# A modern VET system to deliver the skills we need

TAFE NSW needs to streamline what it does. In 2020, just one teacher can manage an entire teaching section with videos and online learning. I don't mean boring outdated Moodle pages. I mean look at how Lynda.com has beautiful courses set out in a brilliant manner of short achievable objectives. The TAFE classroom is dead in 2020.

2020. Micro-credentials are smarter, more innovative, and would attract many more students with a passion to learn.

Big old traditional courses are boring in 2020. Students dislike the fluffy units. Teachers dislike the fluffy units. If TAFE NSW was to break away from national training it

could have the smartest courses in the world. It would have a competitive edge. It would have very keen and interesting teachers. It would have thousands more students.

As it stands, many

As it stands, many parts of TAFE NSW are just robotic teaching processes, it's a qualification mill

with old less useful qualifications for a rapidly changing workforce. The national model is too slow to react to changes.

Unless TAFE NSW can break away and meet the needs of jobs of the future, the working experience will continue to be 'robotic' at best. The Lynda.com model is beautiful. TAFE NSW needs to have a similar model

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Going forward from 2020, if a young person does not have programming skills, automation and design skills, 3D graphics skills, machining and tools skills, electronics skills etc they are not going to fit the mould for the new workforce jobs. TAFE NSW should consider deregistering as an RTO and going back to its old way of designing and managing its own courses. Training packages are

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vative courses in

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and have teachers making video courses in segmented easily digestible chunks. Assessing could still be done in a TAFE NSW testing centre.

There are far too many overheads and management sections in TAFE NSW. The new Skills Points are a joke. Millions of dollars wasted to

produce what? TAFE
NSW marketing is a
joke... a careers booklet
which is not in
newsagents and is only
available after providing
your credentials.
Really? Hundreds of
millions of dollars in
TAFE NSW could be
saved if it just had the
old 'schools' system
from 35 years earlier.
The School of

Mechanical Engineering for example. Lean, clean, simple.

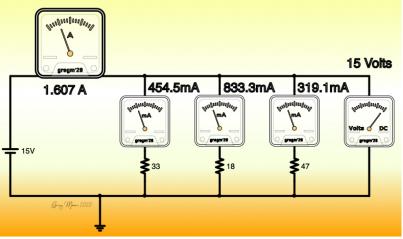
The cost of managing smart and skilled in NSW is probably the greatest burden which TAFE and all TAFE staff have had to meet. Deregistering as an RTO means all those overheads would instantly vanish. ASQA and all its barriers to proper and sensible functioning of TAFE NSW. Again, deregister as an RTO and those problems will go also.

The bottom line is... if TAFE NSW smartens up and becomes leaner and more creative with its own courses and content, it will be once again competitive and great.



### What happens with Training in the USA?

Community colleges in the USA are similar to what TAFE NSW could be. In fact, a very long time ago, way back in 1991, TAFE NSW was broken up into 10 Institutes around the state. Each Institute could have its own courses and be independent from



others. This was a very good idea, all of the working conditions and administration were identical throughout TAFE NSW but each Institute could run courses they way they saw fit. However, before this really built up any steam, the national curriculums were brought in and training packages emerged as a one package suits all in Australia approach.

This was a bastardized form the British system of City and Guilds, where one course curriculum is uniform throughout Britain. The big difference in Britain is that City and Guilds set the curriculum and then private training providers all work with it. The testing is set by City and Guilds. The testing is uniform. In Australia, any RTO can run the national course and will conduct its own testing based on its own ideas of

assessment so there is absolutely no uniformity with national curriculum assessment throughout Australia. Additionally, the AQF plays havoc here also. Only Courses have an AQF level, but the individual study units within each course do not have an AQF qualification level.

training package, even when students and industry are saying the content is rubbish. TAFE NSW is not serving its customers well because of this.

In the U.S.A., The Community Colleges are all independent with

their own programs. There is fierce competition between the many Colleges to run great courses and draw in many students. Their curriculums are independently designed and can be updated very efficiently and quickly to suit changes in industry or technology.



What does this mean? Well, if a unit of study appears in a Certificate 2 course and also in an Advanced Diploma course... At which level should the RTO treat the unit of study? Because of this, assessment is a total mess with no two RTOs conducting the assessment the same way, yet the student gains the same recognized qualification all around Australia.

Training packages in Australia have been a dismal failure. The Skills Organizations with their technical advisory committees etc have been in the main, slow to act on changes and not diligent in representing all stakeholders and industries.

Every single provider in Australia is forced to tow the line and teach to the

These Community Colleges are kind of like a polytechnic, a mix of what TAFE NSW is and also offering their own degree programs. The cost of courses in Community Colleges is very reasonable and that is also part of the competition which exists between all colleges in the USA.

In comparison, Australia has zero competitive edge between any vocational provider. The costs are the same, the course is the same albeit based upon the national



training package outline and the same units.

So what avenue does an employer have if nobody can quickly change the training to suit his needs? None. Even if that employer was a large employer and he sort to become an RTO, he would have to conform with the requirements of ASQA and teach to the training package.

The freedom to control their own courses in the USA is a wonderful thing. Students are learning the best material for industry because Colleges fast adapt to changing needs.

Meanwhile in Australia, we are bogged down with the national

curriculum which is essentially controlled by 6 Skills Organizations.

Some Training
Packages which these Skills

Organizations control are only updated every 5 to 7 years. Well... In 5 years time we may not even have

fossil fuel cars on the road any longer! Technological change under Industry 4.0 is rapid, very rapid. The Internet of things, networking, artificial intelligence and robotics have changed or even killed off many jobs. Programming languages have moved on from Cobol and BASIC.

Micro Controller units such as the 16bit PIC controller shown at the bottom of this page, are powerful and cost less than a packet of cigarettes in 2020. One MCU such as this can replace many older systems and is



programmed via cloud based apps. The rate at which embedded controllers are changing alone is several multiples of generations

faster than a Training Package is updated.

Industry is no longer interested in paper qualifications. Skills testing will be given to applicants to find out what that applicant is capable of doing. It is not sufficient to just rely on that certificate which was rubber stamped by TAFE NSW in 2020. For individuals to gain the edge with technology now, courses are available online from all around the world. The very Community Colleges

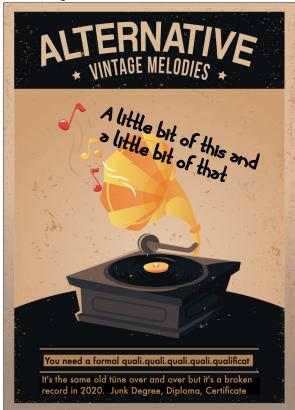


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mentioned are not just limited to providing courses in their own states, but can provide online training to someone in Africa or Australia.

Because the training system here has its hands tied with compliance to ASQA rules and the content of old outdated Training Packages, many students now are doing their training via the USA or Europe - online.

## University and TAFE are dying. 'Death by Disruption'.



There are so many ways to obtain knowledge and skills in 2020 with Youtube, Udemy, Lynda etc that the last competitive edge for the University and TAFE sector is that they provide a formal qualification. But what if the workplaces no longer care about the worthless bit of paper and do their own employee testing... Best applicant wins! This is

happening more and more. TAFE colleges and Universities might end up in the same place as the record industry – a vendor selling overpriced three to four-year certificate, diploma, degrees is like a music shop selling an album when the end-user only needs a couple of its hit singles or just a handful of specific subjects. And these can be obtained through some self study with so many free and cheap courses online. After all, who wants to pay \$10,000 a year for zoom delivered online courses from a university or college when the same stuff is already online and often presented better for free or close to free. Also, a qualification stream is rubbish in 2020. The borders have all been breached in vocations. 'Makers' like Adam Savage (Mythbusters) prove that with a bunch of skills from metal machining, woodwork, welding, spray painting and electronics and electrical, they are readily employable.

#### **Micro Credentials**

Micro Credentials are a very smart move in 2020. Students have been seeking this for a long time but the lack of flexibility in the training package system which Australia is forced to use has made what could be some wonderful courses, impossible to deliver.

Based on what our ex Mythbusters friend can do, a student would need to learn how to use the table saw, the band saw, the metal lathe, the milling machine, draw blueprints, use 3D design software, interface with 3D printers and plasma cutting machines, design electronics circuits, wire up electronic and electrical circuits, program micro controller

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units, machine tool parts etc etc.
There is no course which can deliver
all of this at the moment. But with
tearing down the Training Package
barriers, breaking away from the
National Curriculums, a training
agency can teach whatever they like
to teach and students can smile a
very big smile.

True, some RTOs can string together Skill sets but it's so messy. Why not just have a course which includes all of these things. The first large RTO to break away will cause a collapse of the national training system, and that is not a bad thing. It's broken. Without some major change the disruption from Industry 4.0 will cause the whole vocational and tertiary training system, that is, TAFE colleges and Universities to suffer a slow death.

### Wrapping it all up

Vocational training and especially TAFE NSW must break away from being an RTO under the current national system.

The advantages are many and each other RTO would quickly follow.

The savings would be in the order of hundreds of millions of dollars and the new style of NSW set course curriculums can be managed by each 'School' within TAFE. Ie, the School of Mechanical Engineering, with its scheduled meetings and day to day feedback from sections could rapidly change any course material and delivery recommendations.

Industry does not care for a national system. There are too many players and too much red tape. Even years into the national system, Electricians

trained in one state will need to meet that states energy authority rules and regulations to be granted a license there.

Productivity is what we need to build smarter industry.

Talking about Electricians, it is noted that in China, the electrical student spends 1 year in vocational college full time and graduates work ready. There is no apprenticeship. Are apprenticeships still mandated as they once were?

Are apprenticeships bogging down the training throughput?

This is my own work and only reflects my own research and my own opinions.

This is a very short paper, quickly put together, so I apologize for problems with flow or syntax or errors and the lack of more detailed information.

This paper is designed to stimulate thinking and create fresh new ideas for the training system in NSW.

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