

Post-16 opportunities in Singapore and New Zealand- **Pearleen Arora**

My research is based on post-16 opportunities in Singapore and New Zealand. This covers tertiary education, degree apprenticeship developments and other opportunities available to students. In this investigation the aim is to understand different education opportunities available to students and compare how education could be developed to promote growth. I decided to look into Singapore due to its diversity in education and the cultural influences that Singapore has on their universities. I also looked into New Zealand to understand their post 16 opportunities and the rich diversity available in New Zealand and it affects their education opportunities.

Methodology

Majority of the data used was from pre-existing data that Edge has collected through online meetings and sessions with New Zealand and Singapore. This data was collected via connecting with universities and different vocational programmes available in Singapore and New Zealand to understand the different post-16 opportunities available to students. The report consists of both primary and secondary data as well as quantitative and qualitative data.

Post-16 opportunities in education in Singapore

Higher education approaches

Singapore has an experimental university (SUSS) which is driven by social impact. It is a local, government-funded autonomous university in Singapore that provides lifelong and industry-relevant tertiary education to school leavers and working adults. SUSS is one of Singapore's six national universities and its mission is to provide lifelong education that equips learners to serve society. SUSS provides an applied education that targets both fresh school leavers and adult learners.¹ This fits into Singapore's wider skills system to display and apply new pathways students can take in the university through a variety of different learning approaches. SUSS is a university that is based on Social Sciences. The reason why SUSS may be considered as an experimental university is due to the different education opportunities available. One is Lifelong Learning where it is based on automation and developing tech adoption to allow students to work more efficiently based on their course and skills development. Furthermore, SUSS can be approached as experimental due to their flexible learning modes, applied learning, social emphasis and inclusive education.

The university is highly focused on a curriculum which is experiential and is community focused, it plays a huge role in social improvement and growth. This also plays a huge role in their culture where their primary measures of success are not just about employability statistics, graduate job placements or entry-level salaries, but social impact.²

Student life in their first year consists of five mandatory experiential modules. The first is a credit-bearing experiential team building programme to develop foundational aptitudes in self-awareness, team effectiveness, and community-mindedness. The second is a minimum 24 weeks 1-to-1 career-mentoring programme. The third is an overseas experience focused in ASEAN (associations of southeast asian nations) , China and India. The fourth is

¹ [Singapore University of Social Sciences | SUSS](#)

² <https://www.edge.co.uk/news-and-events/blogs/singapore-exploring-novel-approaches-to-higher-education/>

service-learning and community engagement in sectors like sustainability, diversity and inclusion, etc. Finally, students must develop an e-portfolio. Combined, these approaches aim to create well-rounded graduates broadly prepared for an unpredictable future.

Additionally, SUSS career assessment involves six months of mandatory training with a specialist mentor in each student's study area. Mentors are not academics but professionals who have transferred into higher education from industry. They train students to search for jobs, write cover letters, produce resumes and build digital portfolios. Students also receive mentoring in digital and data literacy, sustainable development, entrepreneurial mindset and ethics in Artificial Intelligence. An expert assessor evaluates them on analytical, communication and presentation skills. Subsequently, their grade is listed on a transcript for future employers. While the programme is not credit-bearing, completion is required to graduate.³

To beat cultural indifference students are placed on a three-week mandatory placement where students have to travel to a different country, particularly ASEAN (Association of Southeast Asian Nations), China and India. This also pushes students from their comfort zone and the university also has social impact programmes in which students collaborate with NGOs (Non-governmental Organisations) overseas.

Teaching data analytics to arts students

The national university of Singapore offers a distinctively Asian and global experience that is grounded in maximising the potential of students and their future-readiness, and broad-based research excellence that enables beneficial translation. NUS is also highly regarded for the hallmark rigour and breadth of its academic programmes, innovative entrepreneurship education, and experiential learning. Learning across faculties and disciplines is highly valued and practised, with other cross-disciplinary initiatives available for a well-rounded knowledge base and transferable skills.⁴ This university has been looked into closely due to its innovative ideas to educate students..

The National University of Singapore (NUS) recently introduced computational thinking as a core requirement for all students, regardless of discipline, to equip students with problem-solving skills for the 21st century. Jonathan now teaches arts and social science students a course called, "Computational Reasoning," an interdisciplinary module teaching coding and data analytics, as well as philosophical critical thinking skills to be effective problem-solvers.

³<https://www.edge.co.uk/news-and-events/blogs/singapore-exploring-novel-approaches-to-higher-education/>

⁴ [National University of Singapore \(NUS\) : Rankings, Fees & Courses Details | Top Universities](#)

This is not without its challenges. Students come into the module with high levels of anxieties, worried that their unfamiliarity with the subject will affect their grades. This presents psychological barriers to effective learning. His top priority is to alleviate anxiety and mental barriers to this technical subject with a combination of interactivity and humour. In Jonathan's words: "It's hard to feel anxious when you're laughing!" His techniques include humorous, interactive stories that teach the practical processes behind data analytics, quizzes and group projects that focus on real-world scenarios (for example, how to devise classification models to determine which hospital staff should receive a vaccine against a virus). Similarly, students learn to code by developing a maze game in Excel. While this teaches the same mechanics as other algorithms, it does so in a more relatable way. Jonathan's focus on humour and social solutions act as a distraction from the more 'technical' aspects of the learning, with students feeling both a sense of accomplishment and pride in the works they produce.⁵

Skills future

Skills future is a national movement in Singapore that provides opportunities for Singaporeans to develop their fullest potential in life. This is a big movement in Singapore and is being used by many Singaporeans for career development. As a developed country with advancing ideas, Skills Future is advancing to be a great investment for Singapore allowing new workers consistently with the changing market. Singapore is emerging technology such as AI and cybersecurity are creating new demands and new jobs and opportunities for workers. The government, industries and educators are collaborating to provide skilling ecosystems and platforms for learners to acquire future skills. Skills future also develops future skills including soft skills, such as reasoning, ideation, and problem-solving, that enable workers to adapt, innovate, and collaborate. Future skills are not only essential for career success, but also for personal growth, lifelong learning, and social impact.

The main aims of SkillsFuture are:

- To help individuals make well-informed decisions, whether they are in education, training or careers.
- To provide an integrated high quality system of education and training that responds to constantly evolving needs.
- To promote employer recognition and career development based on skills and mastery.
- To foster a culture of lifelong learning for everyone.⁶

Skills future is based on projects assigned to students based on skills in their desired sector to develop. The entire system works based on a supply driven model- based on how well students respond to different parts of their modules, they change and adapt depending on their own learning style. Students are required to complete these projects and this measures and develops critical core skills (communication skills, problem- solving skills, numerical skills etc) for students to apply these skills in a workforce. These projects are set to complete in given hours and this is done in both school and work systems.

Skills future is a movement that provides opportunities for all Singaporeans to develop their fullest potential at different stages of their life. "Whether you are in your career stage, whether it's a student, mid-career or an experienced worker- you can gain a wealth of

⁵ [Singapore: Exploring novel approaches to Higher Education | Edge Foundation](#)

⁶ Rsa_wsuk_singapore-case-study-07-11-19- cited with permission

resources to help you attain your skills mastery.”⁷ Skills future is based on always learning and is a huge part of Singaporean culture. Skills futures main focus is based on career building and development and can be picked up whenever to allow people to have flexibility and be more likely to pick it up.

“Skills mastery isn’t just about paper qualification or traditional definitions of success, Instead, it is about continually striving towards excellence through knowledge, application and experience.” It’s about changing the culture about learning to allow more students to develop their skills rather than stick to one approach in a competitive market.

The acting minister of education outlines three big ideas- ‘mastery’, ‘meritocracy’ and ‘you’. (Ong, 2016).

Within the development state, skills future isn’t different from previous policies, namely preparing a skilled and highly adaptive work force for industrial policy. As for a policy to promote learning and training, the differences between old and new policies are hard. Skills future is an opportunity for those who wish to develop their industrial knowledge and for some who understand that other opportunities don’t fit for them.

Skills future ecosystem

Skills future is made up of three main sections to accommodate students through education opportunities and skills development depending on the career pursued.

1. Pre-employment sector: schools, technical college, polytechnics, universities

Industry engagement: new business models, applications, commercial spin-offs.

New learner groups: lifelong learning and life wide learning, equality issues.

Community engagement social objectives for coherence.

Promoting lifelong learning: skills mastery.

Steering research towards areas of skills-future policy interests.

Provide micro credentials and ‘badges’.

2. Continuing education and training sector

Expanding its scope in the context of the ‘future of work’.

Promote career development in the skills perspective.

Develop a natural skills framework.

⁷ Information passed on by Professor Johnny Sun- Cited with permission

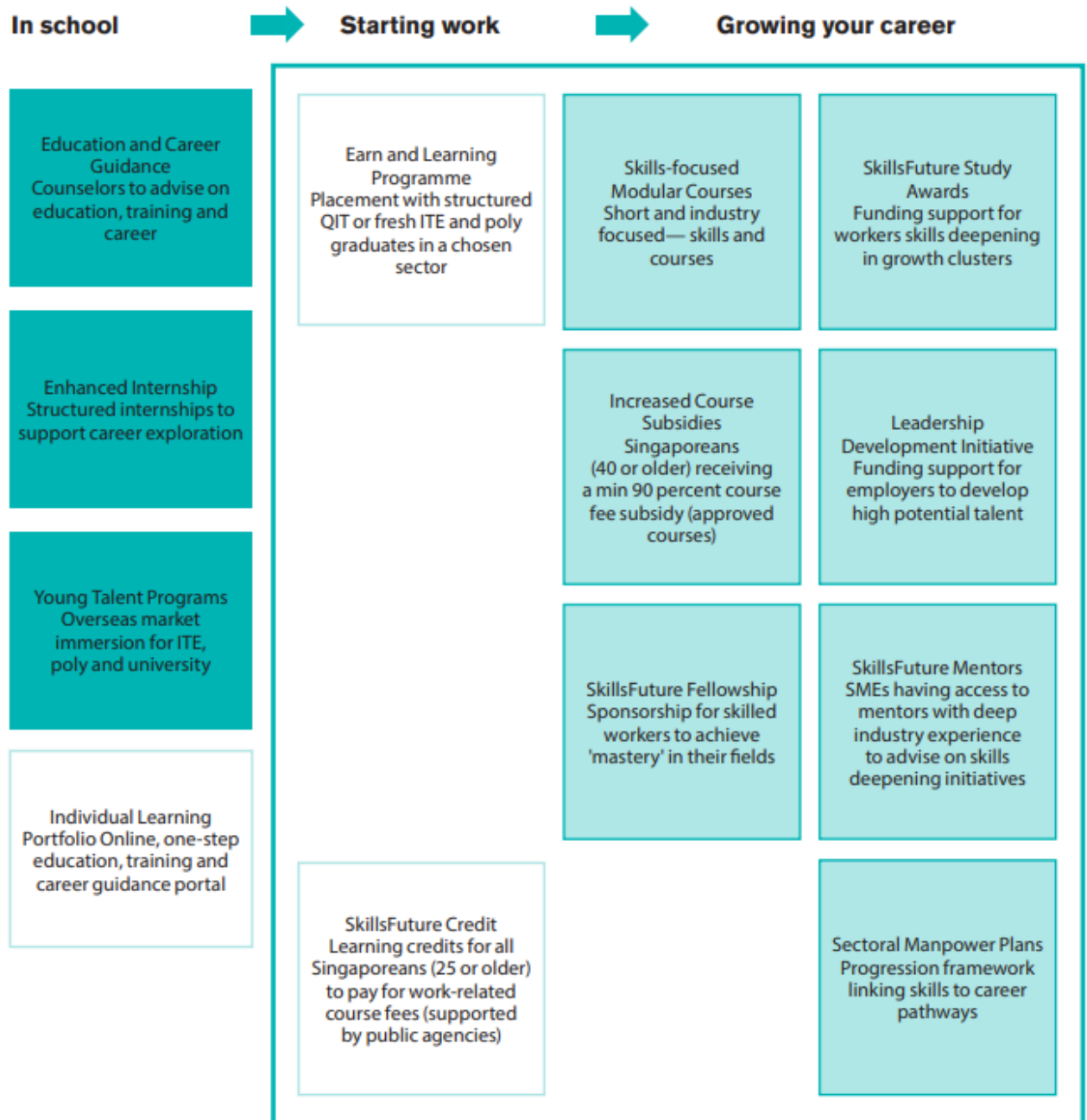
Private sector providers: adapting their business models to support life cycle and deep skilling training, provides new micro credentials and 'badges', promotes lifelong learning. Promoting lifelong learning- skills mastery.

3. Labour market facilitation

Jobs bank-jobs matching

My career future portal

My skills future portal- skills future credit⁸



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⁸ Information passed on by Professor Johnny Sun- Cited with permission

⁹ Rsa_wsuk_singapore-case-study-07-11-19- cited with permission

Life-long learning

Lifelong learning is a form of self-initiated education that focuses on personal development. Lifelong learning is learning throughout a person's life that enables them to access opportunities to enhance their adoption of new technologies and developing tech adoption to allow students to work more efficiently based on their course and skills development.

Universities also play a role in lifelong policies to allow students to adopt university-like learning as well as learning skills in the workforce. Lifelong learning has a positive impact on the skills future policy as well as the labour market and education provision, this is because people have more skills, decreasing unemployment allowing the economy to grow, hence allowing better provision by the government to allow students to have better opportunities. A lot of lifelong learning consists of industry work to allow more experience of job requirement hence employees tend to be more efficient and successful in their job.

Lifelong learning doesn't do degrees, rather consists of a variety of work consisting of skill work regarding the career you wish to pursue. Singapore is a GREEN label which means it's safe for people to come to Singapore, encouraging students to come to Singapore and study; more students who are heavily into environmental projects are more attracted to Singapore. In Singapore, education is highly valued due to the economic growth it brings. The main intention since the 70s was to lead Singapore to a Utopian future and one of the approaches was to focus on education due to skills development, this allows people to pursue better skilled jobs and hence allowing them to promote economic growth in Singapore.

PET and CET also helped students and promoted growth. PET is pre-employment training, this is a medium to advanced level training allowing workers to be equipped with the essential skills to be able to work. This is perfect for workers who wish to develop their skills, especially those who are new to the industry or those who are already in the industry and are looking for career direction and development. CET is continued-employment training, allowing adults of any working age regardless of their current skills to develop and improve their skills. This training allows them to seek better opportunities. This type of training is built on a base to increase competition and build a career resilient workforce. This is all worked on diversification and development of medium skills.

35+ years old took life-long learning opportunities well. Singaporeans are considered as people who don't miss out and this value is embedded into their culture.

Comparisons

Scope

Before: Clear distinction between PET and CET policies and provision.

Since 2015: boundary is meant to disappear.

Approach

Before: education excellence

After: going beyond 'exam smart' excellence through knowledge, application and experience.

Structure

Before: education, labour market, industry, community development pursued their own goals.

Since 2015: education is integrated with labour market, career development, continuous learning, industry partnerships and connections with communities.

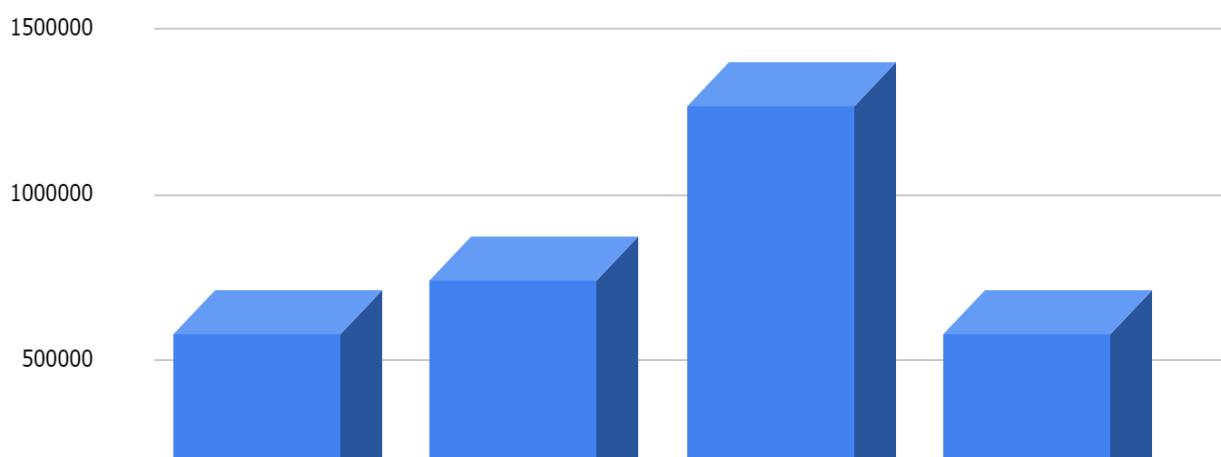
Teachers were given incentives if students were performing better. This encourages them to work so that they are given bonuses and the economy is also profited. This also benefits students as they have better skills to enter the workforce and secure a job with high security.

The supply of high-skilled labour

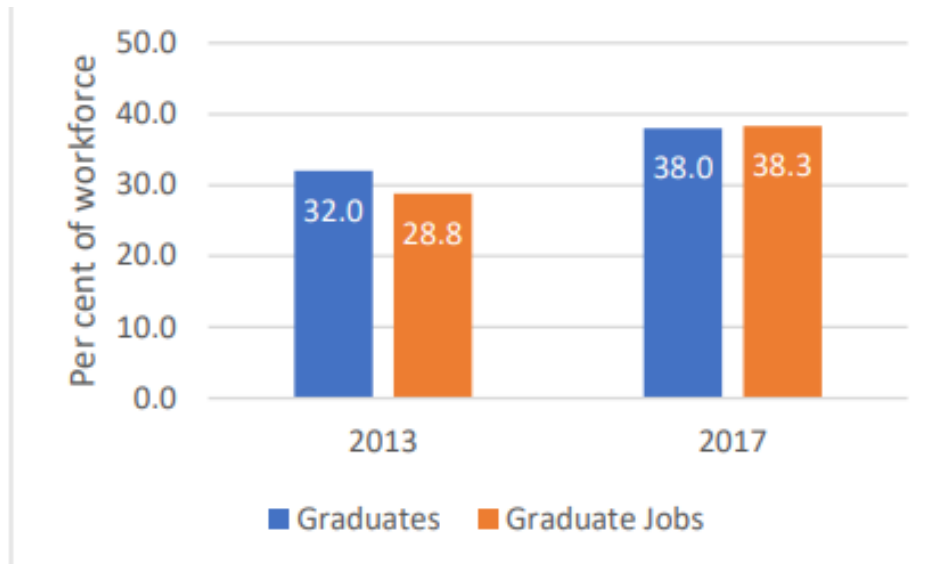
As an advanced knowledge economy, it could be expected that there would be a high and growing demand for high-skilled labour in Singapore. To meet this demand the country is traditionally distinctive in that it has a well-developed short-cycle tertiary education sector led by its five polytechnics, which has delivered a considerable proportion of employers' high-skill needs. Yet those educated to degree level have now become an important segment of Singapore's tertiary labour force, not least because university graduates are expected to be an essential component of the 'skills deepening' effort.

To meet future demands for graduate labour, there are now six autonomous universities, which have a collective enrolment of more than 100,000 students. In addition, there are many private transnational campuses offering qualifications from foreign higher education institutions. In 2019, the size of the workforce was 3.7 million, of whom 2.3 million were Singapore citizens or permanent residents. Some 31 percent of these had professional qualifications, diplomas or postsecondary but non-tertiary education qualifications, while 38 percent were university graduates. The remaining 1.4 million non-residents are highly segmented, between ex-patriate graduates, diploma holders and the rest of the non-resident workforce. The analysis here applies solely to the resident workforce. Increasing focus on higher education The need for a new analysis of Singapore's graduate labour market arises both from the recent rapid rise in supply of graduates in the labour force, but also from its expected continued rise in the context of Singapore's evolving skills policy – the inauguration of SkillsFuture, with programmes designed for students, individuals, employers and providers. The shift of policy emphasis has naturally led to an increased emphasis on the sort of high-skills flexibility for which university education is most suited. The combined intake at Singapore's six autonomous universities grew by four per cent per year since 2008. Even without these rising enrolments, a growth in the proportion of graduates in the labour force would be expected during the 2020s decade, as older less qualified workers retire.

Total workforce (3.7 mil people)



According to the figure, the share of graduates in the employed workforce rose from 32 per cent to 38 per cent in the four years between the surveys. Yet the impressive growth of the graduate workforce was more than matched by a 9.6-point increase in the percent of jobs that require a university degree upon entry. There is thus a dynamic balance over this period between the supply of graduates and graduate jobs.



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Comparison between Singapore and the UK

Some universities and schools use the UK curriculum in Singapore which is great for students to show international competition and shows how Singapore and the UK are collaborating and implementing a better education system for students.

Furthermore, both Singapore and the UK have experimental courses and universities. This is a good scheme to implement to show the success rate of new courses and ideas. Singapore and the UK both also have degree apprenticeships to enhance opportunities for students and allow an easier flow into the workforce due to a degree and work experience in hand.

Although Singapore and the UK have different curriculums and separate education systems, they both have schemes that go hand in hand and are also targeted post-16. Singapore has more opportunities for lifelong career development, while the UK mainly focuses on creating more variety of opportunities post-16.

Both countries have looked in the other direction in terms of building more opportunities to allow more people to enter the workforce and allowing people to build their career and personal development to have a job of higher skill.

The UK and Singapore also have similar schemes to support SEN (special educational needs) groups. In both countries SEN students are put in normal mainstream schools with additional support in place to support those students. Students with more conditions are placed in more specialised schools to support them to their best.

¹⁰ Skills for the Future - Analyses of Singapore's Graduate Labour Market- Cited with permission

Progress and challenges so far in Singapore

Progress so far in Singapore

- Implemented a whole of government approach to the lifelong learning policy.
- There's a coherent education and training system linking career development, labour market mobility to lifelong learning.
- It has opened up a publicly funded training fund to non-utilitarian learning.
- Division put up to run courses for students, the government hasn't considered (for e.g. performing arts).
- 20000 small courses- under skills future.
- Increased awareness and participation of lifelong learning amongst citizens.
- The PET (pre-employment training) sector has embraced (new) live long learning activities and new goals.
- Influenced learning program, e.g. the need to consider new elements such as the workplace, career paths and learner retention etc.
- Has established the need to link (education and training) supply to demand (individual demand and work demand).

Challenges so far

- Employee support hasn't changed significantly.
- Individuals are still chasing 'paper qualifications' when it comes to learning.
- Evidence for skills mastery is still unknown – lack of data.
- There's not yet clear evidence about behavioural change as a result of skills future policy. Skills future is a 'movement' – also data issues.
- 'Seamless integration' in practice is very difficult, e.g. PET(pre-employment training) and CET(continued-employment training) provision, through collaboration, is increasing.
- Adoption of the skills framework by employers is relatively slow, especially in areas such as HR practices.
- Utilisation of the skills future credit is slower than expected (in terms of full utilisation)
- Job bank participation – both, employers, occupation and sectors – are 'uneven'.
- Not entirely clear how school future works with the younger generation, e.g. Life choice preferences, work preferences and the new forms of work.
- Funding issues – while funding is generous policy makers may start asking about the return to investment?
- Is there anything to resolve the issue of students wanting paper qualification?
- The government is trying but is making less progress than expected.
- Exam smart but can you build skills mastery?
- Exam smart 95% of the assessment portfolio plays a role as well as its a record for all of the work completed.
- School accommodation and general housing is built on equal status.

Post-16 opportunities in New Zealand

Lessons in tertiary education

Tertiary opportunities in New Zealand have developed over the years. New Zealand faced a crisis when polytechnics (an institution of higher education offering courses at degree level or below, especially in vocational subjects) were enrolling about 1/6 of all degree students. Despite their unified vision, however, vocational education followed a different.¹¹

New Zealand planned to develop their education system and in the process of doing so, there were less jobs available than the education being funded. This eventually caused a loss to the economy with more people with higher skills working in low skill jobs.

Currently New Zealand has adopted a unified system in which all post-16 education is under one branch and all funding is distributed equally through the various education systems available post-16. Through the development and improvement of the education system it's caused a shift in progress within the country.

Funding incentives must align with policy objectives if we wish to drive the desired outcomes. Addressing disparities in esteem between academic and vocational pathways requires long-term cultural and attitudinal changes, beyond mere structural reforms. As Roger succinctly concluded: "What will happen is what people are incentivised to do."¹² New Zealand can only improve their education system through salaries motivating people to work, this ensures people to encourage change in response to a stable salary. This causes long-term shifts in educational opportunities and causes a shift in the economy with more stable jobs.

Approach to degree apprenticeships

New Zealand introduced their first degree apprenticeship in 2019 and since then it has expanded. New Zealand decided to introduce degree apprenticeships to allow more education opportunities for their students. This was introduced to those who wished to study and earn together. A degree apprenticeship was introduced to allow more people to have an opportunity at further education. Furthermore, New Zealand launched degree apprenticeships as a way to address skills shortages, improve social mobility, and change perceptions of vocational education. They started their degree apprenticeships from bachelors in engineering and have expanded their horizons. The course is through online-learning and work-based learning however this has also had issues in the process of trying to expand where students don't have a set schedule on learning causing students to have more individual pathways where students continued to try and learn content themselves or left the apprenticeship. Furthermore, there have also been issues with expanding the degree apprenticeships to a wider scale due to funding. Currently, the programme is only offered at Otago Polytechnic, although there are no structural barriers to wider adoption.

New Zealand also has a different programme which is the occupational therapy programme and this is available through different parts of New Zealand and is at a larger scale compared to degree apprenticeships in engineering. This programme day-release framework in which the students have a set timescale and the curriculum have adapted existing degree curricula and accreditations to meet student requirements. This has been

¹¹ Structuring the Post-16 Education Sector and Degree Apprenticeships' (forthcoming). Cited with permission.

¹² Structuring the Post-16 Education Sector and Degree Apprenticeships' (forthcoming). Cited with permission.

designed specifically to allow workers to have opportunities and has been in place to offer better opportunities for local Māori groups.

Although they are both new and recent since the past five years, it has caused improvement in the education system with better learner outcomes where students are earning as they are learning and this is also a great opportunity to seek as cost of living seems to get harder. This has improved job opportunities and career outcomes, where people are becoming more successful in landing a job which matches their skills. New Zealand's employers have also reported benefits like improved staff retention and professional development, and opportunities for senior staff members to mentor and teach. The programme has strengthened education-industry links, creating potential opportunities for future research and project partnerships.

Transitioning from school to work

School leavers are given a National Certificate Of Educational Achievement (NCEA) allowing students to explore individual pathways shifting purely from knowledge-based learning to recognising VET (vocational education and training) skills and competencies. 1 in 5 New Zealanders' complete a traditional university degree ¹³causing the rest 80% questioning the relevance of completing a degree and the effect on its economy and value of the qualifications. To improve the education gap and improve the economy, the government implemented more schemes to allow people who are not in education, employment or training with free entry to tertiary education. Additional school-to-work initiatives included STAR (Secondary Tertiary Alignment Resource), which provides funding for schools to incorporate tertiary or employment-related learning into the curriculum – enabling them to offer university-level courses or industry-specific training. Another initiative, Gateway, allows students to engage in work placements as part of their school learning, earning credits towards their qualifications. Trades Academies have proved especially popular. These polytechnic or training organisation-led academies allow students to spend one or two days a week with a tertiary education provider, engaging in vocational courses while still studying at school. Trade Academies currently serve around 10% of the student body.

¹⁴More educational pathways besides university has caused a great cultural shift increasing employment and allowing more pathways for students to consider. Trades academy- a scheme in new zealand which is another pathway that students consider instead of university have higher job retention in comparison to non-participants (46% compared to 21%).

¹⁵

Tackling the bridge between education and unemployment

Educators and students should have a set curriculum. Both needs should be met to have a beneficial experience to learners to have the relevant knowledge and skills to meet needs to a business and employers to provide sufficient training to employees so that they meet the current needs of the business. To develop an ideal system for students a joint development of qualifications was put through, as well as ensuring that the qualification remains relevant to the industry. This allows students to continuously update their qualifications due to their various skills and keep pace with the changing needs of society. Furthermore, McSweeney emphasised the need for a unified approach to education delivery, where all providers –

¹³ Structuring the Post-16 Education Sector and Degree Apprenticeships' (forthcoming). Cited with permission.

¹⁴ Structuring the Post-16 Education Sector and Degree Apprenticeships' (forthcoming). Cited with permission.

¹⁵ Structuring the Post-16 Education Sector and Degree Apprenticeships' (forthcoming). Cited with permission.

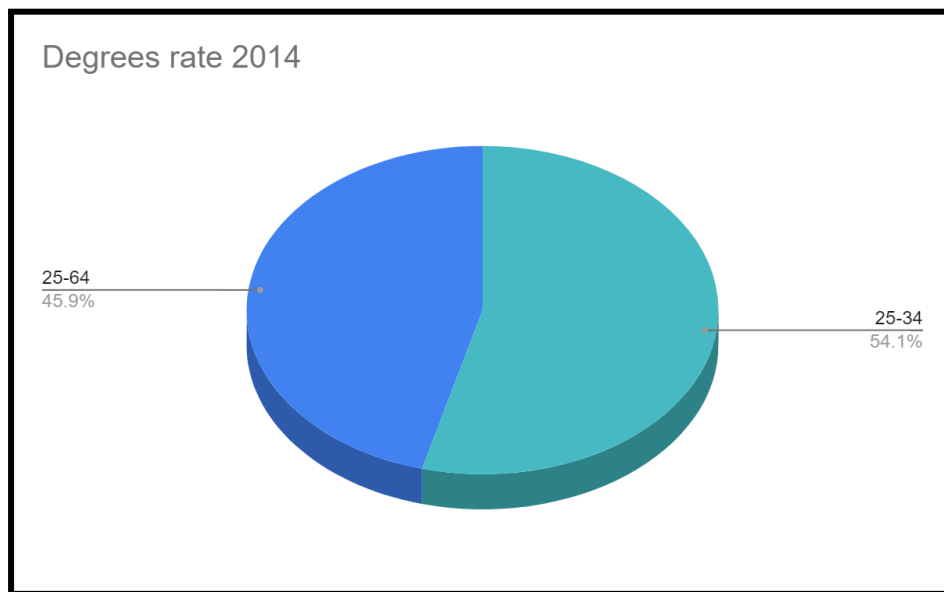
including polytechnics, training organisations, and open universities – prioritise the most effective combination of learning methods for each qualification, rather than allowing funding incentives to dictate their teaching approach.¹⁶

The general educational organisation has developed a system to allow vocational education into a career development and this includes active training in which trainees were supported.

Different types of education provided to students

At the time of 2014, there was more demand for construction and service related sectors and there were less opportunities in jobs available for graduate level jobs. The education system then shifted and focused on apprenticeships and this focused on level 4 qualifications. A limited subsidy was promised to employers who took up apprenticeships, and this was doubled in priority sectors.

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Comparisons between the UK and New Zealand

Key themes, innovations and developments in the UK and New Zealand education systems, comparing respective practices, innovations, and policy responses to shared issues and challenges were discussed to mention the difference in education systems in both countries. While the UK has traditionally distinguished between further and higher education, New Zealand has pursued an integrated 'tertiary' model. Both countries have recently or currently had a look in the other direction though. One of the key points discussed is how New Zealand attempts at creating a unified tertiary education system over the past 30 years, including recent reforms merging polytechnics and industry training organisations. A unified tertiary system is a policy that aims to allow further education and training, higher education, and research and innovation to work closer together¹⁹. This system allows stronger links and hence students are more responsive and builds a stronger society. Merging polytechnics meant their aim was to teach both purely academic and professional vocational degrees (engineering, computer science, law, architecture, management, business, accounting,

¹⁶ School to work and employer engagement' (forthcoming). Cited with permission.

¹⁷ Technical, practical and vocational learning (Edge foundation). Cited with permission.

¹⁸ 2014 New Zealand degrees rate- cited with permission

¹⁹ [gov - Unified tertiary system \(www.govt.nz\)](http://www.govt.nz/unified-tertiary-system/)

journalism, town planning, etc.). Their original focus was applied education for professional work, and their original roots concentrated on advanced engineering and applied science (STEM subjects); though soon after being founded they also created departments concerned with the humanities²⁰.

Secondly, there were challenges in addressing disparities in esteem between vocational and higher education, deeply embedded in cultural attitudes and funding structures. It was difficult to implement new education systems due to cultural attitudes being harsh due to new ideas may not be successful and having university and having a paper based qualification was the way to success.

The importance of aligning incentives, particularly funding, to drive desired behaviours in the system rather than relying solely on structural changes. Aligning incentives was essential to encourage teachers and employees working the education system to work more efficiently, this thereby allowed more students to do better, and this increased economic growth, which essentially benefited everyone. It's better to provide incentives rather than relying on structural changes as this took time to execute and may not be successful.

The need for a whole-system view when reforming tertiary education, considering culture change and stakeholder engagement beyond just policy and structural changes. Culture change is essential when reforming tertiary education due to negative attitudes, such as affordability or success rate of getting a job after completion of education. Also, stakeholder engagement is by the decisions it makes or can influence the implementation of its decisions.²¹ Hence, depending how well the students respond to new opportunities being available the better the success rate of the education system, providing better opportunities due to better communication and response.

The role of industry in stewardship of the vocational education system and the challenges of balancing public good with industry needs. Stewardship meant taking care of the organisation and the challenges of balancing both student needs and economic growth was difficult. Opportunities like this meant a lot of students were having higher levels of skills, however as the job market was low, it meant a lot of students were working lower skill jobs. This caused a loss in the economy. This also created a lot of competition between students and had a negative effect on their wellbeing.

Comparisons to the German vocational education system and the cultural factors that make it difficult to replicate elsewhere. There were comparisons made to Germany and the cultural factors made it difficult to replicate due to opportunities available. Cultural pressure and attitudes varied from country to country.

The impact of socioeconomic class on education pathways and perceptions of different types of tertiary education. Having different types of tertiary education, especially to those who came from low socioeconomic backgrounds had benefited from these vocational opportunities, preparing them for polytechnic jobs as well as being versatile; it helped those who had picked up this pathway later on.

Challenges faced by universities in the UK, including financial pressures and the need for transformational change. Universities in the UK had funding issues and in terms of transformational change they needed to see an increase in student performance or see improvement in students studying at the university due to funding not being enough.²²

²⁰ [Polytechnic \(United Kingdom\) - Wikipedia](#)

²¹ https://en.wikipedia.org/wiki/Stakeholder_engagement

²² 240717 Skills_Edge virtual study tour - session summaries- cited with permission

The school to work journey: supporting relevant pathways and curriculum in senior secondary education.

New Zealand's efforts over the past 20 years to reform their secondary and tertiary education system, including: Introduction of the National Certificate of Educational Achievement (NCEA) in the early 2000s. The NCEA is the main qualification for secondary students, coming in many levels depending on the stage of education that a student reaches. Youth Guarantee initiative in 2012 to support the secondary-tertiary employment interface. Youth Guarantee initiative helped young workers respond to a high level of unemployment by supporting young people not in employment, education or training in the labour market.²³ Various programs like Trades Academies, Gateway, and Service Academies to provide vocational options for students

Challenges in shifting perceptions and culture around vocational education vs. academic pathways. This has been difficult to implement due to the societal standing of vocational education. Due to the fact that academic pathways have been more successful, vocational pathways have often been looked down upon, due to vocational pathways having less success rate as less people have done it. Students often value a degree and a paper of qualification in their hand rather than skills development for a specific job.

Early data showing positive outcomes for students participating in Trades Academies, including higher retention in employment and better earnings after 3 years. Trade Academies are secondary-tertiary programmes that provide senior secondary students access to a broad range of trades or technology learning opportunities to ensure they stay engaged in education. This is delivered through partnerships developed between schools and tertiary education organisations. This was successful as students had specific skills for their job, meaning they were more likely to get hired as they have the skill set for that job. Due to partnerships that trade academies have with organisations, they received a good level of education leading to better outcomes.

The importance of blended curriculum models that combine academic and vocational elements. This is highly important to experience the work that they will go into. A blended curriculum is important so that a student learns more effectively and is more interested in the curriculum. Both elements are important as students have different capabilities and due to a versatile curriculum they are likely to be more successful.

The role of parents in advocating for more relevant education connected to the world of work. Parents should be involved in student life with education and show their support as well as pushing the student to learn so encourage students to do well in the education opportunities they receive.

New Zealand is in the early stages of developing degree apprenticeships, with two main case studies discussed:

- o Bachelor of Engineering Technology at Otago Polytechnic
- o Bachelor of Occupational Therapy (called "work augmented delivery")

They are working on the following:

- o Funding models and incentives for employers
- o Aligning academic calendars with workplace needs
- o Changing perceptions of apprenticeships at higher levels
- o Balancing the needs of younger students vs existing employees
- o Administrative systems and processes

²³ <https://eufundinggoverview.be/funding>

- Comparisons to the German vocational education system and the cultural factors that make it difficult to replicate elsewhere.
- The impact of socioeconomic class on education pathways and perceptions of different types of tertiary education.

Conclusion

In conclusion the report discussed post 16 opportunities and the different education pathways students take in Singapore and New Zealand. From the research collected we can emphasise that Singapore's skills future programme has proven growth for improvement in education opportunities. Lifelong learning has allowed growth for the economy and allowed workers to adapt to workforce requirements allowing them to be more successful in their personal development and career. These opportunities have allowed Singaporeans to have better opportunities in their career and be more successful due to these schemes. Additionally, the development of tertiary education in New Zealand by introducing degree apprenticeships has benefitted students in a big way. By introducing degree apprenticeships it allowed more people to have a job of higher skill and as a way to address skills shortages, improve social mobility, and change perceptions of vocational education.

Appendix

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