Whittlesea Tech School

EPPING, VICTORIA

2020 AWARD SUBMISSION JAMES D. MACCONNELL

Whifflesea TECH SCHOOL Think it, Design it, Create it

Vigeni Wen

Executive Summary

Whittlesea Tech School is part of a 10-school initiative by the Victorian Department of Education and Training, focused on developing critical Science Technology Engineering and Maths skills (STEM) in Victorian secondary students.

Located on the Melbourne Polytechnic Epping Campus, the new facility functions as an innovative learning hub, connecting 10,000 students from 14 government, catholic and independent schools in the local region to a technology rich and industry-focused learning framework, preparing them for the jobs of the future.

Designed to inspire curiosity and deep learning, Whittlesea Tech School provides a responsive, multi-age, multi-stage, learnercentric environment that celebrates experimentation, presentation and display to challenge and empower the innovators of tomorrow.

"When students walk through the front doors they will enter a world where technology, imagination and innovation merge to create new solutions to old problems. A world where breaking with conventional wisdom is not only encouraged but expected. A world where emersion in tech, gives rise to creative inspiration, unexpected discoveries and, just as crucially, an enormous amount of fun."

The Hon. James Merlino MP

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Scope of work and budget

"Tech Schools use innovative, leading-edge technology and discovery to give secondary school students the skills they need to flourish in the global economy.

They are a link between schools and industry to provide innovative learning programs. Tech Schools challenge students to solve real-world problems and prepare them for the future world of work.

Students remain at their regular schools and come to Tech Schools for free programs designed to inspire their interest in STEM. They are hosted by universities or TAFE colleges, giving students a taste of higher education and potential career pathways."

Department of Education and Training

Building Area (GFA)	1,331sqm
Student capacity	160+
Partner schools	14
Grades housed	Years 7 - 12
Original budget	\$6,860,862
Building cost	\$5,243,000
Date completed	23 August, 2018





The School Community and Stakeholders

Over a two year period, the Whittlesea Tech School Community Network, which incorporated the future school community, the State Government, and local schools and educators forged the vision for the new Tech School.

Throughout the design and documentation process the Project Control Group (PCG), comprising representatives from Melbourne Polytechnic, the Department of Education & Training with design and project management representatives, worked tirelessly to coordinate the feedback of the Interim Board within the constraints of the site and budget. And although the design and construction spanned more than two years, the community were brought along the journey through virtual reality tours through the facility and special community workshops.

Local industry also played a big part. In October 2015 a local industry round table was held to obtain vital input into what skills would be needed by the next generation of the workforce. The following businesses were involved in this process and some are now still involved in programming within the curriculum:

01.	NMIT	09.	RMD Industries
02.	AMTIL	10.	Cornerstone Solutions
03.	Dolphin Products	11.	Combo
04.	Tasman 3D Printing	12.	Melbourne Markets
05.	United Bonded Fabrics	13.	Checkbox Studios
06.	Food Process Engineering	14.	NORTH Link
07.	Cryovac	15.	Banyule Nillumbik LLEN
08.	Darebin Enterprise Centre		

Host Campus

Direct Student Link

••••• Indirect Student Link

Challenges Hundreds of **Developing skills** Facilitating student, Providing a setting Inspiring a love of Fitting into an students working for jobs of the discipline and that houses evolving STEM in students established in a fluid style future industry connection technology campus \mathbf{v} Solutions The Tech School With the exponential The brief called for a Technology is always Several sites were It was important to create embraces agile learning growth and disruption learning environment changing but curiosity a space that was fun, investigated as options environment solutions of Industry 4.0, the that supports formal is constant. Instead of engaging and interactive; for the Tech School. that reflect and respond educational field is being partnerships with trying to foretell future where students could The final location within to changing societal forced to change its business, industry technology trends or take ownership of their Melbourne Polytechnic contexts, cultures and methods. The specific and tertiary education focus on technology, this learning pathways and Epping Campus and the ways of life. On any given jobs of the future may or providers. A range of building comprises agile build skills through resulting design provide day the Tech School may not yet exist but the physical and virtual curiosity, investigation and a highly visible presence learning environments could host hundreds of family of skills needed to connection points that facilitate connections collaboration. The space for the Tech School within students from a variety be developed in students have been embedded and support a learner's provides an equitable the community, consider of age levels, abilities are well understood. throughout the building journey, providing environment that and capitalise on existing and schools, working The Tech School design including a dedicated exposure to high-tech encouraged more female campus assets and fit simultaneously around supports skills of Industry Hub. These points without relying on it. students into STEM within the surrounding or in collaboration with adaptability, autonomy, facilitate an educational studies. context and architectural each other. It is designed creative problem solving, program that provides character. to respond to evolving and communication, all students with real time educational objectives, of which will be required access to resources and

technology, as well as

inspiration, provocation and feedback.

student cohorts, curricula

and pedagogies.

for high demand and high

reward career paths.

The Melbourne Polytechnic Campus

Whittlesea Tech School is located on the south-eastern edge of the Melbourne Polytechnic campus. This site was selected from several options for a range of key reasons.

Firstly, it was important for the facility to have its own sense of address and identity, while still being connected to and have access to Melbourne Polytechnic resources. This is partially because of a school's duty of care responsibilities, but also for the practicality of having many students accessing the Tech School on a regular basis and to facilitate after-hours access for community groups.

Secondly, Melbourne Polytechnic Epping has two key facilities, the Green Skills Centre and the Library (directly north of the Tech School) that provide many opportunities for the two student cohorts to access and share resources including a weather station, robotics lab, solar technologies, books, reading spaces and additional meeting rooms. This location within the campus meant that these features would be within a very close proximity to the Tech School and would therefore not need to be included within the design.

In addition, the Tech School is a multi-age, multi-stage, crossschool, cross-sector facility, which meant there were also unique opportunities to link curriculum and program development to the broader community.

Its prominent street frontage to Dalton Road and the new dedicated bus drop-off, along with future plans for converting the adjoining driveway and carpark into a semi-public, pedestrian forecourt, afford the school a strong presence within both the Melbourne Polytechnic and wider Epping community.

Melbourne Polytechnic Campus	01. Whittlesea Tech School
Project Scope Area	02.Library
Project Built Form	03.Green Skills Centre
\longleftrightarrow Pedestrian Entry Points	04.Future Forecourt
Vehicular Entry Points	05.Epping Train Station



Educational Environment

"The Tech School will be a centre of technological innovation that builds the aspiration and confidence of students to engage in a future world of work with the skills and capacities to successfully operate as global citizens."

Whittlesea Tech School Vision

Highlights:

Learning environments and programs respond to future industry within the local region.

Students have access to industry professionals via a dedicated Industry Hub as well as digitally via video conferencing technology.

Agile learning environments cater to a myriad of learning settings.

Prioritisation of exploration and presentation over repetition and examination.



08

Educational Goals

Whittlesea Tech School was opened in late 2018. During it's first four years in operation, the Whittlesea Tech School aims to provide:

- » Contemporary instructional practice for students of all abilities that adds value to classroom learning and builds students' critical and creative thinking.
- » A strong innovative culture that excites and engages students and teachers through exposure to high end technology.
- » Strong partnerships with business and industry that guide employment innovation.
- » Strong partnerships with TAFE's and Universities that connect contemporary research, subject expertise and post school opportunities for students.
- » A program of activities that facilitates entrepreneurial opportunities and 'real world' problem solving using emerging knowledge and research.
- » An environment that enables students, parents, teachers and the wider community to understand the future of work, career opportunities and post school pathways.
- » Professional development opportunities for school staff that will engage them in the delivery of activities at the Tech School and sustain opportunities for students beyond their involvement.



Supporting the Innovation Process

The pedagogical model at Whittlesea Tech School champions the development of essential capabilities in collaboration, problem solving, critical thinking, and entrepreneurship. The specifics of the brief eschews typical education facility design to generate excitement for STEM and create a welcoming, inclusive and appealing environment for all learners.

Learning is characterised by authentic and active investigation and inquiry within a collaborative learning environment. The program leverages student agency to create a climate of high levels of aspiration, motivation, self-direction and self-regulation of learning. The development of an innovation mindset is central to the philosophy, participation and outcomes of the Tech School. Students co-design learning experiences in partnership with educators, experts, industry and community leaders.

The use of digital technologies to create and access online media and resources for communication, learning and knowledge sharing is an integral aspect of Tech School learning. Learning in the Tech School is not bound by physical location, maximising digital, community, school and industry assets.



Functional Space Requirements



The Theoretical Becomes the Physical

The architectural and interior design of Whittlesea Tech School is a physical manifestation of the Tech School's unique pedagogical vision. The design is adaptable, inclusive and innovative, underpinned by technology-rich learning spaces that support diverse modes of learning and facilitate meaningful connections with local industry.

Whittlesea Tech School needed to allow for five enquiry focused classes on campus at any one time, four physical inquiry settings and one theoretical masterclass. This level of curriculum required the building to be able to accommodate around 125 students at any one time.

The school would also need the ability to adapt core spaces such as the Central Gallery to an ever changing curriculum as themes for the students changes.

Depending on the context, group sizes can range from individual to small, large and very large groups. Ease of flow between a variety of learning and teaching modes is essential; hence, a variety of learning spaces were required.

- Course curriculum structure
- Physical space required
- Virtual space required
- O Physical space within an existing building
- Connection required between spaces
- Spaces directly related to course curriculum

ducational Environment

4



Learning Settings & Spaces Ground Floor





STUDENT TRIAD

OR 1 STUDENT

DIRECT EXPLICIT

TEACHING TYPICALLY 8-50+

STUDENTS

DISPLAY OF WORK 2-12 STUDENTS STUDENT FACILITATED

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STRUCTURED & FREE FORM COLLABORATION UP TO 50+ STUDENTS



ENGAGE IN CREATIVE ACTIVITIES

2-15 STUDENTS TEACHER FACILITATED



CREATIVE ACTIVITIES WITH SPECIALISED EQUIPMENT 2-4 STUDENTS



07-6J INVESTIGATIVE ACTIVITIES (WET) 2-25 STUDENTS TEACHER FACILITATED

Experimental Learning ы 12 Experiential Learning ь. • Collaborative Learning

6 A



Support Spaces Outdoor Learning





Learning Settings & Spaces First Floor





OR 1 STUDENT

STRUCTURED & FREE FORM COLLABORATION UP TO 50+ STUDENTS





ENGAGE IN CREATIVE ACTIVITIES 2-15 STUDENTS TEACHER FACILITATED



CREATIVE ACTIVITIES WITH SPECIALISED EQUIPMENT 2-4 STUDENTS



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TEACHER FACILITATED Experimental Learning Experiential Learning

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DISPLAY OF WORK 2-12 STUDENTS

STUDENT FACILITATED

Outdoor Learning

CONSTRUCTION, MODELLING TYPICALLY 2-4 STUDENTS

STUDENT FACILITATED

DIALOGUE, STORY TELLING TYPICALLY 8-15 STUDENTS

CONDUCT MEETINGS

2-12 STUDENTS TEACHER OR STUDENT FACILITATED



Supporting Future Local Industry

Themes and programs focus on identified future industries within the local region:

- Advanced manufacturing
- Scientific and Technical
- Health and Social Assistance /Medical **Technology and Pharmaceutical**
- **Professional Services**
- Entrepreneurialism ٠
- Food and Fibre
- New energy
- **Digital Technologies**

These Foci do not form explicit areas of study within the tech school program, but form a guide and through line for program development and a shared engagement point for industry and education.

Through collaborative inquiry based learning opportunities, students identify, investigate, ideate and prototype solutions to real world problems. These problem solving experiences will link curriculum outcomes and the industry foci through a thematic approach. Possible thematic approaches could include; "Getting old", "Future Food", "Farms without Farmers", What is Privacy in the 21st Century?"

The process and results of student inquiry and innovation based on the theme will be curated and celebrated alongside examples from industry through exhibition, events and performance; both in digital and physical spaces.

Industry Partners





Physical Environment

Students have access to high-tech equipment including:

3D printing and scanning Laser and vinyl cutting JV and garment printing CNC routing and milling Simple electronics Micro-controllers (e.g. micro:bit) Programming and coding App development Virtual and augmented reality Video and audio Green screen, animation and projection Sewing and digital embroidery Moulding and casting 2D and 3D digital design

Highlights:

Spaces connect physically to progress a project from provocation through ideation, prototyping, testing and exhibition.

Advanced manufacturing methods within the building construction showcase possible project solutions and future career paths and highlight the inner workings of the structure.

Every inch is activated for varied learning and teaching styles.



Community Connections

Whittlesea Tech School sits in a centralised location to the 14 partnering schools. It is serviced by train and bus for easy access and has a prominent frontage to Dalton Road with dedicated on-site car parking within the campus.

School Locations

- 01. Whittlesea Secondary College
- 02. Hazel Glen College
- 03. Mernda Central P-12 College
- 04. Edgars Creek Secondary College
- 05. The Lakes South Morang Prep-9 School
- 06. Epping Secondary College
- 07. Marymede Catholic College
- 08. Mill Park Secondary College
- 09. St Monica's College
- 10. Lalor North Secondary College
- 11. Peter Lalor Secondary College
- 12. Lalor Secondary College
- 13. Thomastown Secondary College
- 14. Charles La Trobe P-12 College





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Welcoming

Whittlesea Tech School users are transient. Teachers, students, industry experts, and community members visit for an event, a week, or at most a semester at a time. This made it imperative that the spaces be universally welcoming and instantly intuitive.

The school's double-storey form frames a new Public Forecourt, providing a welcome entry to the building and bringing an abundance of natural light into the interiors.

A signage blade wall leads pedestrians into the spacious Central Gallery. Quiet nooks, breakout spaces, meeting rooms, outdoor connections and formal learning spaces are all visible from this gallery. Users are encouraged to inhabit the parts of the building that support their personality as well as their learning activity.

The simple roof over the multi-level structure allowed for efficiencies in construction, utilising an envelope bent and adapted to the constraints of the site.

The built form mirrors the tapering bunker of the Melbourne Polytechnic library, creating a 'gateway' into the campus and framing a future public forecourt. The building then deftly transitions to a more human scale as it interfaces with housing to the south.





01

Clearly identifiable entry for a transient user group Supporting reusable water bottles Perforated metal as an example of advanced manufacturing techniques Welcoming Entry Forecourt to

accommodate

large cohorts

The concrete ribbon is a clear guiding and connecting element internally and externally

Accessible

Inclusion, access and choice is provided for in a variety of agile learning settings. Recognising that students learn in many ways, it provides for 'equity of instruction' across each student cohort by allowing students to gain access to both preferred and nonpreferred learning activities.

This approach also responds to learners with special needs who may require 'just-in-time' access to various learning settings, such as spaces designed to support those who may need to withdraw or self-regulate. Such spaces include wall niches, small meeting rooms, breakout spaces and direct external access from each of the main learning settings.

Physically, the Central Gallery allows for ease of mobility throughout the building, even when it is full; and clear visibility and supervision across multiple spaces and levels.

Hearing augmentation and wheelchair accessible seating to the auditorium have been seamlessly integrated. As have wheelchair accessible bench-tops in the Workshop and Laboratory spaces; to ensure all students have equitable access to experimentation.

Accessible indoor/outdoor connections on both levels encourages staff and students to think outside the building. A central lift enables access across both levels and facilitates transportation of bulky goods.

The new bus drop-off lane to Dalton Road allows for safe access without crossing a road or walking through the tertiary campus.











Operable windows enable students to work indoors and outdoors also acting as natural cooling of building and airflow Integration of nature and natural materials where practical



Comfortable practice areas for sitting, standing, relaxing – formal and non-formal External tiered seating for briefings, presentations or informal gatherings 5

Inclusive

The interiors adopt a neutral palette of timber, whites and charcoals, with bright, non-gender specific accents in informal and active learning environments.

Staff are positioned in the heart of the building. They do not guard the entry. They are a support and a resource for curious minds. Likewise, the design considers all occupants - student, educator, staff and visitor - as learners. Barriers which may inhibit access or interactions have been removed, and infrastructure that encourages collaboration and conversation have been prioritised.

A common language of leading lines with soft curves reminiscent of a circuit board or metro map appear across a range of forms; pendant lighting, wayfinding graphics, floor finishes, furniture forms and even structure. This brings an approachable interface to a technology-rich environment and subtly references design, invention and industry.

There is a hierarchy of curves within the design. The soft curve of the concrete ribbon traces the volume of the Central Gallery and is then echoed throughout the building in the detailing of floor finishes, plywood and upholstered joinery, custom wall graphics and signage. Each element subtly encourages seamless flow from space to space.







01

Visibility between both levels and concrete ribbon Light filled entry and Central Gallery

03

Custom lighting by a local manufacturer continues the connectivity motif 04

Modular / moveable furniture used as a space for waiting, briefing or break out with the potential to be removed when in a gallery layout 06

Clear visibility and

centralisation of

staff through the

removal of typical

physical barriers

Catering facilities to accommodate events or community groups









Larger class spaces are supported by smaller gathering spaces like this meeting room and adjacent recording booth

Visibility and multiple connection pathways through spaces allow students to flow from one space to another



Writable walls within the technology space allow for collaboration offscreen and allow for ideation in a more fluid manner

Fit-for-purpose technology that seamlessly transitions from traditional screen to drawingboard for ideal ideation and enquiry

Advanced manufacturing methods including plywood furniture made from opensource designs showcase possible project solutions

Quiet nooks and more casual seating areas for student discussion

06

Connected

Drawing strongly on an underlying theme of 'connectivity', the spatial planning and volumetric design enables a seamless projectbased learning journey, prioritising exploration and presentation over repetition and examination.

Over two levels, the purpose-built facility links practical workshop and laboratory spaces housing high-tech equipment to an Auditorium, Industry Hub, conference and meeting amenities, with a double-height exhibition space running the length of the building.

Viewing windows, sliding doors and double-height spaces connect each learning environment with at least two others, allowing learners to organically progress projects through the ideation, production, testing, presentation and exhibition phases.

Amenities such as the Auditorium, signal a more independent and tertiary style of learning, as do virtual conferencing facilities that allow students to connect with industry experts across the world.

Material selections also forge connections with local built context providing a continuance of character. Elements of brick construction echo the new St. Monica's College building across the road, while the predominant use of concrete in the neighbouring library building has been reinterpreted as a dynamic ribbon that flows through the Tech School connecting the two levels internally.







Specialist tools like this CNC machine remain on show and accessible linking the ideation, production and testing spaces

The space allows for prototyping and testing, with different furniture and workspace setups including wet areas

Exposed ceiling with acoustic baffle-grid has services 'on display' to show inner workings of the building



Writable walls for

collaboration and/

or to create and

refine ideas

Connectivity/ flowthrough to 'enquiry focus spaces'









01

Auditorium seating for up to 50 which can house small or large group gatherings

Clear physical and visible connection between levels allows students to see tools and resources available to them



Concrete 'Ribbon' runs through the space

Clear visibility from staff offices and information desk



High tech,

networked screen

for presentations

and briefings in

person or from

across the globe

06

Connection to quiet/informal learning areas and 'gallery' display









Display space enabling a range of demonstration formats. i.e digital, interactive, physical Walls and projectors to showcase digital outcomes

02



Tiered auditorium seating doubles as stairs / social / informal learning / break out

Visual and physical connection

Concrete 'Ribbon' runs through the space between levels

05

Innovative but clear directional signage integrating key Australian inventors

Inspirational

Whittlesea Tech School was conceived as a hub of innovation. As a learning environment, it's focus is firmly on building skills for the future. Technology is embedded throughout every space, supporting a pathway of learning, but it is not the focus.

The school's Industry Hub is the first port of call on entering the building, signifying the importance of industry as both a benchmark and a challenge for students to rise to.

A large Central Gallery presents as a perpetual exhibition space. Dynamic and ever evolving, it champions interaction between students and industry by celebrating work completed by the students in context with their industry and community representatives, encouraging pride and an aspirational outcome for STEM studies.

Visibility of tech outcomes serve as both inspiration and learning tools. The workshop's baffle ceiling gives an intentional view into the building structure and services, while advanced manufacturing methods including plywood furniture made from open-source designs and perforated metal screening showcase possible project solutions.



GROUND



The Industry Hub allows for local leaders in innovation to occupy part of the gallery and directly influence learning



and open area

space double

presentation areas

as student

Meeting Rooms with virtual conferencing facilities



Examples of locally designed and advanced manufacturing furniture and fixtures

A Pathway of Innovation

The concept for the interiors, applied to furniture, fittings and graphical elements was inspired by the pathway that each and every student will take as they engage with the space and programs provided within it.

In the style of metro maps, an innovative wayfinding system uses interconnecting coloured lines and universally recognisable symbols throughout the building to provide clear direction to people of all abilities. Along this path, major Australian innovators have been highlighted and celebrated by being incorporated into the graphics, helping to inspire students to follow their ideas and embark on their own journey of discovery.

Whittlesea Tech School has embraced the Pathway of Innovation design concept as a core part of the organisation's narrative incorporating it into the logo, branding and website.

- 01. External Signage highlights the journey from the moment you arrive on-site
- 02. Wayfinding signage takes inspiration and is made from a single line
- 03. Furniture flows through the space and mimics the qualities of a journey
- 04. The building's concrete ribbon starts on the outside flowing along the building and leading visitors into the space. This concrete ribbon runs through the whole internal space.
- 05. Lighting and fittings are fluid and connected
- 06. Stories about key Australian inventors inspire students as they journey through the space



Adaptable

Whittlesea Tech School delivers visionary vocational education in a state-of-the-art environment designed for constant change. Learners and educators explore technologies, design ideas, production processes and career paths that are rapidly changing, freshly emerging, and yet to come.

Physically, the design embeds useful technology into every space to support innovative project-based learning, without spotlighting it as the 'star'. Interlinked, agile learning environments promote agile thinking and collaboration, encouraging connections between students, disciplines and industries.

Even furniture is modular and moveable, enabling spaces to be adapted to a wide range of learning modes and to accommodate various cohort sizes.







Glazed doors and servery windows connect the workshop to covered outdoor learning allowing experiments to take place outside



Moveable

workstations

with integrated

tool storage and

lockable wheels

High-tech equipment including 3D printers are on display from the foyer and prototyping rooms



Chemical storage,

Open resource

areas ensure

students have

direct access

to the tools and

equipment they

need for their

inquiry

Specialised equipment including laser cutter, CNC milling machine, vinyl cutter, and numerous 3D printers as well as a CNC router

fume cupboard and fridge are available for specialist chemical experiments







Non-porous floors with coved skirting to allow for easy clean up

Movable Seating/ mixture of table styles that allow for collaboration in groups

Stainless steel high

top tables with

lockable wheels

Clear visibility to a variety of learning environments including intimate small-group spaces and informal learning, without compromising on supervision

Deep sinks allow

for a multitude of

uses

Lighting matches the spaces use settings. In this instance even lighting is used for clear visibility of task, while more intimate spaces use softer lighting

06

Results of Process & Project

Whittlesea Tech School opened to students a little over 18 months ago. While formal reporting on educational and community objectives has not yet been completed, anecdotal feedback and observations show that the Tech School is on track to become a vibrant hub for the community and a space that inspires all students who pass through it's doors.

School Goals

The Department's vision to unite schools through joint resources has created a bond between 14 otherwise disparate schools in a rapidly expanding growth corridor.

By making facilities, equipment and the knowledge of the staff available to so many schools, it creates not only a democratisation and economisation of resources, but also serves as a fantastic opportunity for more inter-school collaboration and friendly academic competition.

The connections between schools, industry, educators and students within these walls will continue to be a catalyst of transformation within this region for many years to come.

Community Goals

The local business community in particular, highlighted the desire for the Tech School to build entrepreneurial skill sets through STEM project-based learning in the next generation of workers. Over the past 12 months the Tech School has forged relationships with over 20 industry partners to bring local relevance and insight to it's program.

Unintended Results and Achievements

The Tech School quickly became a community hub, attracting local groups beyond education. While collaborations between schools and Melbourne Polytechnic were planned for, as well as opportunities for night classes, professional development and local business councils, unexpected community groups have also embraced the space including a local indigenous group. "Its biggest test was the one-day Maker Faire in December 2018, which saw 300 primary students inhabit every nook and cranny as they engaged in a series of science and technology activities. The space easily accommodated this large number of enthusiastic young people without feeling crowded, and noise separation was surprisingly good."



6



Working with local industry partners to co-design the school curriculum.



FoodLab design challenges set to commence in partnership with Costa Mushrooms, Farmwall and Melbourne Polytechnic.



Over the last 12 months, Whittlesea Tech School has provided over 5000 student program days.



200 teachers have attended dedicated professional development days.



Core programs, start-up entrepreneurship programs, after school workshops and professional development.



Hosted community events, industry presentations and information sessions.

Education Specifications

A draft education specifications document was created by the Department of Education and Training in collaboration with the Whittlesea Tech School Committee.

*Refer to appendix for full design specifications.

Since opening in September 2018, the building has certainly proved its mettle. It has hosted up to 4,000 students and teachers as well as a plethora of community workshops, special events, teacher development sessions, meetings and master classes. Visiting teachers have remarked favourably on the sense of connectedness and flow between the spaces in the building, and students seem instantly at home as they move from the auditorium to the 'maker' areas and beyond. Its openness and sense of light have been highlighted by a range of visitors."

Whittlesea Tech School.

Inspirational & Aspirational

- Inspires awe and wonder, creativity, optimism, curiosity, exploration and critique
- » Stimulates engagement
- » Embeds innovation
- Innovation and problem solving focussed, inspiring future commitment and pathways
- » Learning is visible and ambient

Authentic, immersive learning

- » Inquiry and project oriented, design based thinking and learning
- Real problems from real contexts. Imaginary and experimental problem solving.
- » Enable learning anywhere, anytime, with anyone, by any means
- » Students demonstrate, exhibit, create and influence products of value.

Learner led

- » Student co-design learning
- » Students find, collaborate on and determine solutions to problems
- » The development of competencies, capabilities and transferable skills are central to the learning experience
- » Student agency is embedded in all aspects of the tech school

Collaboration

- » Collaboration enables deeper learning experiences
- » Learning is interdependent
- » Creates a culture of respectful scepticism and equality
- » Substantial decision making

Responsive Design /Innovative Learning Environment

This requires that, while being required to support and enable the Whittlesea Tech School's vision for learning, the Tech School Facilities design and facilities management systems must be responsive to all current and future needs.

- » To enable learning the environment needs to be Modifiable and Reconfigurable
- » Spaces can be made and unmade
- » That the environment is a teacher
- » The learning environment demonstrates digital, and scientific principles
- Exhibits and demonstration of student work

Capability building

- » Develop an innovation mindset
- » Develop general learning capabilities: critical and creative thinking; personal and social capability; ethical understanding and global outlook
- Encourage taking responsibility for one's own learning

Networked

- » TECH schools, Unis, TAFE's, Industry partners provide a network for resources, support, ideas, collaborative projects
- » Utilising resources of all TECH Schools unis, TAFE's, schools
- » Students experience working in a 'networked' manner
- » Tech school is a community focus and hub for innovation.