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Entrepreneurship in Education

INSPIRING ENTREPRENEURSHIP IN EDUCATION

Enterprise and Entrepreneurship in Higher Education 2018

ncee.org.uk

Produced in partnership with ACS International Schools

ABOUT NCEE

The National Centre for Entrepreneurship in Education (NCEE) supports higher education to build its entrepreneurial future. **NCEE believe innovative and inspiring activities led by enterprising staff create graduates equipped for an ever changing world.**

NCEE support organisations to develop their entrepreneurial capacity to ensure UK higher education remains at the forefront of enterprise and entrepreneurship. Its network spans the UK.

Founded by Government in 2004, NCEE is now funded by the universities themselves to support the sector. NCEE provides a range of services to universities and their senior leadership and practitioners. Entrepreneurial Leaders supports senior leaders to manage change and help universities adapt to new challenge and opportunities.

ABOUT ACS INTERNATIONAL SCHOOLS

Founded in 1967 to serve the needs of global and local families, ACS International Schools has three schools in Greater London and one in Doha, Qatar. It educates over 3,700 students, aged 2 to 18, day and boarding, from more than 100 countries including the UK.

To celebrate its international ethos and inclusive values, ACS International Schools runs the Global Citizens Award which recognises, encourages and rewards young people who are making a difference to their local or international community.

As part of its work as a registered charity the schools provide a bursary programme committing £2.2 million over the next seven years to educate pupils who otherwise would be unable to attend ACS schools.

It is the only school in the UK to teach all four International Baccalaureate (IB) Programmes. Academic success enables ACS graduates to attend the world's finest universities, with UK universities being the preferred destination for the majority of graduates every year.

To speak to us about the issues in this report or to discuss the work of NCEE,
please contact Erica Brice, Deputy CEO: **erica.brice@ncee.org.uk**.

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FOREWORD

The National Centre for Entrepreneurship in Education (NCEE) goes from strength to strength in its support for enterprise and entrepreneurship in higher education. This survey shows how it has changed over the last six years. Heads of Enterprise report a positive picture and there are definite trends emerging with some universities choosing to invest more in start-up support, whilst others focus on embedding enterprise within the curriculum.

Since our last survey there appears to be a reduction in the support for enterprise and entrepreneurship at a strategic level. NCEE partner universities continue to invest at a strategic level so that enterprise and entrepreneurship is fully considered and embedded across the organisation. Our view is that if our universities are to be truly successful we must prepare our students, our staff and our organisations for the future – to adapt to a changing environment and to be innovative and creative in outlook. For us that is what enterprise and entrepreneurship is all about.

Not only do we promote enterprise and entrepreneurship we also directly support universities. The survey shows that there has been a fall in amount of support for the professional development of staff. We would encourage universities to continue to invest – our staff are so critical in delivering great education, research and knowledge transfer. Our transformative Entrepreneurial Leaders programme continues to work with senior leaders to create entrepreneurial universities so that we can respond to the many challenges and changes that we face. Do take a look at our programme, it has changed the way over 160 higher education leaders think and how they lead their organisations.

Ian Dunn
Chair, National Centre for Entrepreneurship in Education (NCEE)
Deputy Vice-Chancellor (Student Experience), Coventry University

EXECUTIVE SUMMARY

This report reveals the state of enterprise and entrepreneurial education in the UK drawing on a survey by NCEE and ACS International Schools of 62 Heads of Enterprise from UK universities. Building on previous biennial surveys that NCEE ran until 2012, the report finds that progress is strong in some areas and weaker in others. Heads of Enterprise report that overall activity has increased, and there is widespread provision of enterprise and entrepreneurial support. However, activities aimed at supporting staff and the provision of broader institutional policies have fallen over the past six years, and despite marginal improvements in other areas – such as support for female and ethnic minority students – there is room for improvement.

Table one below compares key metrics from the 2018 and 2012 surveys.

Enterprise and entrepreneurship in UK universities (page 11)

- UK universities offer a range of support for enterprise and entrepreneurship activity, with most offering support both within and outside of degree programmes – broadly consistent with the previous 2012 survey. Three quarters of Heads of Enterprise indicated entrepreneurship activity provided by their university has increased over the past three years.

- However, activity in nearly all areas of institutional policy has fallen significantly since 2012, with fewer institutions having an explicit entrepreneurship strategy or pro-vice-chancellor for enterprise.

- Support for enterprise in both local schools and local communities has fallen, from 57 to 32 percent and from 73 to 44 percent respectively.

- Those offering staff funds for Continuing Professional Development in enterprise have dropped from 79 to 40 percent, although there have been improvements in support for creating new ventures and start-ups.

- Less than a fifth (18 percent) of responding institutions offer enterprise workshops specifically targeting ethnic minority students (up from 12 percent in 2012). This rises to 29 percent for female students (from 23 percent in 2012).

- EU funding supports activity in 40 percent of institutions, with a range across nations from 33 percent of Scottish respondents, 39 percent of English respondents, and 67 percent of Welsh respondents.

Enterprise and entrepreneurship in UK schools (page 17)

- Just 18 percent of university Heads of Enterprise across all nations believe that schools are 'quite' or 'very well' supported in terms of funded initiatives aimed at developing enterprise and entrepreneurship competence.

- Despite this, respondents believe interest in enterprise activity among school students arriving at university has increased over the last three years, with social media a particularly strong driver.

- There is strong agreement (64 percent) that having exposure to different nationalities and cultures at school has a highly beneficial impact on students' entrepreneurial outlook at university.

- School pressure to pass exams and a narrowing of subject choices are seen as having a negative impact on entrepreneurship interest. The provision of entrepreneurial activities or events in school, and the school's general ethos, have a positive influence on students' interest in enterprise activity at university.

Enterprise and entrepreneurship in UK society (page 22)

- Respondents see the desire to achieve independence (60 percent) as almost as strong a motivator as the drive to make money (61 percent) for students wishing to become an entrepreneur; doing some good for the world (53 percent) is also important.

- Nearly 39 percent of respondents feel that Brexit will impede entrepreneurial activity in the UK. 16 percent feel entrepreneurial activity will be encouraged, with the remainder uncertain or thinking it will make little difference. Over three quarters feel Brexit will have little impact on interest among school students in enterprise activity.

- The overwhelming majority (90 percent) feel that government needs to do more to support entrepreneurial activity post-Brexit.

Enterprise across the nations

For most questions respondents across nations mirrored each other, with a few interesting differences (there was one respondent from Northern Ireland, so the focus throughout is on statistically significant variations across England, Scotland and Wales).

Respondents in the devolved nations are more likely to embed entrepreneurship and enterprise within degree programmes than in English institutions and to have an explicit institutional entrepreneurship policy; Welsh institutions in particular are more likely to offer additional modules in enterprise or entrepreneurship than respondents from other nations. Welsh institutions are also more likely to have a pro-vice-chancellor responsible for enterprise (67 percent, compared to 45 percent overall), to support enterprise in local schools (50 percent, versus 32 percent overall) and all Welsh respondents have a central office for academic enterprise or technology transfer (66 percent overall). Welsh institutions also offer a broad range of facilities to help students with venture creation, and Scottish institutions perform strongly in terms of events and competitions for students. However, only one Welsh and one Scottish respondent offers workshops or events specifically targeting ethnic minority students, although Scottish institutions perform slightly above average in events aimed at female students.

Sources of funding vary between nations. EU funding is utilised by 33 percent of Scottish respondents, 39 percent of English respondents, and 67 percent of Welsh respondents. Three quarters of respondents (74 percent) draw funding from university core funds to support enterprise and entrepreneurship activity – this includes all Welsh respondents but the proportion is slightly lower for English institutions (just over 70 percent). Philanthropic or alumni funds are utilised by a third (33 percent) of Scottish and 40 percent of English institutions, but only one of the six Welsh respondents (17 percent). Sponsorship funds activity in 67 percent of Scottish and Welsh institutions, but only 33 percent from England.

A third of respondents (34 percent) feel the schools in their nation are 'poorly' supported in terms of well-funded initiatives for developing enterprise and entrepreneurship competence. Just under ten percent feel that schools are 'very poorly' supported – and all of these are from English institutions.

Enterprise across mission groups

Views, opinions and activities offered are broadly consistent across most of the university mission groups. However, there are some noteworthy variations. All University Alliance and Million+ respondents embed entrepreneurship and enterprise activity within degree programmes. However, and perhaps for this reason, members of these two groups are slightly less likely to offer additional modules in enterprise or entrepreneurship compared to Russell Group and former 1994 Group members. Nearly all University Alliance respondents offer start-up funding, and nearly all Russell Group respondents offer student hot-desking or drop-in facilities.

There are also outliers against the general trends. Russell Group respondents are more likely to support enterprise in local communities (57 percent compared to 44 percent overall) and to have a central office for academic enterprise or technology transfer (86 percent compared to 66 percent overall). And although 42 percent of responding institutions offer neither staff training in enterprise nor funds for staff Continuing Professional Development in enterprise, only one University Alliance respondent (9 percent) falls into this category.

Others differences are perhaps to be expected: nearly half (45 percent) of University Alliance respondents are keen for entrepreneurial skills to be an influential factor in all course admittance decisions in future, whereas only one of seven Russell Group members (14 percent) say the same.

There are also marked differences between those institutions who are part of a mission group (or were part of the now-defunct 1994 Group) and those who are non-aligned: for example the provision of start up support programmes is higher amongst mission group members than amongst non-aligned institutions. Similarly, mission group members are more likely to see school pressure to pass exams as having a negative impact on entrepreneurship competencies developed among school students.

Table 1: Comparison of selected 2018 and 2012 data

Institutions who provide:	2018	2012
Credit-bearing entrepreneurship and enterprise courses within degree programmes	92%	93%
Extra-curricular support for enterprise and entrepreneurship not part of any academic qualification	95%	99%
Institutions who have or offer: (full table in annex)		
A central office for academic enterprise / technology transfer	66%	84%
A PVC responsible for enterprise / entrepreneurship	45%	61%
Support for enterprise in local communities	44%	73%
Staff training in enterprise	39%	60%
Student incubator facilities	60%	53%
Enterprise awareness events / festivals	85%	80%
Technical, professional, funding and specialist advice	76%	78%
Investor events	45%	35%
Enterprise champions	47%	75%
Events targeting female students	29%	23%
Events targeting ethnic minority students	18%	12%
Institutions who fund enterprise activity from:		
University Core Funds	74%	70%
EU funding	40%	51%
Global Agencies	0%	3%
Overseas Foundations	2%	3%
Private Sector Funds	24%	29%
Paid Fee Income	18%	21%
Endowments	6%	16%
Sponsorship	42%	41%

RECOMMENDATIONS

1. Universities should produce an entrepreneurship strategy at institutional level, prioritising support for staff (including Continuing Professional Development) and students to engage with enterprise activity, with a particular focus on female, ethnic minority and widening participation students.

2. Support for enterprise in local schools and local communities has fallen since 2012. Universities should consider how existing activity and the work of students in particular could engage with schools and communities. A greater focus on social enterprise and working in culturally diverse groups may provide such a route.

3. Staff with responsibility for enterprise activity should look to promote the work of local entrepreneurs. The stories of Elon Musk, Mark Zuckerberg and Richard Branson may be inspirational, but a wider diversity of role models – from different backgrounds, with charitable or social objectives, and with varying scales of enterprise – will help make engagement with enterprise and entrepreneurship more accessible and relatable for more students.

4. The higher education sector should call on government to set out how it will support entrepreneurial activity post-Brexit, whilst showcasing the range of existing work undertaken by the sector and how support for future enterprise activity within UK universities could benefit the economy and society more broadly.

METHODOLOGY AND SAMPLE

NCEE and ACS International Schools surveyed 62 Heads of Enterprise from UK universities through an online questionnaire during April and May 2018. This report builds on previous biennial surveys that NCEE ran until 2012, in which institutions were asked about their enterprise and entrepreneurial activity. A subset of questions, in particular those asking about provision of enterprise and entrepreneurship support within universities, are a repeat from 2012 and the survey adopted the previous terminology in order to aid comparison.

English respondents are slightly under-represented compared to those from each of the devolved nations, although the bulk of responses (46 Heads of Enterprise – 74 percent) are from English institutions. One institution responded from Northern Ireland. In terms of mission groups, members of University Alliance and former members of the now-defunct 1994 Group are slightly overrepresented, and members of Million+ and the Russell Group underrepresented. Over half of respondents are non-aligned. Mission group categorisation is based on membership in October 2018.

## Part A: Enterprise and entrepreneurship in UK universities

UK universities offer a range of support for enterprise and entrepreneurship activity, with most respondents offering support both within and outside of degree programmes – broadly consistent with the previous 2012 survey. Three quarters of Heads of Enterprise indicated entrepreneurship activity provided by their university has increased over the past three years. However, activity in nearly all areas of institutional policy has fallen significantly since 2012, with fewer institutions having an explicit entrepreneurship strategy or pro-vice-chancellor for enterprise, and support for enterprise in both local schools and local communities has fallen, from 57 to 32 percent and from 73 to 44 percent respectively. Those offering staff funds for Continuing Professional Development in enterprise have dropped from 79 to 40 percent, although there have been improvements in support for creating new ventures and start-ups. Less than a fifth (18 percent) of responding institutions offer enterprise workshops specifically targeting ethnic minority students (up from 12 percent in 2012). This rises to 29 percent for female students (from 23 percent in 2012). EU funding supports activity in 40 percent of institutions.

Does your institution embed entrepreneurship and enterprise within degree programmes?

All but five institutions (92 percent) embed entrepreneurship and enterprise within some of their degree programmes. This is a marginal (one percent) fall from the 2012 survey. The proportion is highest amongst business and management programmes (almost 84 percent) and lowest for medicine, healthcare and veterinary courses (35.5 percent) with approximately half of respondents embedding entrepreneurship and enterprise within STEM (47 percent) and arts and humanities (50 percent) degree programmes.

All University Alliance and Million+ members embed entrepreneurship and enterprise activity in some of their degree programmes, and nearly all respondents in the devolved nations embed such activity, especially in business and management degrees.

**Figure 1: Does your institution embed entrepreneurship and enterprise within degree programmes? (no. of responses)**

Category	Responses
Yes, within business and/or management	52
Yes, within arts and/or humanities	31
Yes, within STEM	29
Yes, within medicine, healthcare and/or veterinary	22
Yes, other	5
No	5
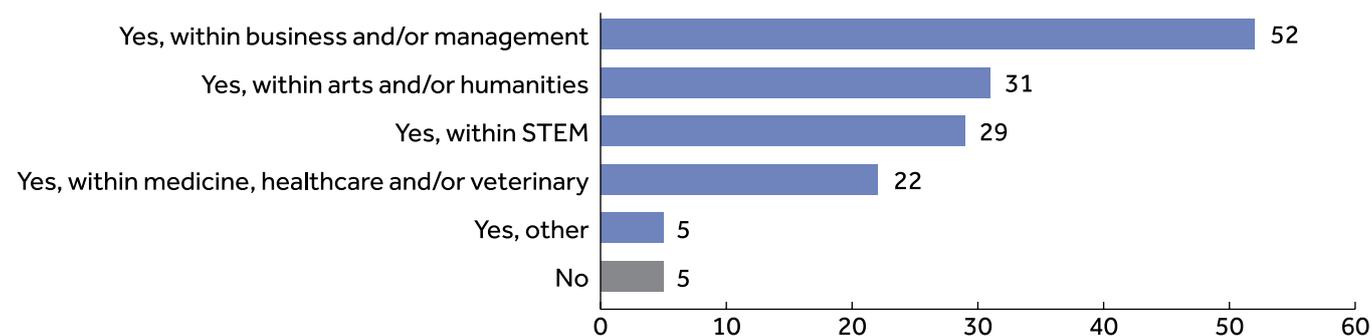
Does your institution offer additional modules in enterprise or entrepreneurship?

Over three quarters of institutions (77 percent) offer additional modules in enterprise or entrepreneurship, with a slightly lower proportion amongst University Alliance and Scottish respondents.

Figure 2: Does your institution offer additional modules in enterprise or entrepreneurship? (number of respondents)
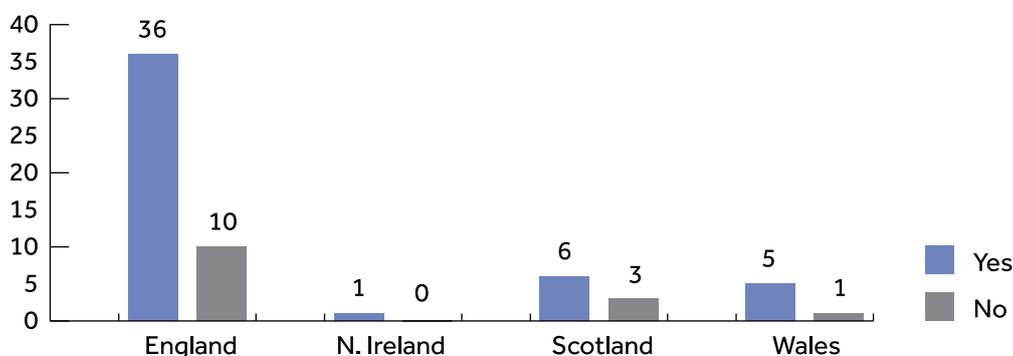
Does your institution provide any extra-curricular support for enterprise and entrepreneurship that is not part of any academic qualification?

A higher proportion (95 percent, or all but three respondents) provide extra-curricular support for enterprise and entrepreneurship that is not part of any academic qualification. This is a slight fall on 2012, when 99 percent (all but one respondent) offered extra-curricular support.

How do you fund enterprise and entrepreneurship activity within your university?

Three quarters of respondents (74 percent), and all Welsh and University Alliance respondents, draw funding from university core funds to support enterprise and entrepreneurship activity. The proportion is slightly lower for English institutions (just over 70 percent), perhaps reflecting the availability of Higher Education Innovation Funding which is used by over 60 percent of English respondents to support enterprise and entrepreneurship activity. EU funding supports activity in 40 percent of institutions, with a range across nations from 33 percent of Scottish respondents, 39 percent of English respondents, and 67 percent of Welsh respondents. Philanthropic or alumni funds are utilised by a third (33 percent) of Scottish and 40 percent of English institutions, but only one of the six Welsh respondents (17 percent). Sponsorship funds activity in 67 percent of Scottish and Welsh institutions, but only 33 percent from England.[1]

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[1] Categories are preserved from the 2012 survey to allow comparison: respondents may have not consistently differentiated between funding categories, for example 'private sector funds' and 'sponsorship'.

Figure 3: How do you fund enterprise and entrepreneurship activity within your university? (number of respondents)
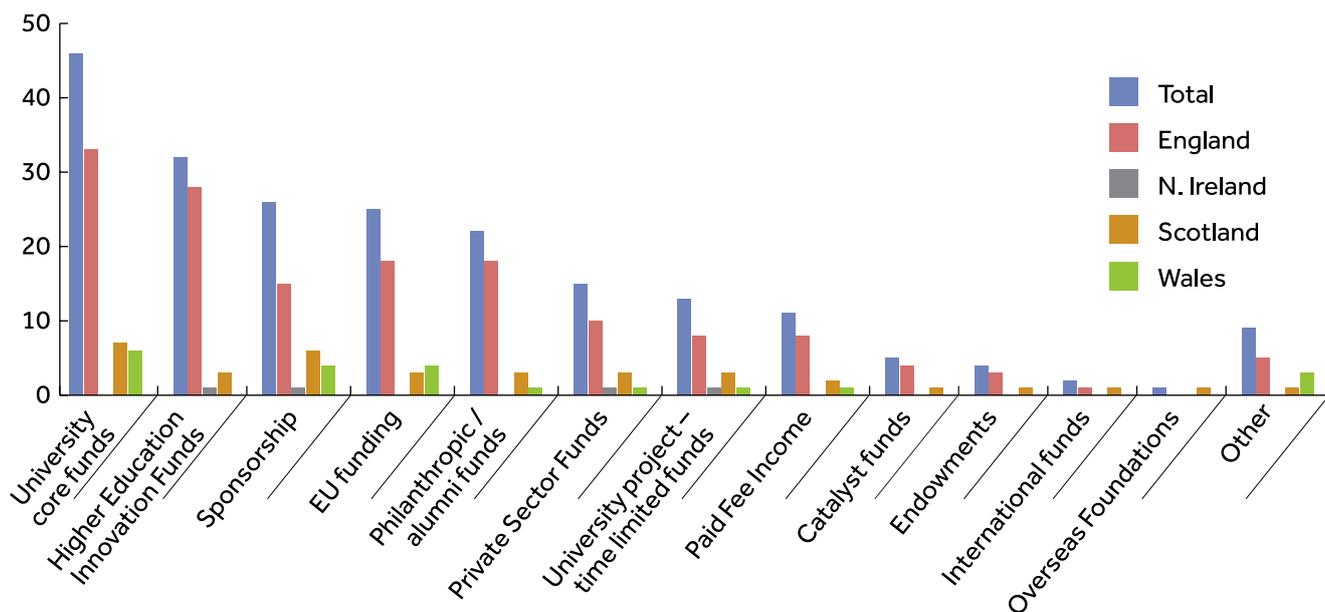
There are some minor shifts since 2012 (see table one). A higher proportion (a further 5 percent) access core university funding for enterprise activity, perhaps reflecting such activity being seen as a core part of university functions. EU funding was accessed by half of all respondents for entrepreneurship activity in 2012 but 40 percent in 2018. Similarly, fewer institutions fund activity from the private sector and endowments in 2018. However, there may have been changes in the relative volumes within each category not captured within the survey data, such as if EU funding levels rose but became concentrated in fewer institutions, for example.

Do you think enterprise and entrepreneurship activity provided by your university has increased or decreased over the last three years?

Three quarters of respondents indicated entrepreneurship activity provided by their university has increased over the past three years, with 45 percent reporting a significant increase - a pattern broadly consistent across nations and mission groups. Three respondents reported a significant decline and six a slight decline - just under 15 percent of the total.

Figure 4: Do you think enterprise/entrepreneurship activity provided by your university has increased or decreased over the last three years? (number of respondents)

Increased significantly	28
Increased slightly	19
Stayed the same	6
Decreased slightly	6
Decreased significantly	3
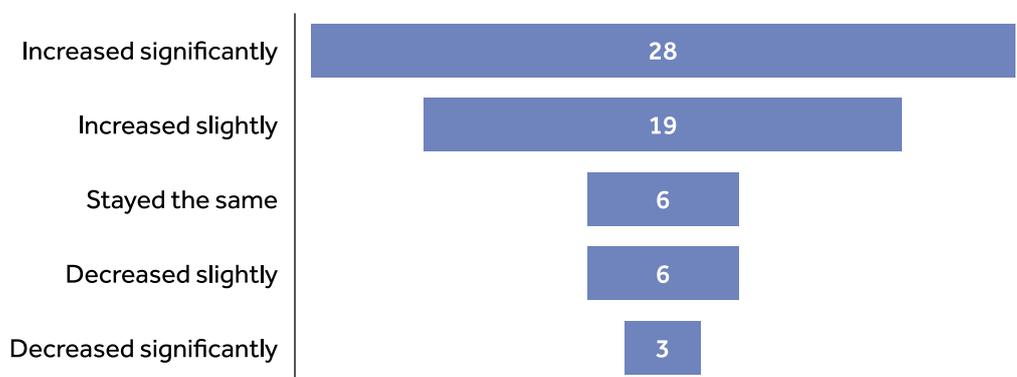
Which areas of enterprise and entrepreneurship support are provided at your university?

See the annex for a full breakdown, including comparisons with 2012 data.

Institutional policy

44 percent of responding institutions have an explicit institutional entrepreneurship policy, although the proportion rises slightly for the devolved nations. 45 percent have a pro-vice-chancellor responsible for enterprise or entrepreneurship. The proportion for institutions who have a central office for academic enterprise or technology transfer is higher at two thirds; a similar number have a dedicated web page for access to enterprise support. Only 16 percent have a specialist centre for female, ethnic or social enterprise, although a higher number (44 percent) offer support for enterprise in local communities. However, activity in nearly all areas of institutional policy is less widespread than 2012: for example support for enterprise in local schools has fallen from 57 to 32 percent, the number of pro-vice-chancellors for enterprise has fallen by 16 percentage points, and 66 percent of respondents have a central office for academic enterprise compared to 84 percent in 2012 – although this latter figure could reflect a decentralisation of enterprise policy within institutions.

Support for staff in enterprise

42 percent of responding institutions offer neither staff training in enterprise nor funds for staff Continuing Professional Development in enterprise, although only nine percent of University Alliance respondents (one of 11 respondents) falls into this category. Over half offer staff support for commercialisation of IP, including all but one Welsh respondent. 79 percent of respondents indicated some form of support, although levels have dropped significantly since 2012: the percentage of institutions offering development sabbaticals for staff has fallen from 40 to 15 percent, and those offering staff funds for Continuing Professional Development have dropped from 79 to 40 percent.

Ideas and planning for students

Activities aimed at students are more widespread, with only a small dip from 2012 levels. 80 percent offer entrepreneur-led events and 85 percent general enterprise or entrepreneurship workshops. Business plan and ideas competitions have particularly high uptake in the devolved nations compared to England. The spread of activities is largely consistent across mission groups. 93.5 percent of respondents (and even higher in the devolved nations) were aware of entrepreneurship activities aimed at students within their institution.

Venture creation

Facilities and initiatives to create new ventures are present at over 88 percent of responding institutions, and all Welsh ones. Nearly 60 percent provide student incubator facilities, and 64.5 percent offer start-up funds for students or graduates. Nearly all University Alliance respondents offer start-up funding, and nearly all Russell Group respondents offer student hot-desking or drop-in facilities. Activity is slightly up on 2012 levels.

Start up support programmes

All but four respondents (nearly 94 percent) offer some sort of start up support programme, with many providing enterprise awareness events or festivals (85.5 percent - a 5 percent increase on 2012) or mentoring (82 percent). Student enterprise conferences and summer schools are less common (both less than 40 percent) except in Wales (rising to two-thirds) where activity is widespread across all areas. Provision of start up support programmes is high in all mission groups (and lower amongst non-aligned institutions). Compared to 2012, a higher proportion of responding institutions offer investor events (45 from 35 percent), access to funding workshops (61 from 54 percent) and student enterprise conferences (39 from 33 percent).

Enterprise skills development

Over three quarters of respondents offer enterprise or entrepreneurship skills training programmes, and nearly 80 percent offer careers service events or workshops focused on enterprise skills development. Over 90 percent offer some form of activity focused on enterprise skills development, a figure that rises further for all devolved nations and for members of mission groups.[2] However, less than half (43.5 percent) offer student enterprise placement workshops. The proportion of institutions offering activity in each area of enterprise skills development has declined slightly since 2012 (although those who have enterprise champions has fallen substantially from 75 to 47 percent).

Networking events

Nearly 85 percent of respondents offer some form of networking events, including all Welsh and Russell Group responding institutions.

Workshops / Events targeting specific groups

Less than a fifth (18 percent) of responding institutions offer enterprise workshops specifically targeting ethnic minority students (12 percent in 2012). This rises to 29 percent for female students (23 percent in 2012) and to 34 percent for widening participation students. Although figures have risen since 2012, there is clearly room for improvement. 77 percent have workshops targeting social enterprise or entrepreneurship and 61 percent offer workshops focused on creative industries.

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2 All respondents from Wales and Northern Ireland and those who are members of the Russell Group, University Alliance and Million+ offer some form of activity focused on enterprise skills development, as do all but one respondent from Scotland and all but one from the former 1994 Group.

How highly does your institution value evidence of entrepreneurial skills in a university application?

Of those who responded, three quarters of institutions state that evidence of a specific entrepreneurial idea or positive approach at application stage would make no difference to an offer for any course, but for the remaining one quarter such evidence could positively influence the offer for some courses. This pattern is broadly consistent across universities and mission groups, although only one of seven Russell Group and one of six former 1994 Group institutions factor evidence of an entrepreneurial idea in application decisions.

Do you think evidence of entrepreneurial skills should become a more influential factor in a university application?

Roughly a third of respondents feel that evidence of entrepreneurial skills should become a more influential factor in university applications for all courses, with a third responding that it should be a factor in some courses and a third responding it should not be a factor. Results vary slightly across mission groups with nearly half of University Alliance respondents keen for entrepreneurial skills to be a factor in all course decisions, and only one of seven Russell Group members saying the same. However, over a third of University Alliance respondents feel that entrepreneurial skills should not factor into course admittance decisions, so variation exists within mission groups. Welsh and Scottish institutions are slightly more likely to favour entrepreneurial skills becoming a more influential factor in university applications than their English counterparts.

Figure 5: How highly does your institution value evidence of entrepreneurial skills in a university application? (number of respondents)


- Very highly
- Not highly
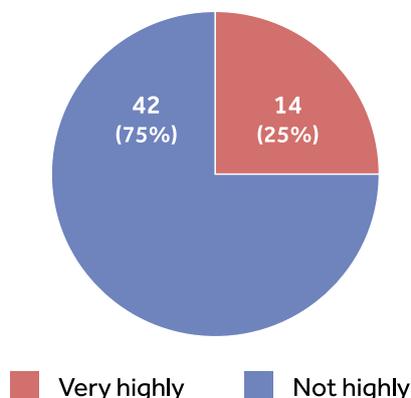
Figure 6: Do you think evidence of entrepreneurial skills should become a more influential factor in a university application? (number of respondents)

- Yes for all courses
- Yes for some courses
- No
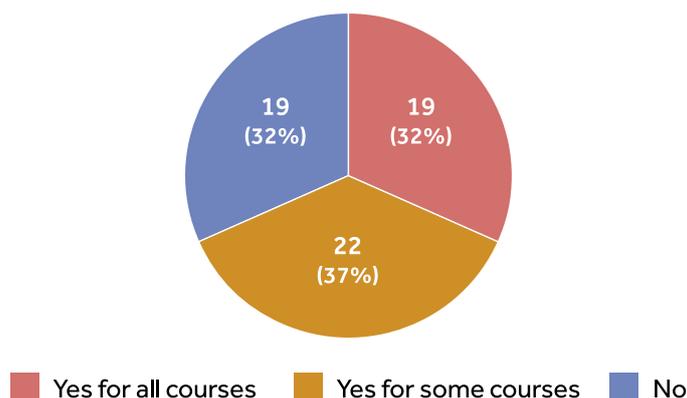
Part B: Enterprise and entrepreneurship in UK schools

Just 18 percent of university Heads of Enterprise across all nations believe that schools are 'quite' or 'very well' supported in terms of funded initiatives aimed at developing enterprise and entrepreneurship competence. Despite this, respondents believe interest in enterprise activity among school students arriving at university has increased over the last three years, with social media a particularly strong driver. School pressure to pass exams and a narrowing of subject choices are seen as having a negative impact on entrepreneurship interest, whereas the provision of entrepreneurial activities or events in school, and the school's general ethos, have a positive influence on students' interest in enterprise activity at university.

Do you think interest in enterprise/entrepreneurship activity among school students, on arriving at university, has increased or decreased over the last three years?

Interest in enterprise activity among school students arriving at university has increased over the last three years, with nearly 65 percent of respondents reporting a slight or significant increase. No respondents report a significant decline; 5 percent perceive a slight decrease and just under a third say interest remains around the same. These patterns are broadly consistent across nations and mission groups.

Figure 7: Do you think interest in enterprise/entrepreneurship activity among school students, on arriving at university, has increased or decreased over the last three years? (number of respondents)

Increased significantly	17
Increased slightly	23
Stayed the same	19
Decreased slightly	3
Decreased significantly	0
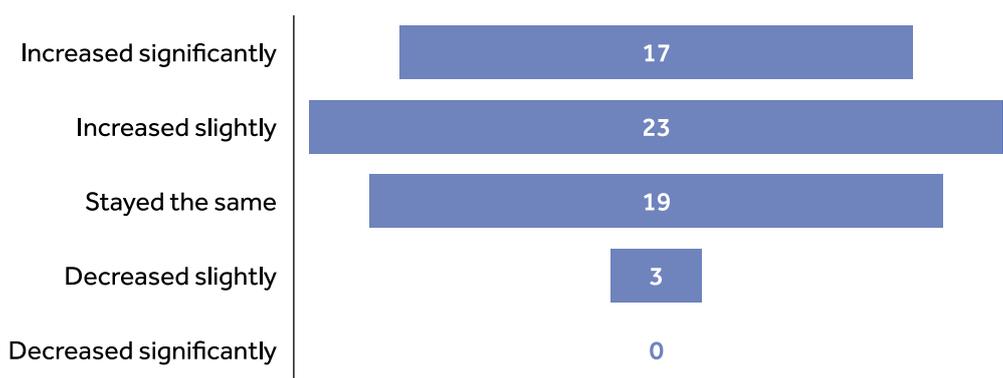
What impact have the following had on the interest among school students in enterprise/ entrepreneurship activity?

93 percent of respondents feel that social media has sparked a sense of entrepreneurial opportunity and interest amongst school students, compared to 71 percent for TV programmes such as Dragons Den and The Apprentice. Crowd funding sites and e-commerce have helped increase interest amongst students for 71 percent and 48 percent of respondents respectively. Most feel that Brexit, British newspapers and a lack of experience of failure among young people have had little impact.

Figure 8: What impact do you feel each of the following has on the interest among school students in enterprise/entrepreneurship activity? (number of respondents)

	Increased	Made no impact	Reduced
Social media (e.g. Twitter, Facebook, Instagram, YouTube)	54	4	
TV programmes (e.g. Dragons Den, The Apprentice)	41	11	5
Crowd funding sites and apps (e.g. Kickstarter, GoFundMe)	41	15	2
E-commerce (e.g. Google Shopping, Adwords)	28	30	
Lack of experience of failure among young people	11	36	11
British newspapers	9	45	4
Brexit	8	42	8
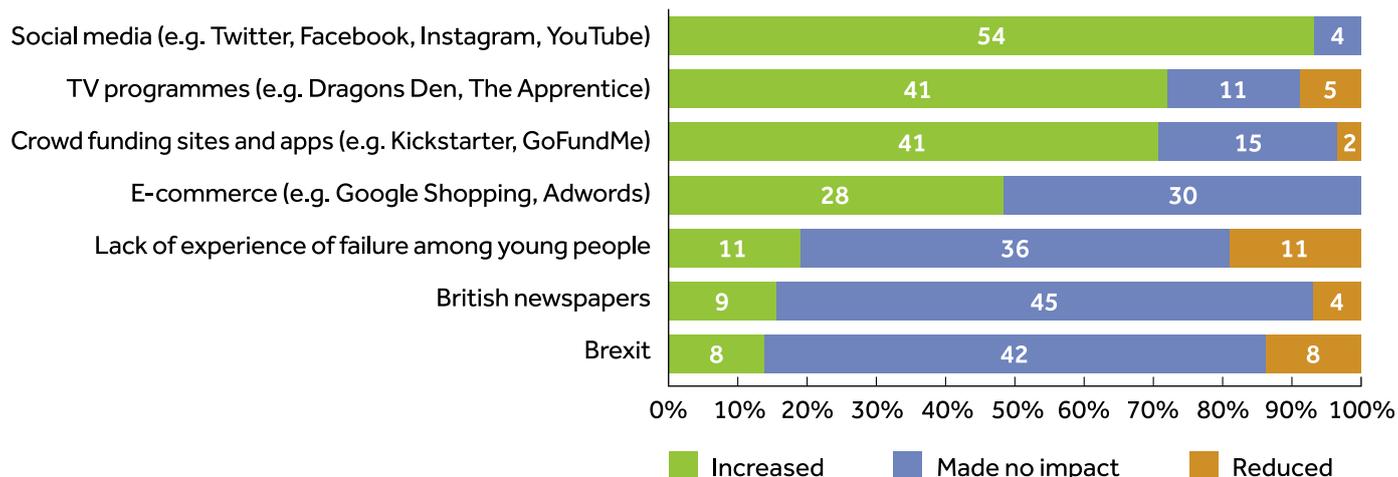
Which of the following factors have had a positive impact on the development of school students' interest in enterprise/entrepreneurship activity by the time they arrive at university?

Respondents feel that providing entrepreneurial activities or events in school has a positive influence on students' interest in enterprise activity at university (85.5 percent of respondents). The school exam system (i.e. A-levels, IB, BTEC, Scottish Highers) is seen as less important (8 percent of respondents), with the general ethos of the school (69 percent) seen as slightly more influential than having teachers trained in entrepreneurship (64.5 percent).

...and which factors have had a negative impact on entrepreneurship activity/ entrepreneurship competencies developed among school students?

School pressure to pass exams is seen as having a negative impact on entrepreneurship competencies developed among school students by nearly three quarters of respondents, with notably higher proportions amongst the devolved nations and members of all mission groups (versus universities who are non-aligned). A narrowing of subject choices is seen as harmful by nearly 65 percent of respondents, again with a higher proportion indicating this is the case in devolved nations.

Figure 9: Which of the following factors has a positive or negative impact on the development of school students' interest in enterprise/entrepreneurship activity by the time they arrive at university? (number of respondents)

Negative		Positive
45	School pressure to pass exams	Providing entrepreneurial activities in school — 53
40	Narrowing of subject choices	The general ethos of the school — 43
29	Budget cuts reducing arts provision	Teachers trained in entrepreneurship — 40
27	Lack of digital skills among teaching staff	Peer groups at school — 27
10	Something else	Schools teaching character-building skills — 21
		The education exam system — 5
		Something else — 11

Negative axis: 50 40 30 20 10 0
Positive axis: 0 10 20 30 40 50 60
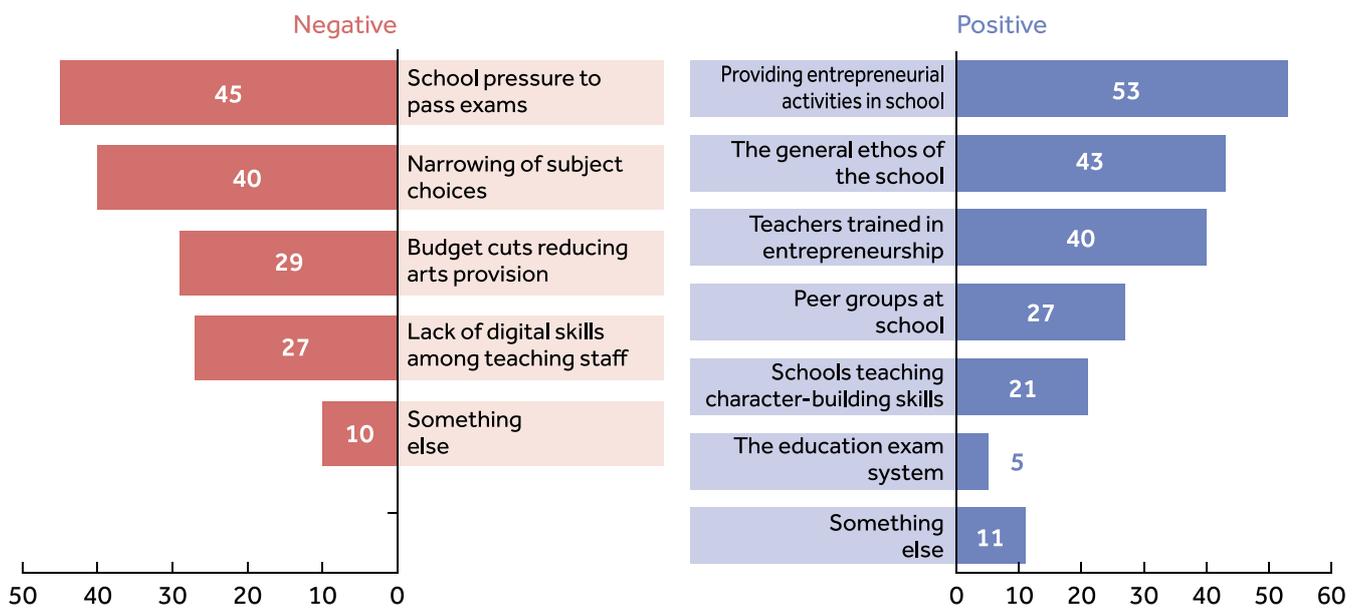
What benefit would you say having exposure to different nationalities and cultures at school has on students' entrepreneurial outlook when they arrive at university?

Exposure to different nationalities and cultures at school has a beneficial impact on the entrepreneurial outlook of students when they arrive at university, according to over 90 percent of respondents. 64 percent say that this exposure has a 'highly beneficial' impact.

Table 2: How beneficial is exposure to different nationalities and cultures at school in terms of students' entrepreneurial outlook when they arrive at university? (number of respondents)

	Total
Highly beneficial	40
Slightly beneficial	16
Makes no difference	5
Slightly detrimental	0
Highly detrimental	0
Not stated	1

Which exam system would you say is most likely to help support the development of an entrepreneurial mindset among school students?

There is little consensus on the exam systems which respondents believe are most likely to help support the development of an entrepreneurial mindset among school students, although BTECs and the IB Diploma are seen as more favourable than A-levels.

Table 3: Which exam system is most likely to support the development of an entrepreneurial mindset among school students? (number of respondents)

	England	N. Ireland	Scotland	Wales	Total
A-levels	2	0	1	0	3
BTECs	8	0	2	2	12
International Baccalaureate (IB)	8	0	1	1	10
Scottish Highers	0	0	0	0	0
They're all the same	11	1	2	0	14
Don't know	20	0	5	3	28
Not stated	1	0	0	1	2

The IBO and KIPP frameworks are often used in schools to develop specific attitudes towards learning and life among school students. For each one, which qualities do you think are most beneficial in terms of building entrepreneurship competency?

The International Baccalaureate Organisation has a framework of ten learner attributes for students. The International Baccalaureate Organisation has a framework of ten learner attributes for students (see figure 10). Respondents identified 'Inquiring', 'Communicators' and 'Risk-takers' as the most beneficial attributes for building entrepreneurship competency. From the KIPP organisation's list of character strengths, respondents highlight 'Curiosity' and 'Social intelligence'.[3]

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[3] The International Baccalaureate Organisation's framework lists ten learner attributes for students: https://www.ibo.org/contentassets/fd82f70643ef4086b7d3f292cc214962/learner-profile-en.pdf. The KIPP organisation lists seven character strengths: https://www.kipp.org/approach/character/

Figure 10: For both the IBO and KIPP frameworks, which qualities do you think are most beneficial in building entrepreneurship competency? (number of respondents)

KIPP
- Gratitude: 2
- Self control: 5
- Zest: 10
- Grit: 21
- Optimism: 22
- Social intelligence: 25
- Curiosity: 36

IBO
- Caring: 1
- Principled: 2
- Balanced: 4
- Knowledgeable: 4
- Thinkers: 10
- Reflective: 11
- Open-minded: 24
- Risk-takers: 37
- Communicators: 39
- Inquiring: 43
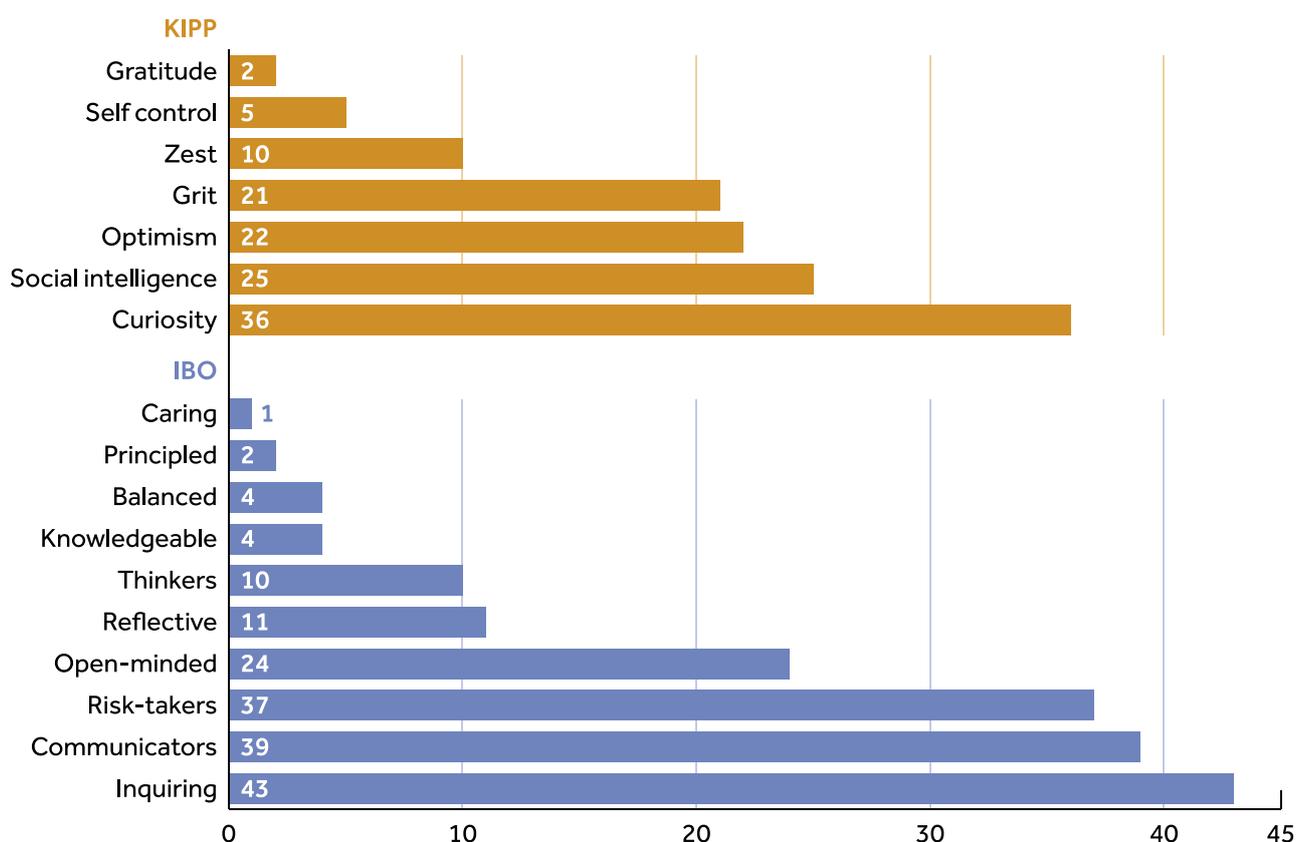
Do you think more should be done at school level to develop entrepreneurship competence in students?

Perhaps unsurprisingly, over 88 percent of university heads of enterprise think more should be done at school level to develop entrepreneurship competence in students.

How well supported, in terms of funded initiatives, would you say schools in your nation are in developing enterprise and entrepreneurship competence?

A third of respondents feel the schools in their nation are 'poorly' supported in terms of well-funded initiatives for developing enterprise and entrepreneurship competence. Just under ten percent feel that schools are 'very poorly' supported - and all of these are from English institutions. Less than a fifth (18 percent) across all nations believe that schools are 'quite' or 'very well' supported.

Table 4: How well supported, in terms of funded initiatives, would you say schools in your nation are in developing enterprise and entrepreneurship competence? (number of respondents)

	England	N. Ireland	Scotland	Wales	Total
Very well supported	0	0	0	1	1
Quite well supported	4	1	3	2	10
Neither well or poorly supported	9	0	2	0	11
Poorly supported	16	0	3	2	21
Very poorly supported	6	0	0	0	6
Don't know	11	0	1	1	13

A drive to make money, achieve independence and help the planet are seen as the key reasons for students wishing to become an entrepreneur. Nearly 39 percent of Heads of Enterprise feel that Brexit will impede entrepreneurial activity in the UK. 16 percent feel entrepreneurial activity will be encouraged, with the remainder uncertain or thinking it will make little difference. Over three quarters feel Brexit will have little impact on interest among school students in enterprise activity. The overwhelming majority feel that government needs to do more to support entrepreneurial activity post-Brexit.

Do you think one of the UK's strengths is its entrepreneurial flair?

60 percent of respondents think one of the UK's strengths is its entrepreneurial flair – a feeling broadly consistent across nations.

Figure 11: Do you think one of the UK's strengths is its entrepreneurial flair? (number of respondents)
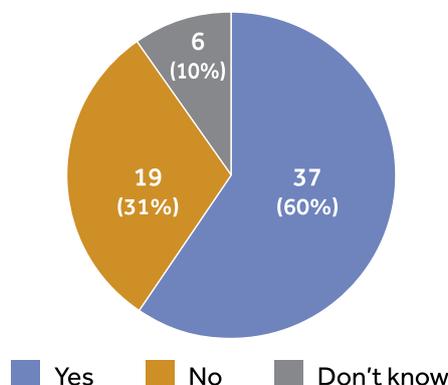
Legend: Yes, No, Don't know

How strongly do you believe that entrepreneurship competence can be learned or is it just something you're born with?

Over two thirds of respondents believe entrepreneurship competence is something you can learn, and just under a quarter believe it is something you are born with, with no strong differences between mission groups or nations.

Table 5: How strongly do you believe that entrepreneurship competence can be learned or is it just something you're born with? (number of respondents)

	Total
Something you are born with	15
Not stated/neutral	5
Can be learned	42

How important are these factors in determining whether a person will eventually develop their own entrepreneurial enterprise or activity?

82 percent believe that family background is important in determining whether a person will develop an entrepreneurial enterprise. Slightly more (84 percent) believe educational environment and the acquisition of skills are important, whereas fewer - 60 percent - feel government incentives and levers are influential. However, respondents from Wales are more likely to weight all three factors as being important compared to other nations.

Figure 12: How important are these factors in determining whether a person will develop their own entrepreneurial enterprise or activity? (number of respondents)
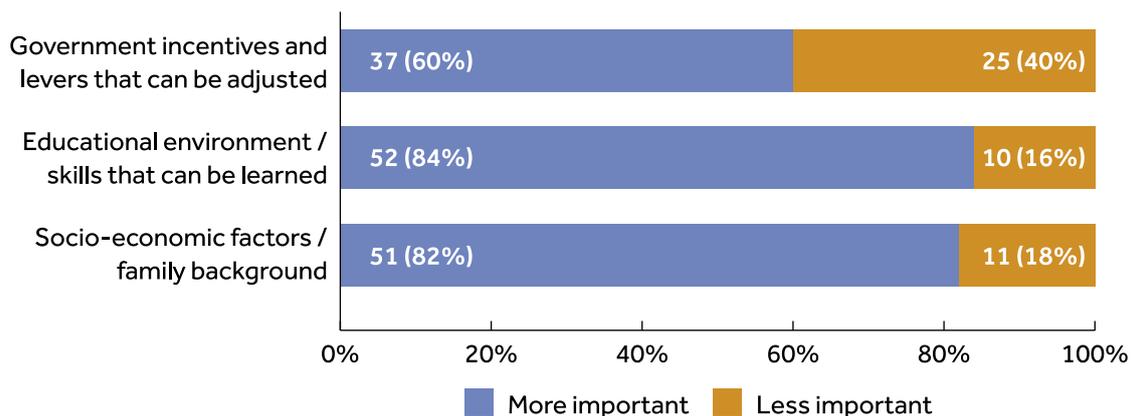
Factor	More important	Less important
Government incentives and levers that can be adjusted	37 (60%)	25 (40%)
Educational environment / skills that can be learned	52 (84%)	10 (16%)
Socio-economic factors / family background	51 (82%)	11 (18%)

What do you believe are the key drivers behind a university student's ambitions to be an entrepreneur?

Respondents see the desire to achieve independence (60 percent) as almost as strong a motivator as the drive to make money (61 percent) for students wishing to become an entrepreneur; doing some good for the world (53 percent) is also important. A yearning to become famous is only seen as important for 13 percent of respondents.

Figure 13: What do you believe are the key drivers behind a university student's ambitions to be an entrepreneur? (number of respondents)
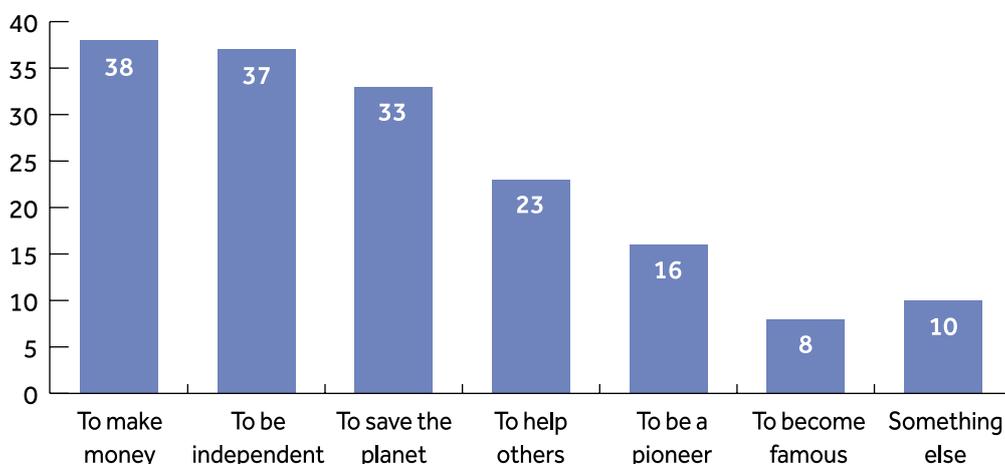
Driver	Number of respondents
To make money	38
To be independent	37
To save the planet	33
To help others	23
To be a pioneer	16
To become famous	8
Something else	10

Do you think Brexit will encourage or impede entrepreneurial activity in the UK, or make no difference?

Nearly 39 percent of respondents feel that Brexit will impede entrepreneurial activity in the UK. 16 percent feel entrepreneurial activity will be encouraged, with the remainder uncertain or thinking it will make little difference. Over three quarters feel Brexit will have little impact on existing levels of interest among school students in enterprise activity.

Figure 14: Do you think Brexit will encourage or impede entrepreneurial activity in the UK, or make no difference? (number of respondents)
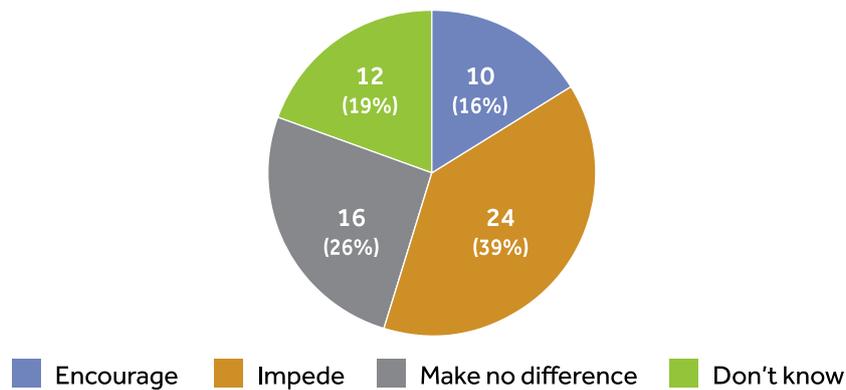
Encourage Impede Make no difference Don't know

Do you think the government needs to do more to support entrepreneurial activity post Brexit?

The overwhelming majority (90 percent) feel that government needs to do more to support entrepreneurial activity post-Brexit – the remainder were unsure.

Figure 15: Do you think the government needs to do more to support entrepreneurial activity post Brexit? (number of respondents)

Yes Don't know
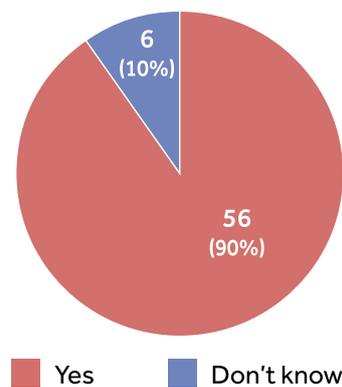
Which living entrepreneurs do you believe inspire young people (both school and university students) to become entrepreneurs?

Elon Musk, Mark Zuckerberg and Richard Branson are all seen as particularly inspirational living entrepreneurs for students (from a pre-selected list), confirming the archetypal entrepreneur as a wealthy, technology-focused male. Several Heads of Enterprise call for a challenge to this model, with universities perhaps having a role in promoting more relatable role models. As one respondent noted, "having engaged high-profile entrepreneurs and our own alumni to provide talks, our discovery was that learners were more inspired by those they could identify with and whose businesses were seen as totally out of reach 'but achievable'".

Highlighting entrepreneurs from diverse backgrounds, with charitable or social objectives, and those running smaller and medium-sized enterprises could help make engagement more accessible and relatable for more students, as could promoting recent alumni and local entrepreneurs.

Which of the following are provided at your university?	2018	2012
Institutional policy		
Tracking of individuals after graduation	68%	78%
A dedicated web page for access to enterprise support	68%	80%
A central office for academic enterprise / technology transfer	66%	84%
A pro-vice-chancellor responsible for enterprise / entrepreneurship	45%	61%
An explicit institutional entrepreneurship policy	44%	49%
Support for enterprise in local communities	44%	73%
Support for enterprise in local schools	32%	57%
A specialist centre for female, ethnic or social enterprise	16%	16%
Support for staff in enterprise		
Staff support for commercialisation of IP	55%	88%
Institutional awards for excellence or good practice	42%	59%
Staff funds for Continuing Professional Development	40%	79%
Staff training in enterprise	39%	60%
Staff curricula development funds	26%	51%
Incentives to attract / encourage educators to entrepreneurship	21%	35%
Development sabbaticals for staff	15%	40%
Ideas and Planning for students		
General enterprise / entrepreneurship workshops	85%	96%
Entrepreneur led events	81%	86%
Ideas competitions	77%	79%
Business plan competitions	68%	81%
Enterprise / Entrepreneurship games workshops	63%	58%
Enterprise / Entrepreneurship summer schools	47%	47%
Venture Creation		
Student hot-desk / drop in facilities	66%	64%
Start-up funds for students / graduates	65%	65%
Student incubator facilities	60%	53%
Student enterprise interns / fellowships	53%	53%

Which of the following are provided at your university?	2018	2012
Start up support programmes		
Enterprise awareness events / festivals	85%	80%
Mentoring for start-ups	82%	86%
Technical, professional, funding and specialist advice	76%	78%
Access to funding workshops	61%	54%
Investor events	45%	35%
Student enterprise conferences	39%	33%
Summer schools	39%	
Enterprise Skills Development		
Careers service events / workshops	79%	88%
Enterprise / entrepreneurship skills training programmes	77%	80%
Placement or internships with entrepreneurs and small businesses	68%	77%
Personal skills coaching	48%	60%
Enterprise champions	47%	75%
Student enterprise placement workshops	44%	51%
Networking Events		
Network introduction events	66%	84%
Student enterprise club or society	66%	81%
Workshops / Events specifically targeting:		
Social enterprise / entrepreneurship	77%	77%
Creative industries	61%	71%
Science and technology	40%	51%
Widening participation students	34%	
Female students	29%	23%
Ethnic minority students	18%	12%