



DATTA Vic Presentation on Out of Field Teaching in Design & Technologies, 29th March 2021

Slide 1



Council of Professional
Teaching Associations of
Victoria Council



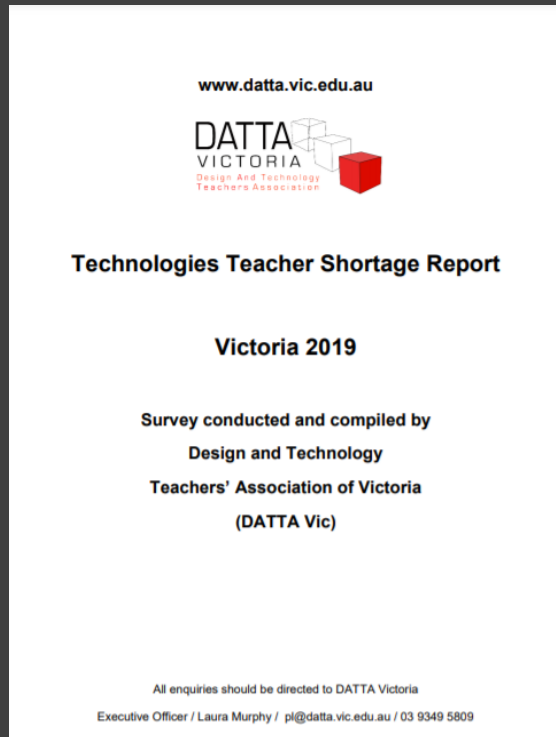
DATTA
VICTORIA
Design And Technology
Teachers Association

Case study: *Out of Field Teaching in Design & Technologies*

LAURA MURPHY, EEO
THE DESIGN & TECHNOLOGY TEACHERS' ASSOCIATION OF VICTORIA
(DATTA VIC)

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These statistics are from our Teacher Shortage Survey from 2019.



Research into the shortage of Design & Technologies Teachers in Victoria

97%

of our member schools reported having difficulties filling vacancies for Design & Technologies teachers

88%

of our member schools reported using teachers from other learning areas to deliver the Design & Technologies curriculum

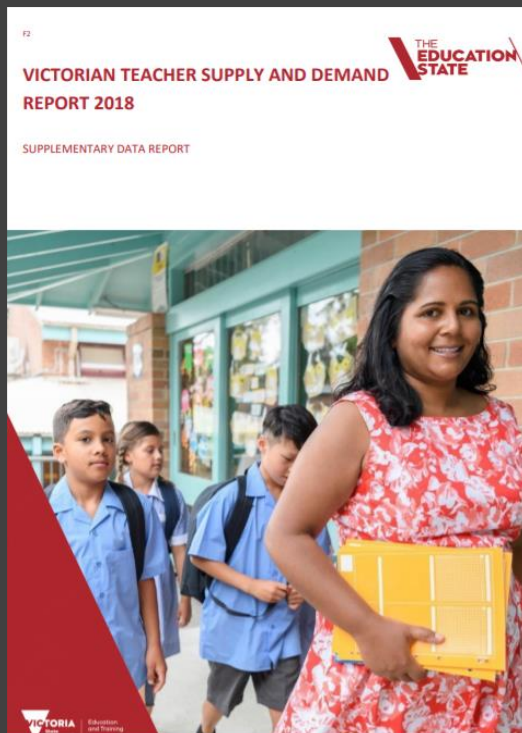
68%

of our member schools believe that the quality of Design & Technologies education has been seriously compromised by the lack of teachers

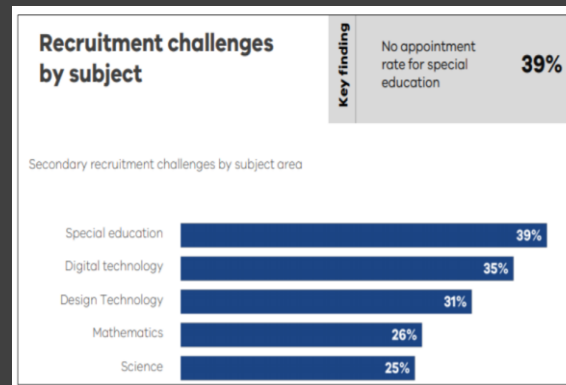
The report is available [HERE](#)

Slide 3

The DET's *Victorian Teacher Supply and Demand Report* shows that Design & Technologies is one of the hardest learning areas to recruit qualified teachers for.



Research into the shortage of Design & Technologies Teachers in Victoria



The report is available [HERE](#)

Slide 4

A major reason for the shortage of D&T teachers is the misconception of the learning area – the belief that we teach woodwork and metalwork only. We actually have an incredible progressive curriculum, which focuses on design thinking, sustainability, ethics and creative problem solving. Try searching for “Sustainability” in the Victorian Curriculum – Sustainability is explicitly mentioned in Design & Technologies 37 times, in comparison to 19 times in Geography and twice in Science.

VICTORIAN TEACHER SUPPLY AND DEMAND REPORT 2018
SUPPLEMENTARY DATA REPORT

THE EDUCATION STATE

Research into the shortage of Design & Technologies Teachers in Victoria

Recruitment challenges by subject

Key finding
No appointment rate for special education **39%**

Secondary recruitment challenges by subject area

Subject Area	Percentage
Special education	39%
Digital technology	35%
Design Technology	31%
Mathematics	26%
Science	25%

VICTORIAN CURRICULUM AND ASSESSMENT AUTHORITY

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Sustainability

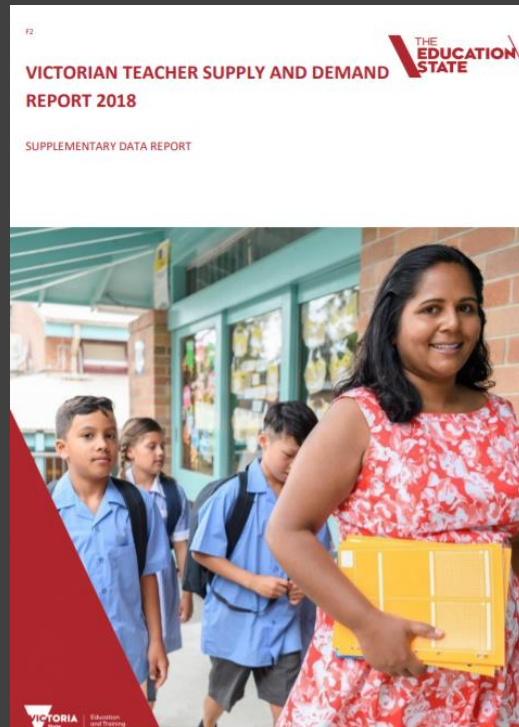
All subjects (267)

- Arabic (12)
- Australian (14)
- Chinese (10)
- Civics and Citizenship (6)
- Critical and Creative Thinking (3)
- Dance (3)
- Design and Technologies (37)
- Digital Technologies (11)
- Drama (9)
- Economics and Business (5)
- English (5)
- English as an Additional Language (EAL) (16)
- Ethical Capability (1)
- French (4)
- Geography (19)
- German (2)
- Health and Physical Education (7)
- Hindi (4)
- History (3)
- Indonesian (6)
- Italian (5)
- Japanese (7)
- Korean (5)
- Mathematics (1)
- Media Arts (2)
- Modern Greek (10)
- Music (2)
- Non-Roman Alphabet Languages (7)
- Roman Alphabet Languages (6)
- Science (2)
- Spanish (4)
- Turkish (4)
- Victorian Aboriginal Languages (3)
- Vietnamese (13)
- Visual Arts (10)
- Visual Communication Design (4)

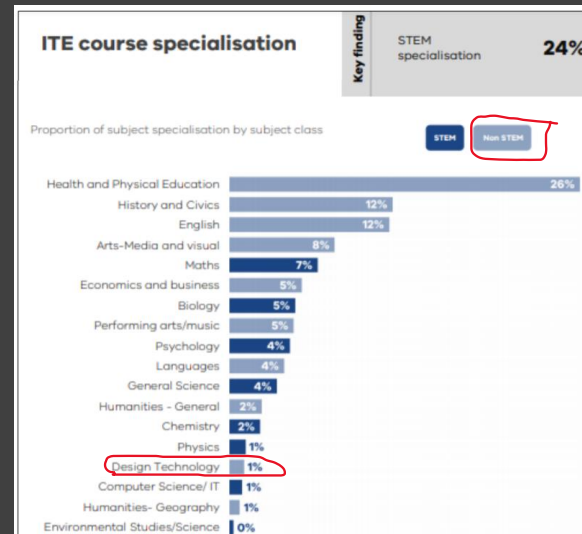
The report is available [HERE](#)

Slide 5

One of the biggest issues we face is that our own Department of Education don't understand our learning area – demonstrated by this graph looking at ITE course specialisation. Design & Technologies is listed as a non-STEM subject....



Research into the shortage of Design & Technologies Teachers in Victoria



The report is available [HERE](#)

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...which means we do not qualify for government programs to increase STEM teachers – for example, the SMSI program is currently spending \$17 million dollars upskilling 272 out of field teachers in maths and science.



Information is available [HERE](#)



What are the solutions?

1. Create more opportunities for initial teacher education in Design & Technologies
2. Support out of field teachers who are delivering the Design & Technologies curriculum
3. Educate the wider education community on the importance of Design & Technologies education for the future of Australia

And what can Teachers' Associations do about it?

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DATTA Vic are advocating with the government and tertiary sector to increase initial teacher education and upskilling programs. We offer help to set up placements for student teachers, and we have a mentor register to match new teachers with experienced educators in their area. We're also working with universities to encourage undergrads from design-related courses to consider a career in Design & Technologies teaching.



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DATTA Vic Teaching Design & Engineering Masterclasses are our biggest program right now – our way to tackle the lack of qualified teachers in the short term until we see more new teachers coming through in our area....



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We've delivered two face-to-face Teaching Design Masterclasses, are currently running an online pilot of this program thanks to support from Creative Futures, and we managed to get funding from Google to develop a Teaching VCE Systems Engineering Masterclass



[DATTA Vic Masterclasses](#)

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We've had great feedback from all of these courses, and we are working really hard to keep them going – although as a small organisation we are limited in capacity to deliver them as often as we would like. Plus without external funding, we have to charge for them, which can be a barrier to regional or low SES schools.



[DATTA Vic Masterclasses](#)

"I've taught for 2.5 years as a STEAM (Design Tech) teacher. Now I feel I know what I am actually supposed to be doing."

"Good to get the confidence to stand up for our learning area and make it vital – particularly useful through STEM and cross faculty curriculum planning."


"I will be now leading the drive in collaborative discussion with an emphasis on technology in problem solving and not around learning competencies to build a product, and will also encourage inter-disciplinary cross curricular options."

"The masterclass covered all the requirements to be able to know how to begin teaching VCE Systems. A Lot of practical demonstrations and hands-on activities to develop skills for teaching."

"It was amazing! I learned so much about course content in regards to VCE and I enjoyed learning the components of systems and coding. Very well presented and totally engaging. Thank you!"

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We know this is important to break down the misconceptions of our learning area – DATTA Vic work hard to ensure the wider education community see what a progressive, dynamic and relevant learning area we are....



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Slide 13

...National Design & Technologies Week is our main advocacy program. It started 7 years ago as a pilot in a single school to look at how we can shine a spotlight on the incredible work done in D&T. This has grown to a national program engaging around 95,000 students in activities through their schools. DATTA Vic work in partnership with DATTA Australia to deliver this, and we achieve it all on a budget of \$6k per year – imagine what we could do with more support!

The image displays two digital assets for National Design & Technologies Week. On the left is a website homepage with an orange header containing navigation links: HOME, DESIGN & TECHNOLOGIES WEEK, TECK, TECHNOLOGIES TEACHER SHORTAGE, CONFERENCES, RESEARCH, and PATRONS. The main content area features a large banner with the text "Design & Technologies WEEK | 2020" and a group photo of students. Below the banner are six grid items, each with a photo and a label: "ABOUT" (photo of a student at a computer), "REGISTER" (photo of a student with a 3D printer), "COMPETITION" (photo of a student at a desk), "RESOURCES" (photo of a student at a computer), "EVENTS" (photo of a group of students), and "PARTNERS" (photo of a student with a 3D printer). On the right is a promotional poster for "Wentirna College Design & Technology House Competition" titled "Design & Technology Week 15th - 21st October". The poster includes a "Design Competition!" section with three tasks: "Design a next generation sports shoe", "Design a logo for the Art & Technology Learning Area", and "Design an electric vehicle for tomorrow". It also features a "Developing Creative Problem - Solvers" section with a deadline of 3:00pm on 20th October 2018. The poster is decorated with colorful icons representing "WISDOM", "KNOWLEDGE", and "LEARN". To the right of the poster are three photos with captions: "Above - Ballarat Tech School Aboriginal STEAM Program", "Below - Drone Racing at NHS", and "Below right - Motorclassica Schools Program".

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We've been looking at the issues of the teacher shortage and out of field teaching as a paper exercise, but we can't forget about the human cost – this is incredible challenging for the D&T teachers we have out there, doing everything they can to engage their students in D&T. This is a real crisis, and without intervention, it will only get worse....

"Staff find it difficult to take leave or pursue higher positions due to trained casuals' availability. This affects health and wellbeing as well as stymies professional advancement."

"The question is "Why would anybody want to be a Technologies Teacher?" It is important that there is a clear incentive that is beyond the normal rhetoric, and the pathways to becoming a Technologies Teacher are easy, cost effective (scholarships?) and achievable, especially for people who are currently employed in industry and have fixed financial commitments which may normally prevent swapping employment for further education."

"I have wanted to quit without a Tech assistant. I can't be expected to do the level of job I know would do me proud whilst doing the job of two. For years it was only me in the Technologies department and I found it really hard. I see Technician Assistant support the most vital part to keeping Technologies teachers."

The learning area is vitally important for innovation in the design and manufacturing industry, and to develop a Technology-aware community, but it is dying out due to lack of new teaching staff, and limited energy and currency in existing staff."

"Technologies learning area delivers what employees are looking for – problem-solving, teamwork, project-based learning – reading literacy texts in a practical context, performing maths in real situations. How is the current shortfall in the workforce going to be overcome if our students don't have the teachers to teach them the skills?"

It's beyond dire. My take on it now is that the lack of available staff coupled with a ridiculous teaching load as the Domain Leader has led me to contemplate becoming an apprentice butcher...due to the stress and anxiety this situation is causing me.