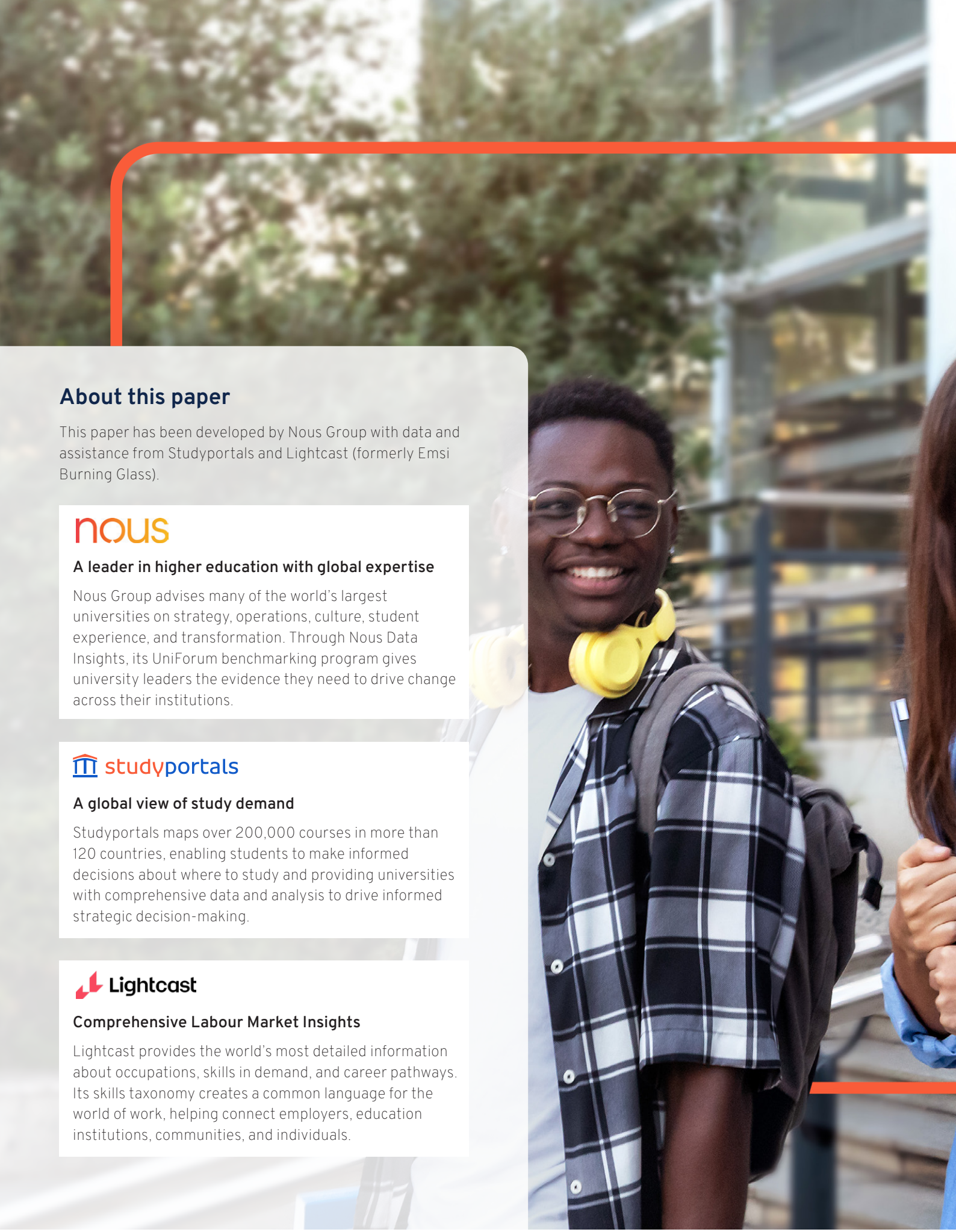
University as a *connector*

2026



nous studyportals Lightcast



About this paper

This paper has been developed by Nous Group with data and assistance from Studyportals and Lightcast (formerly Emsi Burning Glass).

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A leader in higher education with global expertise

Nous Group advises many of the world's largest universities on strategy, operations, culture, student experience, and transformation. Through Nous Data Insights, its UniForum benchmarking program gives university leaders the evidence they need to drive change across their institutions.

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Contents

- Executive summary 4
- Student and employer demand are diverging 8
- AI skills are becoming a portfolio-wide capability, not a standalone discipline 18
- Graduate pathways extend the connector role beyond enrolment to employment 20
- The choices universities need to make 22
- Conclusion: The connector role is no longer optional 24



Executive summary

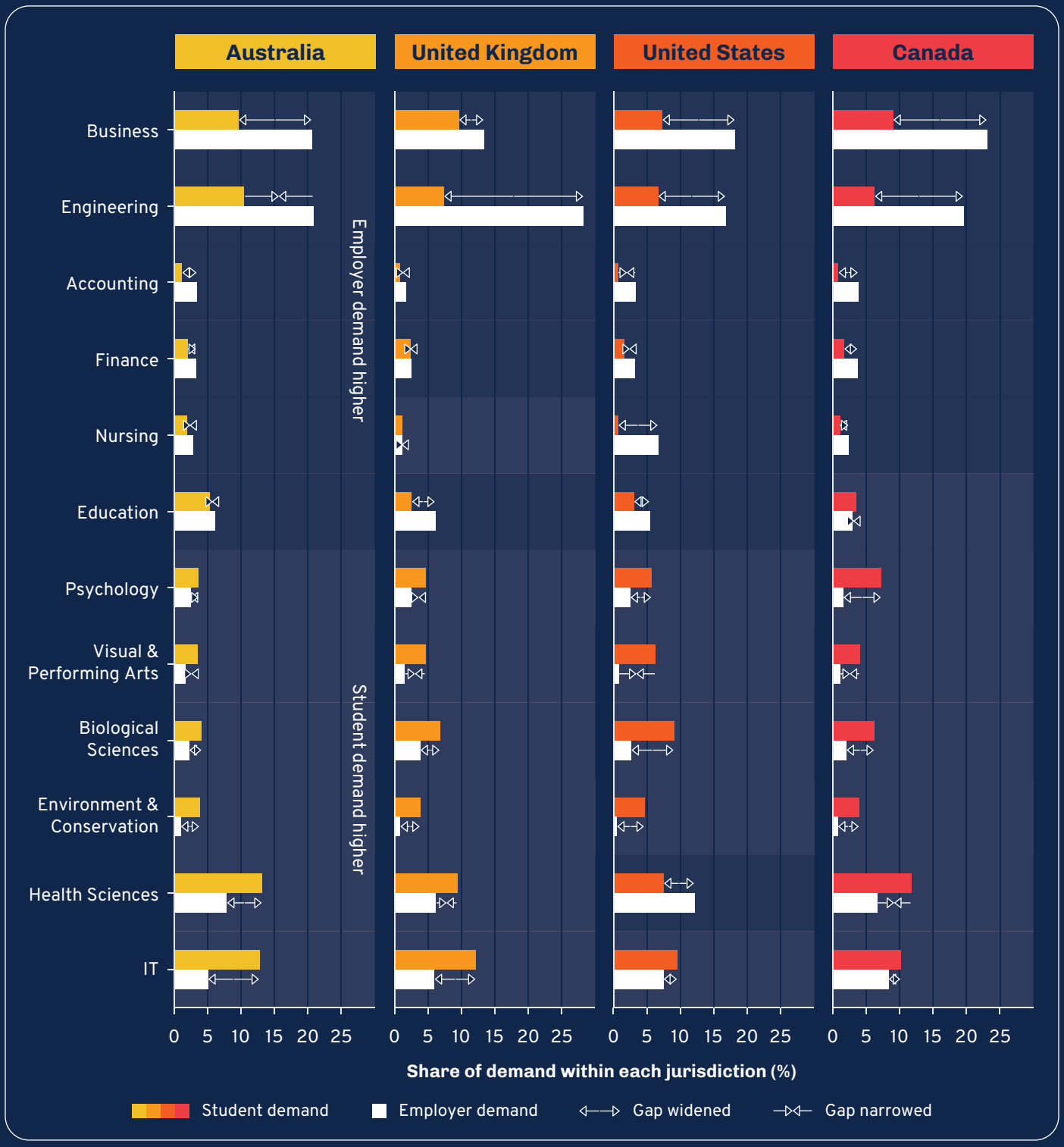
The skills mismatch facing modern economies is becoming more concentrated, more visible and harder to close. As workforce shortages persist in critical fields and graduate outcomes face increasing scrutiny, governments, employers and communities are asking universities to play a more active role in addressing the gap.

Our first *University as connector* report argued that universities can play a more valuable role in society by more tightly linking student demand for education with industry demand for skills. This new report shows where that role is even more important and where it matters most, specifically in large workforce pipelines where employer demand is growing faster than student interest and in disciplines where AI is changing the skills graduates need.

Figure 1 shows the scale of the opportunity. Business, engineering, health, digital technology, education and nursing account for a large share of employer demand across Australia, Canada, the United Kingdom and the United States. These fields matter because they are large, long-cycle and central to national capability.

Employer demand is outstripping student demand in Business and Engineering.

Figure 1 | Employer and student demand for top fields of education and country – 2025, arrows indicate whether gap has shrunk or grown since 2022[1]



Student demand is outstripping employer demand in Health Sciences and IT.

[1] The chart shows the ten fields with the largest gap between student and employer demand.
Source: Lightcast, Studyportals, Nous analysis.

Our updated analysis points to five critical findings

1 Business is the most consistent cross-market mismatch

Employer demand associated with business is growing or holding up across markets while student interest is flat or declining in several of them. Business-related roles can be entered from many disciplines, and commercial acumen is in demand across industries and occupations. The mismatch may therefore reflect broad demand for commercial, financial, operational and analytical capabilities, rather than a straightforward shortage of business graduates. This interpretation is consistent with Australian graduate outcomes data, which shows business graduates record employment outcomes closer to the system average than highly constrained workforce fields such as engineering, teaching and health.[2]

2 Engineering shortages remain unresolved

Engineering continues to sit at the centre of national infrastructure, energy, defence and technology priorities. Yet the data shows student interest weakening in some markets even as employer demand grows. This is the clearest example of why universities cannot rely on current enrolment demand alone. They need stronger pathways, better employer partnerships and more deliberate demand generation in shortage fields.

3 The relationship between computing demand and student interest is becoming more uneven

Across several markets, the share of employer demand associated with IT has declined while student interest has remained comparatively resilient, widening the mismatch. Part of this resilience may reflect growing student interest in AI-related programs classified within the broader computing field. Universities should avoid treating computing as a single growth category and align programs more closely with emerging areas of technical demand, including AI, cybersecurity and data, while strengthening graduates' transferable analytical and business capabilities.

4 AI is changing skills within disciplines, not just creating new disciplines

The main shift is not simply the growth of specialist AI jobs. Existing jobs in business, law, marketing, health, engineering and other fields now require different skills. Universities therefore must embed AI literacy, data capability and durable human skills across the curriculum, and not treat AI as a narrow technology specialisation. This shift is reflected in the recent growth of AI-related programs outside IT, including at universities in the United States and the United Kingdom.

5 The connector role extends beyond enrolment to employment

International students are an important part of global workforce pipelines, particularly in shortage fields. However, attracting students into high-demand disciplines does not guarantee that their skills will contribute to the workforce of the country where they study. Universities should look beyond recruitment and completion to how they support graduates into employment, whether they remain in the country, return home or move elsewhere. This means understanding graduate mobility and employment outcomes, building pathways into relevant industries across markets and supporting graduates' transition into the global workforce.

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[2] Australian Government, Department of Education, Graduate Outcomes Survey 2025, domestic undergraduate full-time employment rates by field of education. Graduate Outcomes Survey (GOS) data accessed July 2026.

Together, these findings point to a practical but challenging agenda for universities. They include:

- Rethinking how they generate student interest in large fields where employer demand is growing faster than student interest.
- Building more consequential industry partnerships in fields where student and employer demand are both rising.
- Creating more credible employment pathways in fields where student interest is high but employer demand is weaker.
- Embedding AI capability across the curriculum.
- Ensuring labour market, student demand and graduate outcomes data meaningfully shape portfolio, recruitment and curriculum decisions, rather than being outweighed by internal supply-side pressures.

Universities that respond early and make deliberate portfolio, curriculum and partnership choices will be better placed to demonstrate their contribution to national and international workforce needs. If universities do not make these changes, they risk weakening their social licence and prompting governments to become more directive about the outcomes expected of the sector.



Student and employer demand are diverging

Employer demand is largely outpacing student interest and the university response

The original *University as connector* report asked where student and employer demand were misaligned. This update focuses not only on where gaps exist, but whether they are widening or closing over time. Between 2022 and 2025, employer demand changed faster than student interest could keep pace.

Across Australia, Canada, the United Kingdom and the United States, three patterns stand out.

1 Employer demand gaps are widening in several of the largest fields

Employer demand for business, health and engineering graduates has continued to grow, while student interest in these fields has flattened or declined in most markets. Because these are among the highest-volume fields in both study and work, small divergences translate into large absolute shortfalls.

2 Student oversupply is building in a consistent cluster

Psychology, biological sciences, environmental fields and parts of the humanities appear repeatedly as areas where student interest is growing faster than employer demand, shifting the connector task from recruitment to employability. IT presents a more dynamic version of this challenge: student interest remains high relative to employer demand in several markets, while AI, cybersecurity, data and other specialised capabilities are rapidly reshaping the skills employers need.

3 A smaller set of fields is converging toward equilibrium

Education and finance in Australia, engineering, education and health in the United Kingdom, and health sciences and psychology in Canada all recorded growth in both employer demand and student interest.

Not all mismatches matter equally

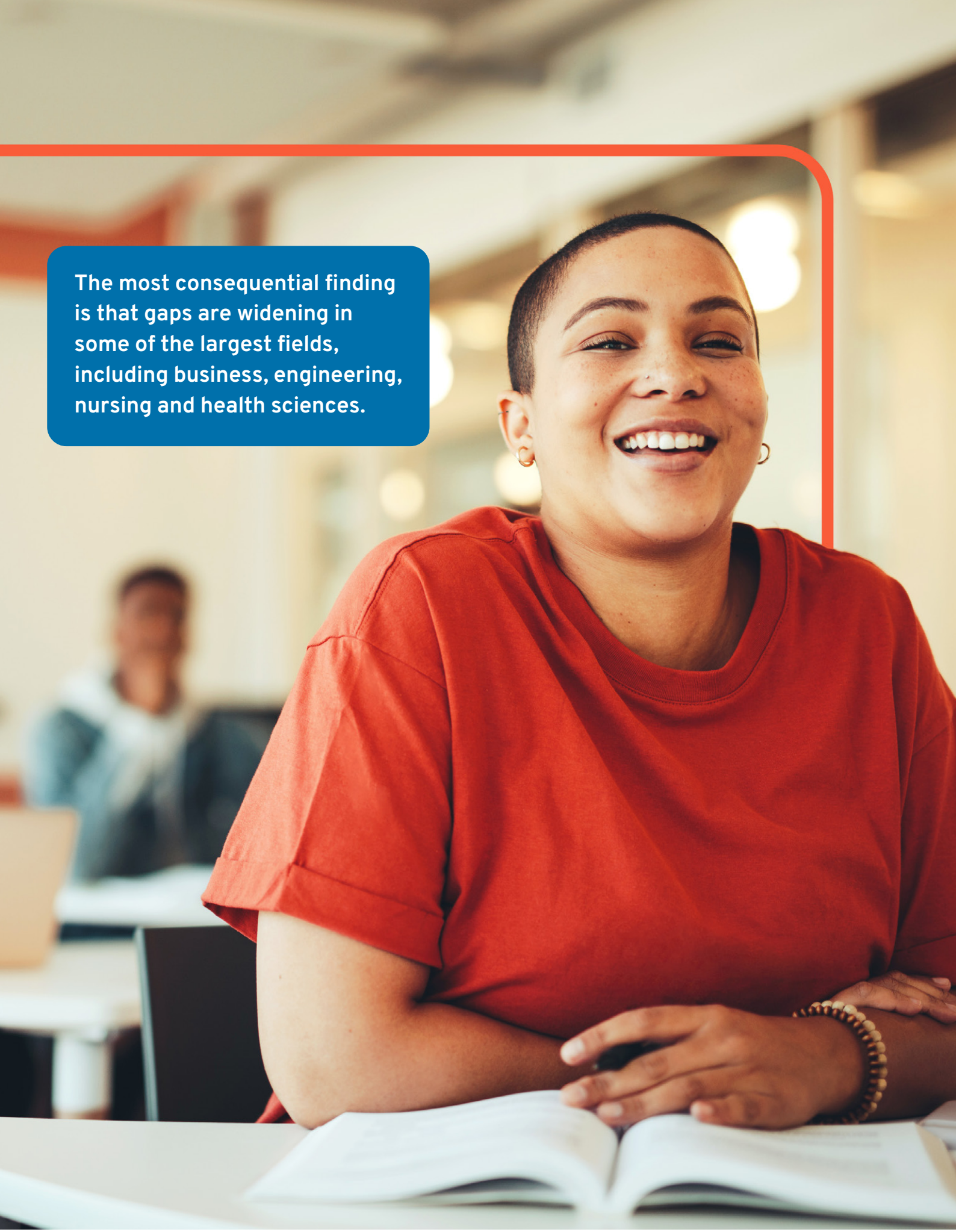
A gap in a large field creates a workforce problem. Business, engineering, nursing and health sciences sit near the top of employer demand in all four countries (Figure 1) and are also among the largest fields of study. That is why widening gaps in these fields matter most.

Engineering shows why scale matters. Australia is estimated to need around 150,000 additional engineers in the next decade to deliver committed energy, transport, defence and infrastructure programs,[3] yet Australian and Canadian data both show employer demand for engineering continuing to exceed student interest. While the gap has narrowed somewhat in Australia since 2022, significant workforce shortages remain. In the United States, nursing shows the same pattern at even greater scale: around 189,000 registered nurse openings are projected every year over the coming decade,[4] while student interest has remained comparatively flat. These are not marginal fields. They are large workforce pipelines where demand is growing faster than student interest.

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[3] Engineers Australia 2026, *Engineers Australia welcomes Federal Budget initiatives to bolster productivity, lift housing supply and slash red tape*. Accessed at: https://www.engineersaustralia.org.au/news-and-media/2026/05/engineers-australia-welcomes-federal-budget-initiatives-bolster-productivity.

[4] American Association of Colleges of Nursing 2026, *Nursing Workforce Fact Sheet*. Accessed at: https://www.aacnnursing.org/news-data/fact-sheets/nursing-workforce-fact-sheet.



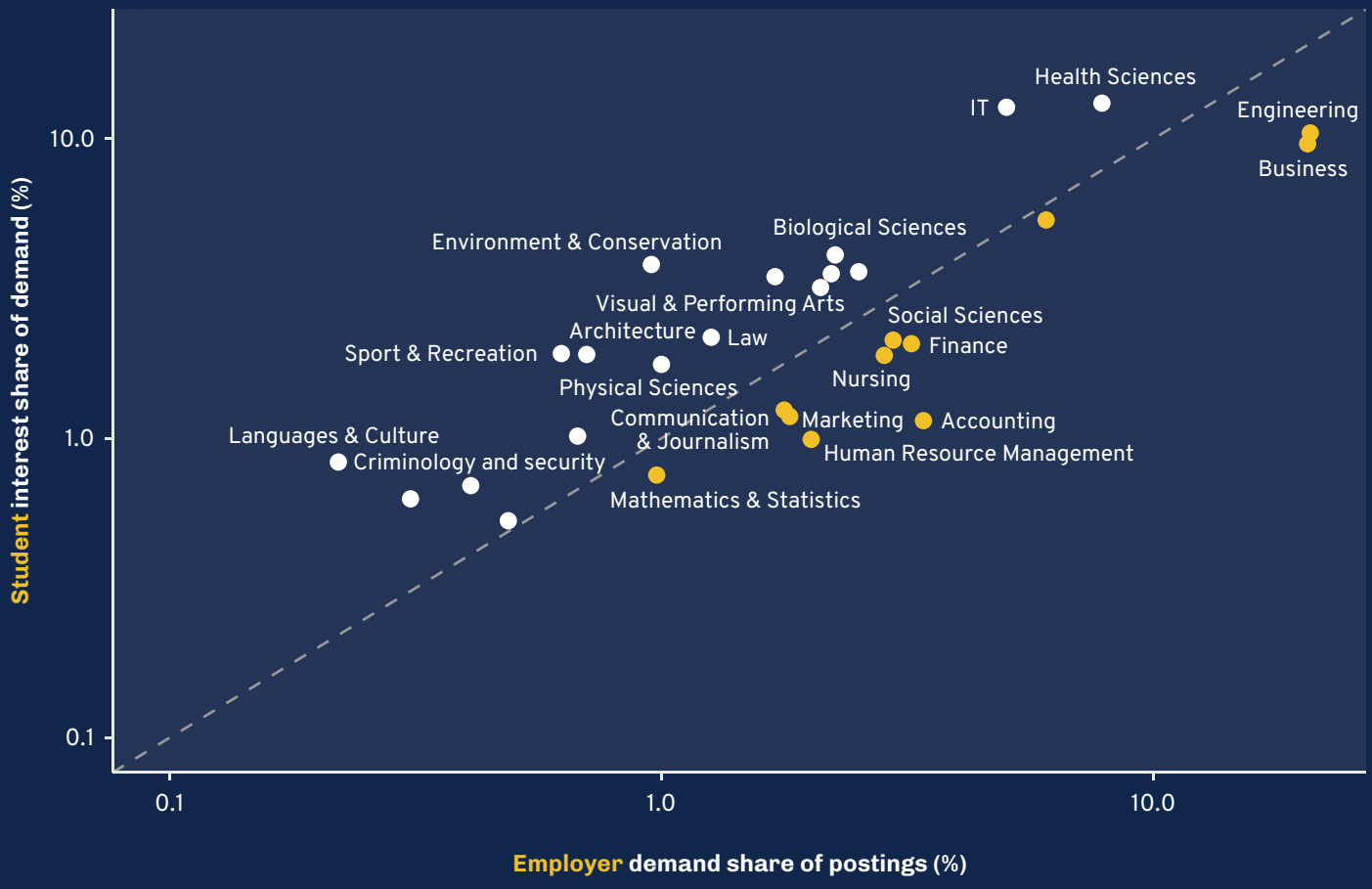
The most consequential finding is that gaps are widening in some of the largest fields, including business, engineering, nursing and health sciences.

Australia

Australia shows a reasonable case of alignment between employer demand and student interest in the 2025 data. Business and engineering are prominent in both employer demand and student interest, while nursing, education and accounting also appear on both sides of the market (Figure 2). Yet, the trend data is more concerning. Between 2022 and 2025, employer demand grew in business and health sciences while student interest declined. Because these are two of the largest fields in the system, this is the most material widening gap in the Australian data (Figure 3).

Business and health are becoming Australia's most significant workforce gaps.

Figure 2 | Australia – Industry demand vs student demand for study by field of education (2025)[5]



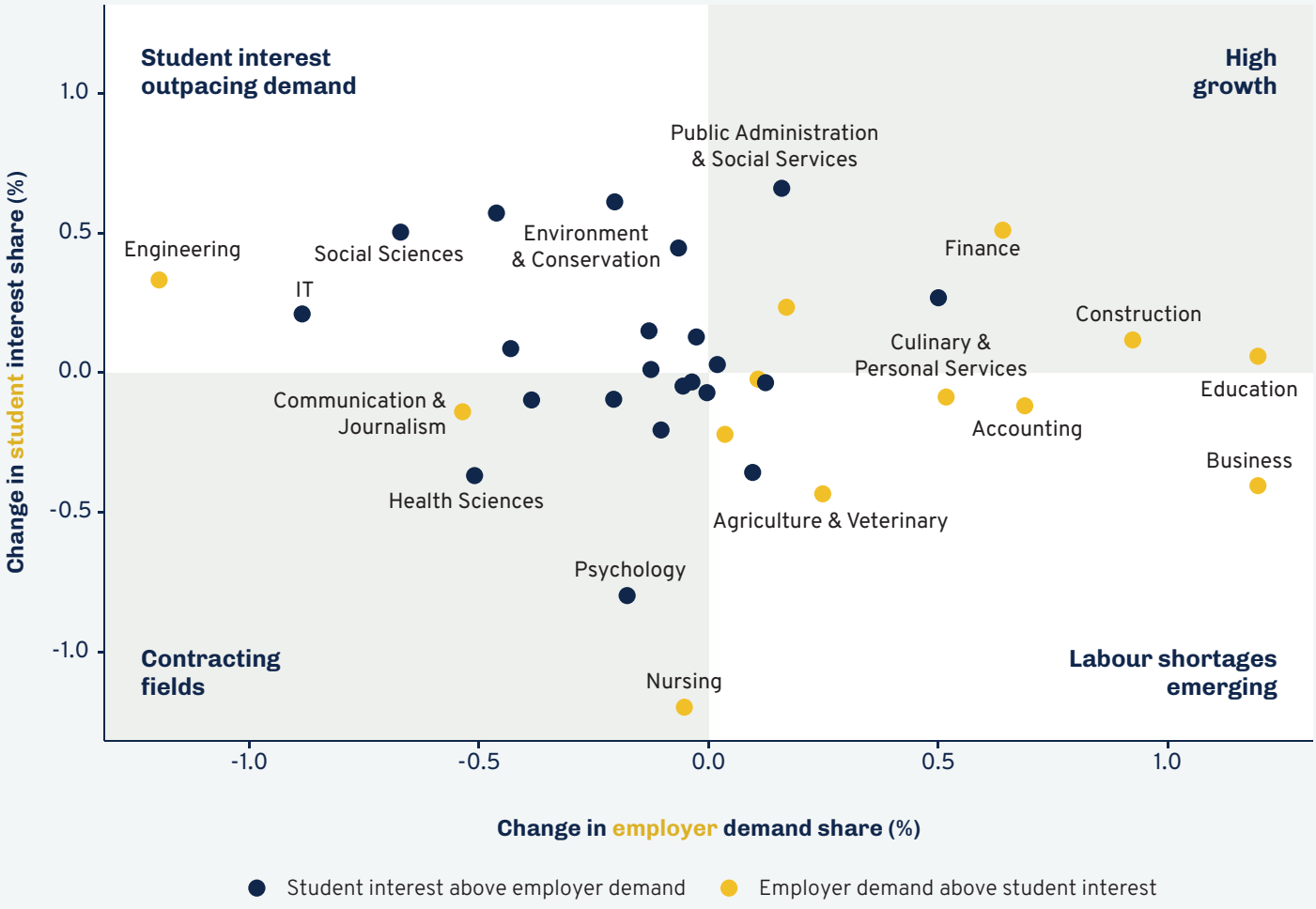
[5] Student demand data sourced from Studyportals based on web hits for study in each country and field of education. Industry demand data based on Lightcast data on job advertisements that reference qualification requirements. Fields of education may be underrepresented for some industries in Lightcast data due to local industry job advertisement practices. Nous analysis of joined Studyportals and Lightcast datasets.

The converging fields are finance, education, public administration and social services, where both student interest and employer demand rose. These fields give universities a clearer basis for selective growth, stronger pathways and deeper employer partnerships.

Engineering, IT, and environment and conservation present a more nuanced picture. In Australia, engineering remains a field where employer demand exceeds student interest. However, between 2022 and 2025 the gap narrowed somewhat as engineering represented a smaller share of total employer demand growth than several other fields. This is occurring despite continued workforce shortages, suggesting that the central issue may be alignment between student demand, specialisations and the capabilities employers require, rather than an absence of overall workforce need. Universities should therefore understand which engineering specialisations, roles and skills are driving future demand and adjust recruitment, curriculum and industry partnerships accordingly.

Australia's biggest future shortages are emerging in business and education.

Figure 3 | Australia – Change in share of industry demand vs student demand by field of education (2022-25)

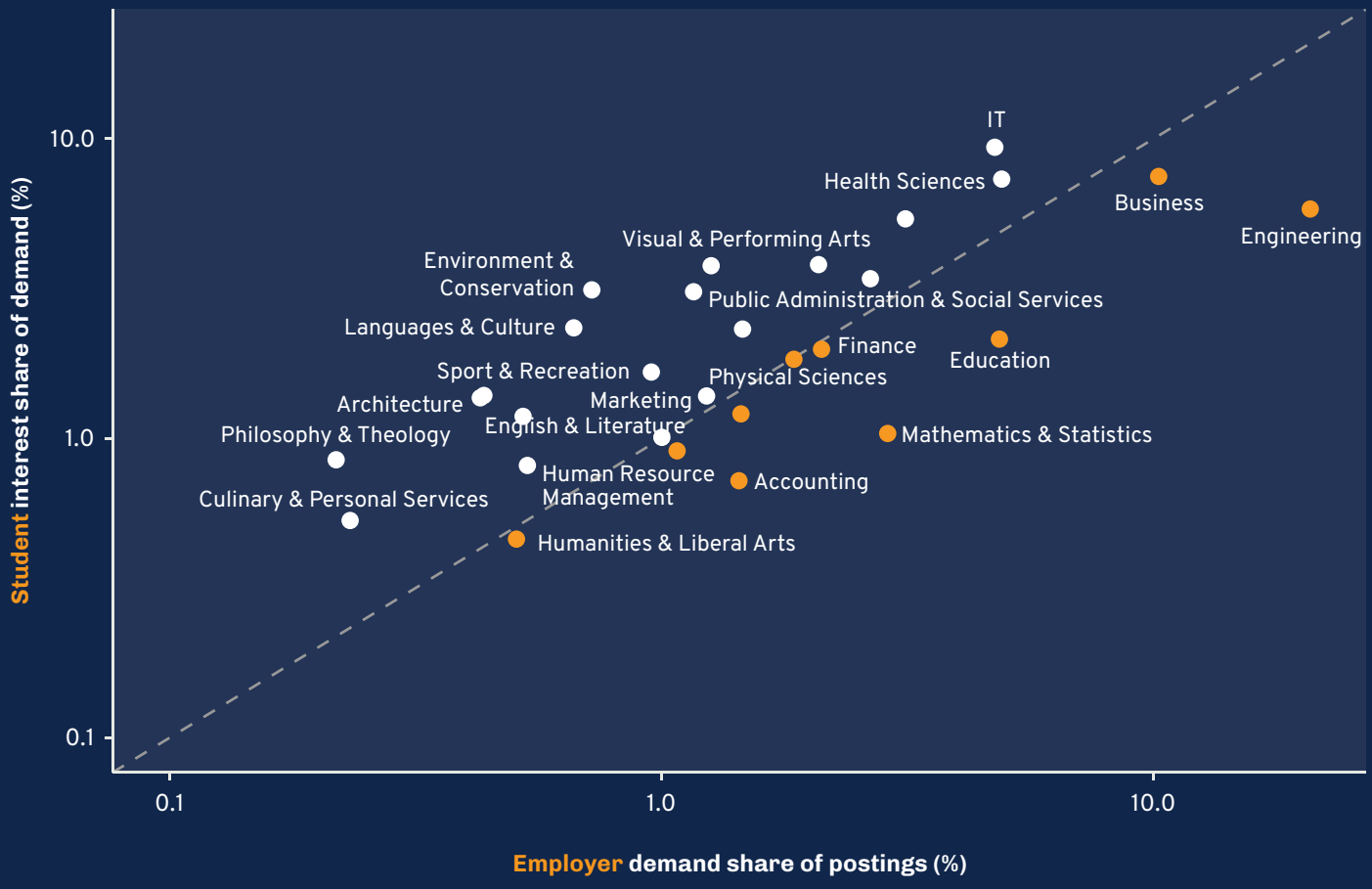


United Kingdom

The United Kingdom is the clearest case of alignment. Engineering, education and health sciences all recorded growth in both employer demand and student interest. This is consistent with national workforce pressures in health, teaching and the technical occupations underpinning infrastructure and the net-zero transition (Figure 4 and Figure 5). For United Kingdom institutions, these fields offer opportunities to expand enrolments and deepen industry partnerships while demand is rising on both sides.

Business and health are the UK's strongest growth opportunities.

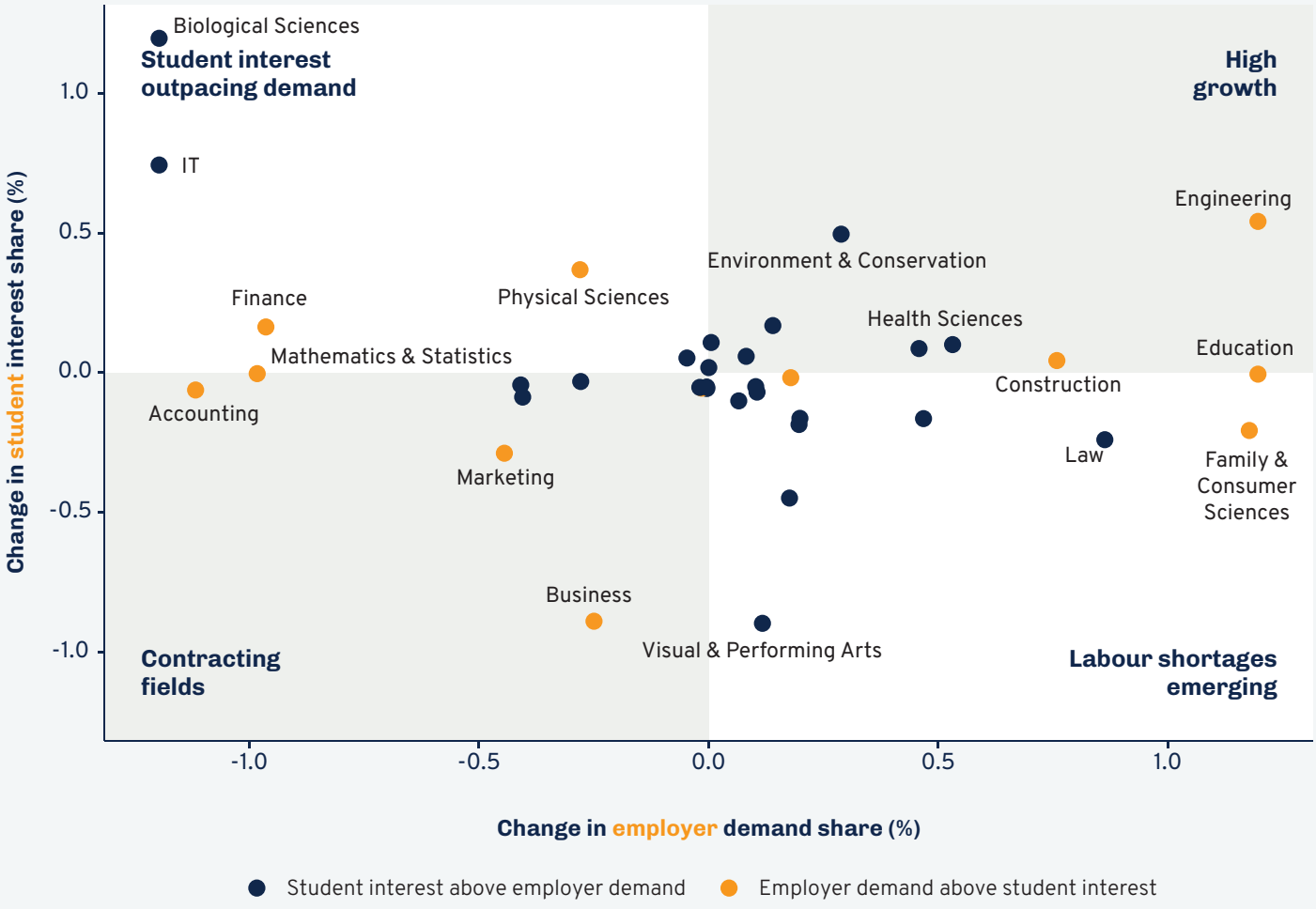
Figure 4 | United Kingdom – Industry demand vs student demand for study by field of education (2025)



The widening gap is business where employer demand continued to grow while student interest flattened, mirroring the Australian and United States pattern and making business the most consistent cross-market divergence in the dataset. On the other side of the equation, oversupply pressure is concentrated in biological sciences, IT, physical sciences and environment-related fields, where student interest has grown well ahead of employer demand. In the context of ongoing concern about student debt in the United Kingdom, these mismatches may add to further scrutiny of whether higher education is delivering sufficient value for students.

The UK is strengthening workforce pipelines in several priority professions (e.g. engineering).

Figure 5 | United Kingdom – Change in share of industry demand vs student demand by field of education (2022-25)

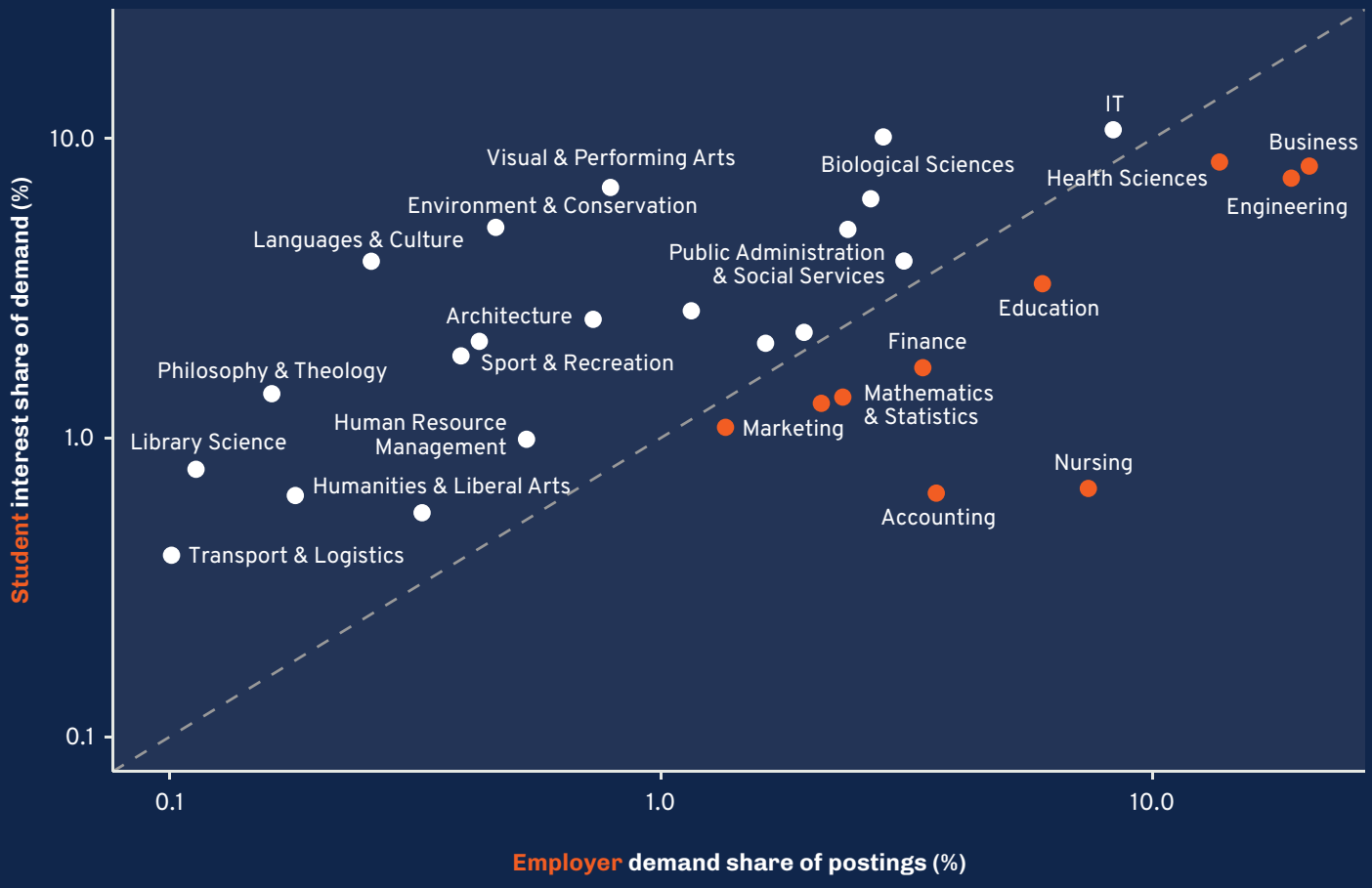


United States

In the United States, employer demand already exceeds student interest in several of the largest workforce fields: nursing, accounting, finance and engineering (Figure 6). The trend data sharpens the picture where the strongest growth in employer demand is in health sciences and nursing, while student interest in both has remained broadly stable (Figure 7). With demand compounding on an ageing population and persistent health-system shortages, this is the widest and most material gap in the United States data, and it is widening from an already-short position.

Nursing is the most significant workforce shortage in the US.

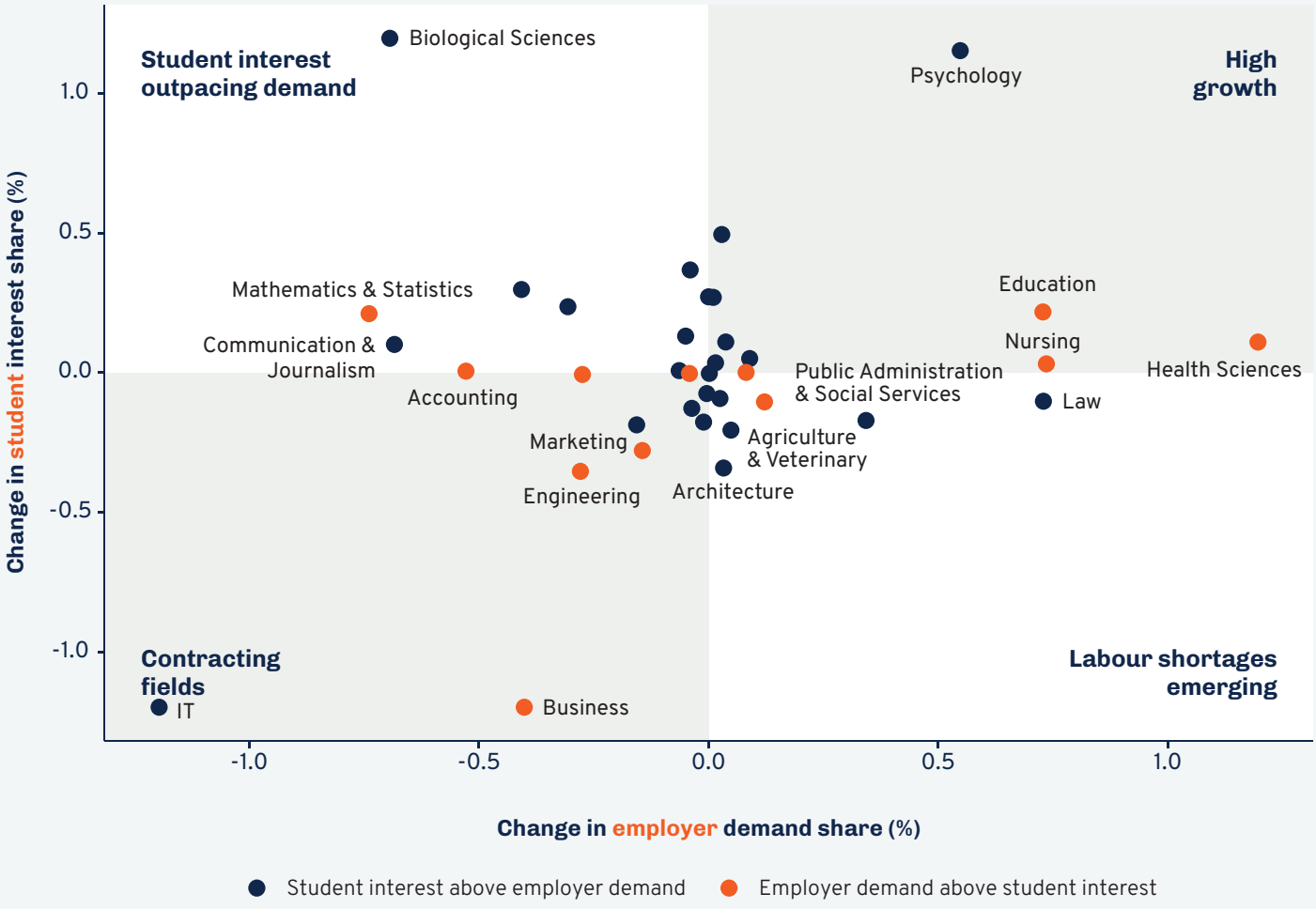
Figure 6 | United States – Industry demand vs student demand for study by field of education (2025)



Business shows the same divergence seen in Australia and the United Kingdom: sustained employer demand against a declining share of student interest. Engineering follows a similar pattern in the United States data. On the other side of the ledger, student interest in psychology, English and literature, and biological sciences is growing faster than employer demand, while IT has contracted on both sides of the market. Growing interest in psychology and biological sciences may partly reflect interest in wellbeing and health-adjacent careers, giving universities an opportunity to build clearer pathways from these fields into health-related roles.

Health and nursing shortages are continuing to widen.

Figure 7 | United States – Change in share of industry demand vs student demand by field of education (2022-25)

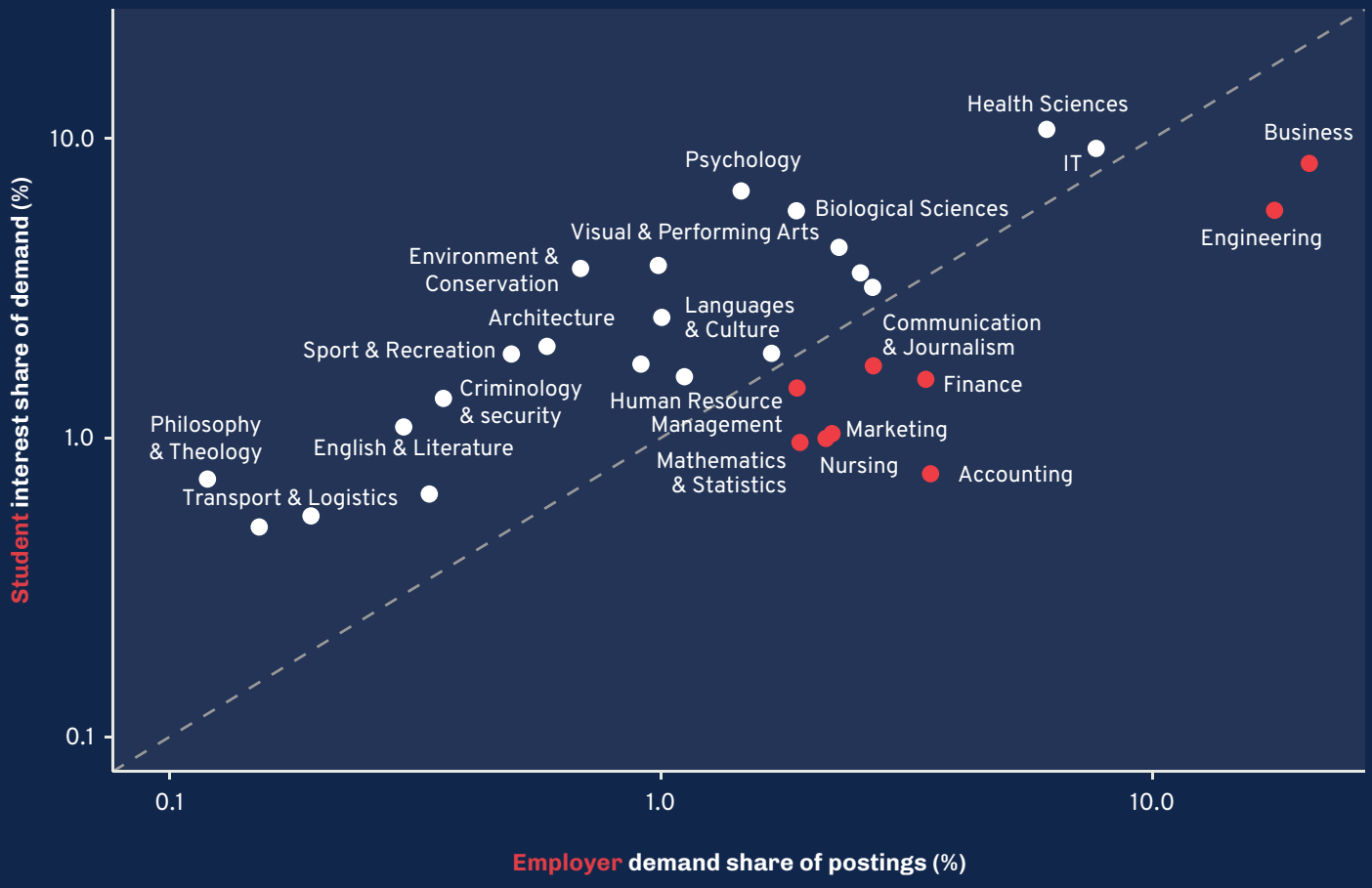


Canada

Canada shows the broadest growth in employer demand across the four countries, with increases in engineering, business, health sciences and finance. Health sciences and psychology stand out as genuine convergence: employer demand and student interest rising together, supported by population growth and rising demand for health and mental-health services (Figure 8 and Figure 9).

Engineering, business and health are driving Canada's workforce demand.

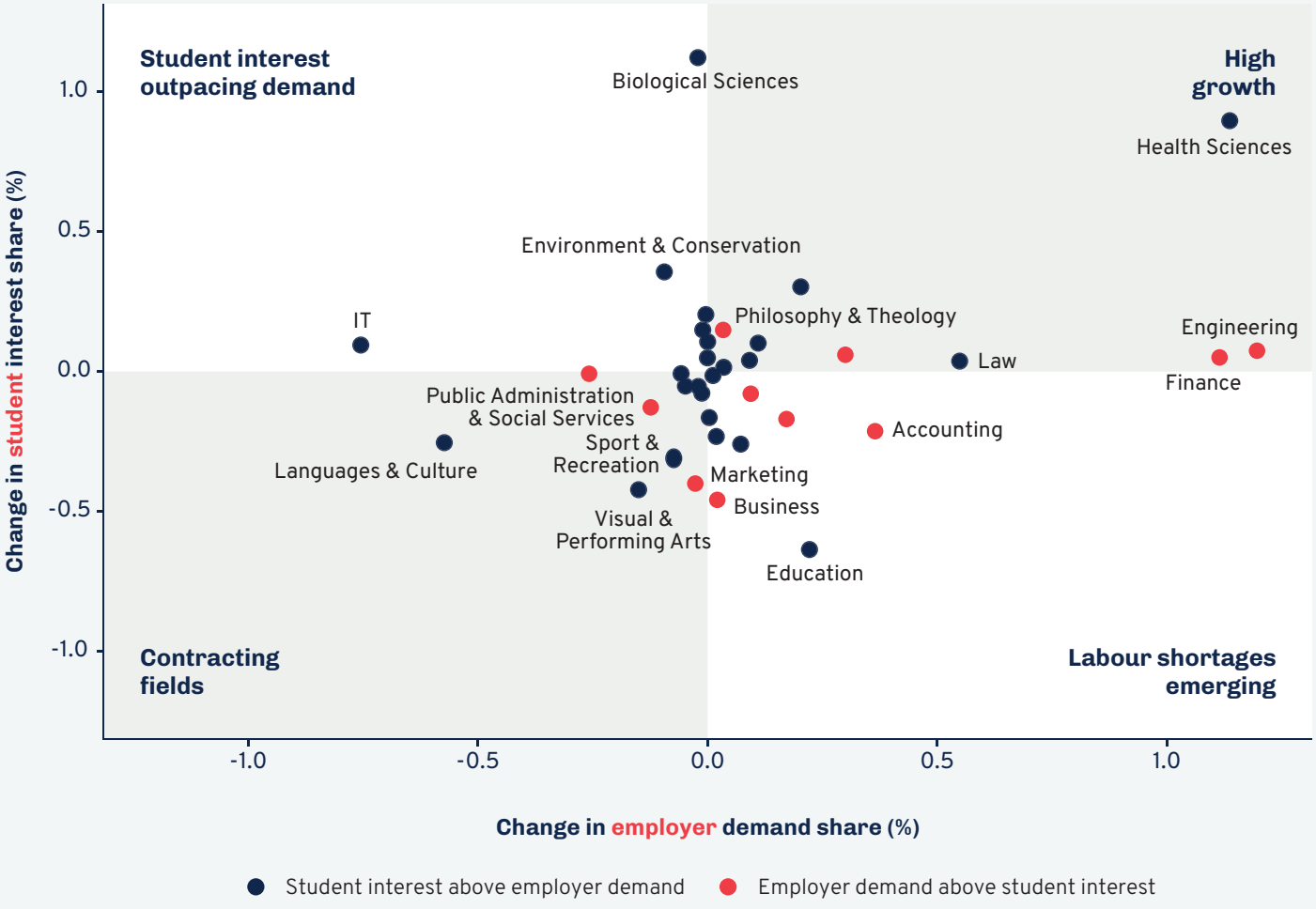
Figure 8 | Canada – Industry demand vs student demand for study by field of education (2025)



The concern is engineering and to a lesser extent business. Both recorded growing employer demand alongside declining student interest, the same widening seen in Australia, in the market where overall demand growth is strongest. If the pattern persists, Canada risks building tomorrow's infrastructure and energy workforce on a shrinking domestic workforce pipeline. Biological sciences, mathematics and statistics, communication and journalism, and IT carry the oversupply-risk profile, with student interest holding up or growing as employer demand weakens.

Engineering is becoming Canada's most significant emerging workforce risk.

Figure 9 | Canada – Change in share of industry demand vs student demand by field of education (2022-25)



AI skills are becoming a portfolio-wide capability, not a standalone discipline

AI changes what universities need to prepare students for. Universities have long prepared students for broad futures, whether through professional pathways, disciplinary knowledge or transferable capabilities. They now need to foster the capabilities and mindset for lifelong learning, enabling graduates to adapt to changing demands in work and society from the outset of their careers and throughout their working lives.

AI demand is spreading across the labour market

Our evidence suggests this shift is happening quickly. Skills in the average job are changing faster than enrolment patterns can respond and AI is a major driver. Demand for AI capability is no longer limited to technology roles. Employers increasingly expect AI literacy in fields such as law, marketing, communications, business and health.

AI-related work falls into three broad categories:

1. **AI-specialist roles**, where building, deploying or maintaining AI systems is core to the role (for example, machine learning engineers, data scientists and advanced analytics specialists).
2. **AI-augmented roles**, where AI tools are increasingly embedded into professional workflows (for example, in business, law, marketing, health and engineering).
3. **AI-enabled generalist** work, where a wide range of knowledge workers are expected to use AI tools productively as part of everyday tasks.

Specialist AI roles are growing quickly, but the bigger shift is the emergence of AI as a core capability across professional work. The curriculum challenge is therefore not only to prepare students for AI-specific careers, but to ensure graduates across disciplines have the AI skills and knowledge required to work effectively in an AI-enabled world.

Our analysis of Australian postings shows how widely AI demand has spread (Figure 10). Between 2022 and 2025, technical fields still led in intensity: 27.8 per cent of postings linked to mathematics and statistics, and 21.2 per cent linked to IT requested at least one AI skill by 2025. But the fastest growth occurred in knowledge- and language-intensive fields outside the technical core. For example, law reached 15.7 per cent of postings, information management reached[6] 15.2 per cent, languages and culture 6.6 per cent, marketing 5.4 per cent, humanities and liberal arts 3 per cent, and communication and journalism 4.8 per cent.

This pattern is visible beyond Australia. Similar increases in AI-related skill demand can be observed across Australia, the United Kingdom, the United States and Canada. These patterns are consistent with broader labour market signals showing the rapid diffusion of generative AI into professional work.

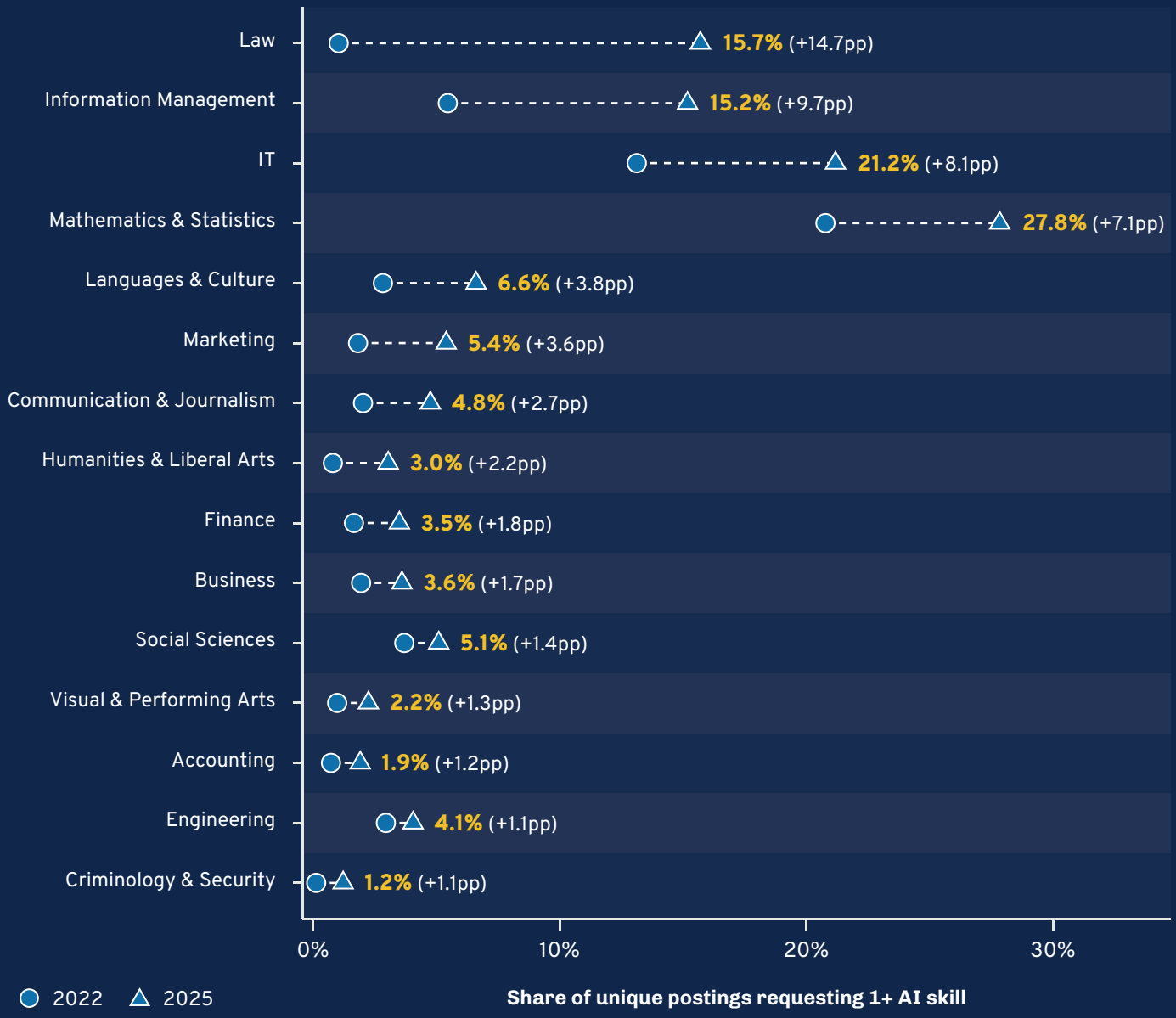
AI is increasing the value of human capabilities

One of the most significant findings from our analysis is that AI is not narrowing employer expectations of graduates. Labour-market data shows that employers are asking for AI capability and human capabilities at the same time. In the World Economic Forum's 2025 employer survey, AI and big data are among the fastest-growing skills to 2030. But analytical thinking remains the most sought-after core skill, and creative thinking, resilience, adaptability, curiosity and lifelong learning are also among the fastest-rising skills. Employers expect around two-fifths of core skills to change by 2030. The skills they value most combine technological fluency with judgement, creativity and the capacity to keep learning.

The same pattern appears in AI-enabled roles. The most frequently requested skills alongside AI include communication, management, research, writing and problem solving. AI capability is most valuable when it is paired with domain expertise and human judgement.

[6] Corresponds to the Library Science CIP2 category.

Figure 10 | Australia – Fields of education with the largest increases in AI skill demand



Universities should embed AI across the curriculum, not isolate it

For universities, AI strategy should not sit only in computer science per se. Technical AI programs will remain important, particularly in fields with deep technical demand. But the larger opportunity is to ensure graduates in every field understand how AI is changing the work they are preparing to enter. That means pairing AI literacy and data capability with communication, management, research, writing, problem solving and judgement.

The question is no longer whether universities should teach AI. It is whether every graduate can use AI effectively and bring the judgement, creativity and communication skills that make it useful.

AI skill demand increased most in these fields between 2022 and 2025.

Graduate pathways extend the connector role beyond enrolment to employment

The connector role does not end when universities align student demand with employer demand. Graduates must also navigate across countries and into industries, and those pathways differ by field and cohort. Yet, universities cannot determine where every graduate will work. They can, however, make pathways more visible, build more defined industry relationships suited to different fields and ensure students develop capabilities that can travel across roles and markets. This extends the connector role of a university from aligning demand to enabling the transition into work.

Business provides a useful illustration. Across several countries, employer demand associated with business capabilities continues to exceed student demand, yet Australian graduate outcomes data shows business graduates achieve employment outcomes closer to the system average than graduates in professions such as teaching, engineering and health.[7] This highlights an important distinction: workforce demand and graduate outcomes are not the same thing. Business graduates enter a broad and highly competitive labour market with multiple pathways and occupational destinations, rather than the more structured graduate-to-profession routes seen in many regulated fields. The challenge for universities is therefore not only supplying graduates but helping them translate their qualifications into employment through stronger industry connections, work-integrated learning and clearer career pathways.

[7] Australian Government, Department of Education, Graduate Outcomes Survey 2025, domestic undergraduate full-time employment rates by field of education. Graduate Outcomes Survey (GOS) data accessed July 2026.



International graduates take their skills across borders

Aligning student demand with workforce need is only part of the connector role. International students make up a substantial share of enrolments in major study destinations, making them an important part of workforce pipelines. But recruiting students into shortage fields does not guarantee their skills will remain in the country where they study. The connector role must therefore extend beyond enrolment to employment and graduate mobility.

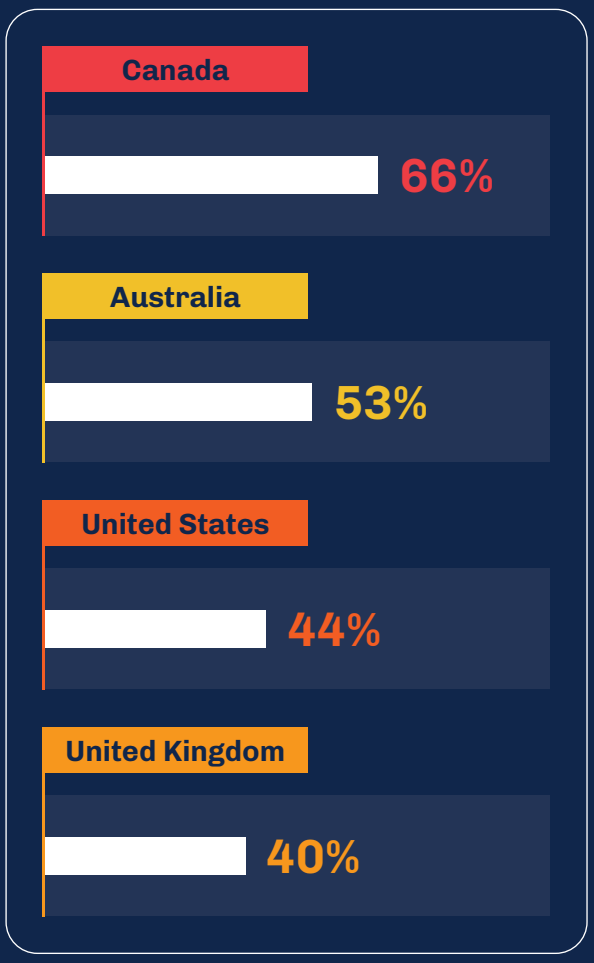
The latest research by Studyportals and Cambridge IELTS explores how students navigate the transition from education to employment.

The Studyportals Graduate Outcome Dataset draws on more than 550,000 international graduate outcomes since 2018. It provides insights into graduate employment and mobility outcomes and enables like-for-like comparisons across countries and disciplines. International graduates broadly follow one of three geographic pathways. Staying graduates remain in the country where they studied, homecoming graduates return to their country of origin and nomad graduates move to a third country.

These pathways matter because international students can make an important contribution to workforce pipelines, but student demand crosses borders while workforce needs are generally understood nationally. Their contribution therefore depends not only on what and where they study, but on where they live and work after graduation.

Major study destinations also retain different proportions of their international graduates. Canada retains a larger share than the other destinations included in the analysis, while the United Kingdom, United States and Australia sit closer to the global average. Attracting international students and retaining their skills are therefore related but distinct outcomes.

Figure 11 | Top destinations by share of staying graduates



Graduates who return home or move elsewhere may still achieve strong outcomes and contribute skills to another labour market. However, universities need to understand where graduates go and prepare them for the different employment pathways they may pursue.

The choices universities need to make

The original *University as connector* report argued that universities sit between student demand and employer demand. The updated data shows what this means in practice. Large fields are drifting out of alignment, AI is changing the capabilities required within disciplines and international graduates move through global workforce pathways that extend beyond the country where they study. Universities therefore need to make clear choices about what to teach, where to focus recruitment effort and how to support students into employment.

CHOICE 1:

Where to grow, hold and reshape

The mismatch patterns in section 2 point to a more deliberate portfolio approach. Fields where widening gaps affect large numbers of students and jobs such as business, engineering, nursing and health sciences, warrant expanded capacity, targeted recruitment and protected investment, even where current student demand is soft. Fields where student and employer demand are both rising warrant near-term growth while conditions are favourable. Where student interest exceeds employer demand, the priority is not necessarily to reduce intake, but to stop assuming enrolment demand alone justifies expansion. Every institution should be clear on which fields sit in each category and what response is underway.

CHOICE 2:

Where to strengthen pathways into employment

Industry alignment should vary by market context. In widening-gap fields, universities and employers need to build the pipeline together through co-funded places, employer-sponsored pathways, guaranteed placements and shared recruitment effort. Where demand is rising on both sides, the priority is to establish co-designed programs and preferred partnerships early. Where student interest exceeds labour market demand, the focus shifts to employability, including stronger work-integrated learning, clearer pathways and more explicit signalling of transferable skills.

Business illustrates why effective pathways matter. Across several countries, employer demand linked to business capabilities continues to grow despite more moderate graduate employment outcomes. The challenge is often less about aggregate demand than about how effectively universities help graduates convert capability into employment. For international students, these pathways should support transitions into relevant employment whether graduates remain in the country of study, return home or move elsewhere.

CHOICE 3:

How to respond to change within disciplines

Section 3 showed that AI demand is spreading across most fields, alongside rising demand for analytical, creative and adaptive skills. This creates a clear choice. Universities can introduce standalone AI programs, which are visible but limited in reach, or embed AI literacy, data capability and durable human skills across the portfolio. The evidence favours the second approach, with specialist programs reserved for areas of deep technical demand. Treating AI as a new discipline alone will miss most of the change in the labour market.

These choices are hard because universities change slowly

These choices are difficult because universities operate under constraints that make rapid change challenging. Students entering today will graduate into labour markets several years from now, meaning decisions must be based on emerging trends rather than current shortages. Portfolio changes are also shaped by governance processes, workforce planning and academic autonomy, which can slow adaptation. At the same time, universities balance workforce preparation with broader educational, research and public-value objectives. The result is a series of trade-offs: how strongly to align portfolios with labour market demand, when to update programs versus using more flexible responses and how to sustain disciplines that deliver significant societal value even where employer demand is weaker. Making these trade-offs explicit and revisiting them regularly helps ensure investment decisions reflect both workforce needs and institutional priorities.



Conclusion:
The connector role is no longer optional

The updated analysis confirms the central insight of the original *University as connector* report: universities play a critical role in linking student demand with workforce need. That role is becoming more important as labour markets evolve more quickly, skill requirements change and governments place greater emphasis on workforce outcomes.

The most significant finding is that some of the largest and most important disciplines, including business, engineering, nursing and health sciences show widening gaps between employer demand and student interest. These are not isolated shortages. They affect large numbers of students, employers and communities, and sit at the centre of national workforce systems.

Universities can have the greatest impact by focusing effort where gaps are largest, volumes are highest and alignment is deteriorating. This means growing or protecting capacity in shortage fields, improving employment pathways where student demand exceeds labour market demand, and embedding AI literacy, data capability and durable human skills across the curriculum. It also means looking beyond enrolment to how graduates enter the workforce, including international students who remain in the country of study, return home or move elsewhere. Notably, this does not diminish universities' broader role as custodians and creators of knowledge, including in disciplines whose cultural, civic and intellectual value cannot be measured through immediate labour-market demand alone.

Universities that respond early will be better placed to improve graduate outcomes, build deeper industry relationships and support future workforce needs. The challenge is not simply to understand labour market demand, but to use that understanding to guide investment, partnerships and portfolio decisions. The institutions that do so most effectively will be best positioned to fulfil their role as connectors between learning, opportunity and work.



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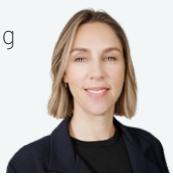
Robert is responsible for integrating new datasets and developing advanced products with Studyportals' portfolio, including data preparation, visualisation, and machine learning applications. He joined Studyportals as part of a project on forecasting international student enrolments and subsequently worked as an Analytics Engineer, bridging data engineering and business analysis.



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We acknowledge the use of Lightcast labour market data in informing the analysis presented throughout this report and appreciate their contribution to the research.