SUBMISSION TO
NEW SOUTH WALES PRODUCTIVITY COMMISSION

HUMAN CAPITAL

Transport and Logistics Centre

27 November 2019

Introduction

The Transport and Logistics Centre (TALC) Limited was established in 2000. It acts as a "think tank" for new ideas in capability building in transport and logistics. As a not-for-profit company TALC provides its services on a cost recovery basis. It is here to serve the industry. Our work is independent and driven by our values - collaboration, empowerment and innovation in all things.

We advise, assist and facilitate projects, programmes and ideas. The primary focus of our work is capability building in transport and logistics. TALC was initially established in 2000 in NSW, and then funded in part by the NSW and Commonwealth Governments from 2004 to 2013. We have enjoyed bipartisan support since 2003. We have also worked closely with private companies, industry associations and trade unions on industry related projects within our mandate. In 2007 TALC became an independent not-for-profit research and consulting group. Since 2013 TALC has been active in all sectors of the supply chain in Australia – especially road freight, rail, maritime and aviation.

The NSW Productivity Commission Roundtable on Human Capital

The Chair of TALC Limited, ▇▇▇▇▇, was invited to attend this roundtable 21st October 2019.

The Commissioner posed a series of questions to the group. TALC addresses some of these.

- How can the NSW Government improve student outcomes and the performance of NSW schools?
- What are the core competencies that a modern school system should provide, given the increasing digitalisation of the economy?
- Do the issues and challenges identified in this section reflect the challenges facing the VET sector in delivering skills for a modern economy? What can be done to address these challenges?
- How could governments raise the profile of VET, and shift cultural attitudes towards the sector?

How can the NSW Government improve student outcomes and the performance of NSW schools?

1. Targeted data collection

In order to arrive at the most considered and valid answers to the above, it is imperative that the question is posed to the two key stakeholder groups linked to student outcomes and the performance of schools:

i.   Teachers
ii.   Students

For the purposes of this response, the term "teachers" should also include teaching support staff as well as non-teaching executives.

Teachers are responsible for interpretation and delivery of the curriculum, and the design of programs to achieve outcomes specified within. Their hands-on involvement and in-depth understanding of "what" is prescribed to be taught, and their input on "how" it is taught will provide valuable insights and real, practical suggestions to implement. Additionally, teachers are continually provided with informal and formal feedback from the students in their charge which will be incorporated in their responses.

In relation to students, the focus should be on those in the later years of high school – Years 10, 11 and 12. Students of this age are likely to be looking towards life after school, considering career options and identifying the knowledge and/or skills that will be meaningful in their chosen careers. Knowledge and skills identified as necessary by students for their participation in society and the economy post-school should be considered when prescribing the curriculum.

All students in high-school years 10, 11 and 12 and all teachers from K-12 in NSW schools should be made aware of "Kickstarting the productivity conversation" and actively invited to respond to the relevant questions. This would be most effectively implemented via a web or social media platform utilising the NSW Department of Education databases. Implemented over a period of 12 months, sufficient data would be collected for analysis and conclusions.

2. Define and cultivate attributes and competencies of effective teachers

It is widely accepted that quality teaching is one of the key contributors to student educational outcomes. Whilst it is possible to identify and measure certain attributes of individual teachers which may contribute to effective teaching, such as a high ATAR (questionable), level of qualification, years of teaching experience and knowledge of specific subject matter, it is more difficult to measure other attributes or competencies which a teacher needs in order to teach effectively as well as serve the many other roles required of a teacher in order to develop young people equipped to thrive and contribute outside school.

Such qualities may include a "moral purpose, intellectual curiosity, empathy, collegiality, communication skills, self-awareness, and emotional intelligence, an ability to connect to young people, intuition and dedication".[1]

A study conducted in the USA[2] with in-service and pre-service teachers over a fifteen year period identified the following twelve characteristics of an effective teacher:

- Came to class prepared
- Maintained positive attitudes about teaching and about students
- Held high expectations for all students
- Treated and graded all students fairly
- Displayed a personable, approachable touch with students
- Cultivated a sense of belonging in the classroom
- Dealt with students problems compassionately
- Had a sense of humour and did not take everything seriously

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[1] O'Shannassy, Paul. What high achievers are missing as ideal teachers. Sydney Morning Herald, October 20,2019. Retrieved from https://www.smh.com.au/education/what-high-achievers-are-missing-as-ideal-teachers-20191018-p5322l.html

[2] Walker, R. (2008). Twelve Characteristics of an Effective Teacher: A Longitudinal, Qualitative, Quasi-Research Study of In-service and Pre-service Teachers' Opinions. *Educational Horizons, 87*(1), 61-68. Retrieved from www.jstor.org/stable/42923744

- Respected students and did not take intentionally embarrass them
- Were forgiving and did not hold grudges
- Admitted mistakes

Extensive research should be undertaken to identify the attributes and competencies which are proven to make a "good" teacher in the local context.

As inherent qualities such as those outlined above (or likely to be identified in subsequent research) cannot necessarily be taught to prospective new teachers during their Initial Teacher education (ITE) the recruitment of new teachers should be designed to attract individuals with the desired qualities as identified.

Subsequently, course content in ITE and ongoing training for existing teachers should seek to further develop the necessary attributes and competencies.

3. Reduce administrative burden on teachers

The 2018 Understanding Work in Schools[3] report from Sydney University and Curtin University to the NSW Teacher's Federation indicates that, (among a range of issues), 97% of teachers in NSW reported an increase in administrative requirements. Further, the report found that 91% of Teachers believed that teaching and learning is hindered by new administrative demands introduced by the Department.

Survey respondents indicated a number of possible, positive solutions, including eliminating processes that are "unnecessary, cumbersome, extremely time consuming, or focused only on administrative demands associated with compliance".

It is suggested that Understanding Work in Schools report and its recommendations be considered as useful feedback in addressing the key question of how to improve student outcomes and school performance. Specialist Administrative positions should be created and funded within schools to more efficiently manage administrative and compliance requirements, whilst allowing teachers to utilise their skills and time towards effective planning and teaching.

4. Specialist support for classroom teachers

Whilst it is commonly believed that 20% of the school student population in mainstream classes has some type of special educational need, a report published in 2003 [4] relating to students in NSW and South Australia indicated the figure for NSW is more realistically 28%.

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[3] McGrath-Champ, S., Wilson, R., Stacey, M. & Fitzgerald, S. (2018) Understanding Work in Schools, the Foundation for Teaching and Learning 2018 Report to the NSW Teachers Federation. Retrieved from https://news.nswtf.org.au/application/files/7315/3110/0204/Understanding-Work-In-Schools.pdf

[4] Peter Westwood & Lorraine Graham (2003) Inclusion of students with special needs: *Benefits and obstacles perceived by teachers in new South Wales and South Australia*, Australian Journal of Learning Disabilities, 8:1, 3-15, DOI: 10.1080/19404150309546718

Teachers described a number of positives as well as difficulties encountered as a result of inclusion of special needs students within mainstream classrooms. Issues noted include a 'lack of time', combined with difficulty balancing the demands of all students. Specific obstacles to implementing inclusive practice included class size, lack of appropriate teaching resources, behaviour problems exhibited by some students), and lack of appropriate professional training.

In order to ensure all students are given the best opportunity to achieve the required outcomes, the teachers' time and efforts must not be focused disproportionately on students who require specialist support.

Further, to adequately cater for students with special needs, and that to ensure other students are not impacted, additional funding is required to:

- diagnose students;
- develop and implement Individual Education Plans (IEPs) that work;
- provide extra training for the teacher; and
- employ additional school learning support officers (SLSOs) who are adequately trained to support students with special needs and their teachers

5. Identify and remedy causes for historical decline in educational outcomes

Teaching methodologies delivered to teachers in ITE occur periodically with certain methods coming into or going out of vogue. An example is the "whole language" approach to reading replacing the "phonics" methodology in the late 1980's and 1990's. It could be argued that this approach led to a decline in outcomes in spelling and reading. Similarly, shunning the rote learning of facts such as times-tables in mathematics anecdotally contributed to a decline in basic mental calculations.

As identified in the Kickstarting the productivity conversation paper, NSW schools showed a decline in reading, mathematics and science in the latest PISA results. Research should be conducted to identify any decline (or growth) in other subject areas.

A detailed analysis of areas of decline (and growth) in student outcomes should be undertaken, and cross-referenced with the teaching methodologies prescribed during ITE and the curriculum of the corresponding teaching and learning periods. Essentially, the teaching methodologies that produce superior results should be favoured.

6. Remove the NAPLAN

The negative aspects of the nation-wide NAPLAN outweigh the positives. The NAPLAN's focus is narrow – English and Mathematics only. As indicated previously, NSW student results have been declining in these areas, so if the purpose of NAPLAN was to improve student outcomes, it is not working.

Many students find the test and the period leading up to the tests stressful.

Teachers and principals feel pressure to ensure students attain the best possible NAPLAN results. It is common for students to be "taught to the test", and valuable teaching and learning time is consequently used up practising past NAPLAN papers. There is evidence of schools attempting to influence outcomes by excluding certain students from the tests, and coaching students during and after submitting their responses to provide the correct answers. This renders data gathered unreliable at best.

As with standardised tests generally, there may be biases towards certain groups; and measuring a student's performance on one occasion is not necessarily an accurate reflection of that student's ability.

7. Remove non-essential lessons

Subjects or classes which fall outside the determined core curriculum should not be taught. Such classes may be ongoing in nature, or "one-offs" and waste valuable teaching and learning time.

All scripture classes in NSW government schools should be ceased. Similarly, the School Chaplain program should be discontinued. Funding redirected from this program could contribute to more effective pastoral care initiatives including increased availability of qualified school counsellors.

Learning which should be the responsibility of parents (e.g. road safety), or the community should not be placed as an additional burden on teachers.

8. Establish specialist secondary schools

Secondary schools should be established with specific core areas of focus, (as an alternative mainstream schools offering a more traditional and diverse curriculum), designed to prepare students for their intended vocations. Areas of focus should reflect identified future skill and cultural needs and include:

- Information and Communication Technology
- Trade Skills
- Science
- Arts

What are the competencies that a modern school system should provide, given the increasing digitisation of the economy?

Prior to addressing the "digitisation" aspect specifically, this question should be amended to allow responses which indicate a broader range competencies required for an economy changing due to a wider range of factors. Such factors include a shift towards renewable energy sources, ageing population, immigration, trends in university and TAFE enrolments and completions, and retention rates of employees in a range of industries.

Detailed labour market modelling should be conducted across key sectors to predict future employment demands. In conjunction with this data, an analysis of the government's own current skills shortage lists, along with historical skills shortage lists will assist in identifying competencies required.

NSW occupational clusters currently experiencing skills shortages are: Automotive Trades, Construction Trades, Engineering Professions, Engineering Trades, Health Professions, Nurses, and School Teachers. [5]

The availability of suitably qualified tradespersons has been steadily declining; with an ageing population, demand for Health Professionals (particularly in the Aged Care sector) and Nurses is set to increase; over one-third (35.8%) of NSW teachers are over the age of 50 [6], which will see large numbers retire in coming years

NSW schools must continue to develop competencies required in the critical areas such of Health, Education, Engineering and Trades, arresting any further shortages in skilled professionals in these essential areas.

Schools, in particular secondary schools, should modify the curriculum providing additional choice for students, with greater emphasis on developing vocational skills in growth industries as well as industries currently or predicted to experience skills shortages.

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[5] https://docs.employment.gov.au/collections/new-south-wales-occupational-cluster-reports
[6] https://data.cese.nsw.gov.au/data/dataset/age-profiles-of-permanent-nsw-public-school-teachers

With respect to digitisation, some insight can be gained from the 2017 Deloitte (Zurich) report focusing on competencies required in the digital age. [7] The study examines the effects of technological changes on the Swiss labour force and highlights what competencies will needed in the future. It also looks into how the education system and companies should respond to these changes.

A key finding is the need to accelerate changes in vocational education to respond to rapidly evolving occupational profiles and skill needs. Schools (primary and secondary) should focus more on further integrating basic Information and Communication Technology (ICT) skills into the existing curriculum. Secondary schools in particular, could be instrumental in introducing relevant ICT vocational competencies to students, to be further built on at a tertiary level.

The report identifies a number of basic competencies which will continue to be required for a large number of different occupations. Basic competencies include:

- Reading comprehension
- Active listening
- Speaking
- Active learning
- Writing
- Critical thinking
- Languages
- Monitoring

These basic competencies are required as a foundation in order to develop more advanced competencies:

- Creativity
  - Complex problem solving skills
- Social Intelligence
  - Social perceptiveness, coordination, customer orientation, persuasiveness and instructing
- Systems understanding
  - Judgement and decision-making
- Technology
  - Computers and electronics

A new, closely integrated a framework of competencies for schools and VET should be developed, underpinned by research and labour market testing, to provide for continuous and seamless education and training for future jobs.

[7] Zobrist, L, Brandes, D 2017, *What key competencies are needed in the digital age?: the impact of automation on employees, companies and education*, Deloitte AG, [Zurich], Retrieved from
https://www2.deloitte.com/ch/en/pages/innovation/articles/competencies-in-the-digital-age.html

Do the issues and challenges identified in this section reflect the challenges facing the VET sector in delivering skills for a modern economy? What can be done to address these challenges?

1. Identification of broader challenges facing the VET Sector

To answer the question simply and directly, the VET sector's ability to provide effective training programs *is* being hampered by complexity, and a lack of flexibility.

The VET system is difficult to navigate for the average person. Qualifications are endorsed nationally, apprenticeships and traineeships registered at a state level; funding arrangements are convoluted, administratively cumbersome and funding is in many cases difficult to find and access; and there are thousands of providers in a system which is difficult to regulate. The process for endorsing training packages is overly bureaucratic and by virtue of this, the curriculum lacks the flexibility to change in line with industry needs within acceptable timeframes.

Compounding the above issues of complexity and lack of flexibility are:

- ongoing reduction of funding to the TAFE system
- a proliferation of private providers with a focus on profit over educational outcomes
- quality and availability of VET sector staff
- declining student enrolments
- low completion rates
- an unwillingness of employers to engage apprentices and trainees; and
- poor public perception of the VET sector (as alluded to in the final question posed in this section of the paper)

2. Targeted data collection

Again, in order to arrive at the most considered and valid answers to the questions, it is imperative that the questions are posed to the key stakeholder groups at the heart of skill development through the VET system:

i.   Teachers
ii.   Students
iii. Employers

VET sector teachers are traditionally highly-skilled and experienced practitioners in their chosen fields and trades. Many will have seen various changes to vocational education and training over time, (as trainees or apprentices, employees, employers and teachers) which have impacted skill development in both positive and negative ways and their views should be actively sought. Additionally, they are a valuable source of formal and informal feedback from students and employers on the effectiveness of training programs.

Students who are beginning to apply the skills developed in the real world, along with the employers utilising these skills through employment or traineeship and apprenticeship programs, are well placed to identify whether or not training programs and courses are adequately preparing students for the job, and to drive improvements.

3. Integration of the school and VET systems

The challenges faced by the VET sector may in many cases reflect those in NSW schools. In addition, these challenges are potentially exacerbated by the fact that many students entering the VET system have accumulated a vast assemblage of unrelated knowledge (not skills) in particular isolated "subjects" which have little or no practical use in their chosen vocation. VET, in a sense, is in many cases starting from scratch.

A progression of competencies developed throughout school, dove-tailing into the competencies required to be developed in the VET system for future jobs, would enhance the ability of the VET sector (or a newly created and integrated future education system) to deliver the skills required.

4. Address government funding levels

A simple solution to address a number of the issues identified above is to restore and subsequently further increase funding to the TAFE system. A corresponding reduction in funding to for-profit providers will ensure the focus is on effective skill development.

It should be noted that in 2016 (according to the Productivity Commission) more than $1.3 billion was allocated nationally to private providers. This is close to 28% of government recurrent funding.

5. Quality control

Greater scrutiny and regulation of all training providers is needed to ensure that the quality of training provided is up to (or surpasses) standards required not only by the regulator, but by the students themselves and the business who employ them during their training and upon completion.

6. Define and cultivate attributes and competencies of effective teachers

As with teaching staff in the previous section, it will be necessary to define the competencies required of "good" Vocational Education and Training teachers and recruit and provide ongoing professional development for them accordingly.

As a highly skilled qualified tradesperson has the capacity to earn an income which is considerably higher that an educator in the VET system, strategies must be in place to attract suitably qualified and skilled persons to enter VET teaching as a profession.

7. Assistance for users of the system

Given the complexity of the system (for students and businesses), the establishment and promotion of Group Training Organisations (GTO's) to manage apprenticeships and traineeships is recommended. Utilisation of GTO services can raise retention/completion rates and assist businesses with their engagement of and employment of personnel for their workforce and industry more broadly.

8. Improved access to training

VET providers, including TAFEs, need to introduce more flexible delivery options to make it possible and attractive for prospective students to gain skills needed. This could include strategies such as:

- on-line and blended delivery
- virtual classrooms
- restructure of traditional "block" courses into units which can be undertaken independently
- increase in the availability of training outside business hours

How could governments raise the profile of VET, and shift cultural attitudes towards the sector?

Note that a number of the solutions proposed in the preceding question would have a flow-on effect of raising of raising the profile of VET and influencing attitudes.

Many of the negative attitudes towards the VET sector are borne from recent scandals including the identification of "ghost schools", the now defunct VET-fee-help system rorts, and private training providers exploiting government subsidies.

Solutions therefore lie in re-establishing a system with integrity.

1. Adequate, targeted funding

NSW TAFE is a large and important player in the Vocational Education and Training sector. As identified in the response to the previous question, the government should seek to reverse the funding cuts to their own TAFE sector and then seek to further increase funding (state and federal) to NSW TAFE so it is able to operate effectively.

This should be done at the expense of non-government for-profit training providers. An efficient, well-resourced TAFE system, delivering results which are promoted to the public by the government would help to shift attitudes.

Governments must more actively promote the various types of funding currently and periodically available for apprentices, trainees and students that would reduce the cost of hiring and training apprentices/trainees for employers. Subsidies available for individuals to undertake training courses should also be promoted.

2. Promotion through schools

Closer integration of Vocational Education into schools would expose a greater numbers of students and their families to the opportunities and possibilities available to students and businesses through this sector. Schools could play an active role in helping to promote VET and career opportunities in line with identified skill requirements.

3. More trainees and apprenticeships

The establishment and enforcement of mandatory quotas of apprentices/trainees for major projects would increase student numbers and assist in raising the profile of the VET system.

For all enquiries please contact: