

# WORKING KNOWLEDGE

## DESIGNING INDUSTRY-LED SUBJECTS FOR STUDENTS AND SCHOOLS

APRIL 2026

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INITIATIVE**

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### About the New Zealand Initiative

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## 1. Background

Imagine you are advising a young person on career options. They are thinking of going to university to study for an arts degree with a view to becoming a policy analyst in a government agency. On the other hand, they are also considering an apprenticeship in heavy automotive engineering. Which to choose?

Many New Zealanders would probably see the first option as higher status. They might also think it would pay better. In fact, policy analysts<sup>i</sup> have very similar average salaries to heavy diesel mechanics.<sup>ii</sup> Down the line, skilled mechanics who start their own businesses can earn much more.

The time required to qualify for these occupations is also similar. An arts degree takes three full-time years to complete, with an option for an additional year to gain Honours or Masters. An apprenticeship in heavy automotive engineering also takes three or four years to complete.

The cost is another matter. In 2024, full-time study towards an arts degree typically cost about \$6,800 per year<sup>iii</sup>, with an additional university services fee. In contrast, tuition for a Level 4 Certificate in Heavy Automotive Engineering costs about \$1,900 for the full qualification.<sup>iv</sup> Not only that, if the certificate is undertaken through an apprenticeship, the employer pays the apprentice a modest wage, and often the tuition fee as well.

All things considered, mechanics may well come out ahead in the long run. They graduate with little-to-no debt and a qualification that is in demand. Prospective policy analysts complete their degrees with at least \$20k in student loans to pay off, more if they have borrowed to cover accommodation.

Given this comparison, why is university study so much more highly thought of than apprenticeships by most New Zealanders? It's a complex question with cultural bias in favour of academic learning at its core. But the story begins at school, with the curriculum heavily skewed towards subjects derived from university disciplines.

For the first ten years of schooling, that skew is justified. Subjects like mathematics, history, science, and geography equip students with broad knowledge of the natural and human worlds. They convey the intellectual tools to communicate, think critically, and participate in cultural activities. But from Year 11 on, students are preparing for life and work beyond school. The continued dominance of academic subjects in that phase of schooling becomes narrowing for young people. Too often, they don't see or think of options other than university.

All that might be about to change. In August 2025, the Ministry of Education (hereafter, 'the Ministry') proposed replacing NCEA with a new school qualifications system.<sup>v</sup> A feature of the proposed new qualifications system is *industry-led* subjects to strengthen vocational education. Subjects more traditionally associated with the school curriculum – such as science and history – will be designated *ministry led*.

Industry-led subjects have potential to provide much more strength and coherence to vocational learning for senior secondary students than has been possible under NCEA – or was under the previous School Certificate/University Entrance-Bursary system. Realising this potential will require careful design of curricula and assessment, and a substantial, well-targeted investment of resources.

Under NCEA, assessment programmes for vocational education have largely been based on bespoke sets of unit standards. Some sets of unit standards, compiled as *Vocational Pathways*, have been identified as having relevance to specific industry areas. However, Vocational Pathways have no formal curricula associated with them and offer little guidance for coherent programmes of learning. Furthermore, completing the set of standards associated with a Vocational Pathway does not yield a credential (although it does contribute towards NCEA).

### *1.1 Design and resourcing of industry-led subjects*

Under the Ministry's change proposal for NZCE/ACE, each vocational subject would have a full curriculum developed by an Industry Skills Board (ISB). This is a strong feature of the proposal; vocational education in New Zealand has never been supported by formal curricula in the past. ISBs would also set standards for assessing industry-led subjects.

The Ministry proposes that industry skill standards rather than unit standards be used to assess industry-led subjects. Skill standards, first implemented in 2024<sup>vi</sup>, improve on the earlier unit standard design in several ways (see 3.3) and will replace them over time.<sup>vii</sup> Moreover using skill standards will avoid a reputational risk associated with unit standards, caused by the *ad hoc* and incoherent manner in which they have sometimes been used under NCEA.

If successfully implemented, industry-led subjects will contribute to improving the status and quality of vocational education for senior secondary students. They will also improve the integration of secondary and tertiary pathways. Thereby, they will provide a piece of a larger puzzle, which also includes tertiary providers and employers.

*Trade Routes*<sup>viii</sup>, a New Zealand Initiative report published in early 2025, made 14 recommendations to strengthen and integrate secondary, tertiary and workplace-based aspects of vocational education. One proposal for the secondary sector was to establish a Level 3 Certificate of Industry Training for senior secondary students. This would be achieved by completing designated groupings of unit standards, recognised by industry bodies as certifying preparation for tertiary and workplace-based training – in other words, to credential Vocational Pathways. Another was to include advice on secondary curriculum development amongst the functions of Workforce Development Councils. These were the predecessors of ISBs, which were established in January 2026.<sup>ix</sup>

The proposal for industry-led subjects brings these recommendations from *Trade Routes* together, albeit with some differences. One is that the Ministry's proposal does not explicitly include a formal vocational qualification, as recommended in *Trade Routes*. Nonetheless, there is scope for industry-led subjects to lead to industry certificates as well as counting towards NZCE/ACE (see 4.1).

In some respects, the proposal for ISBs to develop both curricula and assessment programmes for industry-led subjects goes further than the recommendation in *Trade Routes*. More than just providing advice on curricula, the Ministry proposes that ISBs write them. There are strong arguments in favour of this approach – ISBs will be well positioned to ensure that industry-led subjects are relevant to the needs of industry. Even so, ISBs do not have specific expertise in secondary education. If the curricula for industry-led subjects are to deliver on their potential to raise the quality and status of vocational education, they must be written with cognisance of the constraints under which secondary schools operate. These include resource limitations and students' stages of maturational development and educational progression, which are different from those of typical tertiary students.

Many schools will struggle to implement industry-led subjects within their existing resourcing. *Trade Routes* identifies resourcing mechanisms that could potentially support schools in this regard. On the funding side, *Trade Routes* recommended that fees-free provisions for university study be redirected to support vocational education, including at secondary level. That would enable existing funding schemes for secondary-level vocational education to be consolidated and uncapped (see 2.2). In addition to direct funding, an ongoing role for ISBs in supporting schools to effectively implement the subjects at scale should be mandated (see 2.3).

Another important consideration is that some schools already have high-quality programmes of vocational learning in subjects the Ministry proposes be industry led. These are often in areas of local relevance. An example is the outdoor education programme at Mount Aspiring College (see 2.4). The programme attracts students with a wide variety of interests and aspirations, not only those who intend to undertake post-school qualifications in domains like adventure tourism.

It is essential that industry-led subjects fulfil their purpose of providing pathways to tertiary qualifications. In doing so, however, it is also important that they do not lose touch with the wider educational value of educational programmes that already exist in the learning domains for which they will be developed.

If the full educational potential of industry-led subjects is to be realised, ISBs will need to consult closely with relevant teachers, school leaders and secondary subject associations to ensure that the curricula are manageable for schools and suitable for secondary students.

## *1.2 Scope of the report*

This research note further develops the analysis in *Trade Routes* with specific focus on successful development and implementation of industry-led subjects. Substantial challenges to successful implementation of industry-led subjects are identified and addressed.

The suitability of skill standards for assessing the subjects is analysed and some modifications to their current design are suggested. Questions concerning the aggregation of standards at the subject level, and of subjects at the level of qualifications and awards are also considered. Finally, issues for some specific subjects identified as potential industry-led subjects, but that have been assessed using achievement standards under NCEA – including outdoor education and the performing arts – are identified, and potential solutions suggested.

Based on the analysis, 16 recommendations are made. Some reiterate or build on those made in *Trade Routes*.

## *1.3 Summary of Recommendations*

### *Support for implementation*

1. Support the implementation of industry-led subjects via a per-enrolment amount in schools' operational grants additional to base and equity funding per enrolment in a vocational subject.
2. Fund Recommendation (1) by reallocating funding from the university component of the universal entitlement to a year of fees-free tertiary study.
3. Provide supplementary per-enrolment funding to small schools and schools serving remote communities.

4. Mandate ISBs to engage in close consultation with relevant subject associations, leaders of schools with strong track records in vocational education, and leaders of small and remote schools in their development of curricula and assessment programmes for vocational subject.
5. Include in ISB's orders-in-council a responsibility to support schools to teach and assess industry-led subjects. These functions should include moderation of assessment, running assessment where necessary, coordination of work-integrated learning opportunities and facilitation of dual enrolment with tertiary providers.
6. Establish ISB liaison capability within the secondary qualification team at NZQA and the secondary curriculum team at the Ministry of Education.
7. Mandate the Ministry to develop School-business partnership models, to facilitate high quality work-integrated learning experiences for senior secondary students.

#### *Outdoor Education*

8. Engage and fund EONZ to write the curriculum and assessment programme for Outdoor Education.
9. Require the Ministry of Education either to justify its decision to designate Outdoor Education as industry-led, or to revise that decision.

#### *Design and scope of industry-led subjects*

10. Develop a set of skill standards to assess each industry-led subject to reflect its curriculum. All these standards should include the same grade range available in assessments for ministry-led subjects.
11. Design vocational subjects in pairs, for each of Years 12 and 13, with pairs jointly comprising coherent programmes of learning. Each subject of a pair should be assessed using industry skill standards totalling 20 credits.
12. Develop a 40-credit industry certificate based on the skill standards used to assess each pair of industry-led subjects.
13. Ask the Food and Fibre ISB to consider developing two subjects – Horticultural Industries and Agricultural Industries – rather than attempting to cover both in a single subject.
14. Ask the Electrotechnology and Information Technology ISB to develop an industry-led subject.
15. Mandate ISBs to set subject-level criteria for each industry-led subject. Criteria should reflect the same grade range as ministry-led subjects.

#### *Aggregate awards and qualifications*

16. Develop an Industry Award, attained by passing both of a pair of industry-led subjects (see Recommendation 10) and one relevant, approved, ministry-led subject.
17. Abandon the proposal for aggregate passes in NZCE and NZACE. Instead, report results for individual subject passes in a similar manner to GCSE and A-level subjects in England.

## 2. Implementing industry-led subjects

Several current initiatives support vocational education in secondary schools. These include Vocational Pathways, Youth Guarantee Fees Free, Trades Academies, Gateway, and Secondary-tertiary alignment resource (STAR) funding. As noted in 1.0 above, Vocational Pathways are sets of unit standards deemed relevant to specific domains of industry training. The other initiatives are all funding mechanisms.

### 2.1 Vocational Pathways versus industry-led subjects

Vocational Pathways provide guidance to schools and students on skills and knowledge that are relevant to industry. However, they are simply lists of assessment (unit) standards; they are not supported by curricula and do not yield any aggregate credential. The lack of curricula, and of coherence between the standards comprising each pathway, limits both their appeal and the extent to which they prepare participating students for industry training beyond school.

The proposed industry-led subjects for NZCE/ACE would be a significant improvement on Vocational Pathways. They would have full curricula and, in addition to counting towards school qualifications as coherent subjects, there is potential for them to yield industry certificates in their own right. However, important questions remain regarding their development.

It is unclear how the implementation of industry-led subjects will be resourced. Most secondary schools are primarily staffed and resourced to teach the national curriculum, which will comprise ministry-led subjects. They are not funded to employ additional teachers with expertise in vocational domains. Additional staffing, flexible timetabling, work-integrated learning opportunities, and dual enrolments with tertiary providers will all be necessary for the successful implementation of industry-led subjects. All have resourcing implications for schools.

ISBs will be able to ensure that industry-led subjects are relevant to the needs of industry. However, they will need to consult closely with secondary educators, especially those already running successful vocational programmes, to ensure that the subjects are manageable for schools.

### 2.2 Funding and resourcing industry-led subjects

Youth Guarantee Fees Free, Trades Academies, Gateway, and STAR are discussed in detail in *Trade Routes*. All are funding initiatives that support young people undertaking vocational education.

- *Youth Guarantee Fees Free* provides fees-free study for school-leavers who have achieved no qualification higher than NCEA Level 1.
- *Trades Academies* are partnerships between schools and tertiary providers that enable students to be simultaneously enrolled at both. Funding is provided by the Tertiary Education Commission (TEC) on a per student basis, split between the institutions at which each student is enrolled according to the proportion of their time spent in each.
- Under the *Gateway* initiative, the TEC provides funding to schools, again on a per student basis, to arrange structured work-integrated learning opportunities. These opportunities are expected to entail at least 20 credits of assessment against unit standards associated with one of the Vocational Pathways.

- *STAR* partially duplicates Trades Academies and Gateway, with funding from the Ministry of Education to support senior secondary students' transition to work or further study. It can be used either to support work-integrated learning or tertiary study.

These are all worthy programmes that support student learning. They do not, however, either individually or collectively, comprise a system. They are not well coordinated, they are all capped, they partially overlap, and they are funded by different agencies.

If industry-led subjects are to achieve parity of esteem for vocational education alongside university-track education, these limitations must be overcome. Funding must be available to support dual enrolments with tertiary providers and work-integrated learning for *all* school students electing to undertake vocational education.

Schools should not have to apply for funding to run vocational programmes through capped schemes. Rather, they should simply be funded on the basis of enrolments in industry-led subjects. This funding should be additional to base and equity funding for each student and provided to schools as part of their operational grants. Schools might use the funding to employ additional staff, equipment and other resources to teach industry-led subjects, or to procure tertiary and workplace-based learning for these students.

Remote and small schools will face particular challenges in teaching industry-led subjects. Distance from tertiary institutions, lack of staffing and timetabling flexibility, and lack of proximal employers able to provide work-integrated learning opportunities are all challenges that will frequently confront these schools. A distance or small-roll loading could be added to per-enrolment funding to mitigate these challenges.

This funding model will not be possible within the existing budget for school operations. Realistically, with New Zealand's national budget in structural deficit<sup>x</sup>, it is unlikely that substantial new money will be allocated to education in the near future. Therefore, funding will need to be redeployed from elsewhere in the education sector.

A promising approach would be to reallocate the university component of the entitlement of all New Zealanders to a year of fees-free tertiary study to vocational education. A majority of this funding is presently spent on university study, but there is no evidence that it has resulted in more university enrolments.<sup>xi</sup> Neither is it clear that such an outcome would even be desirable. Arguably, many students attend university due to its higher status, rather than because it necessarily serves their goals and aspirations.

Redirecting fees-free funding for university study would remove an ineffective and unwarranted incentive to attend university. This money would be more effectively spent on improving the quality and capacity of vocational education. Over time, better resourcing of vocational education is likely to improve its status relative to university.

### *2.3 The role of ISBs in school-based vocational education*

ISBs will bring knowledge of the needs of industry to the development of curricula and assessment programmes for industry-led subjects. However, industry-led subjects must not only align with the needs of industry; they must be feasible for schools to implement. They must also be appropriate to senior secondary students' stage of educational and maturational development.

ISBs are unlikely to have deep understanding of the capacity, resourcing, or cultures of secondary schools, or of what is appropriate for secondary students' educational and maturational stage. It will, therefore, be essential for ISBs to work closely with representatives of the secondary sector in the development of industry-led subjects.

Subject associations, where they exist, should be closely consulted. For industry-led subjects without extant associations, schools that teach high-quality vocational programmes in similar areas can provide advice. School leaders, especially those with strong vocational programmes and those who lead rural and remote schools, should also be involved in the development of curricula for industry-led subjects.

In the medium term, the role of ISBs must extend beyond their initial brief to write the curricula and develop assessment programmes. Many schools will need ongoing support to facilitate dual enrolments with tertiary providers and work-integrated learning opportunities. ISBs will be well placed to provide this support. ISBs will also be needed to moderate, and in some cases conduct, assessment of industry-led subjects.

Over time, as industry-led subjects bed in and teachers and schools develop expertise, the need for ISB support may diminish. It will not, however, be entirely obviated. ISBs can help integrate the secondary, tertiary and workplace-based components of New Zealand's vocational and industry training ecosystem. To facilitate and support this integration, both the New Zealand Qualifications Authority (NZQA) and the Ministry should establish ISB liaison capability within their secondary qualifications and school curriculum teams, respectively.

#### *2.4 An implementation model*

In 2021, Geraldine High School Principal Simon Coleman, now Principal of Ashburton College, proposed a collaborative model of vocational education for secondary students. His vision for the South Canterbury Business Pilot Programme (SCBPP) was to bring together a consortium of South Canterbury businesses and schools to provide high quality vocational education for secondary students including work-integrated learning. A broader objective was to create similar programmes across the country.

An important focus of SCBPP was to demonstrate to students the relevance of their classroom learning to the workplace. A trial with Year 10 students showed that, when they understood how knowledge they were learning at school might be useful in their future work, they typically engaged with it much more strongly than when it was taught in the abstract. Teaching in that way also facilitated teachers' understanding of the relevance of what they are teaching to business, enabling them to shape teaching and learning units based on Vocational pathways. Furthermore, they enabled employers to understand the educational contexts of students' workplace learning.

The programme was to comprise a collaboration of secondary principals, businesses, the Ministry, and the career educators' association, Careers and Transition Education Association of New Zealand (CATE). Principals were to commit to equal contributions in delivering the programme, and to making adequate provision for all participating schools. The businesses spanned all six of the Vocational Pathways (see 2.1). Their role was to host visits for students, so that all students would be exposed to a business in each pathway during Year 9 or 10.

Participating schools would work with CATE and the Ministry to establish a method of identifying the pathway best matching each student's interests and aptitudes. Then, during

Years 10 and 11, students would experience deeper engagement with their identified pathway.

Simon Coleman and his staff have established a local version of the programme at Ashburton College. The school provides a wide range of vocational learning opportunities for senior students. They have formed strong links with Ashburton's business community, enabling workplace-based learning across a wide range of industries and well-integrated with curriculum. A particularly impressive aspect of Ashburton's programme is its Building Academy. The school employs a builder to work three days per week with students. They are in the process of prefabricating a house, which will be sold to fund the programme. It is not a formal Trades Academy, so does not attract funding associated with that initiative.

Ashburton College provides proof-of-concept for effective vocational education at secondary level. While establishing this has taken ingenuity and commitment, the school does have some natural advantages. It has sufficient scale, with approximately 1,300 students. It is situated in a prosperous, relatively close-knit community, meaning that a range of employers are available and supportive of the programme. Smaller and more remote schools would struggle to establish similar programmes, highlighting the need for the kind of collaboration envisaged in the SCBPP.

Successful implementation of industry-led subjects will require coordination and scale. A model like the SCBPP would offer both. The Ministry should plan for programmes like SCBPP to be established around the country to accompany the introduction of industry-led subjects. This would require significant investment of resources but would yield dividends in the form of a well-developed school-to-industry pipeline. It would also offer a partial solution to the difficulties that small and remote schools will face, in making the most of industry-led subjects.

### *2.5 Outdoor Education*

ISBs have knowledge of the needs of their respective industries and of the pathways to employment through tertiary and workplace-based learning. They will need the guidance of schools, especially those that already offer strong vocational education programmes, to ensure that curricula for industry-led subjects are appropriate for secondary students.

Concern has been expressed that one subject – Outdoor Education – will be impoverished if it is designated 'industry led.' Staff at schools with strong outdoor education programmes have made robust arguments that the subject should be ministry-led and eligible to contribute to UE. Education Outdoors New Zealand (EONZ) launched a petition in support of this position late in 2025, which quickly attracted more than 50 thousand signatures.<sup>xii</sup>

Supporters of EONZ's position make a number of interrelated arguments. They are concerned that the content, resourcing and uptake of the subject will all be damaged if it is industry-led and developed by the Services ISB. They fear that Outdoor Education will lose important content, local flexibility in curriculum and assessment, and status. As a result, they believe, student participation in Outdoor Education would be reduced, impacting schools' ability to offer it.

EONZ's petition sums up their arguments as follows:

*[As an industry-led subject, Outdoor Education] won't be recognised as a general subject and will have no Ministry-developed curriculum, assessments, or resources. Instead, it would be reduced to a narrow vocational option, controlled by a national*

*skills body... Schools would lose the flexibility to design courses that reflect their local environment and community, and some may stop offering Outdoor Education altogether.*

*Losing recognition at this level strips Outdoor Education of its academic value, limits what schools can offer, and removes a subject that not only supports careers in tourism, recreation, and conservation but also grows the confidence and well-being of our young people.*

EONZ argues that, as an industry-led subject, Outdoor Education may be narrowed to content that serves industry. They point out that the subject currently offers opportunities for students who may not thrive in conventional classroom environments to learn outdoors.

Outdoor education keeps many students engaged at school who might otherwise disengage or exit formal education altogether. Students learn valuable, transferable skills, including communication, risk management, and teamwork. If the development of outdoor education as a vocational subject were to focus on the needs of industry at the expense of a broad curriculum with wide appeal, opportunities to learn these skills in New Zealand's forests, mountains, rivers and oceans, may be compromised.

A related argument is that, if Outdoor Education is industry-led it may lose its disciplinary content. In an interview with RNZ, EONZ Chief Executive Fiona McDonald pointed out that outdoor education connects to a wide range of academic knowledge, including meteorology, ecology, and nutrition.<sup>xiii</sup>

Dave Cassaidy, who leads a first-rate outdoor education programme at Mount Aspiring College, worries that the content and assessment of the subject will lose flexibility under the proposed changes. He notes that "the school's programme had been developed to adapt to the region's environment and the students' needs" and is concerned that schools might all have to use similar assessments.<sup>xiv</sup>

Another objection to making Outdoor Education industry led, is that it would not be included on the list of subjects that can contribute to UE. This, it is argued, would reduce its status and appeal to students.

All of these concerns warrant serious consideration. New Zealand's natural environment offers unique opportunities for outdoor education. Many schools have established high quality programmes over time. It would be a tragedy if policy settings intended to strengthen vocational education were to undermine that work and diminish students' opportunities.

If Outdoor Education is developed by an ISB, it is likely to focus mainly on preparing students to undertake industry qualifications at Level 4. EONZ has expressed concern that this may come at the expense of wider content that is currently included in many Outdoor Education programmes at secondary level. A similar argument might be made for other industry-led subjects. Making room both for content preparing students for post-school education and training in relevant industries and for wider content would be much easier if industry-led subjects were designed in pairs (see Recommendation 10).

No hard separation of 'vocational' and 'academic' content should apply in either industry- or ministry-led subjects. Both kinds of subject must be able to include both kinds of knowledge. Whether Outdoor Education is developed as a ministry-led subject or an industry-led subject,

it will be important to ensure that relevant connections are made to other curriculum areas such as Physical Education and Geography.

Under NCEA, there has been no national curriculum for Outdoor Education. It has been assessed using a combination of achievement standards for subjects such as Health and Physical Education and Education for Sustainability, and (industry) unit standards. As Dave Cassaidy argues, this has given schools flexibility to design their own local curricula, and to assess using whatever combination of standards best fits their programmes.

The downside is that flexibility can also result in weak programmes and insufficient guidance for schools that do not have specialist teachers. An ideal curriculum would identify the core knowledge and practices relevant across all outdoor education contexts. It would not prescribe knowledge or practices that would not be teachable in all those contexts.

Outdoor Education may well be a special case amongst the currently proposed industry-led subjects (see 3.2 for a full list). All the others are clearly focussed on quite specific industries. Outdoor Education stands out as having a much more general nature. It attracts large numbers of students who do not necessarily want to work in a directly related industry. In any case, the most obviously related industry is tourism, which, under the current proposal, would be an industry-led subject in its own right. Moreover, unlike most – if not all – of the other proposed industry-led subjects, Outdoor Education has a strong subject association – EONZ – already in place.

These observations call into question whether the Services ISB is the right organisation to write the Outdoor Education curriculum. If curriculum development for the subject were instead led by EONZ, most of the concerns raised by the organisation's petition could be addressed.

EONZ could ensure that Outdoor Education maintains its broad focus and appeal while ensuring that students who wish to continue studying outdoor education at tertiary level are well served and well prepared. To ensure the latter, EONZ would presumably consult with the ISB.

A curriculum developed by EONZ could identify the core knowledge and practices taught in existing outdoor education programmes around the country. It would be able to ensure that the curriculum could be delivered in settings locally available to any school (mountains, forests, rivers, etc.).

Such a curriculum could strengthen the subject by making it accessible to schools that do not already have strong outdoor education programmes. It would go a long way towards addressing Dave Cassaidy's concerns about loss of curriculum flexibility. A curriculum can be well specified without being overly prescriptive. EONZ would be in the best position of any organisation to get that balance right.

As far as assessment is concerned, as for any subject, decisions should await the development of the curriculum. Assessment considerations should never constrain curriculum development. Rather, the assessment for any subject should reflect its curriculum and ensure that assessment processes are valid. If Outdoor Education were developed by EONZ, there should be no barrier to also developing skill standards that assess all of the content – whether 'academic' or 'vocational' – that EONZ deems necessary, or in ways it deems valid.

One concern raised by outdoor education advocates that would not be addressed by EONZ writing the Outdoor Education curriculum, is that industry-led subjects may not be eligible to contribute to UE. Advocates have made two arguments for ensuring that Outdoor Education can contribute to UE.

One is that the knowledge and practices taught in outdoor education is preparatory for university study. Some commentators have noted that there are existing degree programmes in outdoor education. While that is true, all these programmes are offered by non-university providers. Most do not, therefore, require prospective students to have attained UE.<sup>i</sup> This distinguishes outdoor education from physical education. Four New Zealand universities – The University of Auckland, Auckland University of Technology (AUT), Massey University and The University of Otago – offer either degrees or majors in physical education. AUT offers a minor in Outdoor Learning within its Physical Education degree programme.

The school subject, Health and Physical Education (H&PE), which is UE-eligible, is not a prerequisite for any of the degree or majors at those four universities. The reason for including H&PE on the UE list therefore cannot be that it prepares students for any particular programme. Rather, it must be deemed to prepare students for university study more generally. If H&PE is preparatory for university, it is difficult to see why Outdoor Education is not.

The other argument made by proponents of including Outdoor Education amongst UE-approved subjects is that some students may want to participate in outdoor education at school but then attend university to study something else. These students may be put off participating in the subject if it cannot contribute to UE.

This argument may be valid, although a student could undertake two industry-led subjects at school and still have room in a five-subject timetable to undertake three UE-eligible subjects (on an assumption that UE will continue to require three approved subjects under NZACE). Moreover, if the recommendation to develop Industry Awards were adopted (see 4.2), students would be able to attain both UE and Industry Award with five subjects. Moreover, the latter would contribute to integrating relevant ministry-led subjects with vocational pathways.

A subtext of the anxiety about outdoor education not being UE-approved, is the relative status of subjects that can contribute to UE relative to those that cannot. This is understandable. If students believe that a subject lacks status because it is not UE-approved, they may avoid it. On the other hand, including a subject on the UE-approved list simply to elevate its status would inadvertently perpetuate unwarranted higher esteem for university study.

In conclusion, there seems no strong reason to exclude Outdoor Education from UE eligibility by making it an industry-led subject, especially given that H&PE is UE-approved. The Ministry should either carefully justify or reverse its decision to make Outdoor Education ministry led. Either way, for reasons argued here, EONZ would be a more suitable organisation to write the Outdoor Education curriculum than the Services ISB.

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<sup>i</sup> The degree programme in Outdoor Education at Ara Institute of Canterbury does require UE.

## 2.6 Recommendations

### *Support for implementation*

1. Support the implementation of industry-led subjects via a per-enrolment amount in schools' operational grants additional to base and equity funding per enrolment in a vocational subject.
2. Fund Recommendation (1) by reallocating funding from the university component of the universal entitlement to a year of fees-free tertiary study.
3. Provide supplementary per-enrolment funding to small schools and schools serving remote communities.
4. Mandate ISBs to engage in close consultation with relevant subject associations, leaders of schools with strong track records in vocational education, and leaders of small and remote schools in their development of curricula and assessment programmes for vocational subject.
5. Include in ISB's orders-in-council a responsibility to support schools to teach and assess industry-led subjects. These functions should include moderation of assessment, running assessment where necessary, coordination of work-integrated learning opportunities and facilitation of dual enrolment with tertiary providers.
6. Establish ISB liaison capability within the secondary qualification team at NZQA and the secondary curriculum team at the Ministry of Education.
7. Mandate the Ministry to develop School-business partnership models, to facilitate high quality work-integrated learning experiences for senior secondary students.

### *Outdoor Education*

8. Engage and fund EONZ to write the curriculum and assessment programme for Outdoor Education.
9. Require the Ministry of Education either to justify its decision to designate Outdoor Education as industry-led, or to revise that decision.

### 3. Vocational subject design

If industry-led subjects are to be effectively implemented and provide maximum benefit to students, they must be manageable for schools. They must adequately prepare students for further training in apprenticeships and tertiary education. They must, over time, contribute to improving the status of vocational education. The number, size and scope of industry-led subjects, the industry areas they cover, and ways to harmonise industry-led subjects with ministry-led subjects will affect the extent to which they meet these criteria for success.

A more technical consideration is that the assessment processes for industry-led subjects must yield valid and reliable results. If, as the Ministry has signalled<sup>xv</sup>, the assessment programme for each subject will comprise multiple skill standards, these individual results will need to be integrated to produce subject-level results. Doing this with rigour will require each subject to be underpinned by a measurement model<sup>xvi</sup> and standard setting process.

#### 3.1 Industry-led subject size

Under NCEA, an assessment programme for each New Zealand Curriculum subject comprises achievement standards worth about 20 credits. Students typically undertake five subjects in each of Years 12 and 13.

Under NCEA, New Zealand Curriculum subjects have been assessed using standards registered on the Directory of Assessment and Skill Standards (DASS), which includes achievement, unit and skill standards. However, assessment for ministry-led subjects under NZCE/ACE will probably not use DASS-registered standards. Instead, these subjects will probably be assessed with combinations of examinations and coursework assessments, which will be aggregated into whole-subject results. A typical course load is likely to remain at five subjects.

The Ministry has signalled that skill standards, which are DASS-registered, will be used to assess industry-led subjects (see 3.3). It may be assumed that each industry-led subject will entail 20 credits of assessment, commensurate with the volume of assessment for New Zealand Curriculum subjects under NCEA. However, it may be appropriate to design vocational subjects in pairs. Each subject of a pair should be designed to comprise a coherent programme of learning in itself, while jointly providing comprehensive preparation for post-school training.

There are two reasons for taking this approach.

First, industry-led subjects will need to be relatively broad in scope to prepare students for tertiary and workplace-based learning in a range of more specific industries. Twenty credits may not reflect a programme of learning with sufficient scope to do this adequately. A 40-credit programme of assessment may be more realistic.

Second, a 40-credit programme spanning two nominal subjects would enable students who gained all of those credits to attain a 40-credit industry certificate in addition to achieving two subjects towards a school qualification. This would, to some extent, mitigate concern about a likely fall in overall achievement rates under NZCE/ACE, with its move away from incremental accumulation of credits. Students who do not attain NZCE or NZACE might nonetheless leave school with an industry qualification as well as an Industry Award, if the recommendation of this report to develop them is adopted (see 4.2).

Whether Industry Awards are developed or not, it would be important to design each 20-credit industry-led subject to be coherent and complete in its own right. While 20 credits may be insufficient to certify rigorous preparation for further training in a specific area of industry,

some students may benefit from undertaking just one of a pair of industry-led subjects. This may be because they want to sample different industry domains, which would be especially appropriate in Year 12, or because they have an interest in a subject (e.g., Outdoor Education) without necessarily wanting to pursue it at tertiary level.

For subjects – like Outdoor Education – that attract substantial numbers of students not intending to pursue industry training when they leave school, one of the pair could focus on its more general aspects. This would help to mitigate concerns that industry-led subjects might be too narrowly focussed on the needs of industry to attract those students.

### *3.2 Number and scope of industry-led subjects*

An important aspect of designing industry-led subjects is achieving the right level of specificity. Industry-led subjects should be general enough to prepare students to undertake a range of apprenticeships, diplomas and certificates at Level 4 and higher of the New Zealand Qualifications and Credentials Framework (NZQCF).

Focussing students too narrowly on very specific industries while they are still at school would risk limiting their opportunities. Furthermore, the more specific industry-led subjects are, the more of them will be needed to cover a sufficient range of industries, and the less coverage any one school is likely to be able to offer. On the other hand, industry-led subjects that are too generic would risk not preparing students rigorously for post-school training in any area.

There are eight industry skill boards, established on 1 January 2026.<sup>xvii</sup> Their areas of responsibility will be:

- Transport
- Electrotechnology and Information Technology
- Education, Health and Community
- Energy and Infrastructure
- Manufacturing and Engineering
- Services
- Food and Fibre
- Construction and Specialist Trades

As noted in 2.3, business administration, information technology, and creative arts will not have associated ISBs. Assessment standards for these areas – and presumably for any industry-led subject curricula – will be the responsibility of NZQA.

To date, the Ministry has identified nine industry-led subjects to be developed, and notes that further subjects will be considered in consultation with ISBs.<sup>xviii</sup> The Ministry has associated each of these subjects with a learning area of the National Curriculum. Table 1 lists these nine subjects together with the responsible ISB and the associated National Curriculum learning area.

The scope of most of these subjects strikes an appropriate balance between generality and specificity. Each would prepare students for a range of apprenticeships, certificates or diplomas at NZQCF Level 4. Yet each is specific enough to enable adequate preparation for further training. An exception may be the Primary Industries subject. There are many primary industries. While many skills and are no doubt common across all of them, there are also skills and knowledge specific to working with animals and to working with plants. It is beyond the

expertise of this author to say whether that distinction warrants different (pairs of) industry-led subjects. Nonetheless, the Primary Industry subject seems more general than the others listed in Table 1. The Food and Fibre ISB could consider developing two subjects such as Horticultural Industries and Agricultural Industries rather than attempting to cover both in a single subject.

*Table 1.*

*Industry-led subjects identified to date, with associated ISBs and National Curriculum Learning areas*

<b>Subject</b>	<b>Responsible ISB</b>	<b>National Curriculum learning area</b>
Primary Industries	Food and Fibre	Science
Health & Wellbeing Services	Education, Health and Community	Health and P.E.
Outdoor Education	Services	Health and P.E.
Automotive Engineering	Transport	Technology
Building and Construction	Construction and Specialist Trades	Technology
Infrastructure Engineering	Energy and Infrastructure	Technology
Mechanical Engineering	Manufacturing and Engineering	Technology
Tourism	Services	Social Sciences
Hospitality	Services	Social Sciences

A consideration for developing further industry-led subjects should be harmonising them with curriculum subjects. For example, teachers of performing arts have expressed concern that, when subjects like dance, drama and music are developed for the National Curriculum, they may not include technical aspects of production such as lighting and costume design (Mount Aspiring College, personal communication, 27 November 2025).

A vocational subject in theatre production would complement the performing arts subjects in the National Curriculum. This would harmonise especially well if Industry Awards were developed for NZCE/ACE (see 4.2). Under this proposal, a student completing both, say, drama (as a ministry-led subject) and theatre production (as a pair of industry-led subjects) would be eligible for an industry award in performing arts. The Ministry should consult with schools as well as ISBs in determining additional industry-led subjects for which this kind of harmonisation could be achieved.

An important objective of redesigning the vocational education system, which includes the establishment of industry-led subjects at secondary school, is to raise its status. Robotics and information technology are high-status areas. The Ministry should consider asking the Electrotechnology and Information Technology ISB to develop an industry-led subject. A new ministry-led subject – electronics & mechatronics – is proposed in the technology learning area of the new national curriculum.<sup>xix</sup> A complementary pair of industry-led subjects would do much to improve the standing of vocational education and, with electronics & mechatronics, could form the basis for an Industry Award.

### 3.3 Assessing industry-led subjects

The intention to assess industry-led subjects for NZCE/ACE using skill standards<sup>xx</sup> is a break from the NCEA approach. Under NCEA, vocational programmes have typically been assessed using unit standards.

The Education and Training Act (2020) describes skill standards as “*a specification of skills, the levels of performance [required] in those skills, and the learning outcomes associated with those skills.*”<sup>xxi</sup> Like unit standards, skill standards are registered on the DASS. This means that they can contribute to qualifications on the NZQCF. Thus, as well as contributing subject results towards NZCE and NZACE, skill standards credits could contribute to other qualifications.

The move to use skill standards rather than unit standards to assess industry-led subjects reflects a wider change in vocational education. Skill standards are gradually replacing unit standards for tertiary-level assessment of industry-related skills and knowledge. For the former, the shift to skill standards is timely; it coincides with the introduction of the new school qualification. It is also pragmatic – the reputation of unit standards has been compromised through widespread misuse during the NCEA era.<sup>xxii</sup>

The most important reason to use skill standards rather than unit standards to assess industry-led subjects is their more sophisticated design, which makes them more suitable than unit standards for assessing coherent subjects. To illustrate this, Table 2 compares a unit standard with the skill standard that replaces it on the DASS.

The first notable difference is that unit standard (US)13031 (Demonstrate knowledge of demolition work)<sup>xxiii</sup> is worth just one credit, whereas skill standard (SS)40783 (Carry out carpentry demolition tasks for renovations)<sup>xxiv</sup> is worth three credits. This difference in credit value is reflected in skill standards more generally; they tend to assess wider ranges of skills and knowledge than unit standards. This alone makes them more suitable to assess coherent subjects rather than isolated skills because it reduces the likelihood of curriculum fragmentation.

US13031 requires candidates to *describe* a set of specific processes associated with demolition work, whereas SS40783 requires candidates to be able to *carry out* carpentry demolition under limited supervision. The requirement for candidates to demonstrate an ability to carry out that process, rather than merely to describe it, makes the skill standard more valid than the unit standard. Moreover, SS40783 covers all aspects of the demolition process whereas US13031 focusses on an individual component. This illustrates the greater coherence of skill standards more generally.

Notwithstanding the more holistic nature of SS40783 than of US13031, the broad learning objective of the former is broken down into more specific assessment criteria. These are each specified in much more detail than the criteria for US13031. The skill standard also helpfully includes definitions of key terms (e.g., basic demolition, limited supervision), which the unit standard does not.

Table 2.

Comparison of unit standard 13031 (*Demonstrate knowledge of demolition work*) with skill standard 40783 (*Carry out carpentry demolition tasks for renovations*)

	<b>Unit Standard (13031)</b> <i>Demonstrate knowledge of demolition work</i>	<b>Skill Standard (40783)</b> <i>Carry out carpentry demolition tasks for renovations</i>
Credits	1	3
Purpose	Describes the certifiable outcomes (knowledge and skill)	Describes the certifiable outcomes <b>and</b> the domain of qualifications for which the standard is intended
Specification of certifiable knowledge and skill	Narrow and precise	Broad and general
Guidance information	Specifies legislation, regulations and industry requirements that evidence for assessment must reflect.	Not included (but see assessment specifications)
Outcomes and criteria	Includes performance criteria and the range of factors to which the criteria must be applied. Criteria are very similar to outcomes.	Outcomes are broken down into detailed assessment criteria
Assessment specifications	Not included	Detailed description of what candidates must do to achieve the standard, including: <ul style="list-style-type: none"> <li>• compliance with relevant legislation, regulations and industry requirements</li> <li>• Tools and equipment</li> <li>• Specific procedures</li> <li>• Practices and skills</li> </ul>

Another helpful aspect of SS40783 shared by most skill standards, is the inclusion of ‘indicative content’ for each assessment criterion, linked to supporting material from the standard setting body. As the word ‘indicative’ suggests, this content is not strictly or specifically assessable. Instead, it is intended to support curriculum design.

While there is much to recommend the skill standards for assessing industry-led subjects, existing skill standards will probably not be suitable. In part, this is because they may not address the right skills and knowledge. As argued in 3.2, secondary-level industry-led subjects should be more general than most tertiary training programmes. The skill standards for each subject will need to reflect this. Moreover, assembling sets of skill standards not primarily designed for industry-led subjects at secondary level is unlikely to serve coherence. At the very least, the design and requirements of existing skill standards would have to be modified to be suitable for secondary students.

A particularly challenging aspect of skills standards for industry-led secondary subjects is that assessment is typically required to occur in the workplace. While this stipulation certainly lends authenticity and validity to assessment, it would take an enormous injection of resources to make workplace-based learning and assessment available to secondary students at scale. In the absence of such resourcing, conducting all assessment for industry-led subjects in the workplace is unlikely to be feasible. The required conditions of assessment may have to be modified accordingly. A compromise might be to conduct assessment in simulated workplaces within schools or, where possible, in tertiary providers at which students are dually enrolled.

Achievement standards, which have been used to assess New Zealand Curriculum subjects under NCEA, include criteria for higher grades (Merit and Excellence). While both unit standards and skill standards can also specify criteria for higher grades in theory, very few do in practice. The sets of skill standards to be used for assessing industry-led subjects should include criteria for higher grades, to make them comparable with ministry-led subjects under NZCE/ACE.

The main reason to do this relates to the policy objective of parity of esteem between vocational and university-track education. Parity of esteem will be best served if assessment results for ministry-led subjects and industry-led subjects are reported in the same way, including having the same range of available grades.

Students seeking high grades have tended to avoid unit standard assessments under NCEA. If higher grades are unavailable for industry-led subjects, they will also suffer from this perverse incentive. Students whose aspirations might be best served by undertaking vocational subjects, but who value the possibility of attaining higher grades, may often undertake curriculum subjects instead.

In theory it would be possible to develop criteria for higher grades at the subject level even if the component assessments – skill standards in the case of industry-led subjects – do not themselves specify higher grades (see 3.4). However subject-level criteria are easier to define if they are supported by similar criteria for the individual assessments.

### *3.4 Aggregation of standards for whole-subject results*

Under NZCE/ACE the Ministry proposes reporting whole subject results with three passing grades (A, B and C). Each subject is to be assessed using a combination of external (mostly examination-based) and internal (coursework) assessment. Grades will be determined using objective performance criteria rather than norm referencing.<sup>xxv</sup> This combination, of multiple assessments per subject with criterion referencing, has never been attempted in New Zealand. Doing this rigorously will present a formidable technical challenge.

Prior to NCEA, the School Certificate/University Entrance-Bursary system (SC/UEB) used a single assessment for each subject, a time-limited examination in almost all cases. For most of the lifespan of that system, grades were determined using norm referencing. Raw marks were ranked and a set proportion of candidates were allocated to each grade category based on their position in the rank order.

Under NCEA, whole subject reporting was abandoned. Assessment was conducted against unit or achievement standards, which set an objective criterion for each grade. Students were allocated grades commensurate with their performance against these criteria. Some standards used internally assessed tasks, and others external examinations.

Neither system required the integration of different assessment components to produce a whole-subject result. Under SC/UEB, there was only one assessment component – an examination. Under NCEA there were multiple components (unit and achievement standards) but they were not integrated into whole-subject results.

To complicate matters further, criterion referencing is technically more difficult than norm referencing, although it is far more equitable and meaningful. Norm referencing requires only a rank order and the setting of the norms – the proportions of candidates to receive each grade. Criterion referencing requires a descriptive criterion for each available grade and a process to locate boundaries between grades on raw score scales, reflecting the criteria for each grade.<sup>xxvi</sup> This usually involves a cut-score setting procedure, with markers judging a sample of students' assessments against the criteria to locate cut scores. When a cut score for a grade has been correctly set, a majority of students on that score have met the criterion for that grade, whereas a majority on a score one point lower have not.

If results are to be reported for individual assessment components as well as the whole subject, grade boundaries must be located on both the individual assessment scale and on a whole subject scale. The latter must be established by integrating the assessment components onto a single scale. This requires calibration of the individual assessment scores using a measurement model.

Because industry-led subjects will use skill standards as the assessment components, they will be at an advantage relative to ministry-led subjects. That is because criteria for each available grade will be established when the skill standards are developed.

It is essential to establish criteria for each grade available at the whole-subject level, and to set cut scores on the whole-subject scale that reflect those criteria. While it is not essential that the individual components (the skill standards) entail a full range of grades, if they do, more information will be available to calibrate the whole-subject scale. It would also make the development of criteria for higher grades at the subject level more straightforward.

ISBs will need to set subject-level criteria for each industry-led subject, as well as criteria for the individual skill standards. It is also likely that ISBs will be the best source of expertise for cut score setting on the whole subject scale, a procedure that will be required every year. It will be crucial for ISBs to consult with psychometricians, both to ensure that the descriptive criteria for whole subject grades are valid, and to establish high-quality cut score setting processes.

### *3.5 Recommendations*

#### *Design and scope of industry-led subjects*

10. Develop a set of skill standards to assess each industry-led subject to reflect its curriculum. All these standards should include the same grade range available in assessments for ministry-led subjects.
11. Design vocational subjects in pairs, for each of Years 12 and 13, with pairs jointly comprising coherent programmes of learning. Each subject of a pair should be assessed using industry skill standards totalling 20 credits.
12. Develop a 40-credit industry certificate based on the skill standards used to assess each pair of industry-led subjects.

13. Ask the Food and Fibre ISB to consider developing two subjects – Horticultural Industries and Agricultural Industries – rather than attempting to cover both in a single subject.
14. Ask the Electrotechnology and Information Technology ISB to develop an industry-led subject.
15. Mandate ISBs to set subject-level criteria for each industry-led subject. Criteria should reflect the same grade range as ministry-led subjects.

## 4. Awards and Qualifications

Historically, New Zealand's school qualifications have been much more strongly geared towards university-track education than vocational education. This has entrenched the lower status of vocational education.

Under the SC-UEB system, most subjects were derived from university disciplines. This changed to some extent under NCEA, although much less than its architects had hoped. The lack of national school curricula for vocational education, and issues with the design of unit standards – particularly their lack of higher grades – did not help. University-track education has also been served by the long-standing University Entrance (UE) credential. There is no parallel award for vocational education.

The new curricula to be developed for industry-led subjects by ISBs will contribute to improving the status of vocational education. As argued in 3.3, ensuring that industry-led and ministry-led subjects to offer the same range of grades will be crucial. If industry-led subjects are pass-fail but ministry-led subjects include higher grades, disparity of esteem and low uptake of vocational options will persist. The lack of an industry credential to parallel UE must also be addressed to raise the status of vocational education.

### 4.1 University Entrance and Industry Awards

Senior secondary education has included a specific UE qualification or award since the implementation of the 1944 Thomas Report.<sup>xxvii</sup> UE provides a clearly signalled pathway from school to university. There has never been a similarly well-signalled pathway for vocational education.

Under current arrangements for UE, students must attain 14 credits at NZQCF Level 3 in each of three approved subjects. Arrangements for UE under NZCE/ACE are yet to be announced, but it is assumed here that there will be minimal change – that UE will be achieved by passing three ministry-led Year 13 subjects.

One of the recommendations in *Trade Routes* was to establish a National Certificate of Industry Training (NCIT) at Level 3 on the NZQCF, as a parallel to University Entrance (UE). The motivation for this recommendation was to make pathways to industry training as well signalled as pathways to university. It was proposed that the NCIT be achieved on the basis of attaining a requisite number of credits from a Vocational Pathway (see 2.1).

*Trade Routes* was published prior to the Ministry's proposal to abolish NCEA and to replace it with NZCE/ACE. Education Minister Stanford has promised that NZCE/ACE will be "one integrated system where all subjects, whether Ministry led or industry-led, are equal."<sup>xxviii</sup>

Unlike the current Vocational Pathways, industry-led subjects will be supported by curricula. This will ensure that they are coherent programmes of learning on an equal footing with ministry-led subjects, formally at least. In light of this development, a more sophisticated approach to providing a clearly signalled pathway from senior secondary school to industry training than that proposed in *Trade Routes*, is possible.

Industry-led subjects are intended to contribute to school qualifications (NZCE and NZACE) on the same basis as ministry-led subjects. This will deliver on Minister Stanford's promise of equivalence at the qualifications level. However, if ministry-led subjects can contribute to an additional award (UE) and industry-led subjects cannot, an imbalance in favour of the former will remain.

There are three possible remedies to this: to abolish UE; to allow industry-led subjects to contribute to UE; or to establish an equivalent award for industry-led subjects. The third of these – an industry award – is the preferred option.

As discussed in *Trade Routes*, abolishing UE would remove a valid indicator of university readiness. If this occurs, the universities are likely simply to establish their own entrance requirements, probably along the same lines as the status quo. This outcome would do nothing to enhance the status of industry training relative to university study.

There are sound arguments in favour of allowing industry-led subjects to contribute to UE. The most compelling is to ensure that students undertaking industry-led subjects do not compromise their opportunity to attend university.

A student undertaking two industry-led subjects would still have room in a standard, five-subject load for three ministry-led subjects (assumed to be the criterion for UE). However, if industry-led subjects cannot contribute to UE, they would have to pass all three of their ministry-led subjects to achieve UE. Students undertaking four or five ministry-led subjects would have ‘insurance’ against failing one or two of those subjects.

On the other hand, allowing industry-led subjects to contribute to UE is likely to reduce its validity as an indicator of university readiness. The distinction between industry-led and ministry-led subjects is not arbitrary. Most ministry-led subjects are derived from disciplines taught at universities<sup>ii</sup>, whereas industry-led subjects will be derived from coherent bodies of skills and knowledge relevant to industry. Achieving the latter is therefore less likely to indicate university readiness than achieving the former.

An equitable attitude towards industry-led and ministry-led subjects would be as concerned about limiting students’ access to apprenticeships and tertiary industry training as about limiting their access to university. Instead of abolishing UE or allowing all subjects to contribute to it, a truly equitable approach would be to establish *industry awards*, equivalent in size and status to UE. The availability of industry-led subjects makes it possible to recognise preparation for industry training in a manner very similar to UE. An industry award along these lines would recognise students’ preparation for industry training in its own right, rather than casting it as an adjunct to UE. It is not, however, proposed that an industry award would be a hard prerequisite for tertiary or workplace-based training.

#### 4.2 Designing an industry award

To maximise the equitability of industry awards, four principals must underpin their design:

- Industry awards must be valid indicators of preparation for apprenticeships or tertiary training.
- Industry awards and UE must have similar workload requirements, operationalised as the number of requisite subjects required to attain each. Based on a presumption that attaining UE under NZACE will require three passes in ministry-led subjects, industry awards should also require three subject passes.

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<sup>ii</sup> Not all ministry-led subjects are derived from university disciplines. However, this observation better supports an argument to exclude non-disciplinary subjects from UE eligibility than to include industry-led subjects.

- Students' options should be kept as open as possible, without valuing either UE or industry awards more highly. In practice, this means it should be possible to attain both UE and an industry award on a standard, five-subject programme of study.
- One relevant ministry-led subject should be allowed to contribute to each industry award. This would go some way towards mitigating concerns that industry-led subjects might exclude relevant disciplinary knowledge. It would formally recognise the value of such knowledge to further training.

To meet all of these criteria, industry awards should require students to pass both of a pair of industry-led subjects (see 3.1) and one ministry-led subject in a related domain. Table 3 shows ministry-led subjects that might be eligible to contribute to industry awards in each of the areas for which industry-led subjects have been announced. For example, an industry award in primary industries may be attained by gaining both industry-led subjects in this area, as well as one of agricultural and horticultural science, biology, or business studies (ministry-led subjects).

Table 3.

*Ministry-led subjects that could potentially contribute to industry awards in each of the areas for which industry-led subjects have been announced.*

<b>Industry Award</b>	<b>Potential associated ministry-led subjects</b>
Primary Industries	Agricultural & Horticultural Science, Biology, Business Studies
Health & Wellbeing Services	Health Education, Biology
Outdoor Education	Physical Education, Geography
Automotive Engineering	Materials and Processing Technology, Physics, Applied Mathematics
Building and Construction	Materials and Processing Technology, Physics, Applied Mathematics
Infrastructure Engineering	Materials and Processing Technology, Physics, Applied Mathematics
Mechanical Engineering	Materials and Processing Technology, Physics, Applied Mathematics
Tourism	Business Studies, Geography, Te Mātai i te Ao Māori
Hospitality	Business Studies, Te Mātai i te Ao Māori

This design for industry awards would enable students to attain both UE and an industry award with a standard, five-subject load in Year 13. To do this, they would undertake the three subjects (two industry-led and one ministry-led) leading to an industry award, and any two additional ministry-led subjects. The ministry-led subject associated with the industry award would contribute the third subject required for UE.

#### *4.3 Aggregation of subject results for qualifications*

The Ministry proposes that achieving NZCE or NZACE will require a passing grade in at least four subjects.<sup>xxix</sup> While setting a criterion for the number of subjects required to achieve a qualification has appeal from the perspective of rigour, it would also open the door to controversy about the relative difficulty of subjects. It is, moreover, likely to establish perverse incentives for students to choose subjects they perceive to be relatively easy, which might not be the ones that would best serve their aspirations.

The Ministry's intention to implement aggregate passes for NZCE and NZACE is unlikely to play out well for industry-led subjects. New Zealand's history of poor esteem for vocational

education is likely to result in criticism of industry-led subjects in the debates about the relative difficulty of subjects that would inevitably ensue. If industry-led subjects had, on average, higher pass rates than ministry-led subjects, there would be accusations that that they were ‘easy options.’ If they had lower pass rates, this would likely be explained away in terms of the ‘lower ability’ of the students undertaking them. Neither argument would necessarily be warranted, but that would not protect industry-led subjects from reputational damage.

Internationally, not all school qualifications systems award aggregate qualifications. Neither England’s General Certificate of Secondary Education (GCSE), nor its Advanced (A) Level qualifications<sup>xxx</sup> include aggregate passes. Instead, students simply work towards passes in individual subjects, and these are recorded on their qualifications

Taking England’s approach of awarding passes (and higher grades) in individual subjects, but not for aggregate certificates, would take much of the heat out of debates about subject difficulty. If there were no concept of aggregate passes, then differences in pass rates for individual subjects, whether warranted or not, would matter much less. Students would be more likely to take subjects that served their interests and aptitudes than to take subjects they perceived to be easier.

Some debate about relative pass rates between subjects is likely, even if the Ministry’s intention to implement aggregate passes is abandoned. Moreover, aggregate awards cannot be entirely avoided. UE is likely to be attained on the basis of three passes in ministry-led subjects and, as would industry awards if the proposal for them is adopted. However, specific comparisons of the relative difficulty of industry- and ministry-led subjects would be less likely to drive perverse incentives in subject choice. That is because each of these awards would be focussed only on ministry-led subjects (UE) or on industry-led subjects (industry awards).<sup>iii</sup>

#### *4.4 Recommendations*

##### *Aggregate awards and qualifications*

16. Develop an Industry Award, attained by passing both of a pair of industry-led subjects (see Recommendation 10) and one relevant, approved, ministry-led subject.
17. Abandon the proposal for aggregate passes in NZCE and NZACE. Instead, report results for individual subject passes in a similar manner to GCSE and A-level subjects in England.

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<sup>iii</sup> While the proposal for industry awards involves one curriculum subject, the choice of subjects would be highly constrained, largely obviating potential for perverse incentives.

## References

Education and Training Act 2020, s 10 (NZ).

Education Review Office. (n.d.). *Set up to succeed: How well is NCEA Level 1 working for our schools and students?* <https://evidence.ero.govt.nz/media/ogsj4ax1/set-up-to-succeed-how-well-is-ncea-level-1-working-for-our-schools-and-students.pdf>

Kellow, J., & Willson, V. (2008). Setting standards and establishing cut scores on criterion-referenced assessments some technical and practical considerations. In J. Osborne (Ed.) *Setting standards and establishing cut scores on criterion-referenced assessments some technical and practical considerations* (pp. 14-28). SAGE Publications, Inc., <https://doi.org/10.4135/9781412995627.d4>

Lee, G. & Lee, H. (2016). Thomas Report, and William Thomas (1879-1945). *Dictionary of Educational History in Australia and New Zealand*. <https://dehanz.net.au/entries/thomas-report-and-william-thomas-1879-1945/>

Masters, G.N. (1982). A Rasch model for partial credit scoring. *Psychometrika*. **47**: 149–174. [doi:10.1007/BF02296272](https://doi.org/10.1007/BF02296272)

Ministry of Education. (2024). *Supplementary Analysis Report: final-year Fees Free*. <https://web-assets.education.govt.nz/s3fs-public/2025-01/Supplementary%20Analysis%20Report%20final-year%20fees-free.pdf>

Ministry of Education. (2025a). *Proposal to replace NCEA with new national qualifications: Discussion document*. [https://web-assets.education.govt.nz/s3fs-public/2025-08/NCEA%20Discussion%20Document%202025\\_web%206Aug.pdf](https://web-assets.education.govt.nz/s3fs-public/2025-08/NCEA%20Discussion%20Document%202025_web%206Aug.pdf)

Ministry of Education. (2025b). Years 11-13 subjects for the National Curriculum. <https://files-au-prod.cms.commerce.dynamics.com/cms/api/qwxsnqcpfm/binary/MLe0TF>

Johnston, M. (2025). *Trade Routes: Charting New Pathways from Secondary School to Industry Training*. The New Zealand Initiative, Wellington. <https://www.nzinitiative.org.nz/reports-and-media/reports/trade-routes-charting-new-pathways-from-secondary-school-to-industry-training/document/872>

New Zealand Qualifications Authority. (n.d.-a). *Unit standard 13031*. <https://www.nzqa.govt.nz/nqfdocs/units/pdf/13031.pdf>

New Zealand Qualifications Authority. (n.d.-b). *Skill standard 40783*. <https://www.nzqa.govt.nz/nqfdocs/skills/pdf/40783.pdf>

New Zealand Qualifications Authority (2024). *eQuate June 2024*. <https://www2.nzqa.govt.nz/about-us/publications/newsletters-circulars/equate/june-2024/>

Otago Polytechnic (2026). New Zealand Certificate in Heavy Automotive Engineering (Level 4) (Road Transport) or (Plant and Equipment). <https://www.op.ac.nz/programmes/nzqa/new-zealand-certificate-in-heavy-automotive-engineering-level-4-road-transport-or-plant-and-equipment>

- Our Action Station (n.d.). Stop the Government taking away Outdoor Education. *Petition to Hon. Erica Stanford, Minister of Education*. <https://our.actionstation.org.nz/petitions/keep-outdoor-education-as-a-senior-curriculum-subject-list>
- RNZ (2025, September 15). Outdoor education up a creek without a paddle. *The Detail Podcast*. <https://www.rnz.co.nz/programmes/the-detail/story/2019004315/outdoor-education-up-a-creek-without-a-paddle-ammended>
- Saadi, R. (2025, September 7). Fears over plan to axe outdoor education. *Otago Daily Times*. <https://www.odt.co.nz/regions/wanaka/fears-over-plan-axe-outdoor-education>
- Seek.co.nz (n.d. a) What can I earn as a Policy Analyst? <https://www.seek.co.nz/career-advice/role/policy-analyst/salary>
- Seek.co.nz (n.d. b) What can I earn as a Heavy Diesel Mechanic? <https://www.seek.co.nz/career-advice/role/heavy-diesel-mechanic/salary>
- Skills for Careers (n.d.). *A Levels*. <https://www.skillsforcareers.education.gov.uk/pages/training-choice/a-levels>
- Stanford, E. (2025). Future focused secondary school subjects. *Beehive.govt.nz*. <https://www.beehive.govt.nz/release/future-focused-secondary-school-subjects>
- Tertiary Education Commission (2026). Eight Industry Skills Boards established. <https://www.tec.govt.nz/strategic-initiatives/vocational-education-system/changes-to-the-vocational-education-and-training-vet-system/industry-skills-boards>
- Tertiary Education Commission (n.d.-a). *Consultation on Industry Skills Boards' Coverage*. <https://www.tec.govt.nz/assets/Consultation-Documents/TEC-Consultation-Documents-ISB-Coverage.pdf>
- Universities NZ (n.d.). Fees for Domestic Students 2024. <https://www.universitiesnz.ac.nz/sites/default/files/universitiesnz/documents/Fees%20for%20Domestic%20Students%202024%20update.pdf>
- Willis, N. (2025). Budget 2024 Speech. *Beehive.govt.nz*. <https://www.beehive.govt.nz/speech/nicola-willis-budget-2024-speech>

## Endnotes

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- <sup>i</sup> Seek.co.nz (n.d. a)
- <sup>ii</sup> Seek.co.nz (n.d. b)
- <sup>iii</sup> Universities NZ (n.d.)
- <sup>iv</sup> Otago Polytechnic (2026)
- <sup>v</sup> Ministry of Education (2025a)
- <sup>vi</sup> New Zealand Qualifications Authority (2024)
- <sup>vii</sup> Ministry of Education (2025a)
- <sup>viii</sup> Johnston, M. (2025)
- <sup>ix</sup> Tertiary Education Commission (2026).
- <sup>x</sup> Willis, N. (2025).
- <sup>xi</sup> Ministry of Education (2024)
- <sup>xii</sup> Our Action Station (n.d.).
- <sup>xiii</sup> RNZ (2025).
- <sup>xiv</sup> Otago Daily Times (2025).
- <sup>xv</sup> Ministry of Education (2025a)
- <sup>xvi</sup> Masters, G.N. (1982).
- <sup>xvii</sup> Tertiary Education Commission (2026)
- <sup>xviii</sup> Ministry of Education (2025b)
- <sup>xix</sup> Ministry of Education (2025b)
- <sup>xx</sup> Ministry of Education (2025a)
- <sup>xxi</sup> Education and Training Act 2020
- <sup>xxii</sup> Education Review Office (n.d.)
- <sup>xxiii</sup> New Zealand Qualifications Authority (n.d.-a)
- <sup>xxiv</sup> New Zealand Qualifications Authority (n.d.-b)
- <sup>xxv</sup> Ministry of Education (2025a)
- <sup>xxvi</sup> Kellow, J., & Willson, V. (2008).
- <sup>xxvii</sup> Lee & Lee (2016)
- <sup>xxviii</sup> Stanford, E. (2025).
- <sup>xxix</sup> Ministry of Education (2025a)
- <sup>xxx</sup> Skills for Careers (n.d.)

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