



THE UNIVERSITY *of* EDINBURGH
Careers Service

After Your Degree: What can you do with Maths?

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Careers Consultant

Schools of Engineering & Maths

Inspiring futures



Some wisdom to begin...

“Not knowing what you want to do isn’t a problem.

Doing nothing about it is!”

Chris Phillips
(Former Careers Adviser and Information & Research
Director, GTI Media)





Fact:

Most people spend **more time** planning their 2-week holiday...

than their **whole** lifetime's career!
(and how many weeks is that?)

But

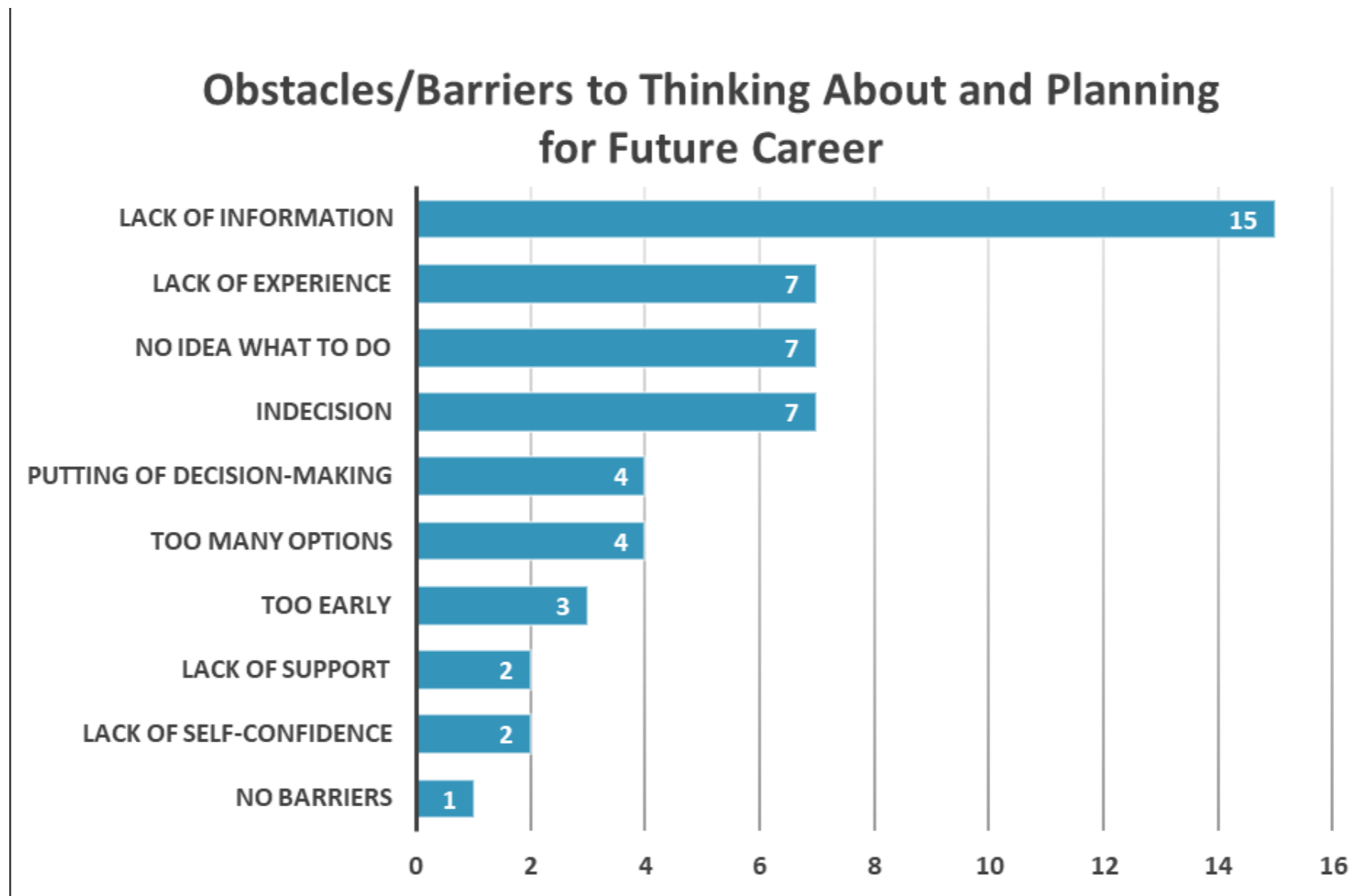
You don't need to plan your *whole* career.

Just plan your next steps. (More on this later)





Future planning: Maths students said...



Source: Career Motivations and Outcomes of maths Students Research, Summer 2018



This session will cover:

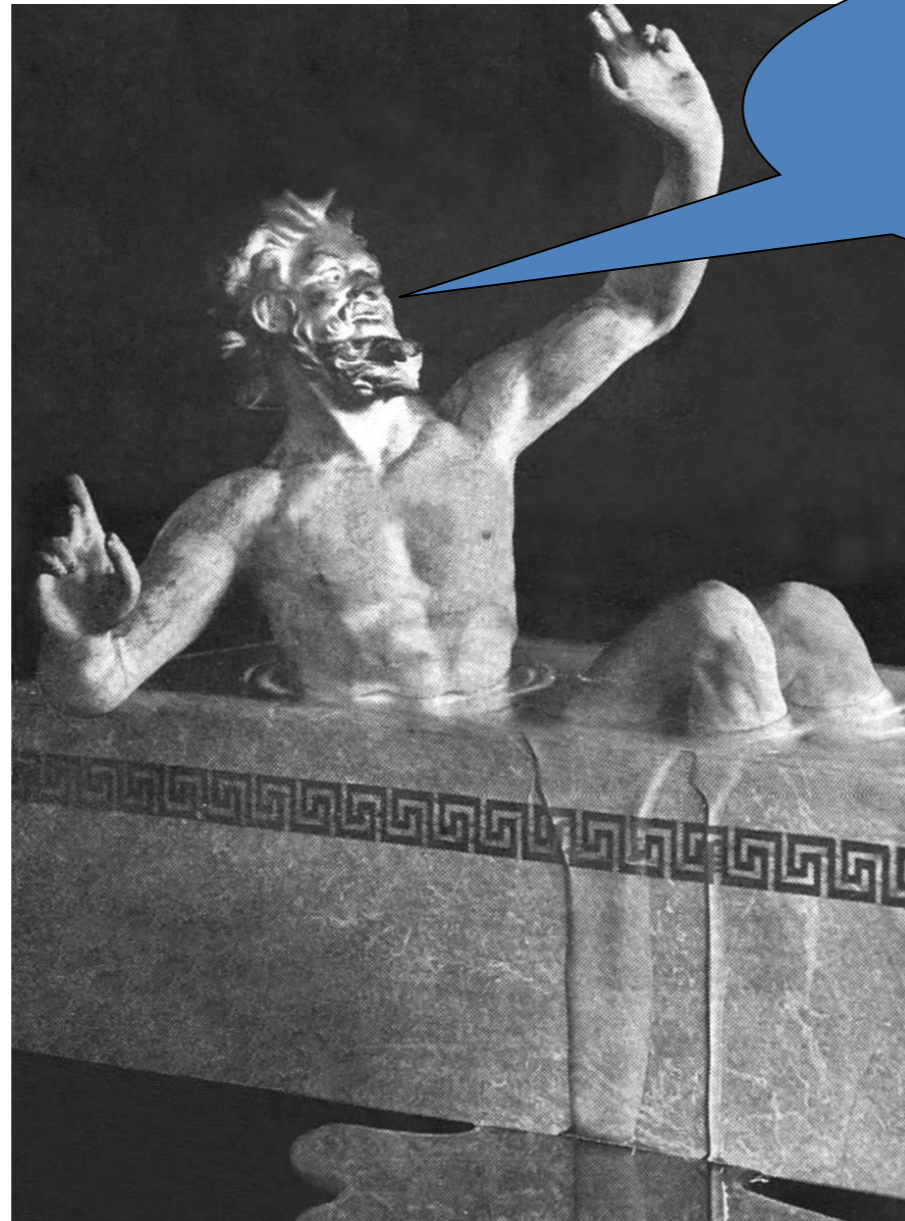
- A model to help you structure your ideas: Career compass framework
- Information on the graduate labour market
- Career options for Maths graduates
(incl. information on the destinations of previous Edinburgh graduates)
- Resources for finding out more



Are you all the same?



Archimedes (c. 287 BC – c. 212 BC)



"Eureka!"



Career planning: issues for you?

- Maths problems generally have an **answer / a solution**, i.e. typically **right/wrong**.
- **In careers, there may be many correct answers:** many jobs, professions/occupations. Searching for the “one true answer” can be futile quest and lead to indecision and paralysis (fear).



- Don't necessarily try to find your one passion.



*Dr
Pepper*

**what's the worst
that could happen?**



What is 'career'?

e.g. J.K. Rowling

French & Classics **Student** (*University of Exeter*)

Researcher & Bilingual Secretary (*Amnesty International, London*)

Temp. jobs (e.g. *Manchester Chamber of Commerce*)

English Language (TEFL) Teacher (*A language school, Portugal*)

Mother / Writer

Part-time Secretary / Writer (*Edinburgh*)

Modern Languages **Initial Teacher Education Student:** (*Moray House*)

Writer (*Edinburgh*)

Mother / Writer (*Perthshire*)

Philanthropist (e.g. *Volant Charitable Trust; Gingerbread; Lumos; Multiple Sclerosis*)

Inspiring futures



You've won the Lottery...



After a *fantastic* party and holiday(!), you decide to buy a house...

- What **factors** do you need to consider?
- What **actions** do you need to take?





LOG IN SIGN UP

2,195 properties for sale in Edinburgh, Lothians & Fife

Locations
Edinburgh, Lothians & Fife
Enter location GO
Radius search
Search by school catchment

Refine your search
Bedrooms: Any
Min Price: Any
Max Price: Any
 Fixed price only
 Added last 7 days
 Include under offer

Order by: Date added List Map



Exclusive ★
7 Parkhead Street, EDINBURGH, EH11 4RL
Offers Over £150,000
3 Bed Lower Flat with 1 Reception Room
Exclusive to ESPC
Beautifully-presented and spacious, three-bedroom, lower villa, with a private garden and multi-vehicle driveway. Located in the popular Parkhead...



25th October | 5.30pm - 7.30pm Edinburgh Book now



Exclusive ★
170/4 Montgomery Street, Edinburgh, EH7 5FE
Offers Over £230,000
2 Bed Second Floor Flat with 1 Reception Room



You've won the Lottery...



After a *fantastic* party and holiday(!), you decide to buy a house...

- What **factors** do you need to consider?
- What **actions** do you need to do?



e.g. My property search: factors (priorities)

Budget: £150k

Style: Edwardian or older

Want

- 2-bedrooms
- Garden
- Rural: East/West Lothian, Borders, Fife

Nice to have

- Bath
- Large kitchen
- Study or box room

Avoid

- Structural problems
- Upstairs neighbours



Analogy: buying a house

What do I want?

- No. bedrooms?
- Style/age?
- Location?
- Garden?
- Parking?
- Condition
- Budget?
- Realism!

Inspiring futures



In the same way, we need a "job shopping list".

What's for sale?

- Property websites
- Being aware
- Viewings
- Rental

Careers: need a to look at jobs vacancies and what they involve (occup. knowledge)

Career planning *process* – a model

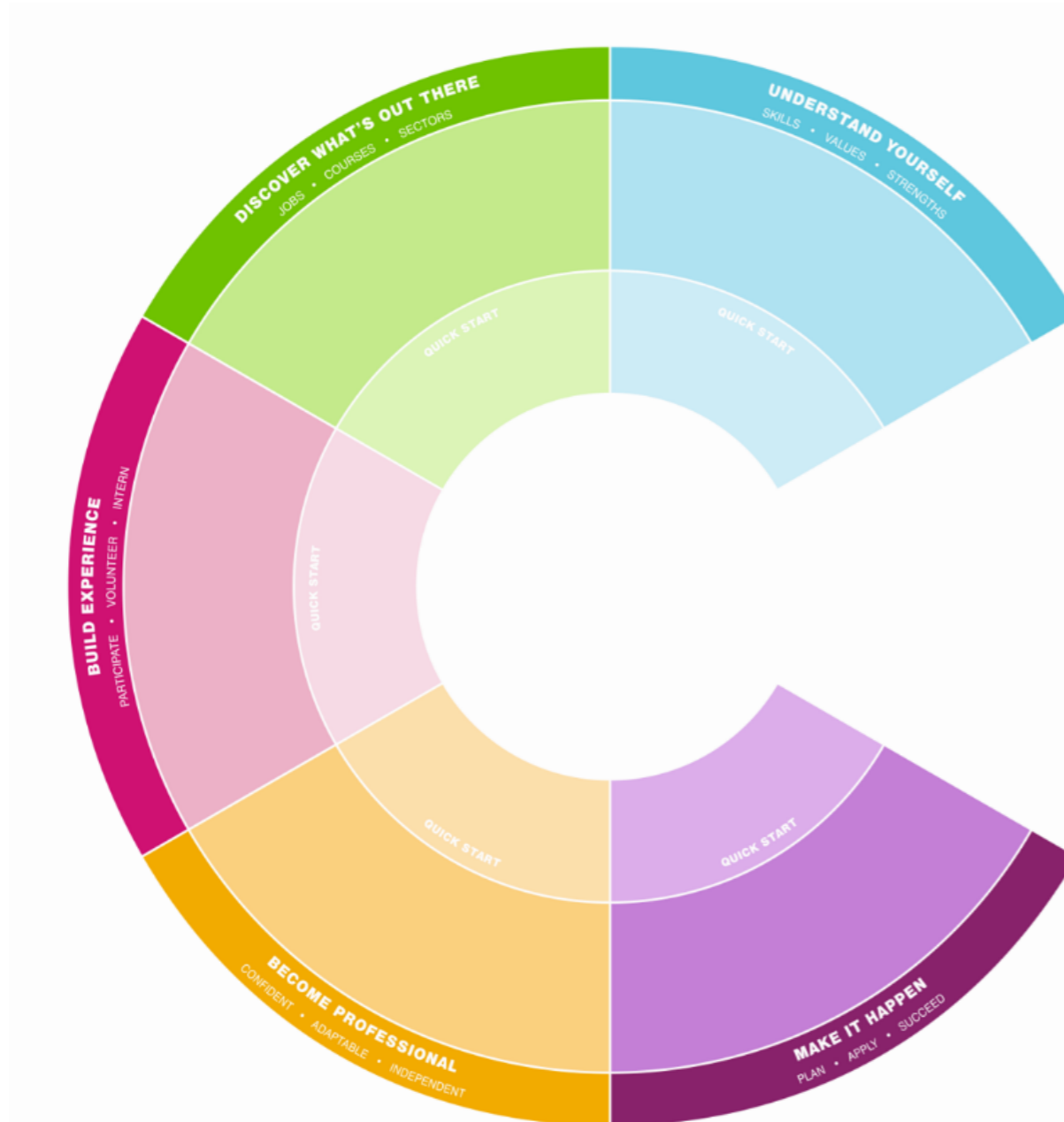


“DOTS Model”, Law & Watts (1977)





Careers Compass – chart your progress

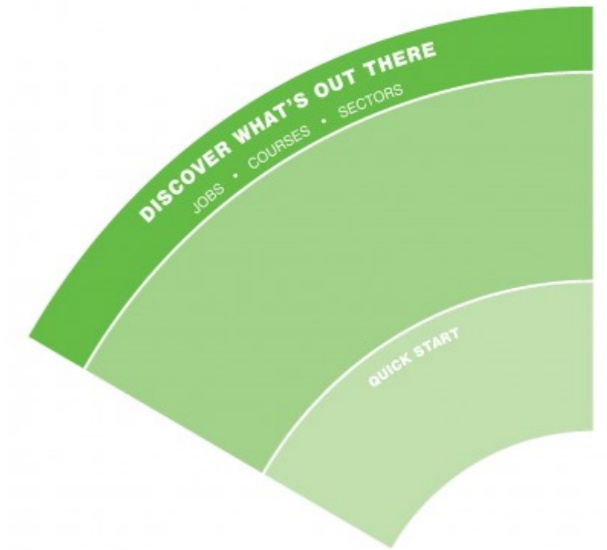


- **Understand yourself** – skills, values, strengths
- **Discover what's out there** – jobs, courses, sectors
- **Build experience** – participate, volunteer, intern
- **Become professional** – confident, adaptable, independent
- **Make it happen** – plan, apply, succeed




So what's out there?

Use **Career Compass** for quick ideas to start exploring



Discover what's out there: jobs, courses, sectors

Being curious and exploring different sectors, finding out about different roles, courses, employers and ways of working will help you work out what's a good fit for you. This will help you narrow down the options and make decisions.



What to try

Early years students

- Quick start: Explore [TargetJobs](#) or [Prospects](#) to learn more about different sectors and job types:
[Target jobs career sectors](#)
[Prospects job profiles](#)
- Looking for ideas? Watch our quick video "Don't know what you want to do?"
[Video: Don't know what you want to do?](#)
- Want to know where your degree can take you? Find out more with "What can you do with your degree?":
[What can you do with your degree?](#)

Penultimate year students

- Quick start: Want to know which employers are on campus this year? Check the events tab on [MyCareerHub](#):
[MyCareerHub events](#)
- Looking for inspiration from Edinburgh graduates? Connect to them on [Platform One](#):
[Platform One](#)
- Feeling overwhelmed by careers information? Start with our website as we've collated the best sites:
[Find out about jobs and sectors](#)

Final year students

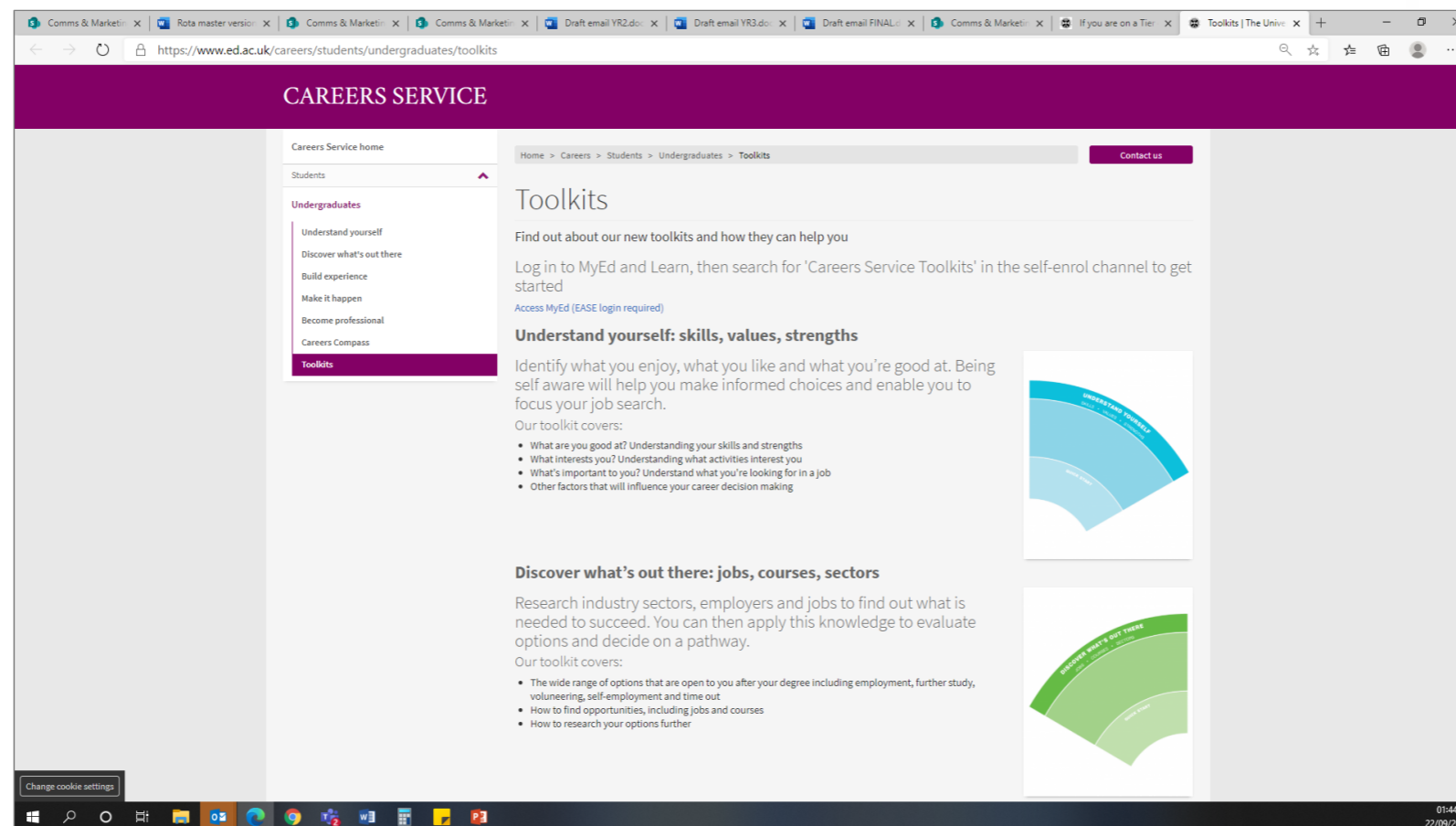
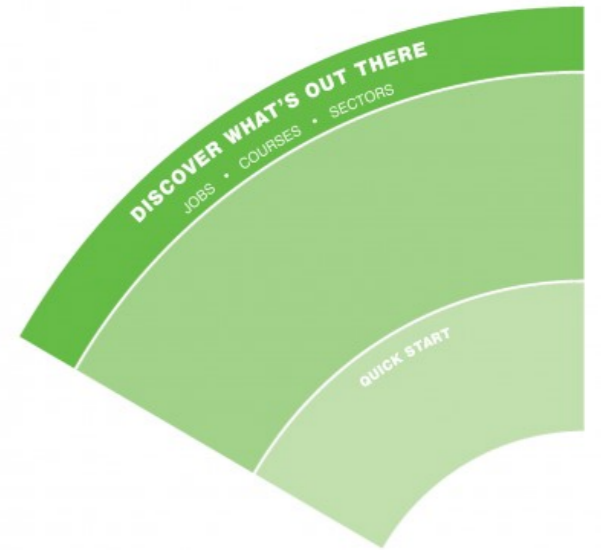
- Quick start: What graduate jobs are being advertised now? Search [MyCareerHub](#):
[Search graduate jobs on MyCareerHub](#)
- Where are graduates with your degree now? Search the [LinkedIn alumni tool](#) to find out:
[University of Edinburgh alumni on LinkedIn](#)
- Thinking about postgraduate study? Start with our website where you'll find useful links and resources:
[Find out about further study](#)

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So what's out there?

Use our **Career Toolkits** in LEARN for more in-depth research

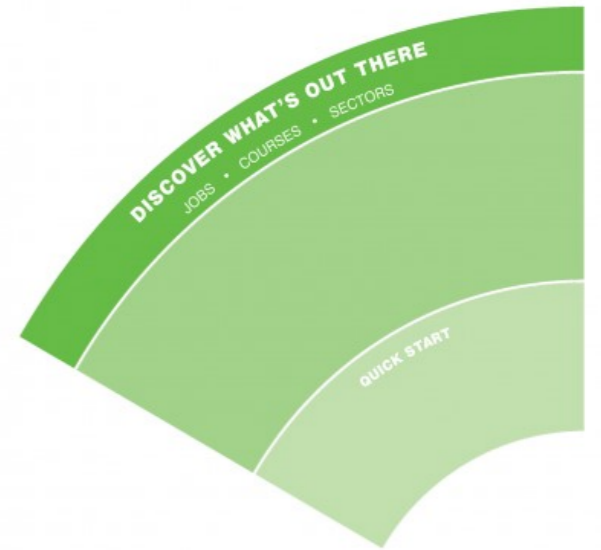


<https://www.ed.ac.uk/careers/students/undergraduates/toolkits>

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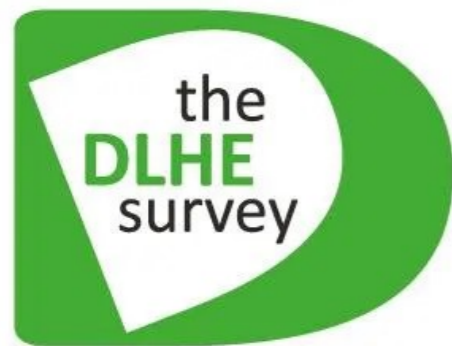


So what's out there?



Maths graduate destinations

1. UK
2. Edinburgh



**GRADUATE
OUTCOMES**

Please complete the survey
after you graduate!

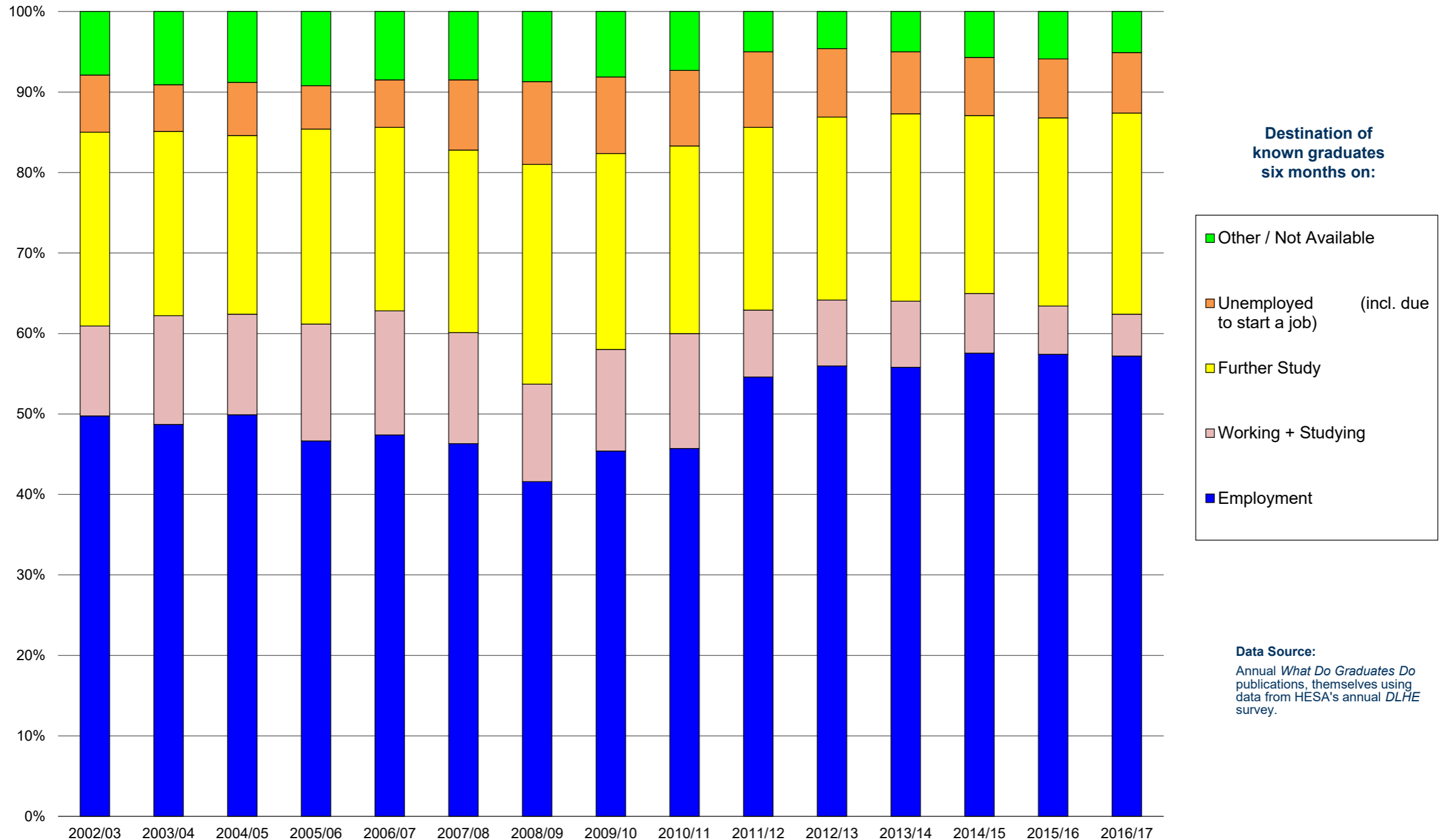
<https://www.ed.ac.uk/careers/graduates/graduate-outcomes-survey>



What do UK maths graduates do?

What do graduates do?

Destinations of UK Mathematics Graduates



Data Source:
Annual *What Do Graduates Do* publications, themselves using data from HESA's annual *DLHE* survey.

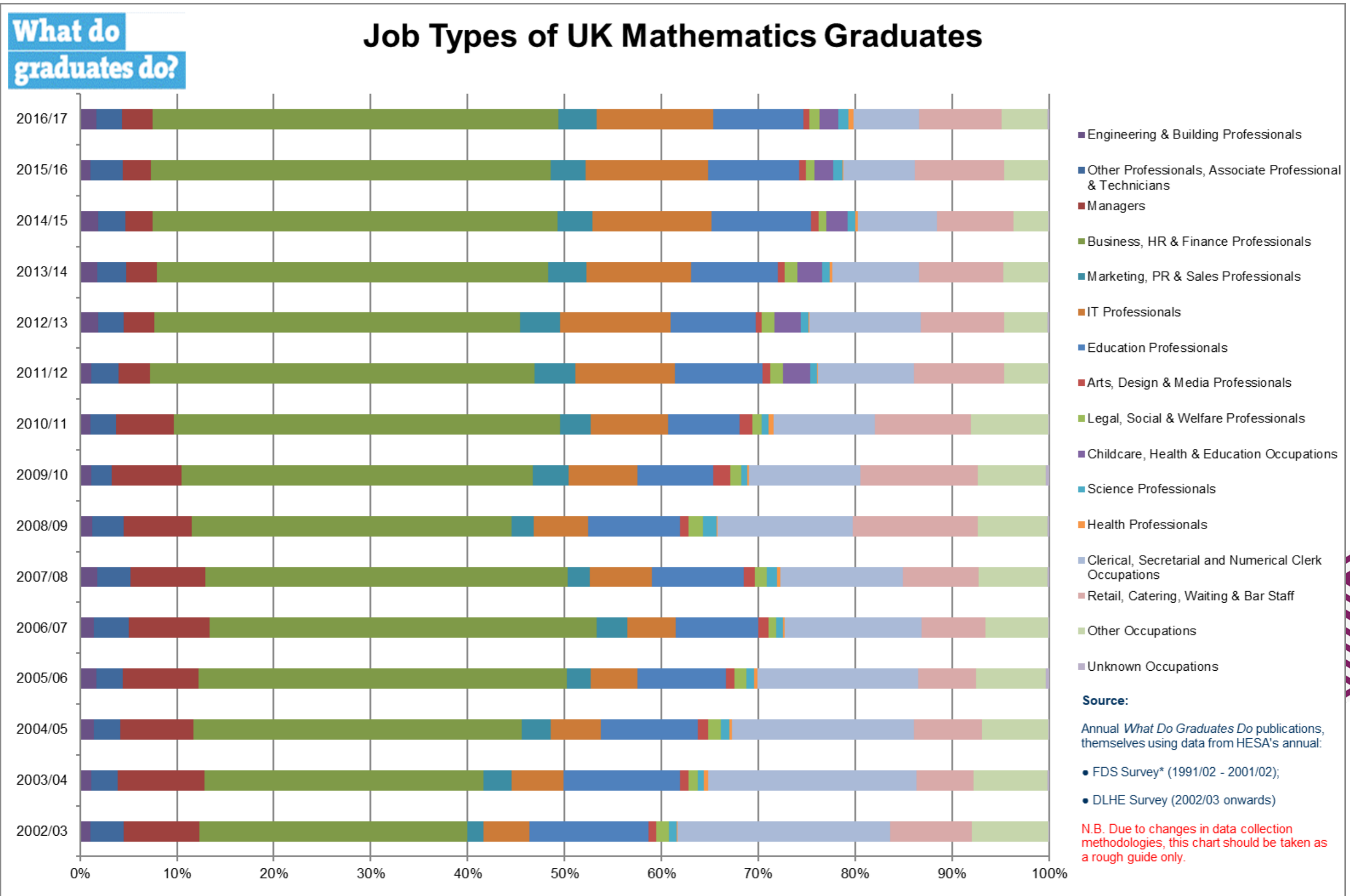
Demand fluctuates



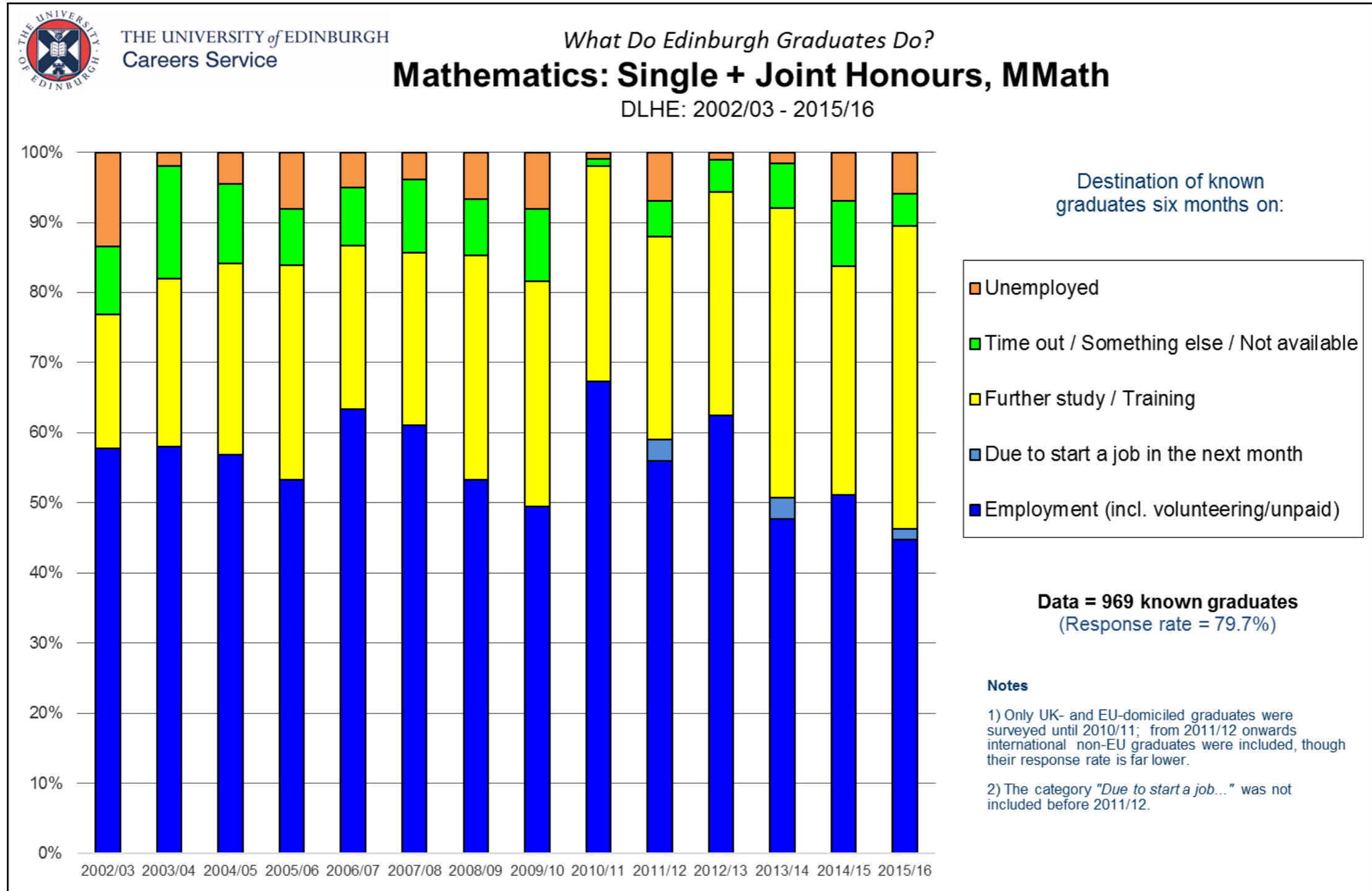
Figure 1. Graph showing changes to graduate vacancies from 2000 - 2022



UK maths graduates – employment detail



What do Edinburgh maths graduates do?

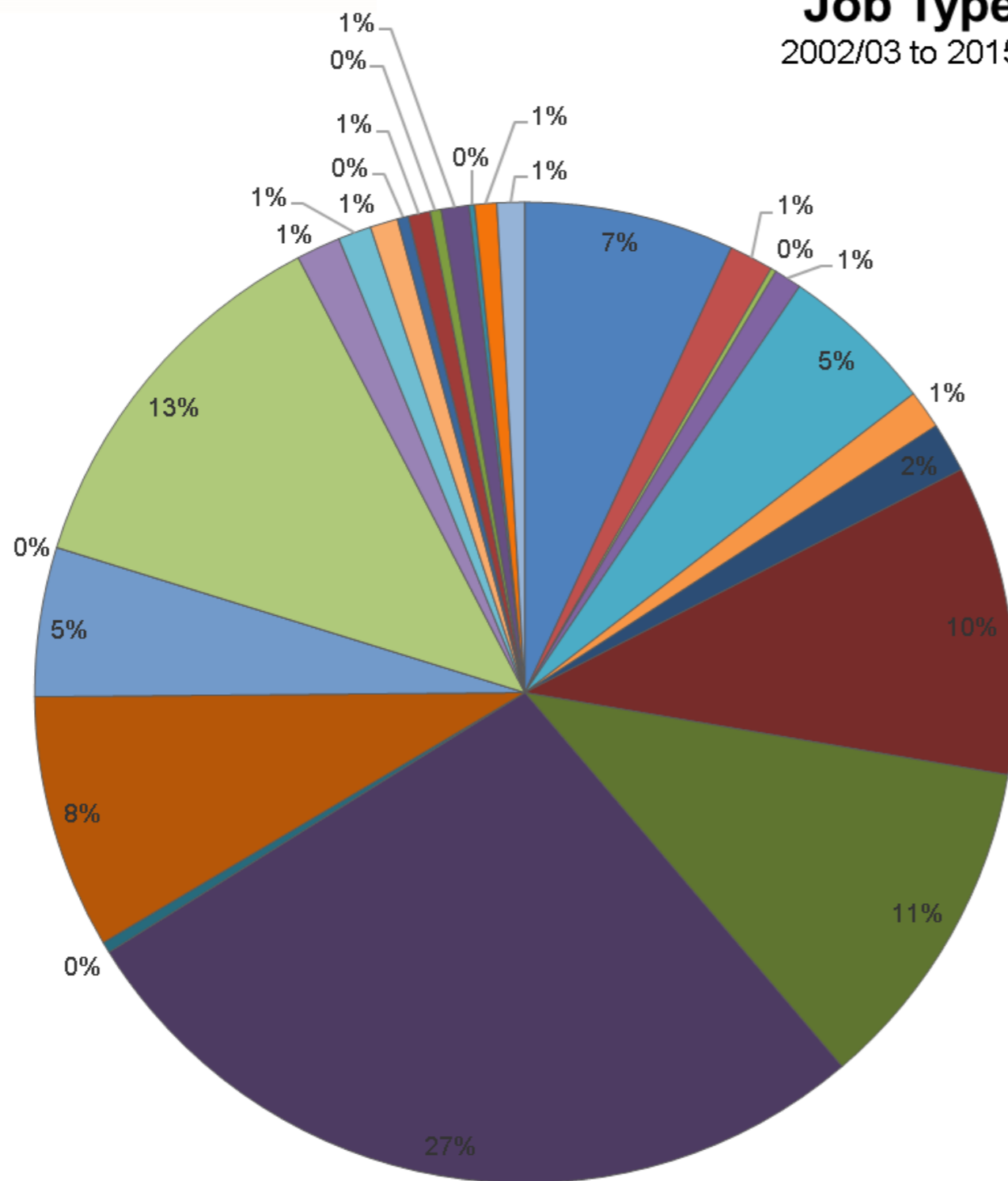




Maths First Degree Grads in Employment: Job Types

2002/03 to 2015/16

Occupational Sector (job-type) of 549 graduates:
(based on AGCAS classification)



- (A) Education
- (B) Social, guidance & community work
- (C) Health care & psychology
- (D) Defence & public protection
- (E) Hospitality & events management
- (F) Leisure, sport & tourism
- (G) Advertising, PR & marketing
- (H) Buying, selling & retailing
- (I) Insurance, pensions & actuarial work
- (J) Accountancy & finance
- (K) Legal services
- (L) Public services and policy work
- (M) Information technology
- (N) Charity and development work
- (O) Business & management services
- (P) Transport & logistics
- (Q) Construction, civil engineering & property
- (R) Environment and energy
- (S) Animal and plant resources
- (T) Engineering & manufacturing
- (V) Scientific research, analysis & support
- (W) Information, patents & heritage management
- (X) Creative arts & design
- (Y) Publishing, media & creative arts
- (Z) Unknown/unable to classify

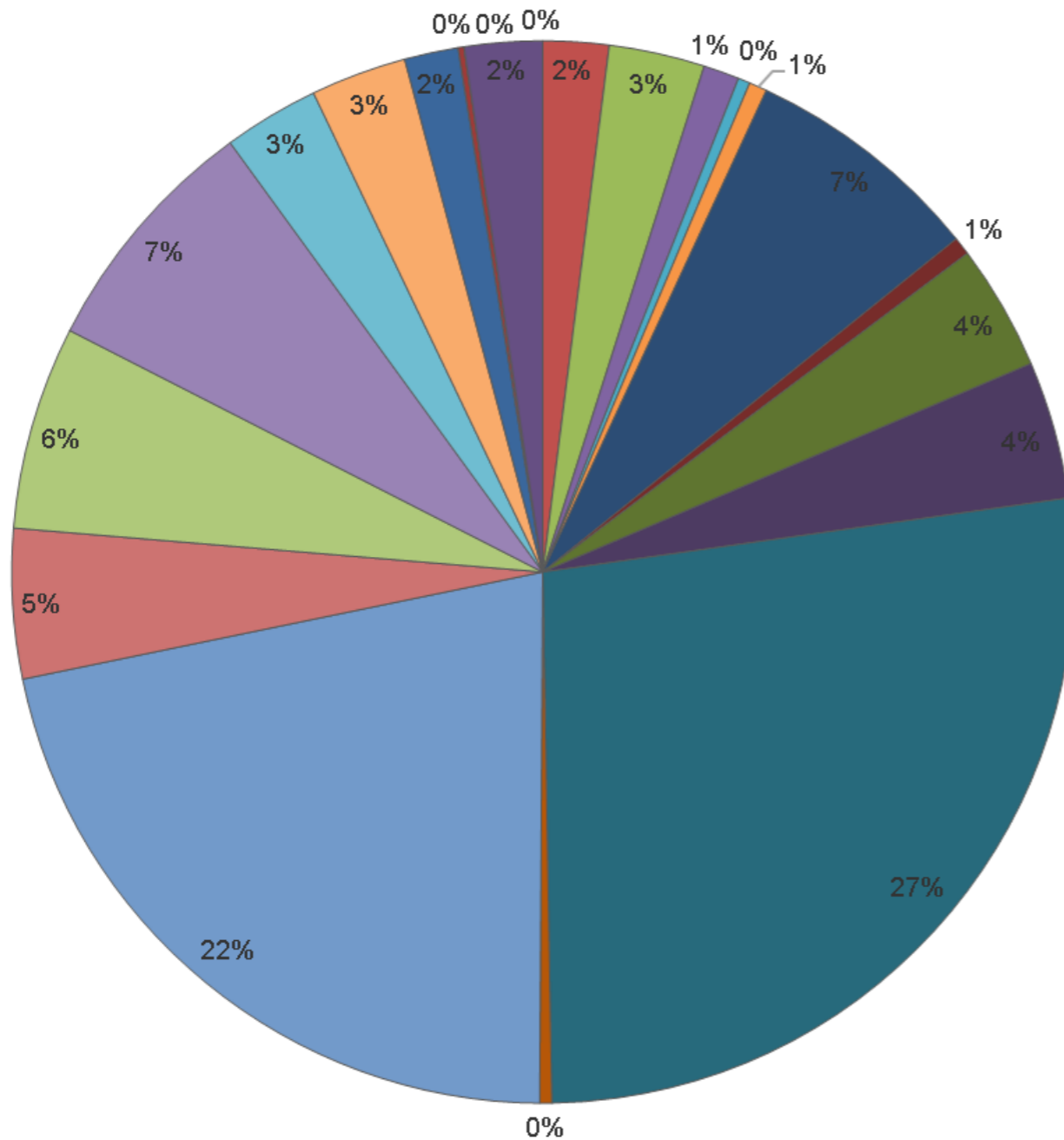


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Maths First Degree Grads in Employment: Employer Types (Sectors)

2002/03 to 2015/16

Industrial Sector of 549 graduates:
(based on Standard Industrial Classification, SIC)



- Agriculture, forestry and fishing
- Mining and quarrying
- Manufacturing
- Electricity, gas, steam and air conditioning supply
- Water supply, sewerage, waste management and remediation
- Construction
- Wholesale and retail trade; repair of motor vehicles
- Transportation and storage
- Accommodation and food service
- Information and communication (incl. broadcasting)
- Financial and insurance activities
- Real estate activities
- Professional, scientific and technical activities
- Administrative and support service
- Public administration and defence; compulsory social security
- Education
- Human health and social work activities
- Arts, entertainment and recreation
- Other service activities
- Activities of private households as employers
- Activities of international organisations and bodies
- Unable to classify sector



Fancy moving into IT?

Careers in Technology

February 2023

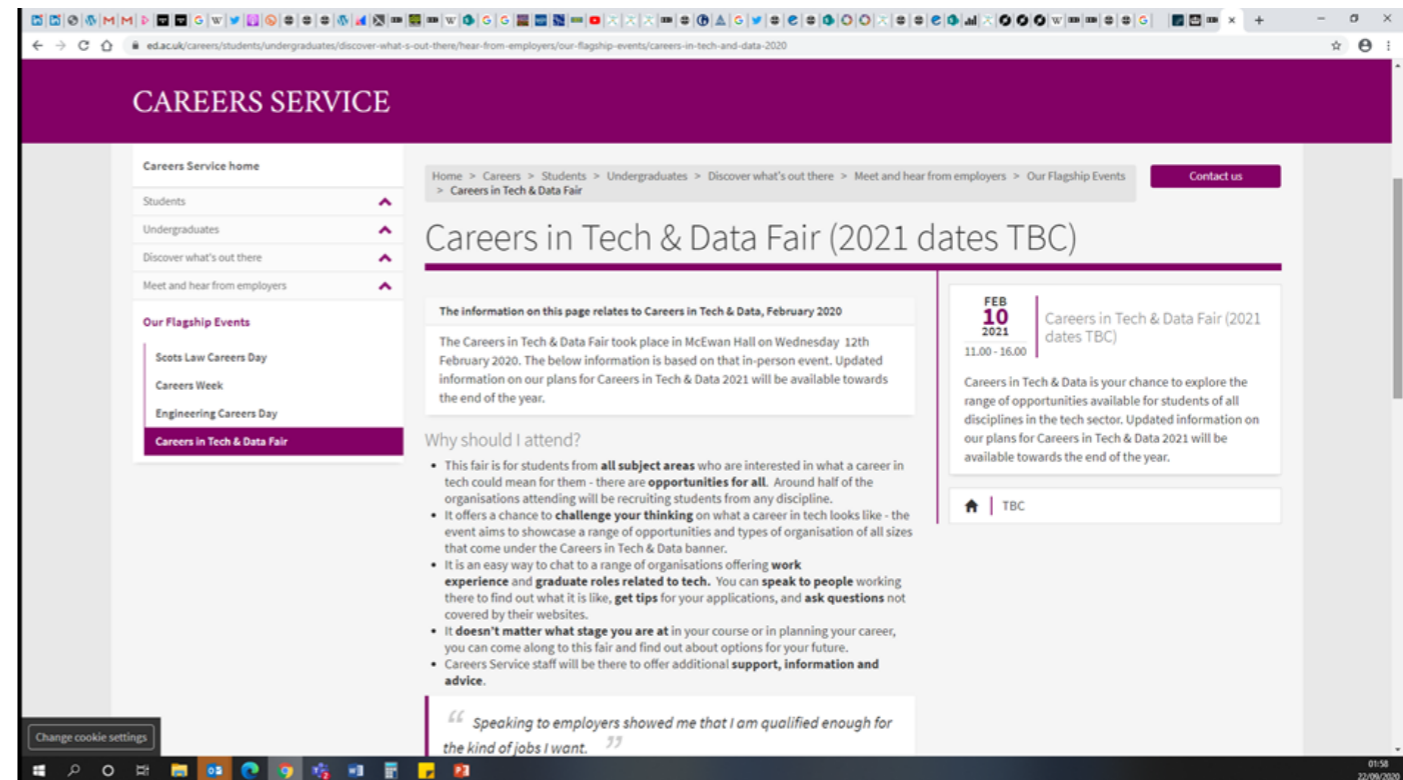
A chance to meet representatives from **organisations offering diverse roles in IT.**

Open to students from **all degree disciplines**, not just the School of Informatics.

Check:

<https://www.ed.ac.uk/careers/students/undergraduates/discover-what-s-out-there/hear-from-employers/our-flagship-events>

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Alternatives?

Many graduate jobs just want any degree – subject not important*!

e.g. SAGE Archive: 9-10 years....

43,707 jobs advertised in total;

17,066 jobs open to any degree = **39%**

* But the degree classification (grade) might be!



Which of the following are NOT possible career options for a **Maths** graduate?

- Barrister
- GP
- Accountant
- Investment Banker
- Vet
- Prison Governor
- Social Worker
- PR Account Manager



What do Edinburgh maths grads study?

Qual.	Total	Category	Total
MSc	113	Maths	79
PGCE	35	Teaching	61
PhD	34	Finance	23
PGDE	25	OR	19
MASt	21	Statistics	14
<i>Unspecified qualification</i>	9	Physics	12
PgDip	4	Actuarial	8
MA	3	IT	7
MPhil	2	Engineering	6
MSc(R)/PhD	2	Biological Science	5
MS	2	Business	5
Advanced Studies	1	Economics	3
BEng (Hons)	1	Languages	3
BHSc	1	Law	3
BSc (Hons)	1	Publishing & Journalism	3
Cert.	1	Arts & Literature	2
CPE/Grad Dip	1	Earth Science	2
Diploma	1	Healthcare	2
LLB	1	<i>Unknown</i>	2
MA (Hons)	1	Advertising	1
Mmus	1	Music	1
MPA	1	Politics	1
MRes	1	Psychology	1
MSc	1	Grand Total	263
Grand Total	263		

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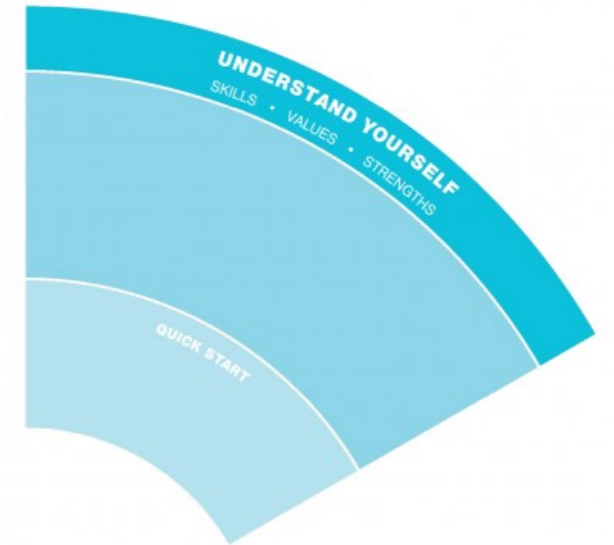
<https://www.ed.ac.uk/careers/students/undergraduates/discover-what-s-out-there/find-out-about-further-study>



You make choices:

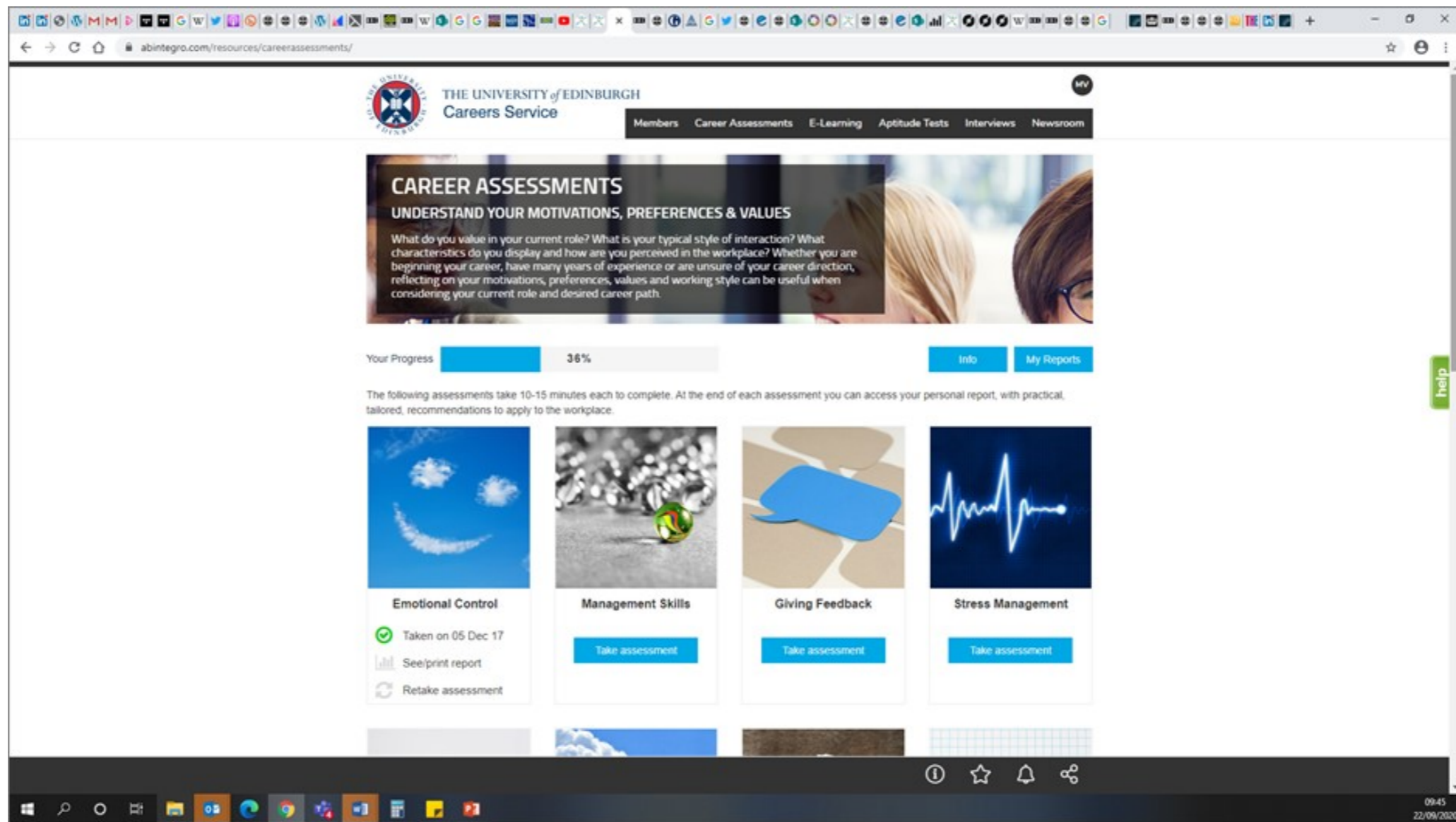
Your career choices are likely to be linked to

- Values
- Interests
- Abilities and achievements
- Work and life experience
- Skills
- Personal qualities and temperament
- Subject-specific knowledge
- Personal barriers and restrictions



Career assessments

Understand your motivations, preferences and values

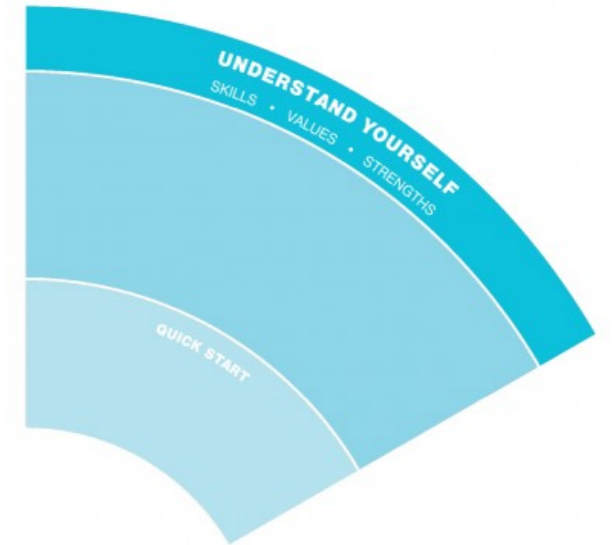


The screenshot displays the 'CAREER ASSESSMENTS' page on the University of Edinburgh Careers Service website. The page features a navigation menu with links for 'Members', 'Career Assessments', 'E-Learning', 'Aptitude Tests', 'Interviews', and 'Newsroom'. A prominent banner reads 'CAREER ASSESSMENTS UNDERSTAND YOUR MOTIVATIONS, PREFERENCES & VALUES' and includes a short introductory text. Below the banner, a progress indicator shows 'Your Progress 36%' with buttons for 'Info' and 'My Reports'. A 'help' button is visible on the right side. The main content area lists four assessments: 'Emotional Control' (taken on 05 Dec 17), 'Management Skills', 'Giving Feedback', and 'Stress Management', each with a 'Take assessment' button. The Windows taskbar at the bottom shows the time as 09:45 on 22/09/2020.

Inspiring futures [MyCareerHub > Resources > Career assessment](#)

Some important values...

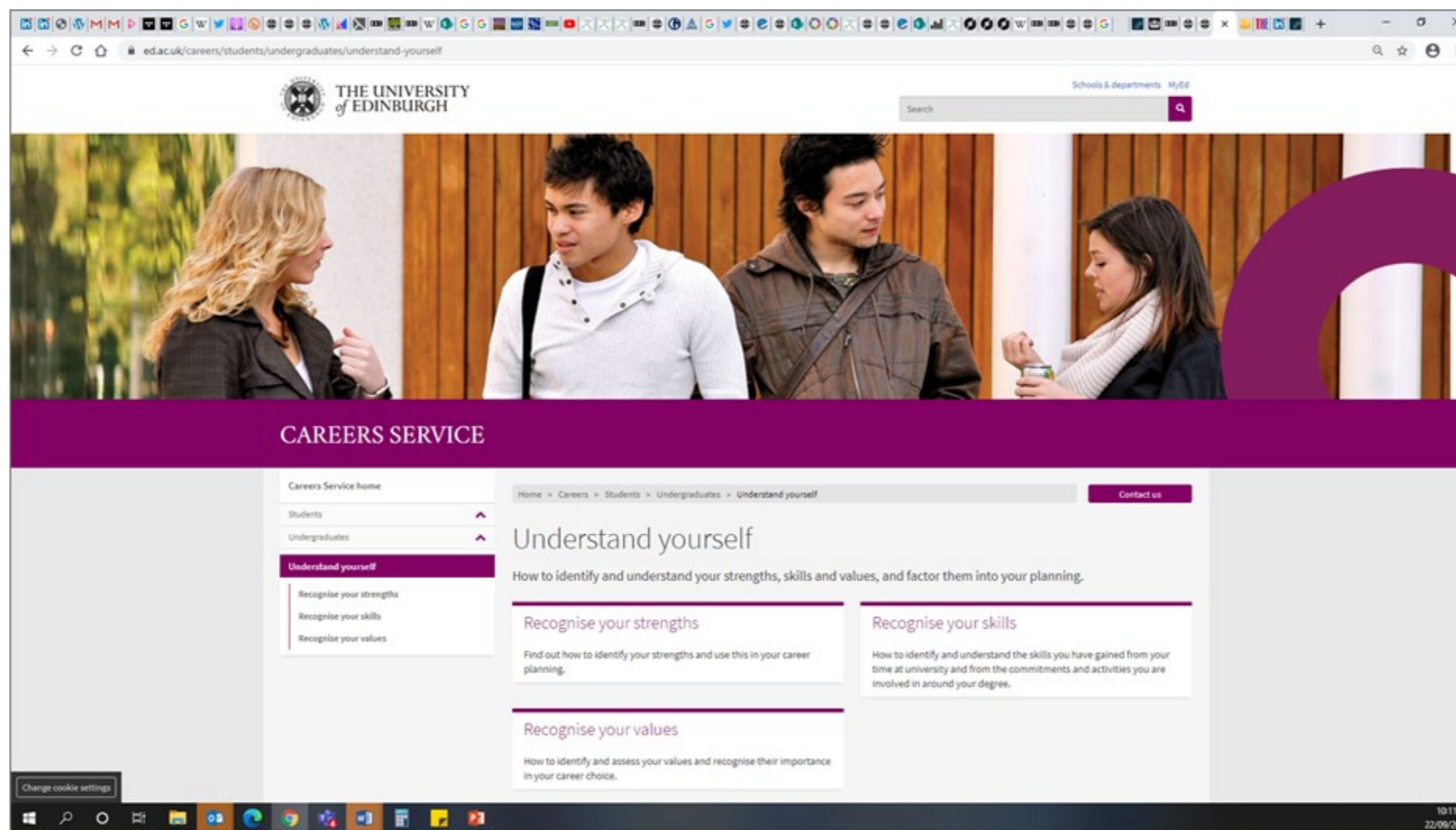
- Location
- Salary (which varies by industry & location)
- Working hours
- Opportunities for advancement/promotion
- Altruism
- Ethical companies
- Working environment
- Autonomy



Understand yourself

Use our resources to help you...

<https://www.ed.ac.uk/careers/students/undergraduates/understand-yourself>



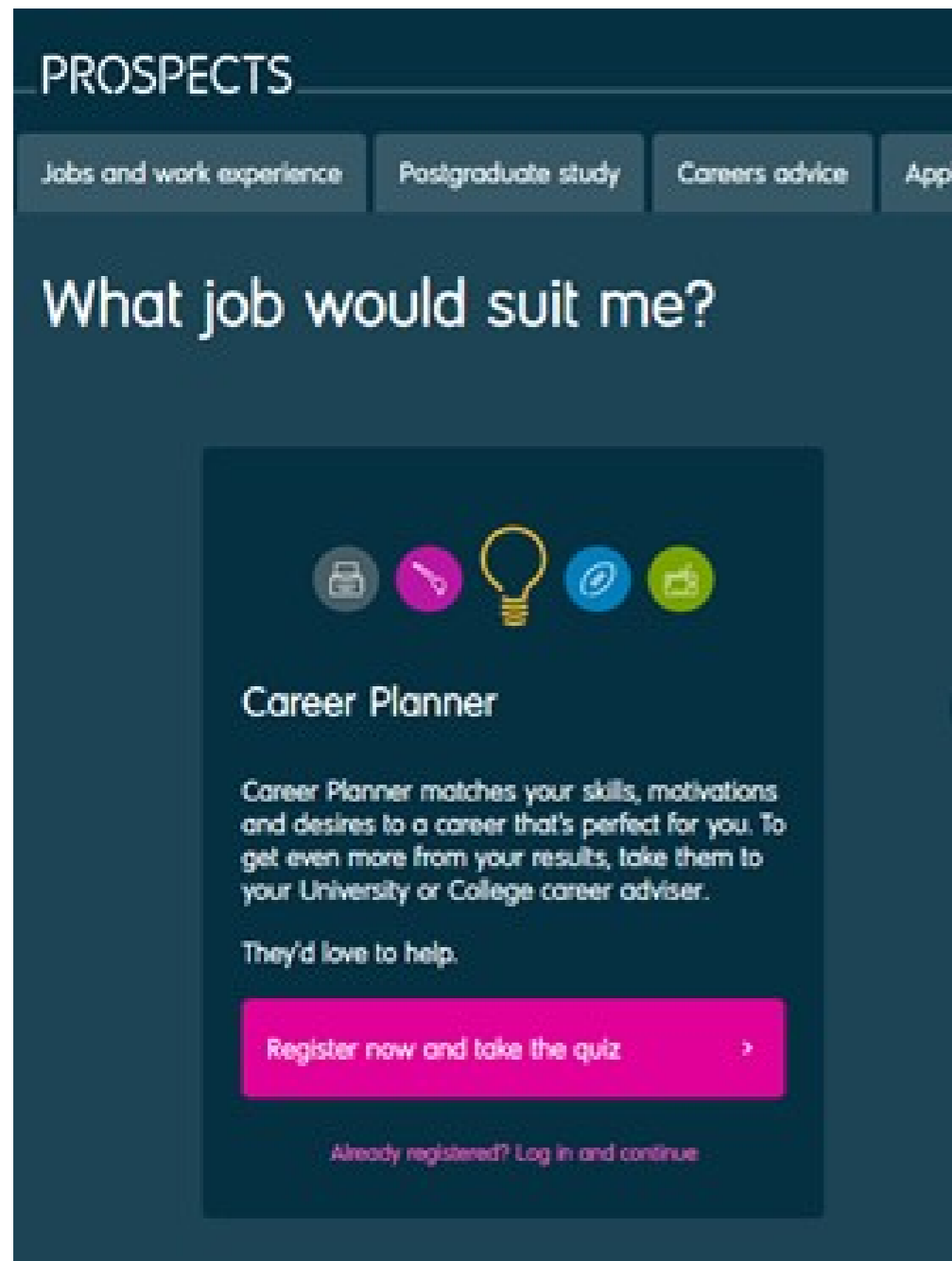
Toolkits:

<https://www.ed.ac.uk/careers/students/undergraduates/toolkits>

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Matching you to jobs?

<https://www.prospects.ac.uk/planner>



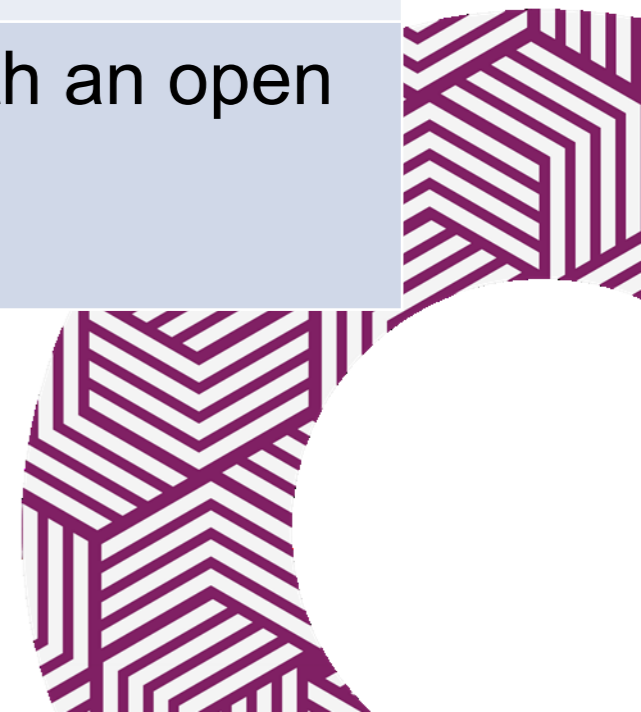
The screenshot shows the PROSPECTS website interface. At the top, the word "PROSPECTS" is displayed in white on a dark blue background. Below it, there are four navigation tabs: "Jobs and work experience", "Postgraduate study", "Careers advice", and "Apply". The main heading is "What job would suit me?". Below this, there is a section titled "Career Planner" with a row of five icons: a document, a pencil, a lightbulb, a magnifying glass, and a folder. The text below the icons reads: "Career Planner matches your skills, motivations and desires to a career that's perfect for you. To get even more from your results, take them to your University or College career adviser." Below this, it says "They'd love to help." and there is a prominent pink button that says "Register now and take the quiz" with a right-pointing arrow. At the bottom of the section, there is a link that says "Already registered? Log in and continue".

Career Planner matches your skills, motivations and desires to a career that's perfect for you. To get even more from your results, discuss them with a careers consultant



Career planning: more issues?

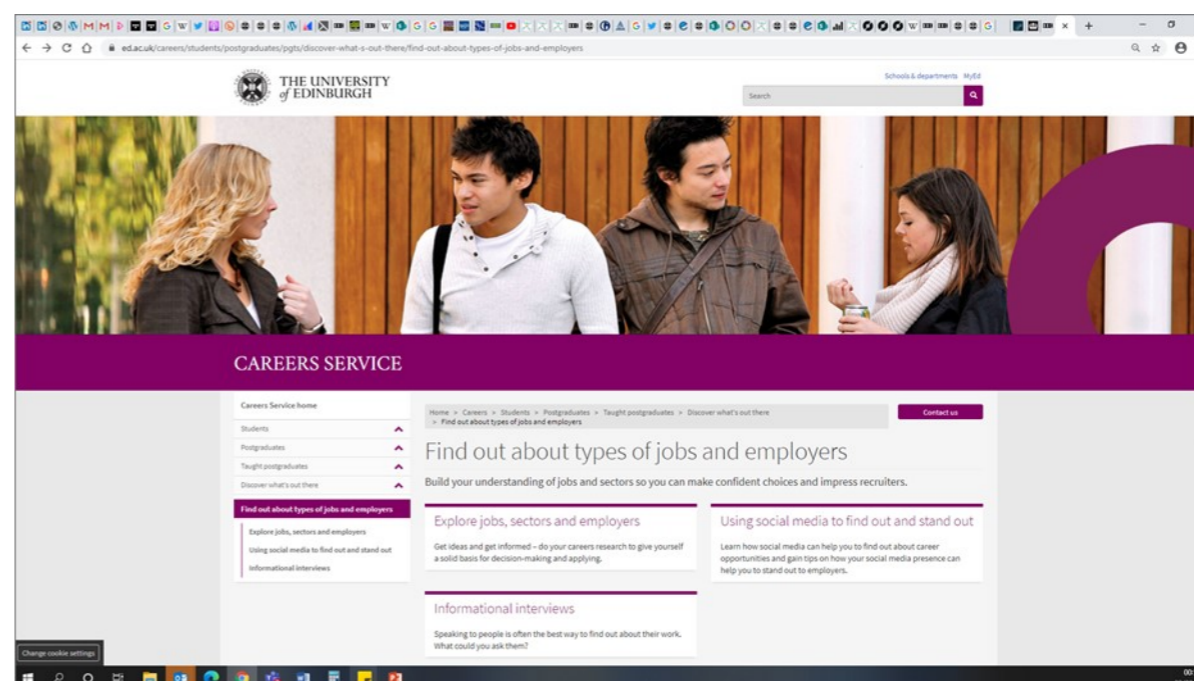
Issue	Solution
Occupational (job) knowledge may be limited.	Research!
Existing occupational information (typically from media, family, friends) is inaccurate, out of date, or biased.	Take advice with a pinch of salt. Research!
We have prejudices: jobs may have stigmas, or we may have our own preconceptions.	Research – with an open mind!



Learn about different occupations

> get a focus!

- **e.g. Finance:** you need to choose an area of financial services that interests you – and be able to **explain why** – on a job application/ at interview *why* it interests you!



- The more you understand a job, the easier to articulate to an employer why the interests and how it matches your skills/interests/knowledge.

<https://www.ed.ac.uk/careers/students/postgraduates/pgts/discover-what-s-out-there/find-out-about-types-of-jobs-and-employers>

Discover what's out there

The banner features a dark orange background on the left with white text, and a yellow background on the right with a white cloud graphic. The cloud contains illustrations of people in business attire using ladders and telescopes to look at the horizon. The University of Edinburgh logo and name are in the top left. The event title 'Discover Careers' is in large white font. Below it, the location 'McEwan Hall' and dates '27 - 29 September 2022' are listed. The event times are 'Tuesday & Thursday, 12pm - 5pm' and 'Wednesday, 2pm - 7pm'. At the bottom left, it says 'Inspiring futures' and 'Find out more on MyCareerHub'. On the right, it says 'Sponsored by' above the NatWest Group logo.

 THE UNIVERSITY of EDINBURGH
Careers Service

Discover Careers

McEwan Hall
27 - 29 September 2022

Tuesday & Thursday, 12pm - 5pm
Wednesday, 2pm - 7pm

Inspiring futures Find out more on MyCareerHub

Sponsored by



NatWest
Group

+ company presentations/events programme

- Check [MyCareerHub](#) for details and live updates

Future planning: biggest issue? (For some)



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A degree from Edinburgh...

Is highly regarded!

QS World Rankings (2023) **#15**

Times Higher Education Supplement, THES (2022) **#30**

Academic Ranking of World Universities, ARWU (2020) **#35**
a.k.a. Shanghai Rankings

N.B. 26,368 universities worldwide, as of 2017

Source: Quora.com

=> You study at a top 0.16% world university!

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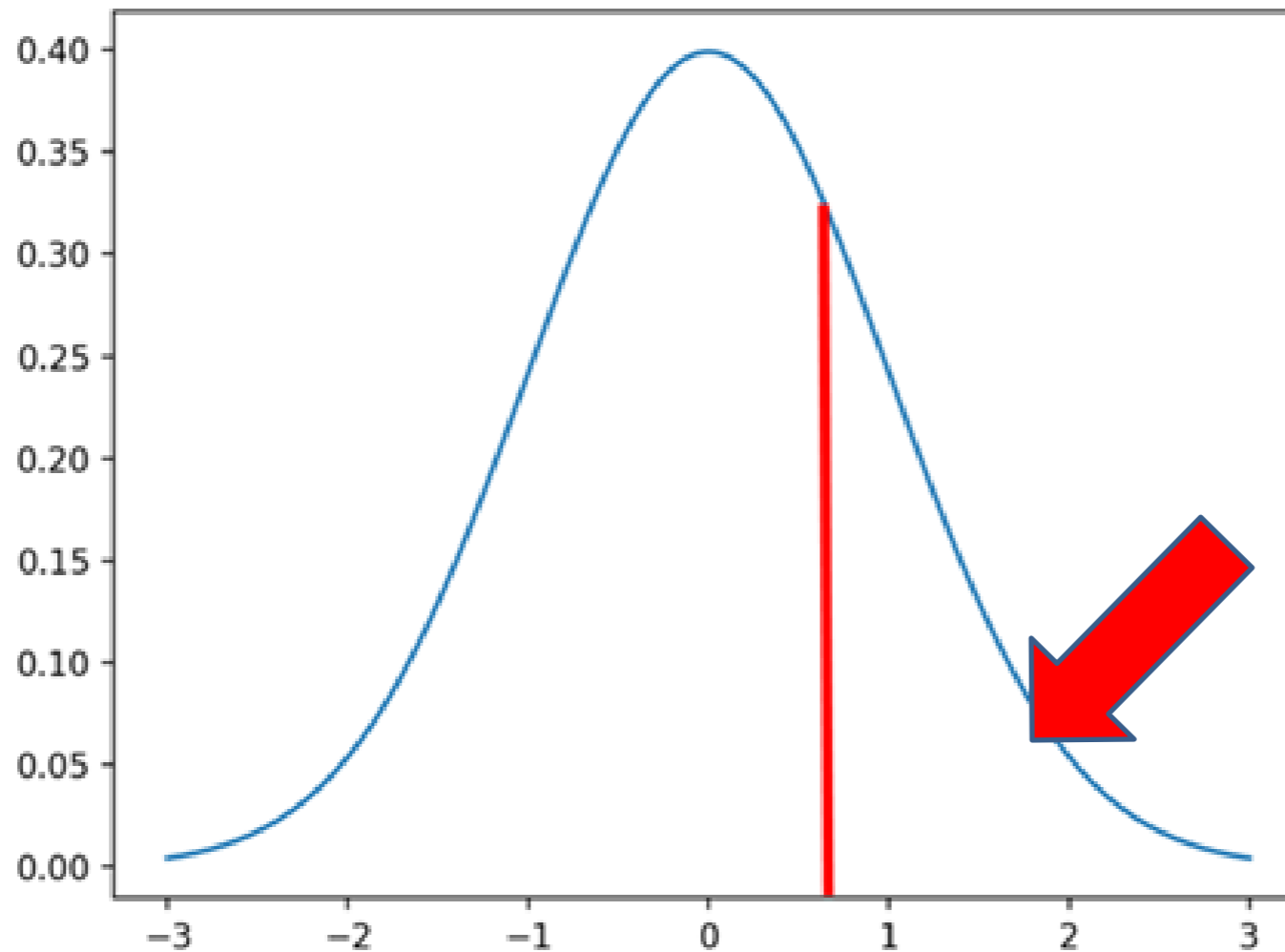
Degree performance: average or below?

Not all recruiters expect a 2.1



A skewed perspective?

If c.40% population attend university; where are you?



Attending uni
– incl. you!

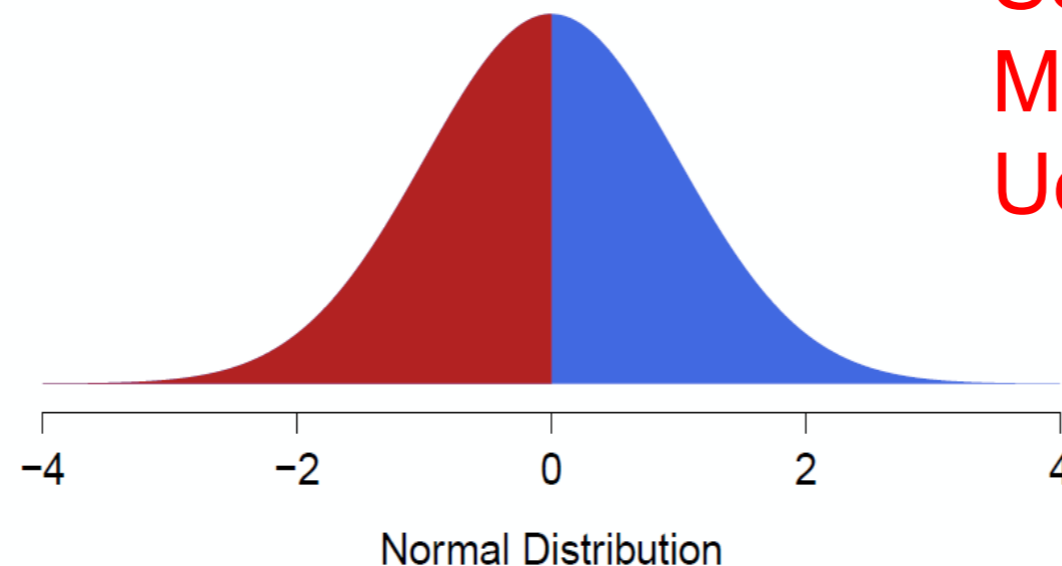


A skewed perspective?

...but during your time at Edinburgh you lose this bigger picture and only compare yourself to your immediate peers.

Logic says that some students will be in the lower half of the class distribution (for the first time... ever?)

It can feel disheartening!

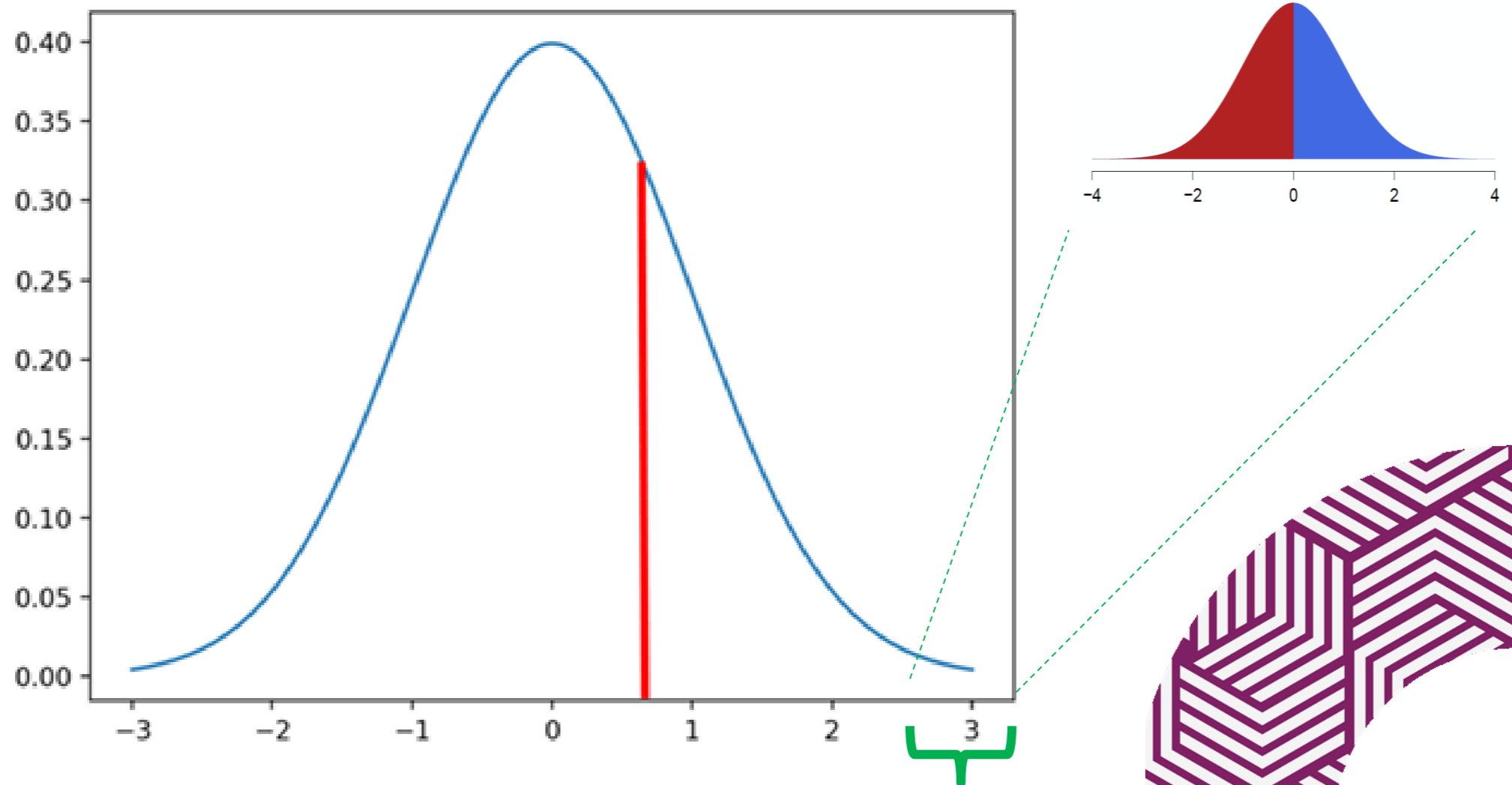


School of
Mathematics,
UoE



A skewed perspective?

If c.40% population attend university; where are you?



Inspiring futures

University of Edinburgh



Time out?

- Great – if it is part of a plan...
- ...but don't drift!



Talk to us

- Live web chat
- Submit a question
- Use the information drop-in
- Book...
 - Appointment (30 mins)
 - Practice interview (45 mins)
 - Maths drop-in (15 mins)
Monday lunch 12:30-14:30



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<https://www.ed.ac.uk/careers/students/quick-links>

A screenshot of the 'CAREERS SERVICE' website. The page has a purple header with the text 'CAREERS SERVICE'. Below the header, there is a navigation menu with 'Home', 'Careers', 'Students', and 'Quick links'. A 'Contact us' button is in the top right. The main content area is titled 'Quick links' and contains several sections with bullet points: 'If you're in a hurry go straight to the relevant information or part of our service using these convenient quick links', 'Our website is full of good advice to support you with your job hunting and future planning...', 'We want to make it easy for you to get in touch with us, whatever you want to find out or discuss. You can:', 'Start a chat using Live Chat on our home page', 'Send in a question here:', 'MyCareerHub Ask A Question', 'Come to our online information and advice drop-ins, Monday - Friday 1-3pm', 'Information and advice drop-ins', 'If you want to look for a job', 'Lots of employers ask us to advertise their vacancies because they want Edinburgh students to apply. You'll find adverts for part-time jobs, internships, and jobs for after graduation here:', 'MyCareerHub Opportunities', 'Put these job adverts into context by reading more, here:', 'Find jobs for while you're a student', 'Find jobs for after you graduate', 'If you want feedback on your CV', 'We're keen that you get the basics of your CV in place before asking us for feedback, so that we can concentrate on the content in our time together! Follow the advice here to get your CV off to a good start.', 'How to write your CV', 'If you want to prepare for an interview', 'Give yourself the best chance of being offered the job by preparing thoroughly in advance.', 'Interviews and assessment centres', 'If you want to book an appointment to talk about your future', 'Find out about our appointments system.', 'Appointments system', 'All our appointments are offered online, for your convenience.', 'Book an appointment', 'If you want to see what events and workshops are happening', 'There are hundreds of careers and employability events each semester. Check out what's coming up so you don't miss out.', 'MyCareerHub Events'.



Final piece of advice:



Keep an **open** mind!





More help

Semester 1

Week	Date	Time	Event
1	Tue 20-Sep	13:10	After Your MSc: Think Ahead!
1	Tue 20-Sep	15:10	After Your Degree: Think Ahead!
2	All Week	13:10	Discover Careers
3	Tue 4-Oct	13:10	Selling Yourself: Talking to Employers & Networking
3	Wed 5- Oct	13:00	UG Careers Showcase
3	Wed 5- Oct	15:00	PGt Careers Showcase
4	Tue 11-Oct	13:10	GORS
5	Tue 18-Oct	13:10	Writing Effective CVs & Covering Letters
6	Tue 25-Oct	13:10	Siemens Advanta Consulting
7	Tue 1- Nov	13:10	Applying to PhDs
7	Tue 1- Nov	15:00	Applying to Graduate Jobs
8	Tue 8-Nov	13:10	Finding & applying to internships
9	Tue 15-Nov	13:10	Preparing for Interviews

SCHOOL OF MATHEMATICS TEACHING

School of Mathematics Teaching home

Employability

- The University Careers Service
- Events 22/23
- MSc Careers Advice
- UG Careers Advice

Home > School of Mathematics Teaching > Employability

Employability

All the information you need about Employability and how to prepare for your future a

The University Careers Service

The University of Edinburgh Careers Service offers advice, information and practical help in all matters relating to the development of future work or study plans.

Events 22/23

All the Employability Events t
22/23

MSc Careers Advice and Guidance

Advice and suggestions on making the most of your year, planning ahead and getting set for the recruitment process, whatever you want to do

UG Careers Advice and Guidance

Whatever stage of your University study you are at it is never too early or late to start thinking about what you are going to do when your undergraduate studies end.

This article was published on 28 Sep, 2021

<https://teaching.maths.ed.ac.uk/main/employability>





Any questions?

