



EDTECH THE HYPER-ACCELERATOR

A Robert Walters Group Company



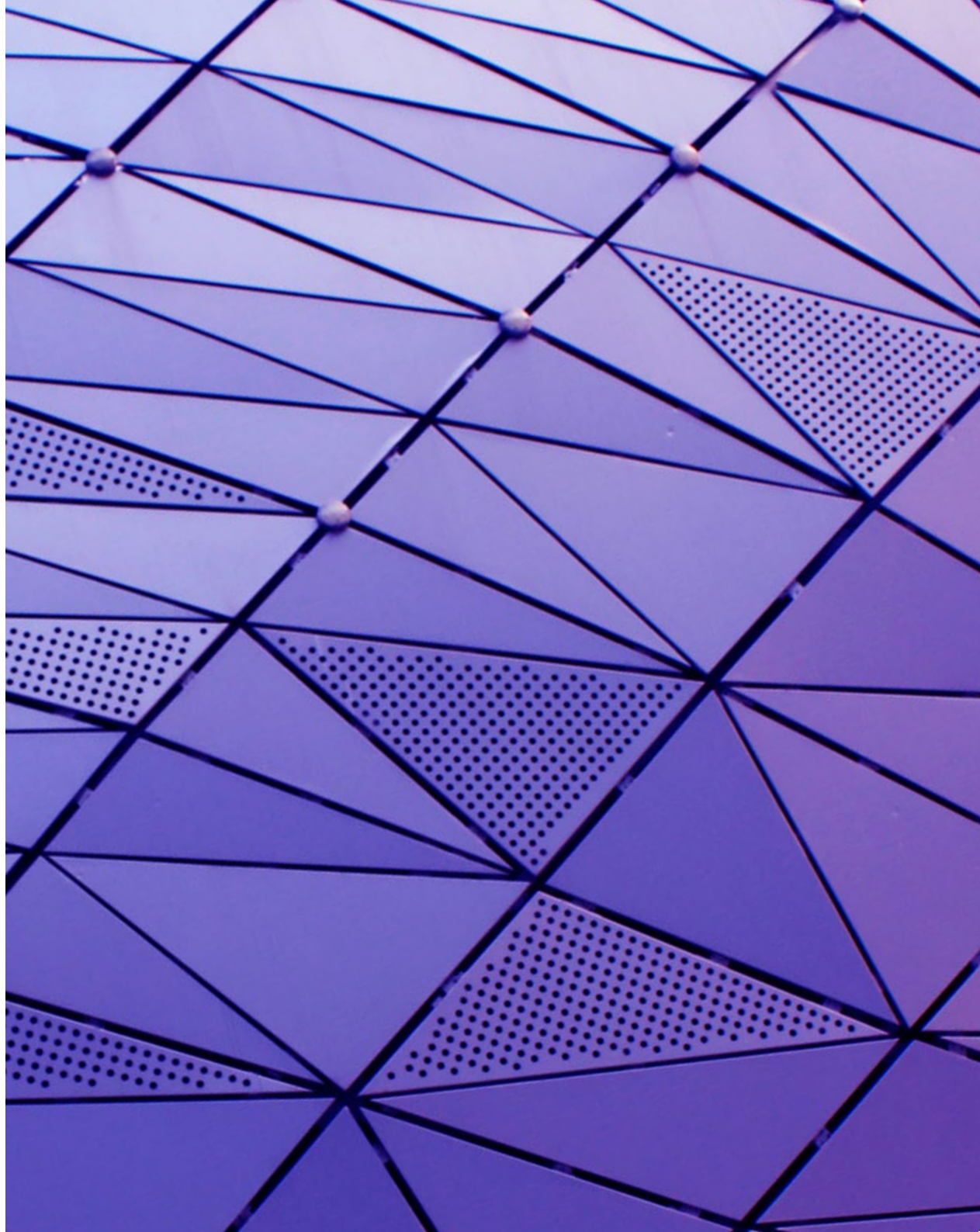
ROBERT WALTERS

INTRODUCTION

A market still in its infancy, the UK's education technology (EdTech) sector has become an economic powerhouse in an adverse business climate.

Technology has already proved to be the biggest disruptor to the education sector, reshaping the way education is delivered to school pupils. In 2020, EdTech has been revolutionary - enabling learning to continue remotely in the midst of a global pandemic, while simultaneously breaking down the barriers that prevent marginalised groups from accessing it.

In the Robert Walters Tech Series, developed in collaboration with VacancySoft, we analyse the role of Covid-19 in unearthing the sector's disruptive potential. As UK EdTech pushes to the forefront of VC investment, we identify the technical skills the UK talent pool needs to cultivate to keep pace with sector demand.





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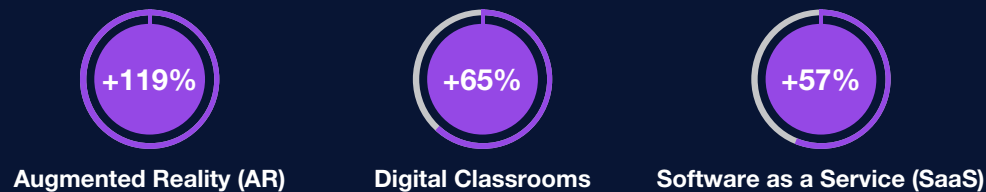
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Fastest growing areas in EdTech:



Top 3 technical skills and languages in demand – Year-on-Year growth



VALUE OF THE UK EDTECH SECTOR



Only 5% of UK tech companies are EdTechs



71.5% forecasted growth in 2020



£170m value of EdTech exports to the UK economy

INVESTMENT INTO EDTECH



No.1 – UK's EdTech sector attracted the most European investment in 2019



22% increase in VC investment in Q1 2020

VACANCIES BY FUNCTION



Technology
+44%

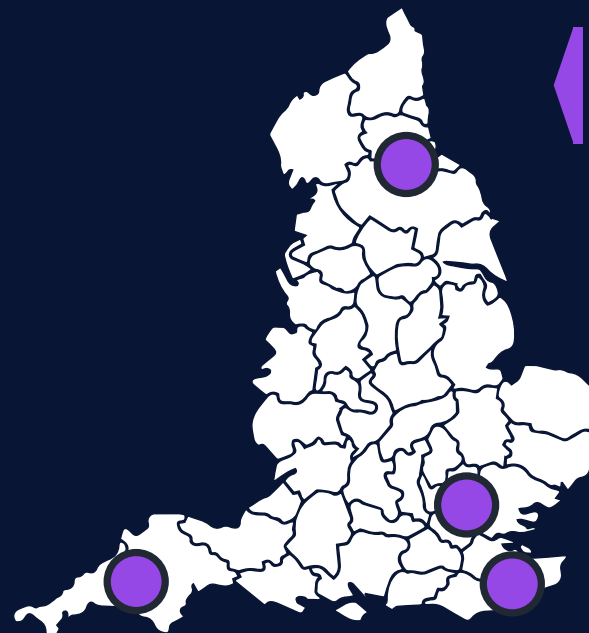


Marketing
+21%



Go-to-market
+12%

EDTECH VACANCIES PER REGION



6 x YOY increase in location neutral vacancies

London – **85.3%**
Remote/Home-based – **4.9%**
South West – **2.5%**
South East – **1.8%**
North – **5.5%**



EDTECH: THE HYPER-ACCELERATOR

While Covid-19 has wreaked devastation across the UK business landscape, for EdTech it has acted as a hyper-accelerator. The temporary closure of schools, universities and businesses has opened up UK EdTech to a colossal wave of demand, as institutions look to technology providers to allow academic life and professional training to continue in a 'virtual classroom', a trend that's expected to persist in a post-pandemic Britain.

As a result, the forecast 2020 growth for UK EdTech is set at an explosive 71.5%. This becomes all the more startling when comparing this spike to the 20% contraction of the UK economy in 2020. In March this year, 1.37 billion students were studying and learning from home - representing three quarters (75%) of school-age children worldwide. Covid-19 has undoubtedly caused remote learning to be adopted universally.

THE SCOPE OF EDTECH

Although Covid-19 has certainly taken EdTech to new heights, companies in the sector were already leveraging technology to push the boundaries of education, with an impressive range of industry microsegments surfacing, including:

- Career-oriented EdTech such as Immersive Labs – testing and retraining cybersecurity candidates
- Higher-education EdTech such as FutureLearn
- Child-oriented EdTech such as Kano's coding for kids

While big-hitters such as Google, Microsoft, the BBC and Pearson are facilitating remote education and training, it's the early-stage start-ups that are delivering solutions that:



1 advance early learning beyond the core academic curriculum



2 alleviate training resource for businesses looking to develop their staff



3 empower individuals (irrespective of their age or location) to upskill independently

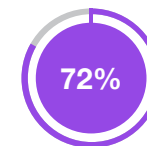


THE GENESIS OF THE UK EDTECH SECTOR

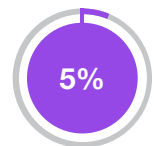
Out of our latest estimates of UK-based technology companies, only 600 of them are EdTech – comprising only 5% of the UK tech sector. But while the number of UK EdTechs is currently small, its social impact and attractiveness to venture capitalists now makes this sector one of the fastest growing in Europe.

EdTech exports were last year estimated to be worth about £170m to the UK economy, and demonstrating how critical the field was to the government even before the crisis, the UK's Education Secretary had last year formed the EdTech Leadership Group as part of a strategy to take advantage of this flourishing sector.

As early-stage start-ups look to develop innovative technologies and apps for learning and development to meet the expanding appetite for EdTech, the industry is now a hive of hiring activity.



**anticipated growth of UK
EdTech in 2020**



**of UK tech
companies are EdTechs**

“While a surge in demand was forecast for the sector this year, this projection has skyrocketed due to the impact of Covid-19. The requirement for both online courses and virtual classes as permanent academic fixtures will dramatically increase the scale of the sector over the next 12 months.”



Tom Chambers,
Head of Technology -
London,
Robert Walters

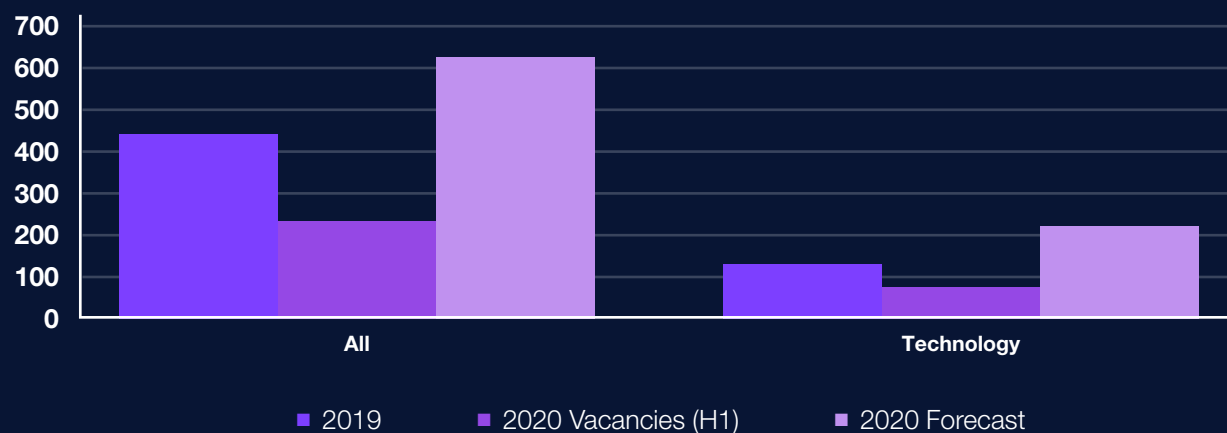


UK VACANCY GROWTH AND REGIONAL HOTSPOTS

With EdTech firms scaling up rapidly, the need is reinforced to invest in talent that allow companies to adopt advanced technologies that deliver competitive advantage and, in turn, heighten the user experience. As a result, we are witnessing the below impact on vacancies on a national level:

- +71.5% forecast year-on-year vacancy growth in 2020
- The volume of EdTech technology vacancies increased by +24%, running counter to the -40% decline in the number of advertised UK technology vacancies in H1 2020 (in comparison to the same period last year)
- +55% forecast year-on-year technology vacancy growth

VACANCIES IN EDTECH UK, 2019 V 2020



VACANCIES BY FUNCTION

Following in the footsteps of fintech, the emergence of start-up edtechs has had a comparable impact on the jobs market, with technology, marketing and business development roles making up more than 75% of the EdTech roles on offer:

- 44% of vacancies are within technology – spilling into multiple specialisms, from software development, data science, to cybersecurity and product management
- Marketing follows as the second largest discipline - 21% of jobs fall within this area with an emphasis on digital-centric roles
- As businesses adopt both B2B and B2C models, the nature of the start-up requires the activation of a dedicated Business Development/Sales function that can identify opportunities to increase user base and reach new markets

Interestingly, academics make up only the fourth largest segment of advertised roles, with tech vacancies more than quadruple that of academic offerings (44.2% against 9.2%). This discrepancy shows exactly how the EdTech sector democratises access to education - leveraging technology to reach more learners with fewer human resource, without compromising on content quality.

EDTECH VACANCIES BY FUNCTION



“This reliance on technology skills and promise of high returns in the sector has been recognized by technology heavyweights, as evidenced by the investment of \$1 million from Microsoft into Kano.”



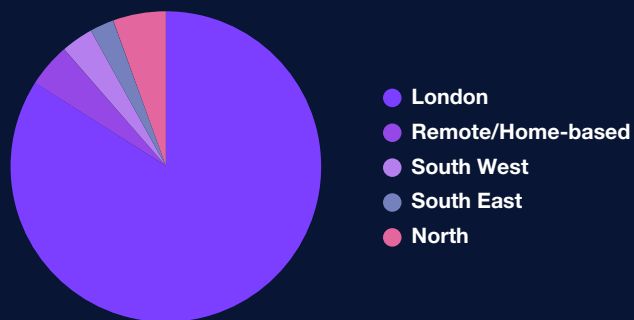
Karen Cordner,
Software Engineering
Specialist (London),
Robert Walters

VACANCIES BY REGION

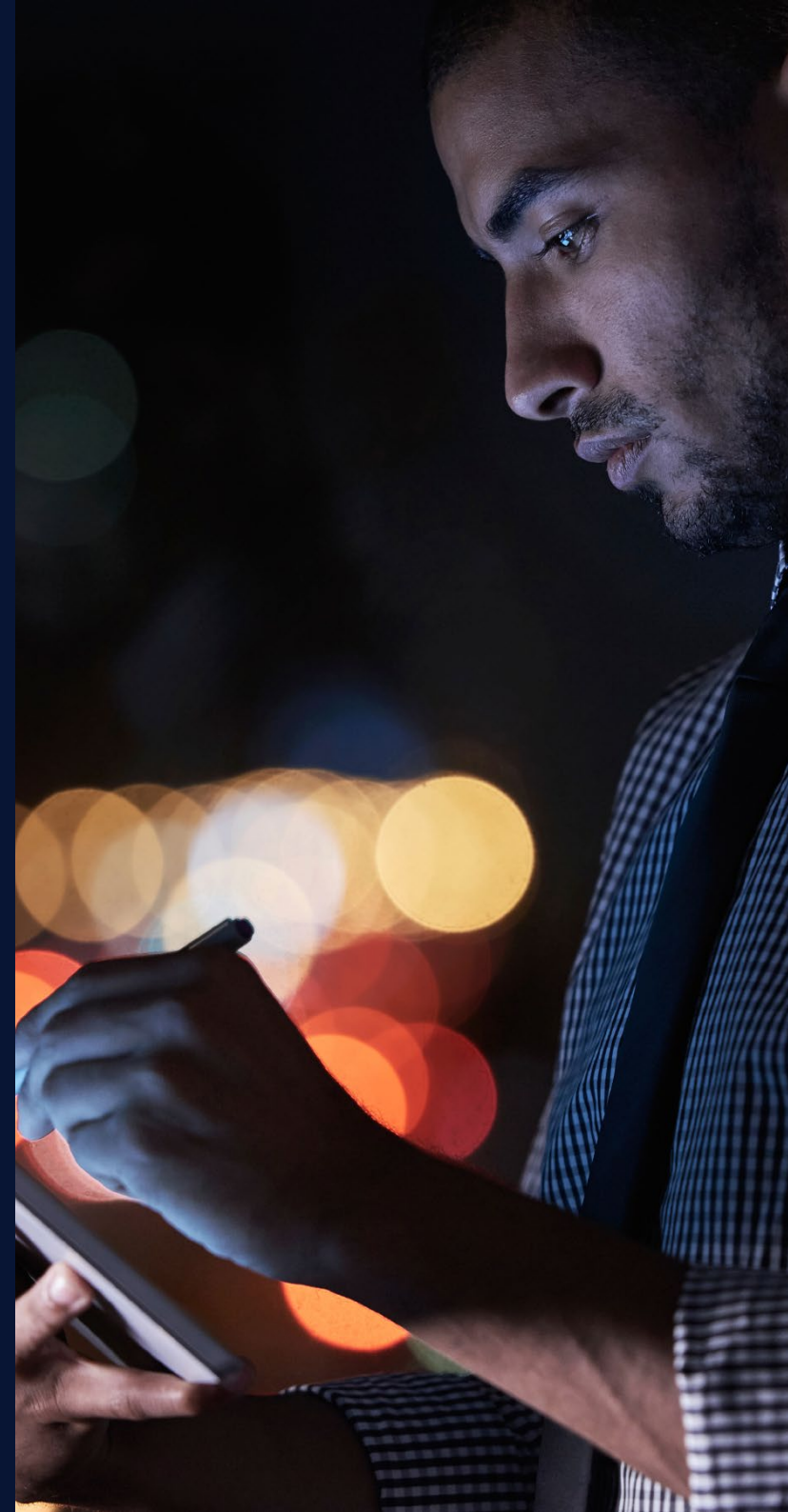
Most vacancies in the industry that are offered in the UK are done so in London. This clearly shows the importance that stakeholders in the EdTech space on having their operations based in capital.

- 85% of all vacancies are based in London, with 43% of London vacancies in tech
- 5% of vacancies are based in Northern tech hubs
- 6% of vacancies are remote, location-flexible or are home-based – marking a stark increase in location neutral vacancies – only 1% of roles were location neutral in 2019

ALL EDTECH VACANCIES BY REGION 2020



As with the large majority of start-up tech sectors, a gulf exists between vacancies London and regional tech hubs. The concentration of EdTechs in London highlights the need to gain exposure to the VC market, but also raises the important issue of increasing accessibility to funding providers for those firms that base their operations regionally.



“Covid-19 is already having a huge impact on vacancies advertised in the tech sector – with an increasing number of businesses offering remote, or location neutral vacancies – both for practicality during the pandemic, as well to provide a more attractive employment offer to tech professionals desiring more role flexibility. Taking this approach will allow London-based EdTechs to tap into the nationwide talent pool – specifically targeting tech-rich talent pools in Manchester, Birmingham and Leeds.”

Coupled with this trend, we expect national infrastructure projects like HS2 to shift the start-up culture with more EdTechs emerging in, or relocating to, regional hubs (as we’ve seen with maturing FinTechs). Steps such as these will go some way to ensuring VC face-time can be accessed regardless of location.”



**James Perry, Head
of Technology (UK
Regions),
Robert Walters**





SKILLS IN DEMAND AND SALARY BENCHMARKS

	Top 10 technical skills and languages in demand	YOY Growth in Demand
1	Machine Learning	+23%
2	SQL	+9%
3	HTML	+16%
4	JavaScript	+9%
5	Product Development	+20%
6	Customer Relationship Management (CRM)	+30%
7	Python (Programming Language)	+12%
8	Social Media Marketing	+24%
9	Web Development	+8%
10	User Experience (UX)	+13%

TECHNICAL SKILLS HOTSPOTS

Software Development

More than half, 51.4%, of technology vacancies by function in 2020 are in Software Development and Engineering, further suggesting an industry sector that is building as fast as possible to desperately meet unwavering demand. Growth in this area will remain steady, with a specific interest in specialists with Python, Golang, Rust and React expertise.

As EdTechs scale, a growing number are hiring Chief Product Officers that can lead a team to design and build scalable online platforms.



Product Management

With disproportionately high levels of Product Managers in EdTech (9.2% of all vacancies) versus the general tech scene in the UK (2.2% of all vacancies) - this illustrates the fact this is a high growth sector in a hurry to build and scale rapidly as projects are planned and new products are tested on the market.

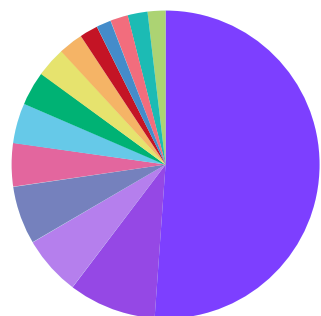
Data Science

With an increasing number of EdTechs adopting a SaaS (Software as a Service) delivery model to provide a Cloud-based curriculum to institutions, data scientists are some of the most in-demand roles in the industry, as EdTech look to analyse large datasets of user data to drive improvements to their products. With this, demand is increasing for SQL (+9% YOY growth) and Python (+12% YOY growth) - underpinning this is the need for professionals with exceptional machine learning and analytics skills.

Digital Marketing

As scaling EdTechs bring their products to market and look to build brand awareness, digital marketing skills are becoming paramount to drive customer acquisition. A fifth (21%) of EdTech vacancies are in marketing with a growing need for digital expertise in social media marketing (+24% YOY growth), CRM (30% YOY growth) and SEO (31% YOY growth).

% OF VACANCIES



- Software Development/Engineering
- Data Scientist
- Data Analytics
- Project Management
- Support Engineering
- Change Management
- Trainer
- Testing
- Product Management
- Security
- UI/UX Designer
- Artist
- Architect
- Management



“It is increasingly becoming the case for EdTechs to maintain a small base in the UK from which they make their 10-15 most premium hires – tapping into the world class AI and NLP talent that is available here. Where the UK stands out in regard to tech talent is that they have typically worked for multinational organisations, have at least 3-5 years of solid experience in high level data calculations, and can guarantee professionalism in the form of security, confidentiality and stability”



**David Roberts, CEO,
KidsLoop**

EMERGING AREAS OF DEMAND IN EDTECH

Augmented Reality (AR) and Virtual Reality (VR)

Professionals with a background in deploying immersive technologies to help enhance the user experience through AR. We expect this trend to lead to an increase in visual design skills (which currently make up just 1.5% of all technology EdTech vacancies), experts in deploying immersive technologies, as well as QA skills to test increasingly complex AR-oriented EdTech products.

- AR - +118.75% YOY growth in demand
- QA - +65.4% YOY growth in demand

Artificial Intelligence (AI) Research

Addressing the need to personalise education for individual requirements, adaptive learning platforms using deep science to analyse the way users interact with content and identify gaps in user knowledge.

- Machine Learning – +11% YOY growth in demand
- Computer Vision - +72% YOY growth in demand

Gamification

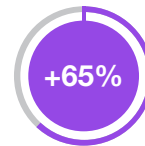
Gamification is becoming increasingly important to improve learning, engagement and performance. This is driving the need for candidates with strong game design skills, as well as UX designers who can ensure the user interface is as intuitive and easy to use as possible.

- UX - +13.3% YOY growth in demand
- Game Design - +12.9% YOY growth in demand

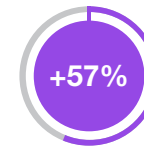
Fastest growing areas in EdTech:



Augmented Reality (AR)



Digital Classrooms



Software as a Service (SaaS)

BENCHMARKING THE EDTECH EMPLOYMENT OFFER

Breaking down the vacancies in technology roles in the EdTech sector a discrepancy emerges - in the EdTech sector, junior positions are far less likely to be offered than in the general tech scene of the UK (4.2% to 11.8% respectively). With EdTechs looking to hire more experienced technology professionals, salary benchmarking is vital to attract the desired talent.

Salaries for top 10 technology roles in demand – EdTech

Roles in demand	Permanent Salary per Annum GBP (£)		Contract Rate Per Day	
	Range	Average	Range	Average
Software Developer/Engineer	75 – 110k	85,000	500 - 650	550
QA Test Analyst	50 – 65k	60,000	300 - 450	375
Data Scientist	60 – 80k	70,000	500 - 650	600
Product Manager	50 – 80k	65,000	350 - 600	450
Security Specialist	50 – 70k	62,000	450 - 500	500
Project Manager/PMO	45 – 75k	65,000	400 - 500	500
UI/UX Designer	40 – 60k	50,000	300 - 450	400
Support Engineer	50 – 60k	60,000	400 - 500	450
Solutions Architect	80 – 110k	95,000	550 - 750	650

Role expectations for technology professionals working in the tech sector



“Owing to the fact it is a new and fast-growing industry, it is likely that companies are looking to select quality over quantity looking for experienced professionals in the development space that can build and deliver products to market at pace.

Factors such as role flexibility, over hours and location, as well as healthy work-life balance, are the main concerns, on top of a competitive salary and benefits package, that EdTech employers need to consider and benchmark against the tech competition in order to attract high-level talent.”



Lee-Roy Fredericks,
Manager -
Technology (London),
Robert Walters



INVESTMENT INTO EDTECH

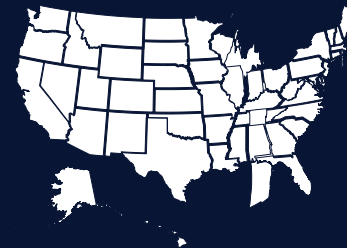


Within the UK, and indeed in Europe, there are no EdTech unicorns - with almost all concentrated in the US and China. But the tide is turning.

The UK is a leader across Europe, with its start-ups attracting 41% of all investment last year in the Continent according to data from [Tech Nation's Data Commons](#). EdTech investment climbed 91% from 2018 to 2019, in contrast, investment in the US actually fell by 12%, suggesting a stagnant market across the Atlantic. Closer to home, general European investment grew only by 8%.



UK: +91%
YOY increase
in investment



USA: -12%
YOY decrease
in investment



Europe: +8%
YOY increase
in investment

The economic potential of EdTech

Even before the crisis, the sector was estimated to be worth £3.4bn by next year. On a global level, EdTech companies saw VC investment grow by 22% in Q1 2020.

One such UK EdTech outfit - FutureLearn- has had up to 30 vacancies this year with a recent valuation of \$100 million. FutureLearn is an example of an EdTech company that is also jumping on the micro-credential movement, a trend that is combating the skills gap. These micro-credential offerings can take the form of MOOC (Massive Open Online Courses), a type FutureLearn has specialised in.

To give an example of the global demand for this sector - Udemy, a US-based MOOC provider, saw 400% growth between February and March of this year in terms of new course subscriptions.

Top 6 UK Edtechs by Valuation - Source TechNation

	Valuation (USD m)	Location	Funding to date (USD m)
Immersive Labs	160-240	Bristol	43.8
A Cloud Guru	132-198	London	36.4
Macat	120-180	London	27.3
Future Learn	100	London	50
Kano Computing	112-168	London	40.5
Fuse Universal	80-120	London	27.3

“The level of UK investment into EdTech - both from the government and VC firms – will deliver the next wave of entrepreneurs looking to add value to the learning experience, with products that span the breadth of potential for learning technology. Covid-19 has not only brought to the surface the key role of EdTech in improving accessibility and inclusion and enhancing teaching of school pupils, but also its propensity in providing dynamic and affordable learning experiences for professionals seeking to reskill or upskill in a challenging economic climate.”

Tom Chambers, Head of Technology (London), Robert Walters



INDUSTRY INSIGHT: KIDSLOOP



KidsLoop is an innovative CLMS platform that features live and interactive classes, an integrated content library, and robust content authoring tools created for children from six months to 10 years old. The system responds to children's learning and reports on each child's progress through the world's most advanced learning analytics technology, allowing schools and parents to interact and see the learning process clearly - such as the child's level of interest and interaction with the classroom curriculum.

The collection and analysis of personalised learning data by the KidsLoop system is considered a breakthrough in the application of technology to education. Information about the pupils, both learning activities taking place in the classroom and at home, is collected and synchronised to provide teachers and parents with constantly updated data about the child's progress.



1. The global EdTech market is predicted to reach a value of \$89bn. What has been driving this demand?

The transition from offline to online has been a 20+ year organic behavioural change, and so it was only a matter of time before it took effect in one of the worlds oldest and most prominent industries – education.

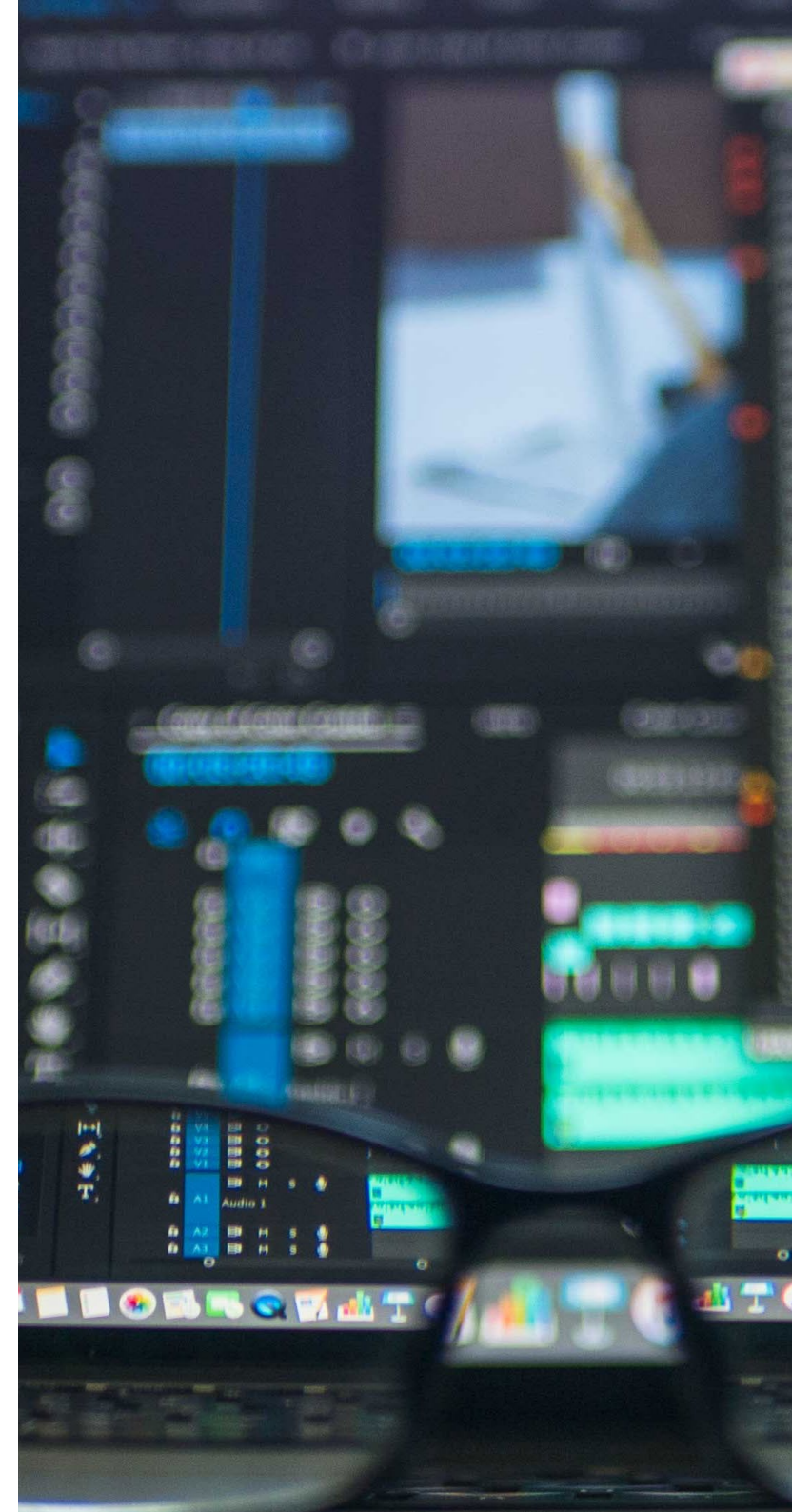
The drive towards EdTech has primarily come from the different way in which content is being used & consumed today. Children & young people are much more digitally literate these days and so are more comfortable with using tech in their day-to-day lives, so much so that for them learning from just books alone may almost seem archaic.

Younger generations are increasingly becoming more accustomed to information being presented in a variety of ways & mediums – in particular digitally – and so the shift towards EdTech will only continue.

The drive for a more personalised and tailored experience has too pushed up the demand for EdTech. For so long education has been a very linear process – led by a standardised curriculum and taught in a universal manner. However outside of education a much bigger transition has been happening in the world – products which service our day-to-day lives; from shopping, meeting new people, and watching TV have become more personalised and choice-based.

Take Netflix, for example, who deliver just one service to a global customer base – streaming TV & film. Through the power of data and algorithms, each Netflix account is tailored towards the user's preferences and personal choice – making the service feel wholly unique and much more useful to them.

As the expectation for choice-based products and services only grows, so too will the demand for optimised and tailored EdTech solutions.



2. What impact has Covid-19 had on the UK EdTech market?

Unlike many other sectors, the pandemic acted as a 'hyper accelerator' for the EdTech market. Overnight educational institutions were expected to take their classroom delivery entirely remote, with technology being the only enabler of this.

In the UK, the biggest barrier to the uptake of EdTech to date has primarily been around the cost & time associated with teacher retraining. However, during lockdown teachers had no choice but to become accustomed to EdTech tools and by and large learnt on-the-job.

On the whole, the UK is early on in its journey of embedding technology into its education system – but now that the doors have been opened, we move increasingly closer to hybrid classrooms with the help of optimised learning platforms.

3. Where do you see hiring within EdTech to be focussed in the next year – any concerns of a skills shortage?

Cash flow & funding will drive the hiring agenda but currently we can see that across the board funding is rife for EdTechs.

In order to tackle any sort of skills shortage it is important to have a global footprint, with developers working in every content, and malware problems handled locally.

It is increasingly becoming the case for EdTechs to maintain a small base in the UK from which they make their 10-15 most premium hires – tapping into the world class AI and NLP talent that is available here. Where the UK stands out in regard to tech talent is that they have typically worked for multinational organisations, have at least 3-5 years of solid experience in high level data calculations, and can guarantee professionalism in the form of security, confidentiality and stability.

The reason in which companies look at other talent elsewhere – for examples the USA for HTML experts, and Asia for developers – is because in order for the product to be priced effectively, staff & running costs must be globally competitive.





4. What are the growth areas within EdTech, and where are the growth regions?

The 5-18 years core school age (or K-12 as it is referred to in many countries) market is probably the most saturated and is dominated by a number of large players. However, with there being a vast amount of test data in this field, entry at this level is relatively easy and low risk hence the high number of start-ups.

EdTech targeting higher education – specifically universities – needs to be able to accommodate the open source, knowledge sharing & content interactivity expected from this market. This issue with this – and the reason why we may not see as much explosive growth – is that to accommodate such needs usually leads to profitability falling off.

The super-growth area truly will be in young children, in particular products that are more specialised and address niche or more complex needs – with users being premium schools. The biggest barrier in this market is the lack of test data in order to create a solid product, and it is here where the value of data will really grow.

In terms of super growth regions, Asia continues to show the most potential. Not only does EdTech economically make sense given the size of the countries within the continent – which also enables scaling to be a lot easier – but there is very little prejudice against technology being embedded into the education system, compared to the likes of the UK where traditional teaching methods are much more protected.



David Roberts,
CEO – KidsLoop



KEY LEARNINGS



Disruption To Education As We Know It

Lockdowns across the world caused nationwide school closures in 190 countries at the peak of the pandemic in mid-April, impacting 90% of the world's pupils. The disruption in the education sector is long overdue and although the traditional methods will undoubtedly continue, interactive digital courses are crucial to the future growth of the education industry under government restrictions.



A Young Sector Reaping Early Returns

Only 5% of UK tech business are EdTechs, yet the sector already yields £170m of output for the UK economy. While Covid-19 has acted as an economic missile for some industries, it has multiplied already favourable growth projections for UK EdTech – with the sector expected to grow by 71.5% this year – unthinkable in a pandemic-ridden commercial landscape.



An Industry Propelled By Technical Talent

With academic resource accounting for less than 10% of current vacancies in the sector, it's evident that the technology function has doubled up to both engineer digital educational products, and reduce the dependency on having teachers to deliver education to the mass market. Technology accounts for almost half the number of roles (44%) – with more than half of these in the software development arena.



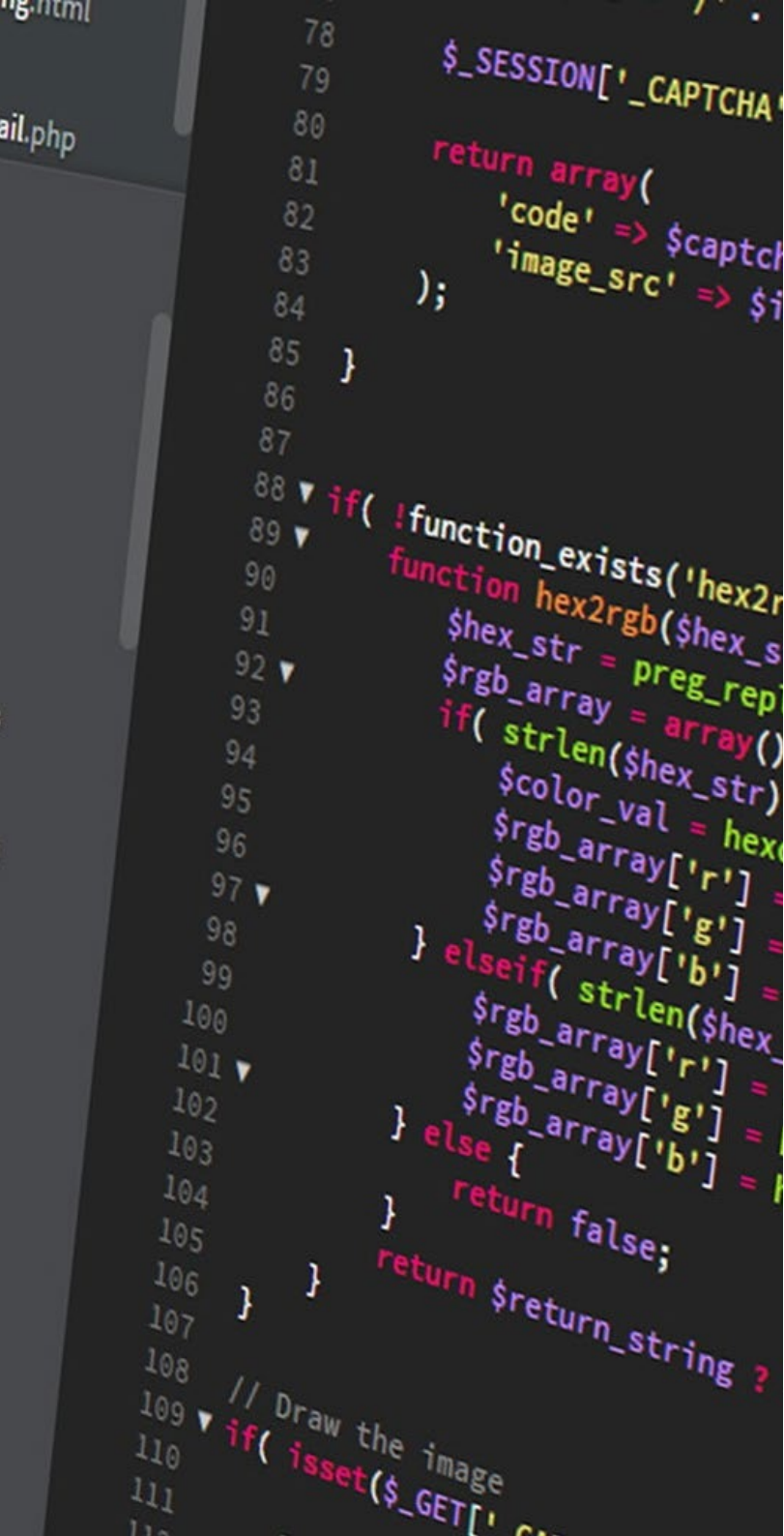
London Is The Lucrative Edtech Hotspot

With the majority of EdTech vacancies based in the capital, important questions are raised around levelling the playing field to allow businesses based outside London to access the VC market, and simultaneously tap into the tech-rich candidate pools in regional hubs. The continual uptake of the remote working model as a permanent workplace fixture, intensified by Covid-19, will likely alter the current dispersion of EdTech businesses and talent.



Embracing New Technologies Is Key To Compete In The Digital Economy

There is a fresh focus on hiring professionals which have experience in deploying and optimising the use of next generation technologies, namely AI and immersive technology experts. Driving forces for change across multiple tech-enabled industries, it's forecast that their implementation drive the next wave of industry growth as businesses race to deliver innovative EdTech products with competitive-edge.



ABOUT THE PARTNERS

Robert Walters

Robert Walters is a global, specialist professional recruitment consultancy. Operating across 31 countries, with offices in technology hubs in London, the North West, Midlands and South East. Organisations rely on us to find high quality professionals for a range of specialist roles. Leaders in technology recruitment, we place candidates on a permanent, contract and interim basis in organisations ranging from the largest corporates world-wide, through to SMEs and start-ups.

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