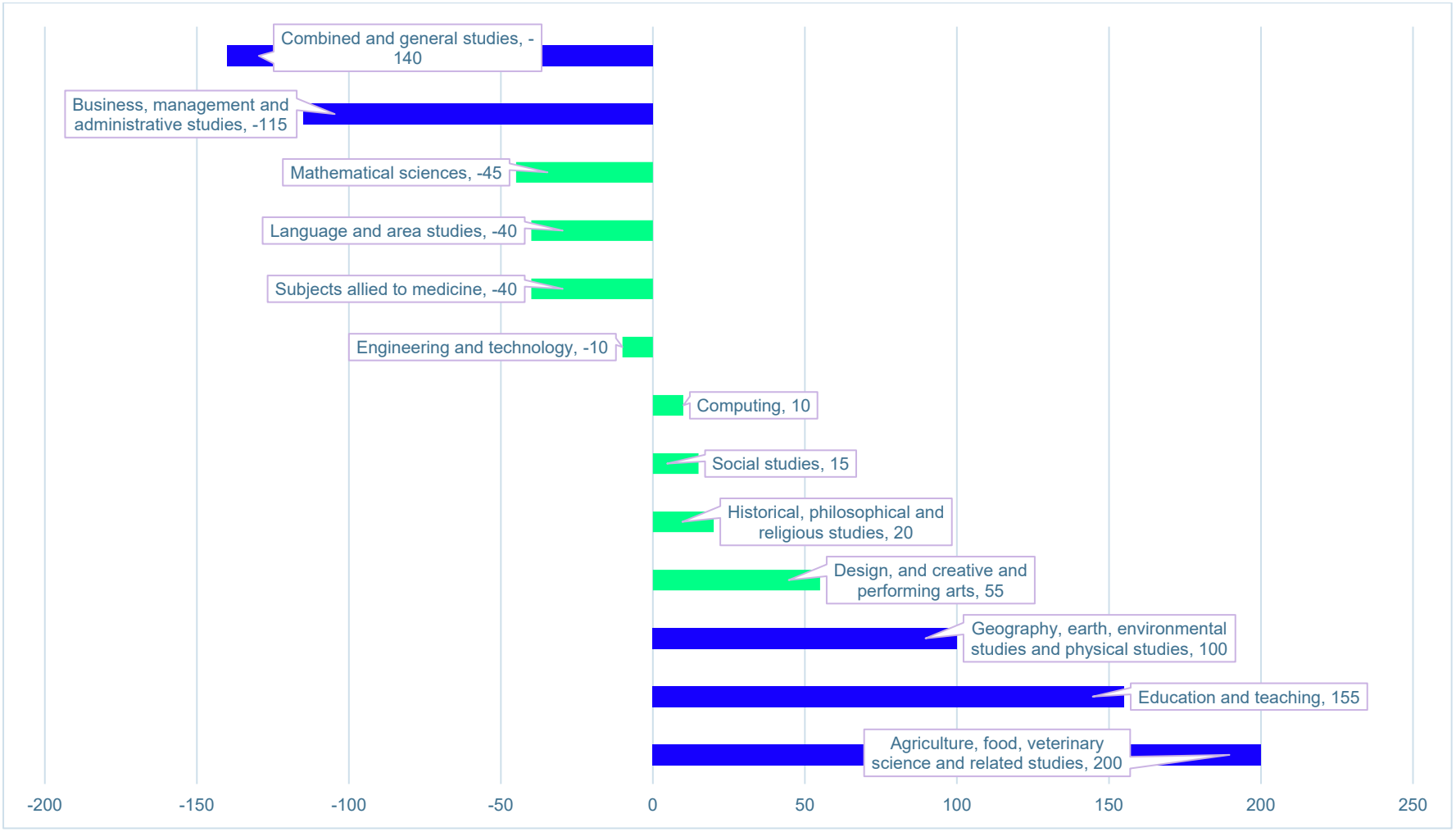


Figure 30: Changes in enrolments in South of Scotland universities between 2011-12 and 2020-21 by subject

MODES OF DELIVERY

As in the North East, COVID-19 affected part-time enrolments, particularly in colleges. There was a 41% (4,375) reduction (of which, c1,800 were short courses of less than ten hours delivered at colleges) since in-person attendance was made difficult (Figure 31)

There was also a sharp reduction in part-time enrolments in universities with campuses in the South of Scotland as shown in figure 32albeit the absolute numbers are relatively small. This runs counter to the information provided in interviews. For example,

- UWS advised that it is increasingly needing to be more flexible to cater for students from diverse backgrounds including those students with caring responsibilities who can only undertake part-time education.
- Representatives from UoG, Dumfries campus also intimated that there is a greater demand for part-time study. However, as noted previously, COVID-19 may have had an impact.

As full-time enrolments held stable for colleges and increased significantly for universities, when expressed as FTE, there were increases for both sectors (11% for colleges; 22% for universities) as shown in figure 33..

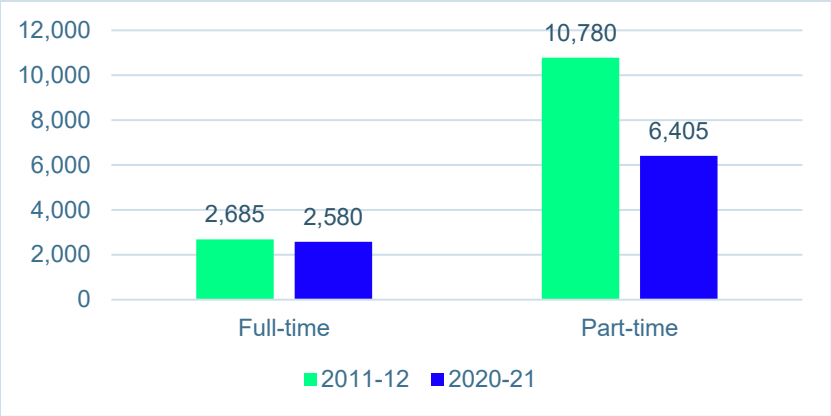


Figure 31: Enrolments to South of Scotland colleges by mode of attendance and academic year

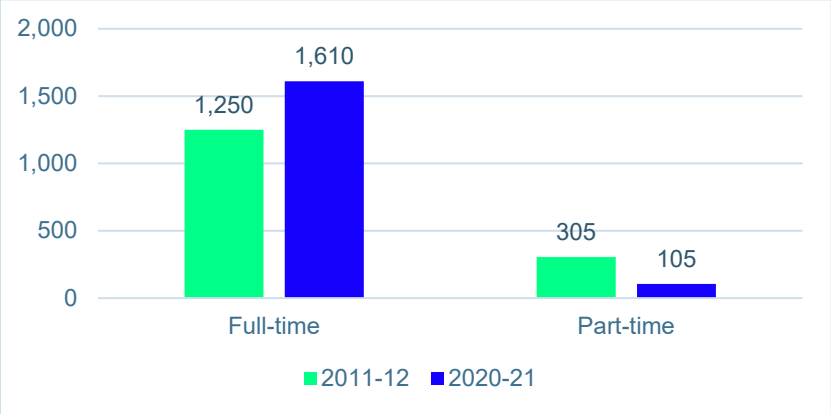


Figure 32: Enrolments to South of Scotland universities by mode of attendance and academic year

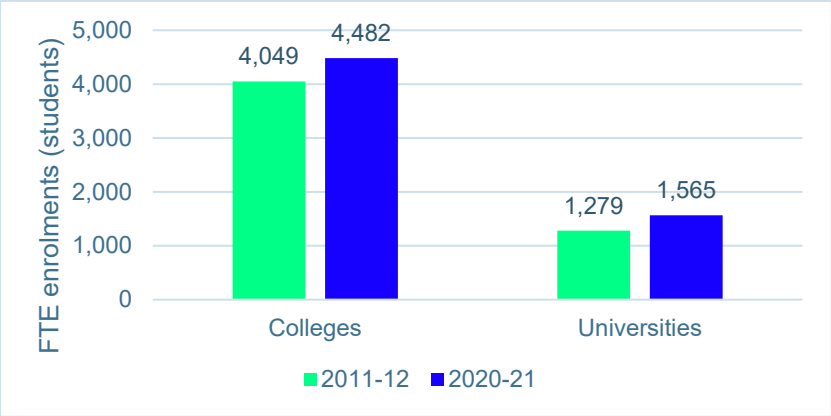


Figure 33: Enrolments expressed as FTE to South of Scotland colleges and universities by academic year

CHANGING STUDENT POPULATIONS

There are several interesting observations when comparing the student populations in the South of Scotland between academic years 2011-12 and 2020-21:

- For enrolments of those aged 16-24 (Figure 34), there was an 11% decrease in overall enrolments. This was comprised of a 16% drop in college enrolments and a 2% increase in university enrolments.
- Unlike in the North East, there is an increase in the proportion of younger students enrolling at college. 50% of college enrolments were for those aged up to 20 in 2020-21, compared with 39% in 2011-12. In the North East, the proportion of those aged up to 20 dropped to 40% in 2020-21 from 46% in 2011-12.
- The number of advanced qualifications increased by 15% and represented 12% of enrolments in 2021-22, compared with 7% in 2011-12. The number of students studying towards an HND qualification during the period has almost doubled to 255 enrolments (from 130 in 2011-12). The combination of HNDs and HNCs constituted 8% of enrolments in 2020-21 compared with 4% in 2011-12. (Figure 35)

There was a 10% increase (155) in university enrolments compared with 2011-12. Figure 36 details the increases in enrolments to first degree (+125, 10%), postgraduate taught (+130, 289%) and postgraduate research programmes (+10, 33%) whilst other undergraduate enrolments decreased by 45% (-120). Care must be taken in the interpretation of these changes as the absolute volumes are relatively small.

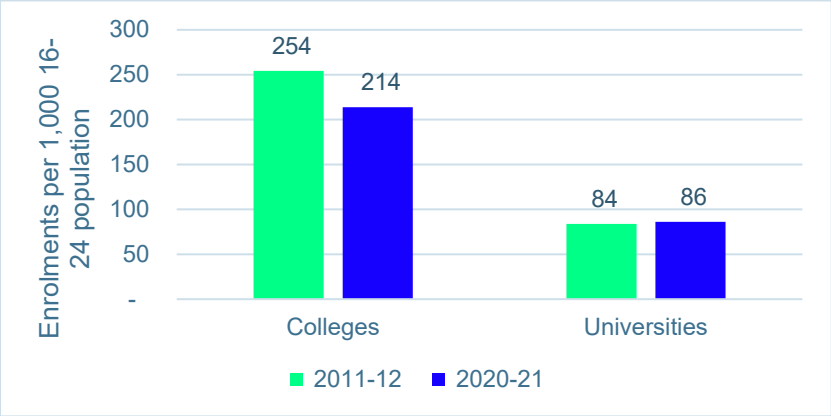


Figure 34: Enrolments by those aged 16-24 in South of Scotland institutions per 1,000 of 16-24 population

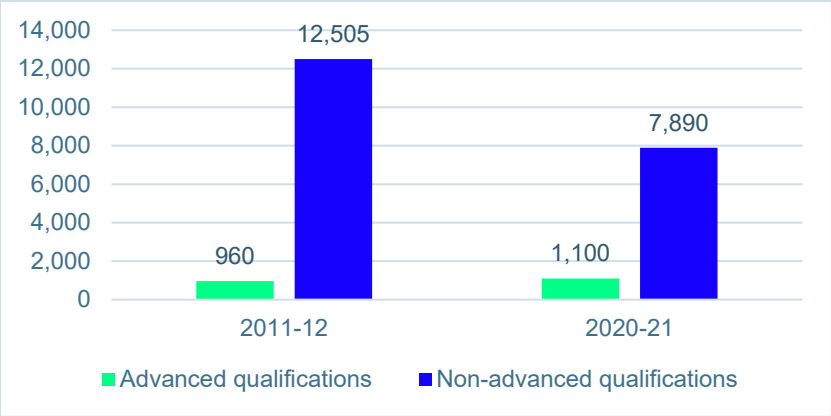


Figure 35: Enrolments by advanced and non-advanced qualifications in South of Scotland colleges by academic year

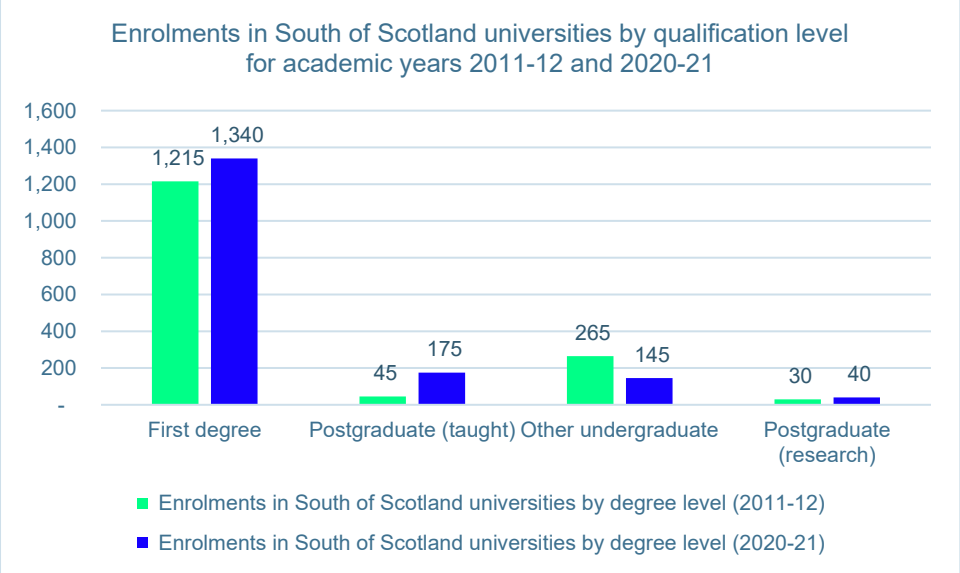


Figure 36: Enrolments in South of Scotland universities by qualification level for academic years 2011-12 and 2020-21

ANNEXES

ANNEX A: OVERVIEW OF REGIONAL TERTIARY PROVISION PATHFINDER ACTIVITY

The objectives of the Pathfinder Programme are to drive greater alignment between provision and societal and employer need; enhance coherence and sustainability across provision; and provide simpler pathways and improved outcomes for learners.

The Regional Tertiary Provision Pathfinder activity is organised under four areas of work:

- Data and analysis
- Regional priorities
- Process analysis / Curriculum planning
- Reflections and recommendations

ANNEX B: SCOTTISH FUNDING COUNCIL REGIONAL PATHFINDER METHODOLOGICAL NOTES

WHAT DO WE MEAN BY 'EDUCATION AND SKILLS PROVISION'?

For this report, reference to education and skills provision means formal education, training and skills development that is made available by tertiary higher and further education institutions (universities and colleges, including apprenticeships).

WHAT DO WE MEAN BY PROVISION IN THE NORTH EAST AND SOUTH OF SCOTLAND?

This report looks at education and skills provision in the North East and South of Scotland. For the North East, this report will consider data from:

- North East Scotland College (NESCol)
- Scotland's Rural College's (SRUC) Aberdeen campus
- University of Aberdeen (UoA)
- Robert Gordon University (RGU)

All colleges and universities in the North East are centrally located in the region.

For the South of Scotland, this report will consider data from:

- Borders College
- Dumfries and Galloway College (DGC)
- Scotland's Rural College's (SRUC) Dumfries campus
- University of Glasgow's (UoG) Dumfries campus
- Herriot-Watt's (HW) Scottish Borders campus
- University of the West of Scotland's (UWS) Dumfries campus.

The South of Scotland does not have a university with its main campus located in the region; UoG, HW and UWS have satellite campuses, which offer a narrower breadth of provision than their main campuses. Institutions are more geographically dispersed when compared with the North East. Where institutions have multiple campuses, we will only consider data from campuses within the two regional areas. Whilst colleges primarily serve a local population, universities attract students from across Scotland and internationally. This report includes analysis from data of students studying at the institutions mentioned above, who study at campuses in the North East and South of Scotland, regardless of where the student resides.

The Open University in Scotland (OUiS) serves the whole of Scotland, providing part-time distance learning courses at undergraduate and taught postgraduate level, with no entry requirements. In 2020-21 there were 2,095 enrolments at the OUiS from individuals domiciled in the North East and 1,280 enrolled from the South of Scotland. While acknowledging their notable contribution outlined above to coherent provision through their online offer in both regions, because of the OUiS' focus on distance learning, they were not in scope for this work.

SECONDARY RESEARCH

This report is based primarily on secondary research. For the secondary analysis, a repeatable data framework was developed, which outlined the data required to:

- Provide a record of what provision looks like in the two regions (e.g. enrolments by subject area, qualification levels)
- Quantify changes to education and skills provision.

The secondary data for universities is from HESA and was provided by the Scottish Funding Council. The secondary data for colleges FES was provided by Scottish Funding Council, who collect and manage college data through Further Education Statistics. The results of this data were summarised, and implications identified to provide the overall picture of provision detailed in this report.

During the project, the data was provided, accuracy tested by the SFC who made the following notes:

- Enrolments are rounded to the nearest 5 to prevent against identification of individual learners
- Values of 1 and 2 have been rounded down to zero
- Totals are rounded independently, so figures may not sum to totals due to rounding.

SECONDARY RESEARCH DATA SOURCES AND NOTES

Except where noted otherwise:

- University student data source is HESA - Student Record
- University staff data source is HESA - Staff Record
- College student data source is: Scottish Funding Council - Further Education Statistics
- College staffing data source is: Scottish Funding Council - Further Education Statistics
- Population and demographics data source is: National Records of Scotland – Mid-year population estimates.

Since direct comparisons between 2011-12 and 2020-21 is difficult since they used different classification systems (the HECoS subject classification replaced the JACS system from the 2019-20 academic year onwards) we have where needed, grouped subjects to allow for easier comparison and analysis. The mapping is shown in the table below. The report also acknowledges the limitations and narrower focus of snap shot data compared to time series or trend data.

Classification for purposes of this research	**Uses the following 2011-12 data using the JACS system**	**Uses the following 2020-21 data using the HECoS system**
Agriculture, food, veterinary science, and related studies	Veterinary science AND agriculture and related subjects	Agriculture, food, and related studies AND veterinary sciences
Architecture, building and planning	Architecture, building and planning	Architecture, building and planning
Biological, sport sciences and psychology	Biological sciences	Biological and sport sciences AND psychology
Business, management, and administrative studies	Business and administrative studies	Business and management
Combined and general studies	Combined	Combined and general studies
Computing	Computer science	Computing
Design, and creative and performing arts	Creative arts and design	Design, and creative and performing arts
Education and teaching	Education	Education and teaching
Engineering and technology	Engineering and technology	Engineering and technology
Geography, earth, environmental studies, and physical studies	Physical sciences	Geography, earth, and environmental studies AND physical sciences
Historical, philosophical, and religious studies	Historical and philosophical studies	Historical, philosophical, and religious studies
Language and area studies	Languages	Language and area studies
Law	Law	Law
Mathematical sciences	Mathematical sciences	Mathematical sciences
Media, journalism, mass communications and documentation	Mass communications and documentation	Media, journalism, and communications
Medicine and dentistry	Medicine and dentistry	Medicine and dentistry
Social studies	Social studies	Social sciences
Subjects allied to medicine	Subjects allied to medicine	Subjects allied to medicine

Table 3: Classification showing the mapping of university datasets

PRIMARY RESEARCH

The limited primary research was collected from a small number of interviews and focus groups. A semi-structured interview approach was employed using a purposive sample: 5 interviews were conducted with employers; 3 focus groups were conducted with learners; 16 interviews were conducted with representatives in institutions (including follow up interviews) from the North East and South of Scotland. Examples of the questions we asked interviewees include:

- For institutional representatives, “How does education and skills provision from 2011 compare to the present?” and “What do you consider when making decisions on skills provisions?”
- For learners, “How well prepared do you feel for the world of work?”
- For employers, “What opportunities do you have to shape what’s going on in institutions?”.

Thank you to those who have participated in the primary research that has informed the qualitative aspects of this report. This includes learners (from AAB Group and South of Scotland Enterprise Agency). A huge thanks also to those who gave generously of their time to be interviewed:

Role	Organisation
Managing Director	Scotmas Group
Vice Principal, Student Experience	Borders College
Chief Executive Officer (CEO)	Grampian Autistic Society
Vice Principal, Learning, Skills and Student Experience	Dumfries and Galloway College
Vice Principal, Strategy and Learning	Robert Gordon University
Project Co-ordinator, Future of Learning and Teaching	Robert Gordon University
Provost and Deputy Principal	Scotland’s Rural College
Director of Curriculum	Dumfries and Galloway College
Managing Director	Natural Power
Academic Strategic Lead	Robert Gordon University
Senior Lecturer	University of Aberdeen
Vice Principal, Learning and Students	University of the West of Scotland
Competency Coordinator	Sparrows Group
Vice Principal, Academic Development and Student Experience	Robert Gordon University
Vice Principal, Planning and Recruitment	University of the West of Scotland
Principal and Chief Executive	North East Scotland College
Vice Principal, Regional Engagement	University of Aberdeen
Global Head of Competence and Training Standards	Sparrows Group
Head of Planning and Academic Partnerships	North East Scotland College
Vice Principal, Curriculum and Quality	North East Scotland College
Vice Principal and Head of the College of Social Sciences	University of Glasgow
Senior Lecturer	University of Glasgow
Global Apprenticeship Manager	Score Group
Senior Lecturer	University of Glasgow
Associate Vice Principal, Curriculum, Planning and Partnerships	North East Scotland College

Table 4: Those who participated in the primary research

ANNEX C: CASE STUDIES

NORTH EAST

C1: NORTH EAST SCOTLAND COLLEGE

LOCAL PROVISION SHAPING VIA ENGAGEMENT AND COLLABORATION

North East Scotland College (NESCol) has a long-standing, established partnership with Robert Gordon University (RGU). This has resulted in many benefits to both institutions and students. NESCol has over 25 'degree link pathways', linking to 52 courses, with a full range of routes across its curriculum, including 3D computer animation, accounting, and nursing. A degree link partnership allows students to study an HNC/HND (SCQF level 7/8) at college and progress straight into year 2/3 (SCQF level 8/9) of a relevant degree programme at university. For anyone with a degree as an end goal, it is hoped that promoting these pathways will encourage applications to NESCol as a first-choice destination for higher education.

The degree link pathway offers many benefits to students who pursue it. The College's learning environment offers smaller class sizes for students, valuable practical learning experiences, and curriculum designed to provide additional support in areas like academic writing and referencing. These benefits, among many others, give students a stepping stone between school/employment and university, helping to provide a smooth transition to university life.

There has been a c25% drop in college enrolments over the past decade. This has been influenced by several factors – not least of which is COVID-19, which has had a significant impact on enrolments between academic years 2011-12 to 2020-21. Other contributors include higher university admissions, and the outflow of students to other parts of the country. Due to this drop in enrolments, colleges like NESCol are exploring ways to attract new students and encourage applicants to begin their academic journeys in a local college setting.

One of the ways in which NESCol is doing this is through the promotion of their university progression routes. The college has established formal degree and articulation pathways with eight universities, including an enhanced partnership agreement with RGU.

RGU articulating students are enrolled on the Associate Student Scheme – this provides college students with access to university facilities and resources that will complement HNC/HND study, and links to prepare them for progression/articulation. Alongside this, college students applying to university will receive support from college staff, such as the Student Advice and Support Team, during the application process and in preparation for the transition to university.

Before COVID-19, around 400 students a year were articulating from NESCol into RGU. Academic staff from both institutions work in partnership to align education and skills provisions and arrange reciprocal visits to ensure students progressing from college to university have a seamless transition.

There are also annual subject-level review meetings to provide an operational focus. These meetings are to review progress, share course developments, network, and create a plan for articulation activity (including degree-prep programmes).

Furthermore, NESCol and RGU are currently working towards an ambition that would see degree link students only submitting one application, whereby students apply to NESCol and RGU at the same time. This would mean applicants avoiding the need to re-apply to university through UCAS, and the associated financial and time costs.

The relationship between NESCol and RGU continues to strengthen. The clear progression pathways have enhanced the transition from college to university. NESCol hope that this option to begin studying towards a university degree at college, with seamless transition to university (if successful at college level) might make college a more attractive option for young people in the North East of Scotland, encouraging applicants to stay in the region and increasing enrolments at college.

C2: UNIVERSITY OF ABERDEEN

EMPLOYABILITY SKILLS

Graduates of the University of Aberdeen (UoA) are entering a fast moving and complex world. UoA aim to make sure that their graduates are equipped for life after university e.g. in future learning, employment, and citizenship. UoA also want to make sure their graduates stand out in a crowd, so in 2008-9 they developed a set of graduate attributes specific to UoA for learners to develop and enhance. These attributes were developed alongside stakeholders, including professional bodies and employers to find out what they would expect from graduates of the university and the skills specified are developed through learning experiences in the curriculum, in credit-bearing courses, and in co-curricular activities, for example work-placements and volunteering or study abroad. There are currently 19 graduate attributes, grouped into the four areas of academic excellence, critical thinking and effective communication, learning and professional development, and active citizenship. Two examples of the 19 graduate attributes are: a breadth of knowledge, understanding and skills beyond their chosen discipline(s); and an awareness of personal strengths and weaknesses.

Employability and skills development are central to the UoA current strategic plan with the graduate attributes playing a key role in ensuring learners have the skills required for employment. The graduate attributes are undergoing a review to ensure they do not stand still and are in line with employer and societal demands. One of the emerging themes in this review is to develop a skills recognition framework that will allow students to evidence and reflect on the skills they are developing throughout their programme. The skills within this new framework will allow students to develop educationally and professionally and ultimately make them ready for the world we live in today. During the revision, UoA plans to engage with employers in the region, including voluntary organisations and regional learning and skills partnerships. They are also considering how students might evidence the graduate attributes they have developed, e.g. through digital badges. UoA hope that doing so will allow the graduates of UoA to articulate their skills, and thrive in future learning, employment, and citizenship.

C3: ROBERT GORDON UNIVERSITY

RESPONSIVENESS OF PROVISION

Spurred by COVID-19; the energy transition and climate change; technology and innovation; changing industry dynamics and worldwide sustainability goals, institutions are thinking differently about the curriculum. More specifically, the energy transition has created a shift in the North East Scotland employment market and the skills required for employees working in the region and in its evolving industry are different. Research by the Energy Transition Institute at Robert Gordon University (RGU) predicted that by 2030, around 80% of jobs in the oil and gas industry will be across nine different job families (including business operations, technicians and engineers, HR, and health). Furthermore, today's graduates are less likely to stay in one job, occupation, or sector. Indeed, they are likely to adopt various roles throughout their working lives. Therefore, the way North East institutions must equip learners for the world of work has evolved from being focused on singular profession based technical skills, such as engineering, to including an interdisciplinary range of subjects, softer skills, and transferrable skill across adjacent energy sectors.

At RGU, they continually seek to prepare students with a range of employability skills to serve as a good baseline for entering the world of work, rather than prepare students for one role and/or career.

RGU has tested introducing various interdisciplinary courses into its portfolio– with varying degrees of success. Further work is planned to promote the interdisciplinary courses, RGU believe there is a gap in knowledge between forecasted industry demands, careers advisors, and young people leaving school, which results in school leavers being unaware of the benefits of interdisciplinary study and therefore not attracted to enrol on these courses.

RGU continually adapt their approach to interdisciplinary studies and find the right balance when introducing them into the curriculum to ensure that programmes are viable and funded through attracting students, whilst being innovative and forward thinking to meet the needs of industry.

RGU's Marketing, Insights, and Planning Team support changes to provision by drawing on data from internal and external sources, including, economic data, analysis of HESA coding at all subject levels and SDS data. This means that decisions on changes to provision are evidence-based and collaborative.

The School of Architecture and the School of Health Sciences created a post-graduate degree programme, 'Health City'. This course involves looking at creating smarter cities that work for people, to combat the negative physical and mental health effects of physical attributes of traditional cities. RGU is currently developing a similar provision for undergraduate level, which involved flexible study framework allowing students to curate their own degrees based on personal and professional interests, with guidance from a tutor. Other examples include interdisciplinary modules between, arts and creative industries, business, law, and computing, with the aim to maximise skills and allow graduates to run their own creative businesses. Skills important across multiple industries are being taught across schools, for example, data analytics and digital animation.

An interdisciplinary project was recently piloted across the School of Engineering, Architecture, Computing, and Gray's School of Art. This was designed to show students the importance of working collaboratively, with people outside of their discipline. It also encouraged students to be creative and think critically. The team was tasked with designing a house of the future that is resilient against flooding, and then creating a poster. Feedback from the pilot was positive, and RGU is currently considering developing this approach to learning further.

By increasing interdisciplinary studies, RGU hope that their provision is helping to create global citizens, with a wide range of skills, transferrable across roles. RGU is ranked top in Scotland and number 3 in the UK for employability. This is testimony to the institutions efforts in listening to what skills and knowledge employers need and filling the gaps. Interdisciplinary studies are one-way RGU is equipping learners for employment after leaving education.

SOUTH OF SCOTLAND

C4: BORDERS COLLEGE

EMPLOYABILITY SKILLS

There is a strong belief that employability skills should be a priority for all students at Borders College (Borders). The staff at Borders continuously review what skills employers expect students to have and what skills students will need to transition into the world of work seamlessly. Previously, employability skills were considered in terms of softer skills, such as communication and problem-solving skills, and teamwork.

Whilst the surrounding demands are continuously changing, current demands influence how the team at Borders equip students for employment include: the current rise in mental health disorders, the global climate emergency, COVID-19, the digital revolution, and the important focus on equality and diversity.

In response to demand, the team at Borders have launched ‘Global Citizenship’, with the aim to build students who are:

- responsible, to themselves, others, the community, and environment
- resilient, ready for a challenge and equipped with coping strategies
- respectful, of cultures, are inclusive and innovative
- recognised, as skilled, competent, qualified, and digitally enabled.

By producing graduates who are responsible, resilient, respectful, and recognised, Borders hope their alumni will be amongst the most employable graduates. The programme ‘Global Citizenship’, which was launched at the beginning if the 2022 academic year, will take various approaches to meet its objectives.

For example, in reaction to the climate emergency, carbon literacy training will be offered to all staff and students, helping the Borders community become more responsible for the environment. Further, resilience training will be delivered to all students at Borders, supporting their well-being and helping face up to adversity. For example, it will help students develop coping strategies for external stressors, encourages students to take responsibility for themselves and others, and raises awareness around the dangers of social media.

The Borders example demonstrates how employability skills must evolve much further than solely focusing on soft skills. In due course, the results of the ‘Global Citizenship’ initiative will become apparent in the employability skills (and related statistics) of Borders alumni. Success levels will be measured through the student survey and the self-evaluation, assessing prepared students feel for life after education. Learner success will be recognised with a Global Citizen Certificate, in and College Global Citizen Champions. Global Citizenship underlines the efforts of Borders strategy to be ‘Regionally Focused – Globally Engaged’.

C5: DUMFRIES AND GALLOWAY COLLEGE

RESPONSIVENESS OF PROVISION

To adapt to the changing needs of the region, Dumfries and Galloway College (DGC) realised they needed to focus and adapt their broad curriculum to ensure it better reflects their unique selling points in green, digital, enterprise and health and social care. Whilst there are some big employers (e.g. in manufacturing) in the geographically dispersed region, the business demographic is made predominantly of 95% small to medium enterprises (SMEs). DGC's challenge was to ensure that their curriculum reflected skills needs for the region and for Scotland.

The curriculum planning process was enhanced to ensure Curriculum Managers (CMs) scan the horizon using a key skills analysis and stakeholder feedback. CMs work with their specialist curriculum team to ensure that their curriculum reflects key questions such as:

- What are the big macroeconomic and technological changes that will affect skills provision and how does our curriculum match that?
- What government policies (e.g. National Strategy for Economic Transformation (NSET) must we align with, or get ahead of?
- How can we innovate delivery of teaching to meet the needs of employers and other partners?
- How can we work closely with the local authority and with schools to minimise duplication and gaps?
- How can we prepare students for employment or smooth articulation for their next step in learning?
- How can we smooth articulation pathways?
- What input can employers provide within the curriculum to ensure our students are work ready?

This evidence-based approach to curriculum development includes regular curriculum reviews. CMs gather data from students (e.g. via self-evaluations) and educators on what is working well and what could be improved. They understand the performance of subject areas (e.g. looking at success / pass / retention rates, number of applications etc.). They look at sector performance indicators (PIs), comparing with other colleges and drilling down into subject level. This allows CMs to work to develop best practice to ensure that they have capacity to improve their offer to students.

This refreshed approach to curriculum planning has enabled the strengthening of DGC's offer to focus on four main areas: green, digital, enterprise and health and social care.

In digital, this has involved investing in a care hub for digital technology to support an ageing workforce in the region. Designed like an assisted living flat, this gives students practical care giving experience. DGC works with NHS staff to continually enhance the facilities. 'Digital' previously focussed on computer science; today, it is concentrating on skills gaps such as cyber, e-sports, and data science.

With local assets in green energy centres (e.g. in wind), engineering courses have been adapted (e.g. engineering and renewable energy) to support the net zero transition. The college has implemented a Green Skills Academy which provides training in energy, transport, and sustainable construction. The college is working in co-operation with Dumfries and Galloway Council on the development of advanced manufacturing and they introduce students to advanced manufacture techniques which enable students to be ready for the world of work.

Working with employer forums via Developing the Young Workforce Dumfries and Galloway, DGC works with local engineering firms to support the provision of placement opportunities and has created access to courses to enable staff from local engineering to develop higher level skills that enable their companies to be more competitive.

DGC works closely with the University of West of Scotland (UWS) to align curriculum to ensure a smoother pathway into university. UWS is based within the campus building which further strengths ties in subjects including business and cyber whilst joint working with UWS focuses on developing qualifications at SCQF level 7 and beyond. To further improve articulation, the college is working with UWS to help implement a seamless process where school leavers can submit one application that enables them to progress to UWS via DGC thereby removing the need for multiple applications and improving the student experience.

Revitalisation of the curriculum started in academic year 2019/20 and it is still at an early stage, however DGC has already seen across the board changes – particularly in the areas of digital, enterprise, healthcare, and socials care and green, to meet the needs of the region. The college has moved to ensure that their skills offer has shifted in response to demand, enabling stronger articulation links, and closer ties with stakeholders to influence provision. Through development of the student experience, with an enhanced self-evaluation process and improved curriculum planning, this will see an improvement in outcomes for student and support the continued development of the curriculum.

C6: SCOTLAND'S RURAL COLLEGE

CURRICULUM CHANGES

Scotland's Rural College (SRUC) was formed in 2012, following the merger of the Scottish Agricultural College with historical agriculture and land-based institutions: Barony College, Elmwood College and Oatridge College. Given the rural location surrounding some of SRUC's main campuses (e.g. Dumfries and Fife) and its access to natural resource, SRUC is in a good position to play a pivotal role in the Scottish Government's net-zero and natural economy priorities. Achieving net-zero will involve a move to environmentally sustainable jobs, sectors, and economies (e.g. the circular economy). SRUC play a key role in reaching these ambitions by providing opportunities for people to gain the education and skills required to thrive in the green economy.

SRUC recognised that if they are to equip students with the skills required for future demands, it was time for a refresh of curriculum and teaching. In 2020, SRUC launched their new Learning and Teaching Enhancement Strategy 2020-2025. The strategy comprised of two pillars and ten principles to which all new and existing provision should align, and a plan for implementation. The strategy sets out to ensure 'All learning, teaching and assessment at SRUC will enable learning for change and learning for all'. An example of some of the ten principles are: working with learners as partners, embedding global challenges and building learning communities.

As part of the implementation plan of the Learning and Teaching Enhancement Strategy, subject leads have been asked to revise the curriculum across the college, the first curriculum review of its kind at SRUC. The college has been divided into four campaigns based on subject groups, who will each take a turn at revising their subject area, the operation is scheduled to take three years.

When considering provision change, staff have been asked to:

- Reflect on what changes are necessary to deliver skills for the future. During this reflection, staff were encouraged to consider changes in terms of enterprise, digital skills, and equality, diversity, and inclusion.
- Bring ideas on how these changes could be implemented into the curriculum.
- Create an action plan on how these changes will be embedded in the curriculum. The action plan is first subject to review by the internal curriculum review team who meet monthly. Further, SRUC felt it was important to get the opinion of other educational institutions and industry and as such, action plans are subject to final review by an external review team.

The first campaign of curriculum review took place in the academic session of 2022-23, some early wins were apparent. After being asked to integrate entrepreneurialism throughout provision, there was a shift in the entrepreneurial mindset of staff and students throughout the institution. The institution recruited two entrepreneurs-in-residence to drive towards becoming an education institution at the heart of the sustainable economy. The entrepreneurial leaders created an online tool to inform students on how they can become entrepreneurs, including self-learning activities.

By embedding entrepreneurialism, digital skills and equality, diversity and inclusivity throughout education and skills provision, SRUC hope that the land-based sector will become an innovative and high-tech sector. SRUC hope to produce graduates who have the skills to advance the natural economy and play a pivotal role in Scotland's net-zero transition.

C7: UNIVERSITY OF GLASGOW, DUMFRIES CAMPUS

RESPONSIVENESS OF PROVISION

Located in the South of Scotland, University of Glasgow's (UoG) Dumfries campus is in a unique position. UoG has built a reputation as a world-leading university that aims to attract home and international students. This is channelled locally through a community-based campus in Dumfries. The rural location of the campus means UoG Dumfries is well placed to deliver several environmental and sustainability focussed undergraduate and postgraduate degrees.

Subjects taught at the campus include environmental science and sustainability, health and social policy, education, and tourism. Tourism is a key sector in the South of Scotland and has been a long-standing subject available to students at UoG Dumfries. However, current environmental challenges have encouraged UoG staff to reconsider what is offered as part of course content, believing that sustainable tourism has a role to play in tackling climate change and other key environmental issues. To address the global impacts of the tourism industry, the innovative postgraduate programmes Management and Sustainable Tourism (run jointly with the Business School in Glasgow) and Sustainable Tourism and Global Challenges were introduced in 2018 and 2022 respectively. Previously, provision on sustainability and tourism was a feature of one of the degree programmes but a new focus has significantly expanded content in collaboration with both environmental and social scientists. UoG introduced the new programmes to educate students on the cultural and environmental issues influenced by tourism, whilst applying critical and practical solutions.

A priority throughout the curriculum at UoG is to mentor students on how to apply academic theory in real life contexts. Sustainable Tourism and Global Challenges has been designed with the opportunity for all students to undertake work placements. This allows students to practice sustainable tourism as part of a graded course. In our conversations with institutions, learners and employers, work placements were stressed as a crucial part of the academic journey as it enhances the practical skills of students and helps them hit the ground running when they enter employment. Work placements are also helping the tourism industry make crucial decisions around sustainability. The South of Scotland is largely made up of micro-businesses who often do not have the capacity to research innovative sustainable practice and implement them across the business. Therefore, students on work placements from UoG enhance the tourism industry by providing unique skills and insights into how the industry can become more sustainable.

Management and Sustainable Tourism has been designed with a project option, based on case study scenarios. UoG work with organisations to develop case study scenarios to ensure they are a true representation of the organisations. The case studies allow students to evaluate a business and management brief to assess strategic challenges that might be encountered as part of an organisation and to apply academic knowledge to real life business challenges.

Community based learning was a re-occurring theme raised throughout education and skills provision discussions in the South of Scotland, and UoG Dumfries campus is an example of how provision is being developed to address local challenges and educate and train valuable graduates. Students from the UoG Dumfries can take unique skills to interesting roles and incorporate them in entrepreneurial opportunities.

C8: UNIVERSITY OF THE WEST OF SCOTLAND, DUMFRIES CAMPUS

EMPLOYABILITY SKILLS

The University of the West of Scotland (UWS) has a distinctive body of students – more than 40% of enrolments are students who have come through college first, or through some other form of mature entry, rather than having a cohort of students that enter undergraduate level straight from school. It is also home to the highest proportion of students in SIMD20 (those in the bottom quintile of places in Scotland where people are experiencing disadvantage across different aspects of their lives).

Due to the diverse background of students joining UWS, the university recognised the need to personalise pathways, close the attainment gap and work in partnership with students to boost employability and skills of their graduates.

In 2022, UWS introduced 'ASPIRE', a new module that adapts the curriculum and puts the student in charge of their personal, professional, and academic development and future employability. Rather than the more typical "academic personal tutor" approach, each student has an ASPIRE tutor, who delivers the ASPIRE module, works with the student to map out their learning journey from enrolment to graduation, and is their first point of contact for academic support. ASPIRE is embedded in the curriculum as a core module for students across the University in first through third years.

For first year undergraduate level, ASPIRE is separated into three strands:

- The institutional strand: students create a personal plan, for example by asking 'where do you see yourself in five or 10 years?', 'what are the steps you need to take to get there?' and 'what are some challenges you might face along the way and how might you overcome them?'. Students then spend the year creating an e-portfolio of evidence to document and reflect on the steps they have taken towards there pre-set goals. Whilst all students undertake the same module, every output will look different with unique records of achievement. The e-portfolio will stay with the student through their entire degree and beyond, as a holistic record of their personal learning journey.
- The discipline strand: students are put into small groups based on their discipline. They work collaboratively on discipline-specific real-life projects, which develops discipline-specific and professional skills, as well as transferable skills like teamwork and communication. Recognising the need for effective cross-functional and cross-organisational working, UWS gets multi-disciplinary teams to work together.
- Meta-skills strand: in first year students chose 12 skills from a list of 48 that they want to develop. Their choice is based on the skills required to reach goals set out in their personal plan. The list includes meta-skills such as communication, critical thinking, networking, entrepreneurship, innovation, leadership and theory of mind skills and volunteering. UWS offer short courses for students to enhance the skills most valuable to them. It is a requirement to spend one hour learning each of the 12 selected skills. The students must use their portfolio to then reflect on how these skills are bringing them closer to their end goal.

Going into the second year of a degree programme, students at UWS continue the ASPIRE module, however, student time is significantly spent on work placement or work-based simulated learning. Like the meta-skills strand in first year, students are required to document learning throughout work placements in their e-portfolio.

UWS expect the change in curriculum through ASPIRE to create more employable students by helping students become more reflective, self-aware, adaptable, and resilient. ASPIRE should, regardless of students starting position, create successful citizens. Another key objective of the module is to encourage students to stay in university and complete the degree. By fostering a connection between what students are learning and achieving through their personal goals, UWS expects student retention and success to improve, giving students the opportunity to make the most of education. Looking ahead, ASPIRE has further potential. UWS have a vision of engaging learners from school and college in ASPIRE before they start university, further easing the transition and creating smoother pathways.