

DEVELOPING AN
OUTCOMES FRAMEWORK
FOR NEW ZEALAND'S
VOCATIONAL EDUCATION
AND TRAINING SYSTEM

Discussion document:

**Potential aims, uses, and indicators for a
New Zealand VET system outcomes framework**

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1. Purpose

This consultation document has been developed by a sector-led 'VET Working Group' to support discussion amongst ITPs, ITOs, other vocational education and training organisations, business and industry groups about:

- The value of developing an outcomes framework for New Zealand's vocational education and training (VET) sector;
- The scope and potential uses of a VET outcomes framework for New Zealand.

The VET Working Group's primary interest in developing an outcomes framework is to help VET-sector organisations strengthen the performance and impact of vocational education and training in New Zealand. This interest aligns directly to the first priority of the Tertiary Education Strategy¹, to deliver skills for industry. It also complements other initiatives to improve the focus and quality of tertiary education investment² and understanding of outcomes from that investment³.

Through consultation, views are also sought on:

- Identifying high-level outcomes to guide future focus and priorities for VET sector leaders;
- Designing processes for assessing impacts and value of the VET system, including potential indicators;
- Clarifying the definition of the VET system for the purpose of developing and applying an outcomes framework.

The VET Working Group will consider feedback from this consultation as it further develops an outcomes framework for New Zealand's VET system. Its intention is to develop a draft framework for testing by ITPs, ITOs and business and industry groups, in 2016.

1 Tertiary Education Strategy: 2014-2019.

2 <https://www.tec.govt.nz/Funding/plan-guidance/Plan-Guidance-for-2017-and-2018-We-we-want-the-engagement-to-focus-on/>

3 <https://www.educationcounts.govt.nz/publications/80898/looking-at-the-employment-outcomes-of-tertiary-education>

2. The VET Working Group

The VET Working Group is a collective of CEOs of ITOs and ITPs, supported by the Industry Training Federation, NZITP and the Metro Group of ITPs.

In 2014, the VET Working Group developed a manifesto⁴ advocating for a VET system that is more directly focused on outcomes for employers and industry, learners and students, now and over time. This manifesto set out a challenge to ensure vocational education and training:

- Enables learners (including employers) to acquire skills relevant to today's labour market as well as having the capacity to move to different types of work, businesses and employment arrangements in the future;
- Ensures that processes for acquiring skills and knowledge are offered through a system that enables flexibility in delivery to meet the needs of individuals, businesses and workplaces, occupations and industries;
- Maintains agility to anticipate and respond to changing pressures and opportunities.

During 2015, the VET Working Group has held several workshops aimed at developing a draft outcomes framework, to form the basis of wider consultation with the VET sector, employers and industry groups, government, and with iwi and other key stakeholders in the VET system. Representatives of government agencies, including the Ministry of Education, the Tertiary Education Commission, the New Zealand Qualifications Authority, the Ministry of Business, Innovation and Employment, Treasury and the Productivity Commission, have contributed to these workshops and supported this sector-led process.

In taking this initiative, the VET Working Group recognises other significant initiatives that will inform this work and potentially be informed by this work. These include the review of tertiary sector models by the Productivity Commission⁵ and the development of a new investment strategy by the Tertiary Education Commission⁶.

4 http://www.itf.org.nz/files/7714/4660/7612/New_directions_for_VET.pdf

5 <http://www.productivity.govt.nz/sites/default/files/tertiary-education-terms-of-reference%20-%20327Kb.pdf>

6 <http://www.tec.govt.nz/Tertiary-Sector/Our-story-the-tec-new-business-strategy/The-Investment-Approach/>

3. Why develop a VET system outcomes framework?

Developing an outcomes framework is a vital step in moving the VET system from an output-driven model to one centred on outcomes (results) that employers and learners want. This in turn will mean VET organisations can target investment (e.g. in programmes, qualifications, industry and sector engagement, and applied research) more effectively to achieve such outcomes or results. Sharpening the VET system focus on such outcomes would also reinforce key messages in the Tertiary Education Strategy.

This sector-led initiative to develop a VET system outcomes framework is intended primarily to support VET sector leaders as they seek to strengthen the performance and impact of the VET education and training delivered through their institutions. VET sector leaders want better information about outcomes to guide the decisions they make about what and how to deliver. Such information should, in turn, influence investment planning.

New Zealand needs a well-functioning and coherent VET system meeting the needs of learners (including employers) and workplaces. It must be responsive and flexible enough to adapt to the needs and demands of not only the current workforce but also the workforce of the future. This is central to building a skilled workforce and a strong growing economy. As advocated by the OECD⁷, VET systems must integrate the world of education within the world of work. This in turn requires a focus on workforce development for workplaces and industry, within which the current and future needs of learners are addressed.

At a *Workforce for the Future Conference* (July 2014), several factors critical to the success of an outcomes-focused VET system were highlighted, including:

- Better integration of the worlds of work and learning
- Multiple pathways for meeting a variety of workplace and trainee/learner needs;
- Incentivising collaboration (and removing ‘patch protection’);
- More and direct involvement of industry for defining workforce needs, including qualifications and matching supply:demand in regional and sector labour markets;
- Integrating short-term objectives within long-term strategies.

Improving outcomes from New Zealand’s VET system will depend on performance measurement that focuses on outcomes. For the VET sector, this will require a significant shift from the focus of the last 20 years of raising participation (especially during the 1990s) and more recently of lifting learner achievement. While the performance of VET sector organisations (as measured by course/qualification completion and credit achievement) has improved over recent years, the associated VET system contributions to workforce skills and economic productivity are not necessarily clear.

⁷ <http://www.tec.govt.nz/Tertiary-Sector/Our-story-the-tec-new-business-strategy/The-Investment-Approach/>

The challenge therefore is to move beyond these earlier performance measures to an assessment of VET sector outcomes; i.e. beyond whether a learner/trainee completed a programme/qualification to posing questions about the value of that achievement (and/or integrated workforce development programmes).

VET sector leaders now want to move from defining concepts and setting goals, to practical initiatives that help set the direction and framework for enhancing outcomes from the VET system. A key component is developing a framework for planning, resourcing, monitoring and reviewing outcomes from the VET sector. This will help VET sector organisations deliver what learners and employers want, how they want it and when they want it.

Discussion Questions:

- ▶ How important is it to shift focus towards outcomes from New Zealand's VET sector?
- ▶ Who are the key groups/stakeholders for whom outcomes from the VET system matter?
- ▶ How should VET sector leaders apply outcomes information to their decision making about what and how to deliver vocational education and training in New Zealand?

4. What is the VET system in New Zealand?

New Zealand's VET system supports work-based learning across a wide range of qualification levels – spanning certificates, diplomas and degrees (Bachelors and Post-graduate). This work-based focus represents a distinctive approach to learning, or pedagogy⁸ (rather than on a defined range of qualification levels).

This pedagogy focuses on developing capabilities that make up vocational competence, including routine expertise, resourcefulness, functional literacies, craftsmanship, business-like attitudes, and wider skills (for employability and life-long learning). The distinctive pedagogy involves learning by, for example, imitating, practicing, thinking critically, real-world problem solving, being coached, and through feedback and conversation. A further distinctive feature of the VET system is its core purpose, to support learners/trainees to develop capabilities to perform well (or better) in work.

New Zealand's VET system comprises organisations providing and facilitating professional and vocational education, integrating the worlds of work and learning, to ensure that learning meets the needs of the workplace. These organisations share a strong focus on⁹:

- Mechanisms to ensure that the mix of vocational provision corresponds to the needs of the labour market;
- Adequate core academic skills, particularly literacy and numeracy built into vocational programmes;
- A range of programmes that offer opportunities for all, and minimise dropout;
- Flexible modes of study suitable to adults with working and home commitments;
- Higher-level vocational qualifications, and avenues of progression from initial programmes to both higher-level vocational and academic programmes.

The VET system also involves enterprises and industry, shaping qualifications and modes of learning to ensure relevance and quality. The interaction of the worlds of work and learning, within the VET system, ensures learners acquire skills relevant to labour market needs now and in the future, while also supporting workplaces to lift their productivity.

Vocational education and training is the core focus for Institutes of Technology (ITPs) and Industry Training Organisations (ITOs). Other organisations, including Wānanga and Private Training Establishments, also contribute to the VET system.

8 Lucas, B 2014. Vocational Pedagogy; what it is, why it matters and what we can do about it. Background Note for UNESCO. http://www.unevoc.unesco.org/fileadmin/up/vocational_pedagogy_bill_lucas_unesco-unevoc_30april.pdf

9 Key features of strong VET systems, as represented by the OECD - <http://www.slideshare.net/OECD/edu/key-characteristics-of-strong-vocational-systems?related=1>

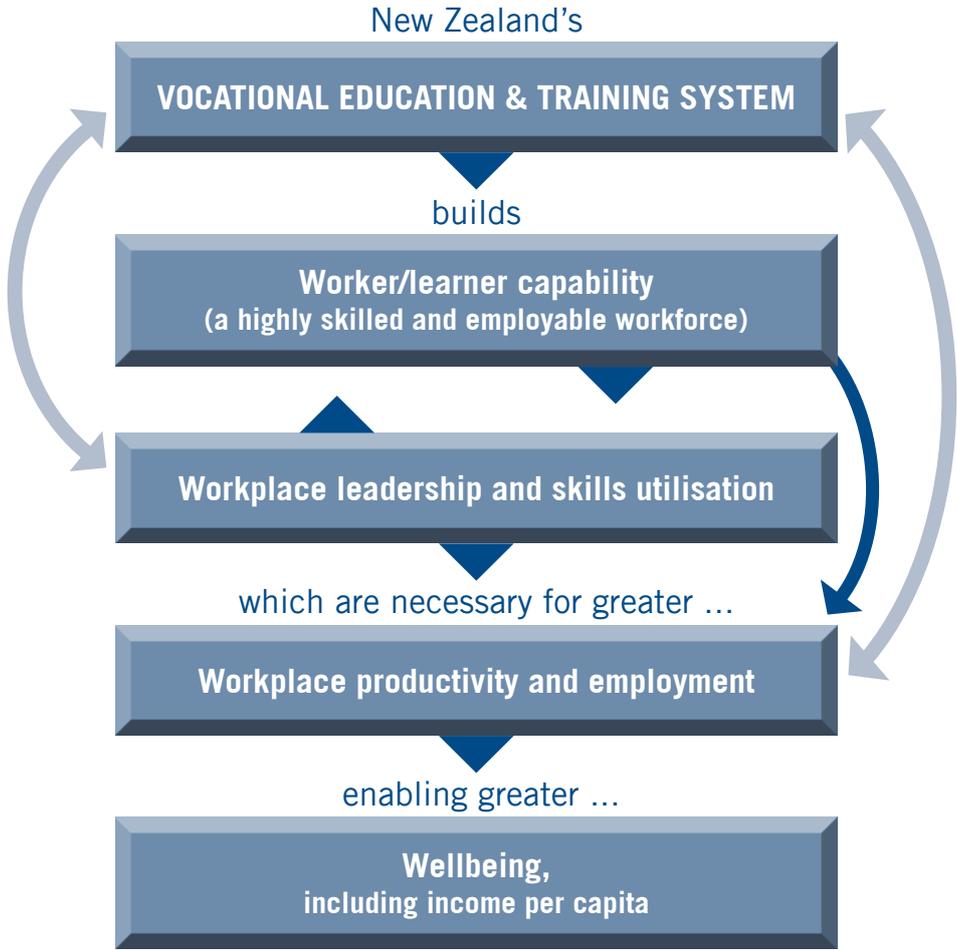
While VET sector leaders, from the ITP and ITO 'sub-sectors', have initiated this focus on outcomes from New Zealand's VET system, they welcome leaders from other institutions and sub-sectors, with interests in vocational education and training, to participate in further work in this initiative.

Discussion Questions:

- ▶ How important is a distinctive pedagogy for clarifying the scope New Zealand's VET system?
- ▶ What organisations participate in New Zealand's VET system?

5. Draft VET outcomes framework: Potential high-level outcomes and intervention logic

A proposed outcomes framework, illustrating ‘intervention logic’, for New Zealand’s VET system is set out in the chart below:



This framework has drawn on international (e.g. OECD¹⁰, UNESCO¹¹) and local (e.g. Treasury¹²) literature. Core outcomes of ‘worker/learner capability’ and ‘workplace leadership and skills utilisation’ are proposed. These outcomes are necessary (but not the only drivers of) ‘workplace productivity and employment’, which in turn contributes to improved ‘well-being’ (individual and social).

10 <http://www.oecd.org/edu/skills-beyond-school/>

11 <https://akoaootearoa.ac.nz/download/ng/file/group-4/skills-for-work-and-life---chakroun-kn1.pdf>

12 <http://www.treasury.govt.nz/abouttreasury/higherlivingstandards>

Descriptions of these core outcomes are now set out, as a basis for identifying indicators that may be used routinely to understand and review contributions and value being made through New Zealand's VET sector.

Worker/learner capability

The VET sector works to create a *highly skilled and employable workforce* through work-focused professional and vocational education and training.

The VET sector helps learners (including employers) develop new capability through distinctive work-based and industry-aligned programmes and approaches. This is achieved through a flexible mix of work-integrated, self-managed and classroom learning, combining knowledge and theory with work-based application, and supported by teachers/trainers who are connected to industry and up-to-date with industry needs.

Worker/learner capability includes core and technical skills.

Core skills establish the foundations that will underpin on-going learning and adaptation to new and changing work situations. Core skills include language, literacy and numeracy, digital and financial literacy, as well as soft skills such as critical thinking, problem solving, entrepreneurship and adaptability.

Technical skills need to be aligned to specific work situations. Such skills are typically identified and integrated into programmes and qualifications in partnership with specific industry/sector groups. As such skills must be relevant to the current and emerging workplace/industry requirements.

Workplace leadership and skills utilisation

The VET system supports *workplace leadership and skills utilisation* through collaboration with employers and industry groups.

Employers and industry can utilise highly relevant skills, acquired by graduates/trainees through industry-approved curricula and programmes delivered in close association with industry. The VET system can further help employers and industry to utilise such skills effectively, through partnerships to align content, skills and the learning process to best reflect industry needs, so graduates and trainees add real value.

Processes of work-integrated learning will ensure graduates/trainees transition smoothly into (and progress naturally within) the workplace, thereby accelerating the utilisation of new and valuable skills. Changing patterns and increasing rates of innovation, globally, are creating new challenges for workplace leadership and skills utilisation ¹³.

13 <http://www.dol.gov/oasam/programs/history/herman/reports/futurework/report.htm>

These changes are increasing the need for multi-skilling and up-skilling, fragmenting career and professional skills, and speeding up the volume of knowledge and skills workers are expected to master.

The VET system strengthens workplace leadership by partnering with employers and industry to develop targeted solutions to workplace challenge, including increasing staff capability and capacity. Such collaboration can include engaging learners/trainees in real-world problem-solving and applied research. It can also build and strengthen management capability, particularly for innovation, planning and entrepreneurship.

Strengthened workplace leadership will in turn raise awareness of future skill demand and training opportunities. Utilising higher skills in the workplace will also typically involve greater innovation and capital investment, therefore driving higher productivity. The VET system can engage with workplace leaders at various points as such changes are made.

Workplace productivity and employment

Through the core outcomes set out above, the VET system contributes to *increasing workplace productivity and employment*¹⁴ in the economy.

This depends on alignment with industry and employers to enable knowledge transfer, as well as sharing and use of new technologies and ideas to solve real world problems.

Productivity is simply the efficiency with which inputs (e.g. labour and capital) are used in the economy to produce outputs. It includes three inter-linked components; labour productivity, capital productivity and multi-factor productivity. Labour productivity can be enhanced by increased capital investment ('capital deepening') and/or by improved 'multi-factor productivity'. The extent to which employers are willing to invest in more capital (per hour worked by employees) is partly dependent on their confidence that they will be able to access the skills needed to benefit from that investment. The skills of individual workers, and of the workers around them, both contribute to multi-factor productivity, essentially by improving the efficiency and effectiveness of outputs produced in the workplace.

Well-being

The VET system helps individuals and communities advance their aspirations and *well-being*, through greater access to and participation in work-aligned learning and the associated impacts on workplace productivity.

Increasing participation and achievement help create positive social and economic change for individuals and communities. This in turn increases the resilience of the New Zealand workforce and economy, for example as improved work readiness and employability reduce reliance on social support.

14 Sustainable employment, drawing on the employees qualifications and skills (rather than just any job)

Distinctive and specific contributions of the VET system

The VET system is only one of many influences on the outcomes proposed here. This ‘partial’ influence is typical of most outcome frameworks, simply reflecting the logical and practical interdependence of many parties involved in outcomes. Outcomes to which the VET system contributes will also depend, for example, on pathways between secondary and post-secondary education, economic growth (sector, regional, national and international) and labour market regulation. Central government policies in tertiary education, economic development and social development will variously impact on outcomes such as those set out above, to which the VET system is contributing.

As outcomes ultimately depend on contributions from various parties, attribution to any single party (e.g. the VET system) can be difficult. Furthermore, time-lags between the direct actions of a party and the ultimate expression of outcomes can be long. While such attribution and time-lag matters can get in the way of directly measuring the impact of the VET system, this should not detract from the overall value of increasing the focus on outcomes to which the VET system contributes.

The Government’s Tertiary Education Strategy¹⁵ sets out a need for a stronger focus on the outcomes of tertiary education, recognising that outputs, efficiency and student achievement do not stand alone, but instead provide stepping stones to assisting individuals and communities to realise their full potential. The Tertiary Education Strategy also highlights a government priority to improve economic outcomes from tertiary education.

Discussion Questions:

- ▶ How well do the high-level outcomes set out here reflect an appropriate focus for New Zealand’s VET system?
- ▶ Is the logic for the contribution of the VET system to these high-level outcomes clear?

¹⁵ Tertiary Education Strategy: 2014-2019

6. Potential indicators for assessing the performance and impact of New Zealand's VET system

Indicators are a vital component of any outcomes framework. In general, established measures (indicators) are used to determine how well an intended result (outcome) has been achieved in a particular area of interest.

Challenges

The development of outcome indicators can be difficult. The following issues will affect the definition and application of indicators¹⁶:

- Relevance – do the indicators relate to objectives (rather than simply measuring what is easily measurable)?
- Tractability – indicators must be able to be compiled.
- Confounding factors – for example, the number of skilled vacancies may be a reasonable measure of the extent to which the VET system is meeting labour market needs, but factors such as the state of the economy and/or inadequate working conditions and wages can confound the relationship.
- Disaggregation issues – policy may dictate that special attention is given to sub-groups, but the data may not be up to the task.
- Unintended consequences – allocating resources on the basis of indicators may lead to perverse behaviour (e.g. excluding 'more difficult to teach students' in order to achieve high completion rates).
- Avoiding the hard issues – for example, business groups may resist measures that focus on their willingness to invest, either directly in vocational education or in capital to improve prospects for capturing value from a more highly skilled workforce.
- Robustness – if indicators are used to inform resource allocation, then they must be robust to avoid risks of unfair allocations based on poor-quality measures.
- Indicators are not a substitute for analysis – as the VET system is complex, it is naïve to assume that policy outcomes can be adequately assessed through simple indicators.
- Simplicity is not always a virtue – for example, indicators are often calculated for the whole population, but age-specific measures can be more useful.

¹⁶ Karmel, T 2008. Measuring educational outcomes: vocational education and training. Paper presented to NATSTATS08 Conference – Working Together For An Informed Australian Society, 19-21 November 2008, Melbourne

Proposed approach

This paper sets out some initial indicators of potential relevance for assessing outcomes from vocational education and training, for consideration and feedback.

These initial options are based largely on data sets already collected for other purposes, but which could at the same time inform evaluation of VET system outcomes.

Many of the indicators proposed here may be amended and/or extended so they better represent outcomes of the VET sector. Other indicators may need to be developed to better represent VET system outcomes more specifically. Feedback is therefore sought on the merit and/or constraints of the indicator options. This will in turn inform the refinement of existing indicators and/or development of new indicators, to achieve the goal of a set of indicators of VET system outcomes that address the issues noted above.

Any assessment of the merit of current indicators and/or the need for new indicators should be based on some core guiding principles. Based on the intervention logic set out in the previous section, the following principles are proposed¹⁷:

- Indicators may relate to outcomes that are ‘attributable’ or ‘not necessarily attributable’ or specific interventions (actions);
- Indicators should always be mapped onto the outcomes hierarchy (i.e. rising from input, to output, to medium-term impact, to long-term outcome);
- The higher up an outcomes hierarchy a set of indicators reaches, the better;
- The more comprehensively a set of outcomes reaches across an outcomes hierarchy, the better;
- The longer the response time (i.e. the time before impacts of an intervention can be measured) for an outcomes hierarchy, the greater the importance of indicators at lower-levels of the outcome hierarchy.

Potential indicators

Initial indicator options noted here are related to the outcome areas set out in Section 5, above. The two core outcome areas are ‘worker/learner capability’ and ‘workplace leadership and skills utilisation’, so definition of indicators for these outcome areas will be critical.

For the outcomes further up the outcomes hierarchy (‘workplace productivity and employment’ and ‘wellbeing’), indicators should help identify how the VET system is affecting outcomes over time.

¹⁷ Adapted from Dr Paul Duignan’s ‘Outcomes Theory Knowledge Base; http://www.parkerduignan.com/ot/principle_indicator_outcome.html

Worker/learner capability

Outcome measures must focus on capabilities in workplaces (as distinct from qualifications gained from VET system institutions).

Technical capabilities

Existing indicators that may be applied include:

- Persistent labour shortages – MBIE collates data on these shortages;
- Ease of finding skilled or specialist labour – a measure of this is included in the NZIER quarterly survey of business opinion
- Employment and earnings – the TEC-led project on ‘Information for Learners’¹⁸ is considering employment and earnings following graduation.

Core capabilities

An existing indicator that may be applied is:

- Workplace literacy and numeracy – the *Survey of Adult Skills* is a survey conducted by the OECD (for 33 countries) as part of the *Programme of International Assessment of Adult Competencies (PIACC)*.

There is no existing survey of employability, but a useful indicator may be devised by reference to a key characteristic of highly-employable workers – e.g. ‘career orientation’ before and after experiencing VET.

Workplace leadership and skills utilisation

Outcome measures must focus on how managers and entrepreneurs received the education and training appropriate to their leadership role, and how they demonstrate competence for sustaining and improving workplace performance, including through the recruitment, development and utilisation of skills.

Existing indicators that may be applied include:

- Management quality – the ‘Management Matters in New Zealand’ survey of the quality of management practices could be extended to include a measure of management practices influenced by a proactive and work-integrated VET system;
- Employer-funded training and development – the ‘Survey of Adult Literacy Skills’ provides some information on this topic, and MBIE is investigating the efficacy of collecting regular and consistent information through the Business Operations Survey;

18 <http://www.tec.govt.nz/Tertiary-Sector/Reviews-and-consultation/Information-for-Learners/>

- Supervision and entrepreneurship skills – could measure the proportion of firms claiming they ‘do not require’ such skills, using the proportion of businesses (with 6+ employees) reporting ‘not required’ for computer, trade, management/supervisory, professional/technical, or marketing skills, in the Statistics NZ annual Business Operations Survey;
- Skills utilisation – a new measure will need to be developed for assessing the extent to which employees consider they are able to use the skills they gained through the VET system, although the ‘Survey of Adult Literacy Skills’ provides some information.

Workplace productivity and employment

VET system impacts on worker/learner capability and workplace leadership/skills utilisation will flow through to workplace productivity and employment.

MBIE’s ‘Labour Market Scorecard’¹⁹ presents a convenient, regular update on many potential indicators for workplace productivity and employment. Other relevant indicators could include:

- Productivity – Statistics NZ maintains annual productivity measures²⁰, for labour productivity, capital productivity and multifactor productivity;
- Employment – Statistics NZ maintains quarterly and annual employment statistics²¹, including the employment rate, the labour force participation rate and the unemployment rate;
- Not in employment, education or training (NEET) – this measure focuses on a key issue for New Zealand in which the VET system can play a vital role, so this represents an inverse measure of a VET system outcome.

The VET system is but one of many factors that will influence such indicators. The key challenge for an outcomes measurement process therefore is to monitor these indicators over time, in order to recognise changes that may be associated with changes in worker/learner capability and/or workplace leadership and skills utilisation.

Wellbeing

As the VET system impacts on skills, employment, and productivity outcomes, it should contribute to improved wellbeing outcomes.

19 <http://www.mbie.govt.nz/info-services/employment-skills/labour-market-reports/labour-market-analysis/labour-market-scorecard>.

20 www.stats.govt.nz/browse_for_stats/economic_indicators/productivity/ProductivityStatistics_HOTP78-14/Commentary.aspx:

21 http://www.stats.govt.nz/browse_for_stats/income-and-work/employment_and_unemployment/labour-market-statistics-information-releases.aspx

Indicators that could reflect the contribution of the VET system include:

- Income per capita – from the Household Labour Force Survey;
- Life satisfaction – from the biennial General Social Survey.

Developing and testing additional indicators

Existing indicators, such as those noted above, cannot provide very specific or immediate measures of the performance or impact of vocational education and training. Additional indicators will therefore be useful, to better inform decision-making by VET sector leaders.

Relevance, coherence and effectiveness of the VET system

Assessing the relevance, coherence and effectiveness of the VET system as a whole (over and above the performance of individual organisations, for example) will be important for guiding the development of VET system policy and goals. The indicator options identified above will need to be tailored to enable assessment of the specific contribution and impact of the VET system, differentiated from contributions and impacts from other factors also relevant to skills, employment and productivity.

Feedback is therefore sought on how specific and tailored indicators might be developed, integrated with and/or complementing the indicators already in use elsewhere.

Discussion Questions:

- ▶ How well do the indicators noted here capture contributions and impacts of the VET system?
- ▶ What additional, specific indicators might further and/or better reflect contributions and impacts of the VET system?
- ▶ How should VET sector leaders use indicators to inform and guide delivery of vocational education and training?
- ▶ How should VET system indicators be used to complement performance measurement for individual VET sector organisations?

7. How to provide feedback

Please provide feedback to the discussion questions set out in this paper.

Together, these questions have been designed to inform further discussion on:

- The value of developing an outcomes framework for New Zealand's vocational education and training (VET) system;
- The scope and potential uses of a VET outcomes framework for New Zealand;
- The definition and application of indicators for assessing outcomes from New Zealand's VET system.

Feedback should be sent by email to:

By 11 March 2016