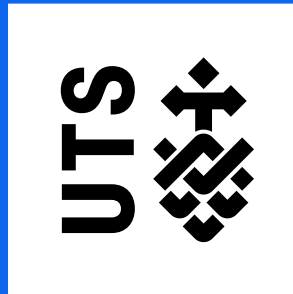# Transdisciplinary Education Model

Embedding occupational therapists into specialised school settings

Dr Kirsty Young

School of International Studies and Education
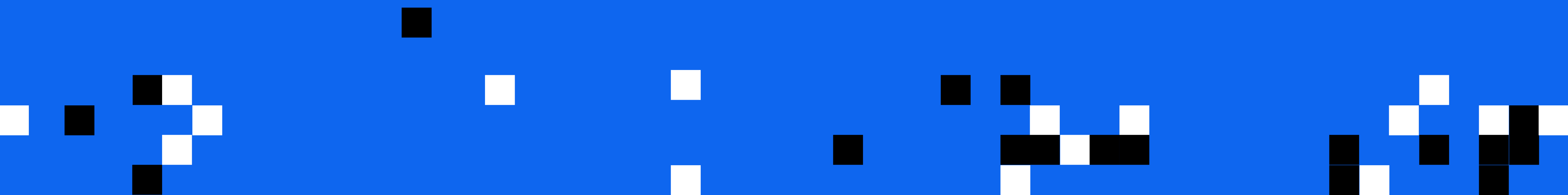
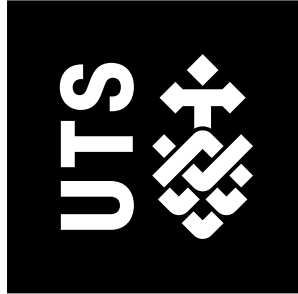UNIVERSITY OF TECHNOLOGY SYDNEY

Two of four research questions addressed:

How does the delivery of occupational therapies, embedded in three specialised school settings:

result in transdisciplinary professional learning?
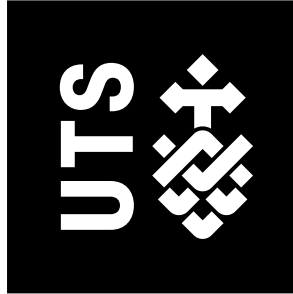
impact the environment?

Literature: School-based therapy

Collaborative consultation models

The *'collaborative relationship between teachers and occupational therapists is a crucial indicator of successful school-based* [occupational therapy] *practice'* (Truong & Hodgetts, 2017 p.122). However, the role of the OT within the school is often poorly understood.

Challenges include: co-ordinator team members' contributions; changing professional roles; professional hierarchies; need to integrate a range of educational, communication and social supports; lack of team processes; overlap between team roles and responsibilities (Truong & Hodgetts, 2017, pp. 124-125).

Literature: Transdisciplinary Model

Holistic integration of disciplinary knowledges and expertise by transcending traditional boundaries (Choi & Pak, 2006).

Various professionals work outside their expertise to collaboratively create goals and deliver therapy (Fitzmaurice & Richmond, 2017).

Transdisciplinary approaches seek to transcend disciplines through collective and collaboratively co-produced learning, knowledge and solutions (McGregor, 2017) *without* losing the specialist knowledge and expertise that disciplines and interprofessional practices produce (Easton, 2017; Edwards, 2012).

Research design

Research period July 2017 – Dec 2019

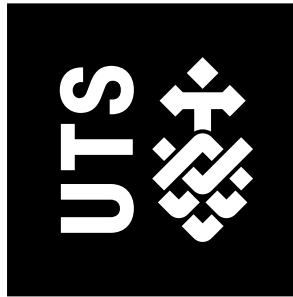Case study methodological approach

Cross-case analysis

Research methods

       focus groups

       individual interviews
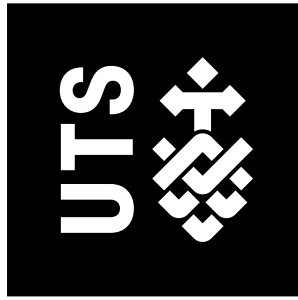
       surveys   (2017 N=67   2018 N=50   2019 N=57)

       journals

       document analysis (minutes of meetings, email correspondence, etc)

Research Sites

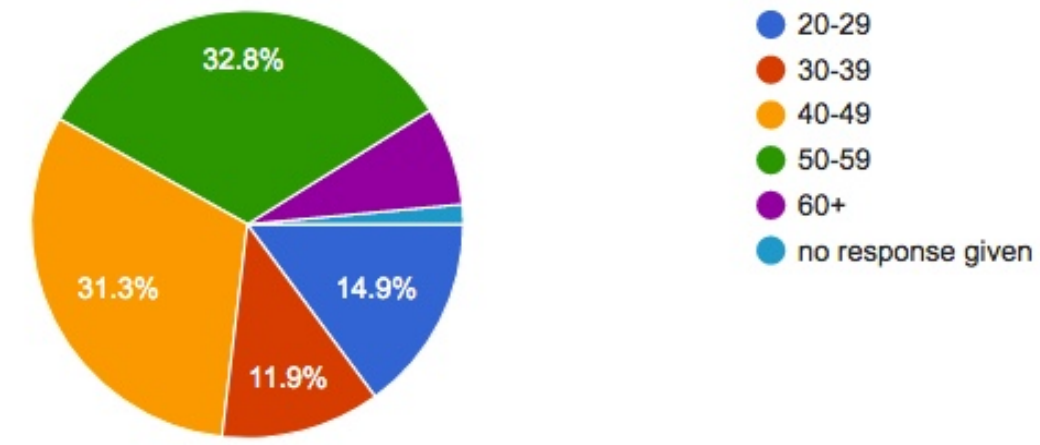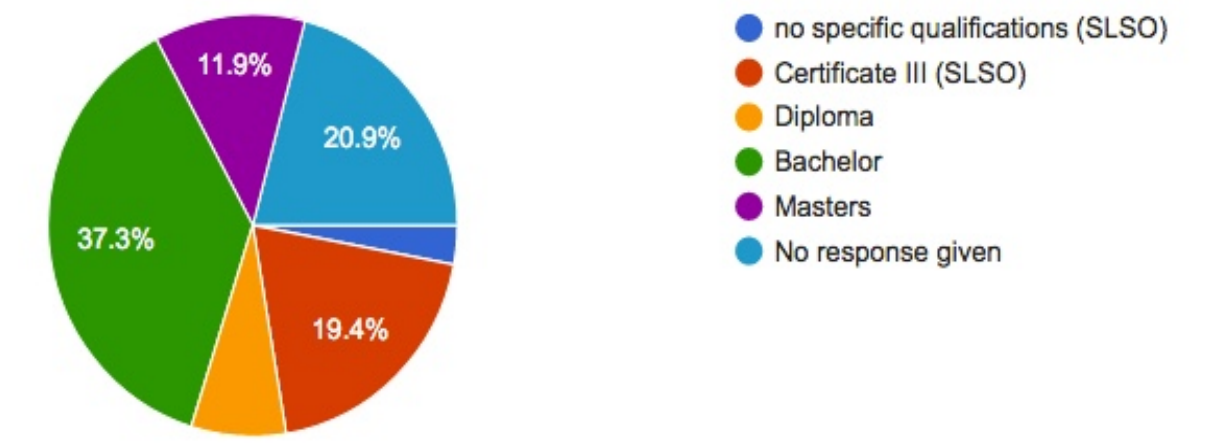| School A	School B	School C
K – 12	K – 12	K - 12
SSP	SSP	SSP
37 students	61 students	50 students
mild – moderate intellectual disability	moderate – severe intellectual disability	18 month intervention behaviour support

Participants

Gender
67 responses

- Female — 77.6%
- Male — 16.4%
- no response given — 6%

Age
67 responses

- 20-29 — 14.9%
- 30-39 — 11.9%
- 40-49 — 31.3%
- 50-59 — 32.8%
- 60+
- no response given
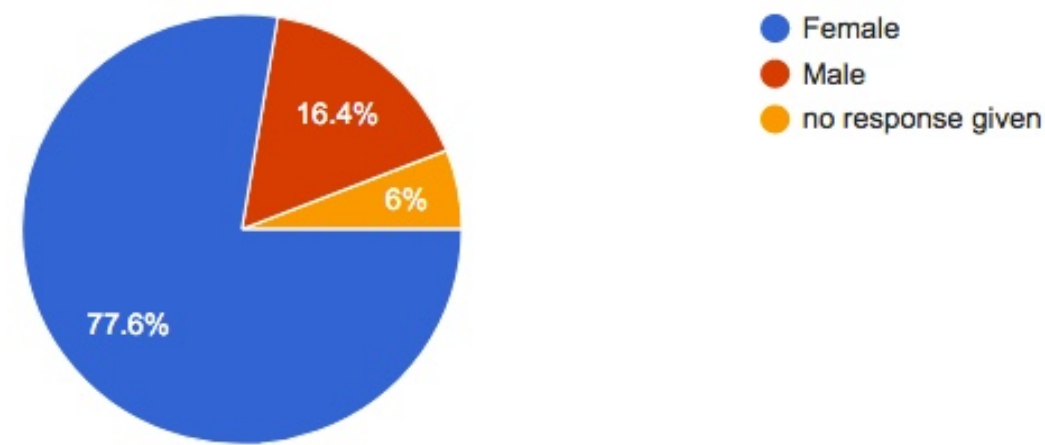
Qualifications in Education
67 responses

- no specific qualifications (SLSO)
- Certificate III (SLSO) — 19.4%
- Diploma
- Bachelor — 37.3%
- Masters — 11.9%
- No response given — 20.9%

Gender
4 responses

- Female — 75%
- Male — 25%

Age
4 responses

- 20-29
- 30-39 — 50%
- 40-49 — 50%
- 50+
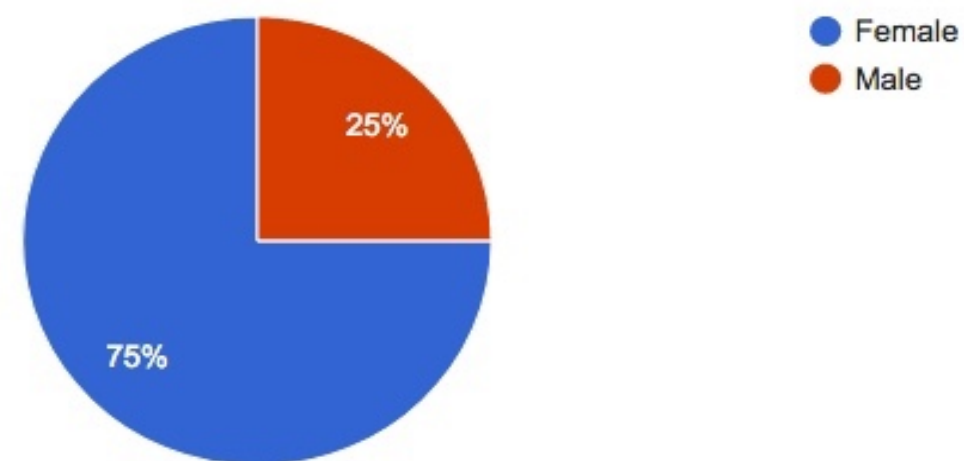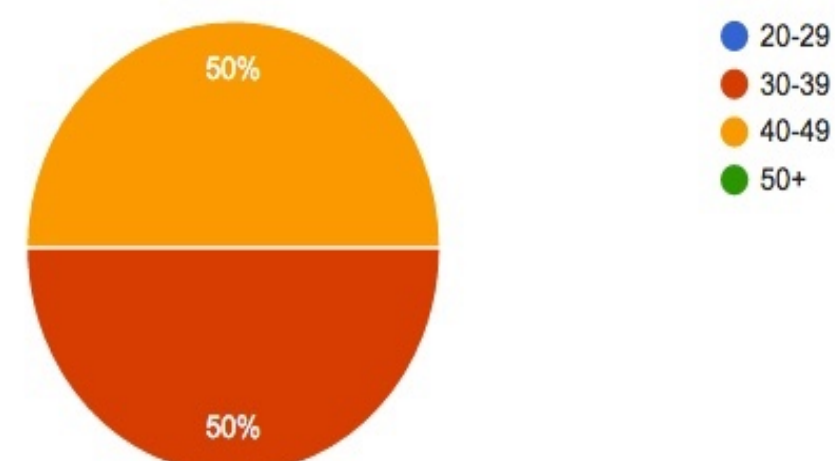
No. years experience
4 responses

- 1-5
- 6-10 — 25%
- 11-15
- 16-20 — 50%
- 20+ — 25%
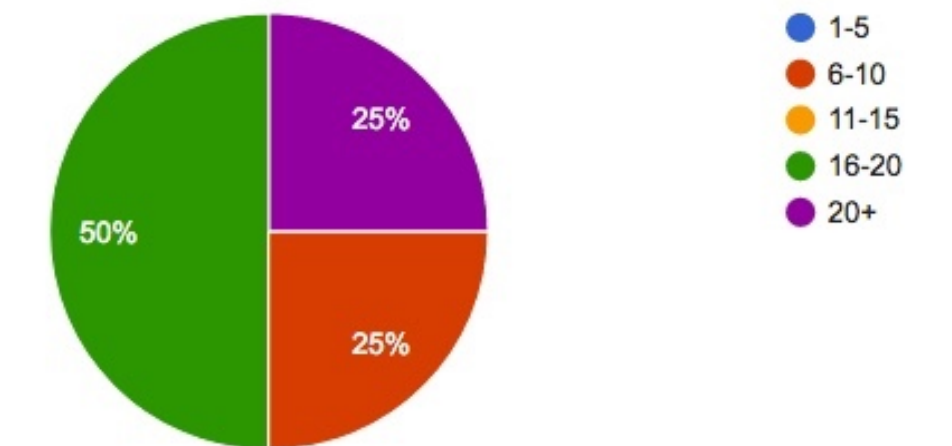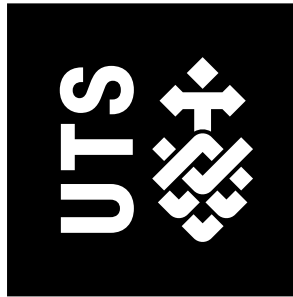
FINDINGS	Sub-themes
Process to building effective transdisciplinary model	Immersion phase Modelling phase Developing a common language Evolving communication strategies
Transdisciplinary professional **learning**	Teachers / SLSOs Occupational therapists Embedded OT v. External OT
Facilitators to **success** of transdisciplinary model	Leadership Whole-school approach Teacher well-being Program ownership
Impact on **environment**	Beyond physical environment Improved physical environment Improved access to resources Integration of diverse resources

THEMES: The Process

1. Immersion Phase
   - (a)   observation
   - (b)   unobtrusive actions
   - (c)   sufficient time
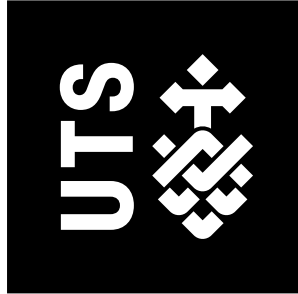
2. Modelling Phase

3. Developing a common language

4. Evolving communication strategies

5. Establishing trust and respect

The process – OTs' voices

[teacher] came across quite nervous about having me there scrutinising her and I think that was a big thing for us to get to know each other and her to realise – 'cause I just kept saying I love being in the class with you 'cause I learn so much off you... it's like a mutual kind of thing rather than me being the authority (OT focus group 17(i)).

So when you're seeing [student] in a classroom, it really shows how they're engaging with other students, how they're watching other students and how they're reacting to the outside influences coming in, whether it be noise or movement or whatever it might be so I think it's really important that therapists see the guys long-term in a classroom, seeing how they interact with other people and other influences (teacher interview 18CT).

much longer than I thought, just getting the rapport and credibility with them, I guess and that relationship to be able to then make suggestions' (OT focus group 17(ii))

*If I'm bringing something in I try and like to **model it and trial it out first** like I'd rather it go wrong with me than with them* [teachers]. (OT focus group 17(i))
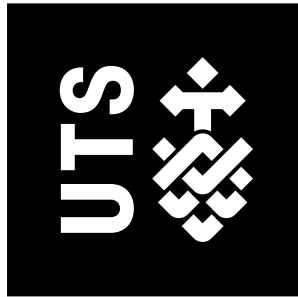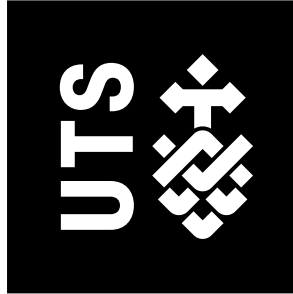
The process – teachers' voices

I needed to find out how to solve a problem, [OT] *was able to come in and have that conversation and then goes away and would flick me some information or give me some other suggestion – and* [OT] *trialled it with me in front of me there and then* (teacher focus group 17C)

the OTs have fitted in well and have not disrupted the class routine' (teacher journal undated 17A1) and '*working with OT in class time has been through common agreement as such not really disruptive or intrusive'* (teacher journal undated 17A2)

it was up to us to own, embrace, take on board and seek support at the level needed without having it sort of pushed down our throats or being too intrusive in the approach' (teacher interview 18AR)

[OT's] *language choices now with us and* [s/he'll] *start talking and then…I think* [OT] *looks at our faces and has definitely, yeah, probably changed the way* [s/he] *talks to us as well and makes it much more relatable to our classroom situation.* (teacher focus group 17C)

The process - key findings

Allocated observational period would alleviate OT concern – time taken for building contextual familiarity.

Teachers valued the **unobtrusive** and **non-threatening** nature of the **immersion period** = building positive relationships

Observations occur across the **range** of school **activities** and **transitions**.

Modelling phase led to improved up-take of OT recommendations = building positive relationships

Immersion helped generate a **common language** = supports ongoing professional conversations.
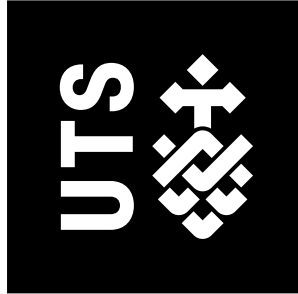
The process - key findings

66% of teachers/SLSOs reported OTs spending regular, ongoing time in their classroom.

79% of teachers/SLSOs said they engaged in regular **professional conversations** with OTs.

Shift in preference for **where** professional **conversations occur**.
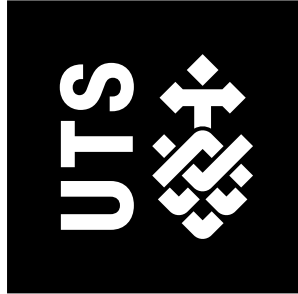
Professional conversations = professional development.

Flexibility is required, as communication strategies evolve over time.

89% reported high involvement between **teachers** and OTs.

82% reported high involvement between **SLSOs** and OTs.

THEME: Transdisciplinary Professional Learning

TEACHERS and SLSOs

1. Validation through theoretical knowledge building

2. Viewing students and pedagogy through an OT lens

3. Strategy building – preventative rather than reactive

4. Generalisation of transdisciplinary knowledge

   (a) Transfer of transdisciplinary knowledge
   (b) Adaptation of transdisciplinary learning

Transdisciplinary Professional Learning – teachers' voices

'I've picked it up and now I'm looking at other kids and how they're travelling with it' (teacher interview 18C) and *'You go home and go well I have four kids in my class that fit into this box so I can use all of this. I have two kids that – 'cause we're time-poor – I have two kids like this so this crosses over'* (teacher interview 19BL).

Generally it has changed the way staff view behaviour and deal with it. It has changed the perspective to 'what can we do to support regulation' rather than 'the student is choosing to be defiant/agitated/ aggressive. (survey respondent 19)
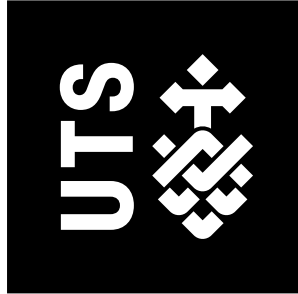
feeling like you're not doing your job by offering them [sensory breaks] because I think so much is placed on the academic part and sometimes you felt really guilty in inverted commas because you were saying oh we're going to jump on the trampoline or we're going to have sensory play. I think I personally used to think you know am I wasting my time? Am I wasting their time? Should I be you know sort of pushing that and it was this really nice feeling of justification… I knew it was working but it was having somebody say to me this has got a meaning behind it and it's the right thing to do. (teacher focus group 17C)

Transdisciplinary Professional Learning – teachers' voices

adrenaline hits and then okay, what do I do? where now it's like more forward-thinking so instead of waiting for you know that ultimate crisis moment like you kind of read the behaviour signs way earlier and try and implement some sort of movement strategy or OT strategy in the system to try and bring the behaviours back the other way so – yeah … just being like giving them tools and I guess kind of more of the theory behind the OT side of it rather than just going oh we have a trampoline, this child's hit the red. (teacher interview 19BK)

It just becomes part of your daily routine rather than becoming a therapy thing that we do, it just becomes part of your timetable and how you run your class so it's not a – it shouldn't be a unique thing or a separate thing. (teacher focus group 17C)

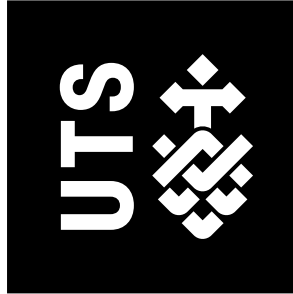# Transdisciplinary Professional Learning – Key findings

TEACHERS and SLSOs

Strategies previously used by teachers/SLSOs were **validated** through building theoretical knowledge.

Teachers/SLSOs now **view their students through an OT lens** and reassessed underlying causes of student behaviour.

By 2019, 96% of teachers/SLSOs had **considered different ways** of supporting students as a result of the embedded OT.

93% of teachers/SLSOs agreed/strongly agreed that they had **adapted** and **improved** their practice.

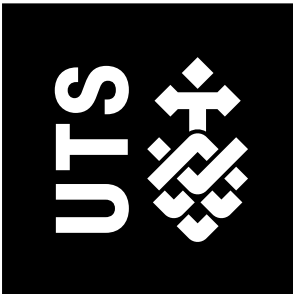# Transdisciplinary Professional Learning – Key findings

TEACHERS and SLSOs

93% of teachers/SLSOs agreed/strongly agreed that they were **able to identify** when students were becoming dysregulated and 85% were confident they **could successfully intervene** if a student became dysregulated.

Teachers/SLSOs became more adept at using **preventative, rather than reactive, strategies** to deal with student behaviour.

Teachers **transferred** their learning of strategies for individual students across different students.

Teachers **adapted** resources and strategies provided by the OT to suit their own teaching styles and classroom needs.
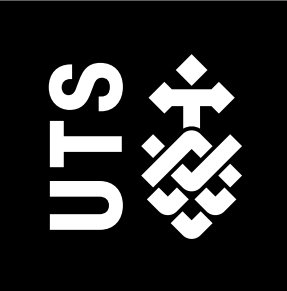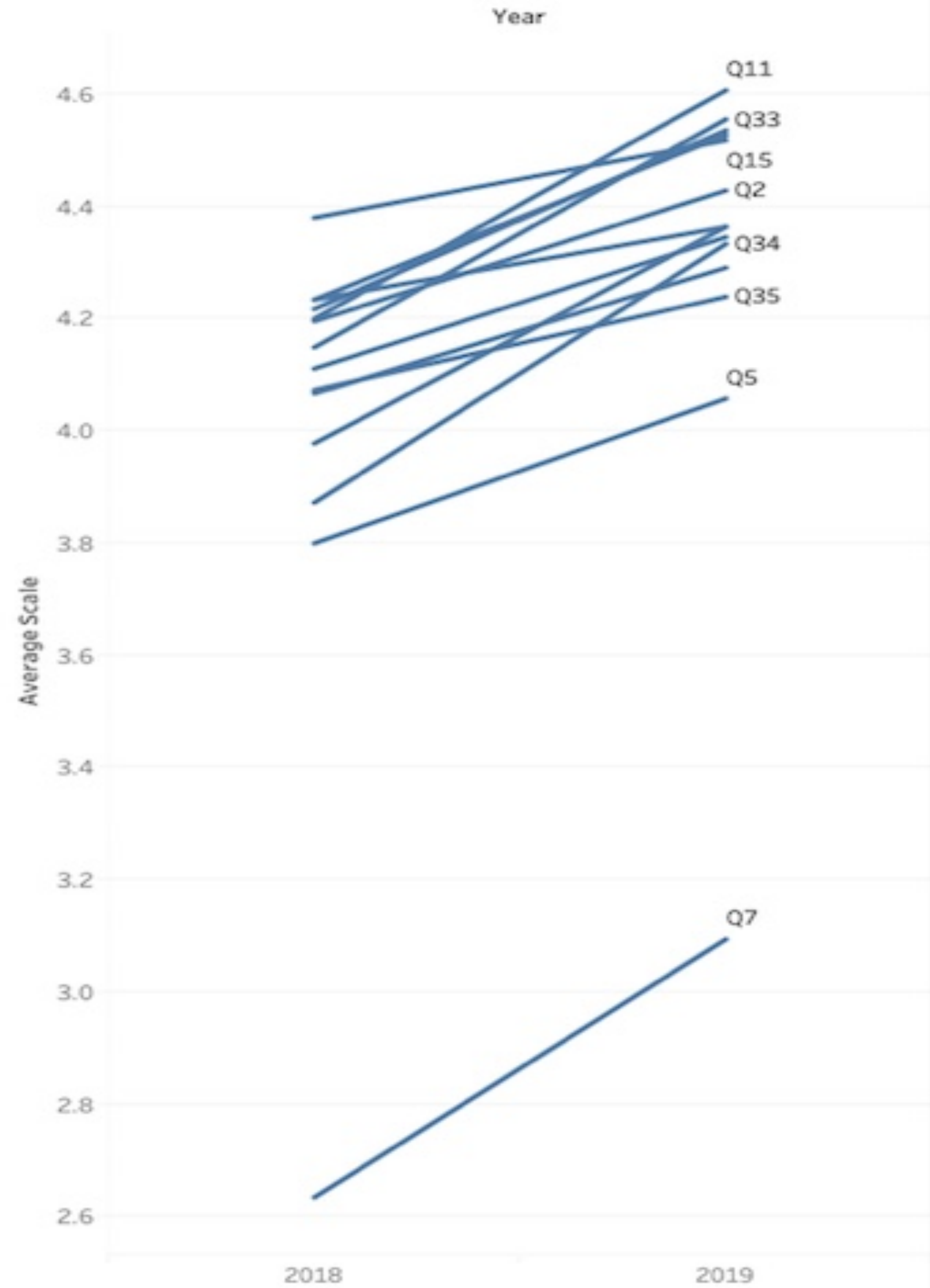
Average Scale

Question	Year 2018	Year 2019
1. Through access to an OT I have considered different ways of supporting student development	4.23	4.53
2. Through access to an OT I have adapted my practice to support student development	4.20	4.43
3. Through access to an OT I have improved my practice to support student development	4.22	4.54
5. Through access to an OT I have adapted how I work with teachers/SLSOs	3.80	4.06
7. Through access to an OT I have adapted my programming tools	2.63	3.09
11. I feel confident to use Zones of Regulation in my classroom	4.20	4.61
14. I will receive appropriate support to successfully integrate Zones of Regulation in my classroom	4.23	4.36
15. Applying the Zones of Regulation will help/helps me understand and manage student behaviour more effectively	4.38	4.52
33. How would you rate teachers at your school's understanding of the role of the OT?	4.15	4.56
34. How would you rate teachers at your school's involvement with the OT?	3.87	4.33
35. I acknowledge the sensory processing issues of each student when programming for them	4.07	4.24
36. I understand the impact of each student's sensory processing strengths/challenges in the daily school routine	4.11	4.35
37. I have the ability to identify subtle changes in each student that indicates they are becoming dysregulated	4.07	4.29
38. I have confidence to effectively intervene when a student is dysregulated	3.98	4.36

Average Scale: 1.00 — 5.00

Average Scale broken down by Year Year vs. Question. Color shows Average Scale. The marks are labeled by Average Scale. The data is filtered on Scale, which excludes Null.

Average Scale Slopegraph

Year

The trend of Average Scale for Year Year. The marks are labeled by Question ID. Details are shown for Question. The data is filtered on Scale, which excludes Null.
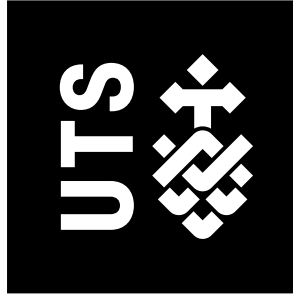
Transdisciplinary Professional Learning – OT voices

to produce content is enormous like I don't know how teachers do it, develop lessons every single day of the week for six hours or five hours or however long – how much content you have to deliver. Like as a therapist if I was to do a workshop and present for five hours it would take me two months to prepare that content. You guys do it on a daily basis, it blows my mind so we've got completely different skillsets and we approach information differently because of that, because of the need to disseminate so much content on a regular basis. (OT interview 18)

I'd worked in schools for lots of years so I kind of thought I knew how to do it but I have learned a lot for example this time of year for these two weeks, don't implement anything 'cause it's report-writing time. All of those things that go with the natural cycle. (OT interview 19)

having a dialogue with a teacher which is also hard, trying to get time to a teacher when you're an external therapist and you're paid to have therapy with that one child and you're looking around going okay, there's 23 other kids here that are impacting the child I'm working with so I can't comment on that 'cause that's a breach of my role so I have to try and skirt that by – anyway it's complicated. (OT interview 18)

Transdisciplinary Professional Learning – Key findings

OCCUPATIONAL THERAPISTS

OTs developed in-depth understanding of the **complex role** of the teacher.
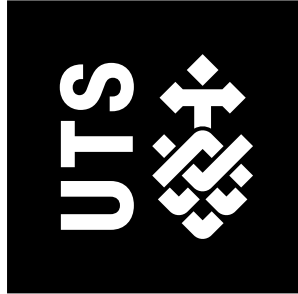
OTs considered the **constraints on schools** in implementing proposed strategies/resources and revised planning accordingly.

Factors related to the education system in which schools' operate became more apparent to OTs.

Embedded model over external model:
        programs were developed context
        programs integrated into classroom setting
        continued opportunities to liaise with OTs and
        engage in collaborative problem solving
        increased OT accountability

THEME: **Facilitators** of a **successful** transdisciplinary model

1. Leadership

2. Whole-school approach

3. Teacher well-being

4. Program ownership
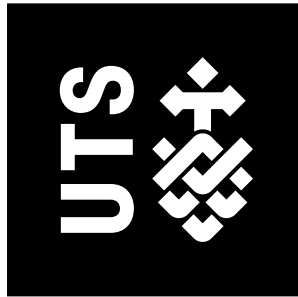
Facilitators of a successful transdisciplinary model – participants' voices

I think having those couple of pilot classes with some keen and motivated teachers, getting them on board was the enabler to them to be able to say to everyone else hey, look at what's happening, this is working really well and then the positive talk and the positive experiences. Then seeing that wow, the materials, the resources, everything's here, this is great I think then enabled everybody else to then jump on that bandwagon and go hey, let's keep going with it. (Principal interview 18M)

marrying up the behaviour plan with the OT strategies and knowing what your pathway is before crisis and adrenaline hits and all that, it's sort of like that emotional reaction. So before all that comes into play this process with [OT] and the strategies has really clarified how to deal on a thinking level where you just okay, this is it, we're not panicking, it's not adrenaline, this is what we do.

I was really worried about self-care following a critical incident or a situation where they might have a student who's being aggressive or abusive or whatever or hits them or – there's no again formal structure for them to have a debrief moment … So I wanted to equip the teachers just with a three-minute activity that they could do in the context of having the rest of the class like – so they're still teaching but they can do some breathing activities just to help settle their own nervous system down. (OT interview 18)
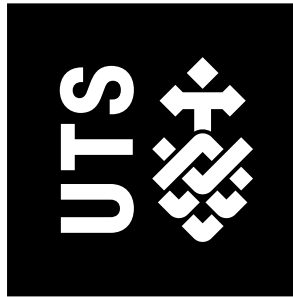
# Facilitators of a successful transdisciplinary model – Key findings

Leadership team with clear vision for the purpose of the project.

Leadership team supportive in ensuring a positive experience for teachers/SLSOs, reflected - 89% of teachers/SLSOs reporting they had received sufficient support.

A whole-school approach was developed, building from successful outcomes in pilot classes.

Teacher wellbeing was increased on the back of implementing new strategies with students; builds momentum to continue using these strategies.

Teachers, SLSOs and OTs demonstrated ownership of the program.
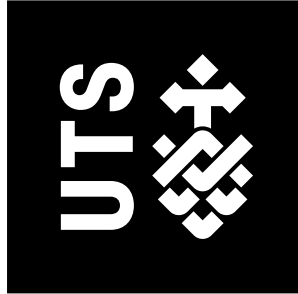
THEME: Environmental Impact

1. Impact beyond the physical environment

2. Improving the physical environment

3. Improved access to resources

4. Improved integration of diverse resources
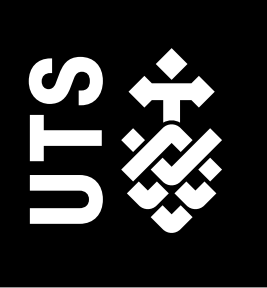
Environmental Impact – Key findings

Significant influence on classroom schedules and whole-school timetables.

Communal spaces reconceptualised through an OT lens - turning negative to positive.

Identify underlying causes for spaces not functioning well.

Environmental risk assessments - greater specificity.

Increased access to a broader range of resources.

Teachers/SLSOs – critical reflection - evaluating resources and strategies.
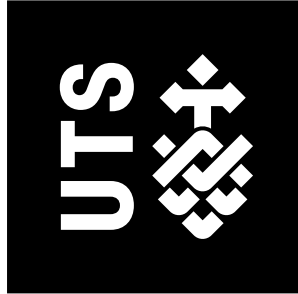
Effects on environment – Key findings

Teachers/SLSOs increased knowledge existing resources which were underutilised or not used at all.

Teachers more confident purchasing resources - less trial and error.

60 new resources and strategies were introduced by the OTs.

Resources and strategies ranged from the personalised – to classroom based - to the whole school accessible.
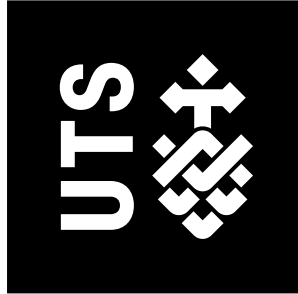
Future Directions

Final data being collected - two remaining research questions:
- impact on home-school-therapy connections
- impact on student outcomes

- Economic modelling with business academics at UTS
- Liaison with Dept of Ed and NDIS re new models of funding to support
- Seeking ongoing funding to build project/s
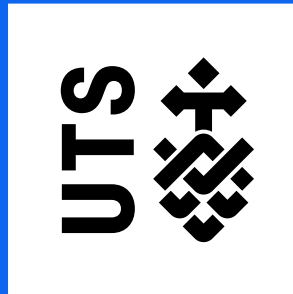
Project funded by Toyota Foundation through SchoolsPlus

Full report available: www.uts.edu.au/kirstyyoung