

# Enhancing Adaptability with Task-Based Learning

Nicholas Little  
The Scots College, Sydney, Australia

## Further Information

This poster and further information is available at <http://www.theibsc.org/>

Researcher's Email: [n.little@tsc.nsw.edu.au](mailto:n.little@tsc.nsw.edu.au)

## Introduction

Three years ago, a *Next Generation Learning Space* was installed in the secondary school Science building at The Scots College. Through its design, it attempted to disrupt classical teaching pedagogies and encourage an *activity-based learning* (ABL) approach amongst teaching staff. My first teaching experiences in the NGLS were frustrating for me and my students; it was hard to adapt teaching and learning strategies to fit the space. As teachers trialed new pedagogies, some showed signs of greater student engagement. I was inspired to investigate further. Building on past experience, my action research project employed a task-based learning (TBL) intervention to help boys adapt to a NGLS.

## The Research Question

*How might task-based learning help Grade 9 boys adapt to a next generation learning space?*

## Research Context and Participants

The project was conducted at The Scots College, an independent boys' school in Sydney's Eastern Suburbs. It has a reformed Presbyterian heritage and draws on its Christian values to shape and inform practice in the school. The participants were 18 Grade 9 boys who make up a regular Science class. They were chosen because they had Science class timetabled in the Science NGLS.

## The Research Action

TBL was introduced as a teaching strategy to help students adapt to the NGLS. The expectation was, that by implementing a teaching technique to fit the space, students would respond positively and have more success in adapting to this exciting, unfamiliar, and new environment.

The boys received a digital content outline at the beginning of each week. Tasks allowed boys to participate in individual learning, small group learning, and large group lectures. Other examples of tasks included:

- Making videos
- Group presentations
- Stileapp (computer-based activities)
- Mini-lecture
- Whiteboard (chalk talk)
- Worksheets
- Teacher experiment demonstration
- Practical tasks
- Group research tasks
- Individual research tasks

## Data Collection and Analysis

It was integral to the scope of this project to collect qualitative and quantitative data as both data types provide different, yet equally important, information. Quantitative data were collected through:

- Google Form questionnaires

Qualitative data were collected through:

- Google Form questionnaires
- Photographs
- Exit tickets
- Focus groups

These data collection methods provided boys opportunities to describe their experience throughout the action. Data were coded and analysed. Particular points of interest focused on how boys demonstrated adaptability cognitively, behaviourally, and emotionally. (Martin, Nejad, Colmar & Liem, 2013).

## Key Findings and Discussion

Data were grouped into four main categories, which also mapped well against the three adaptability domains.

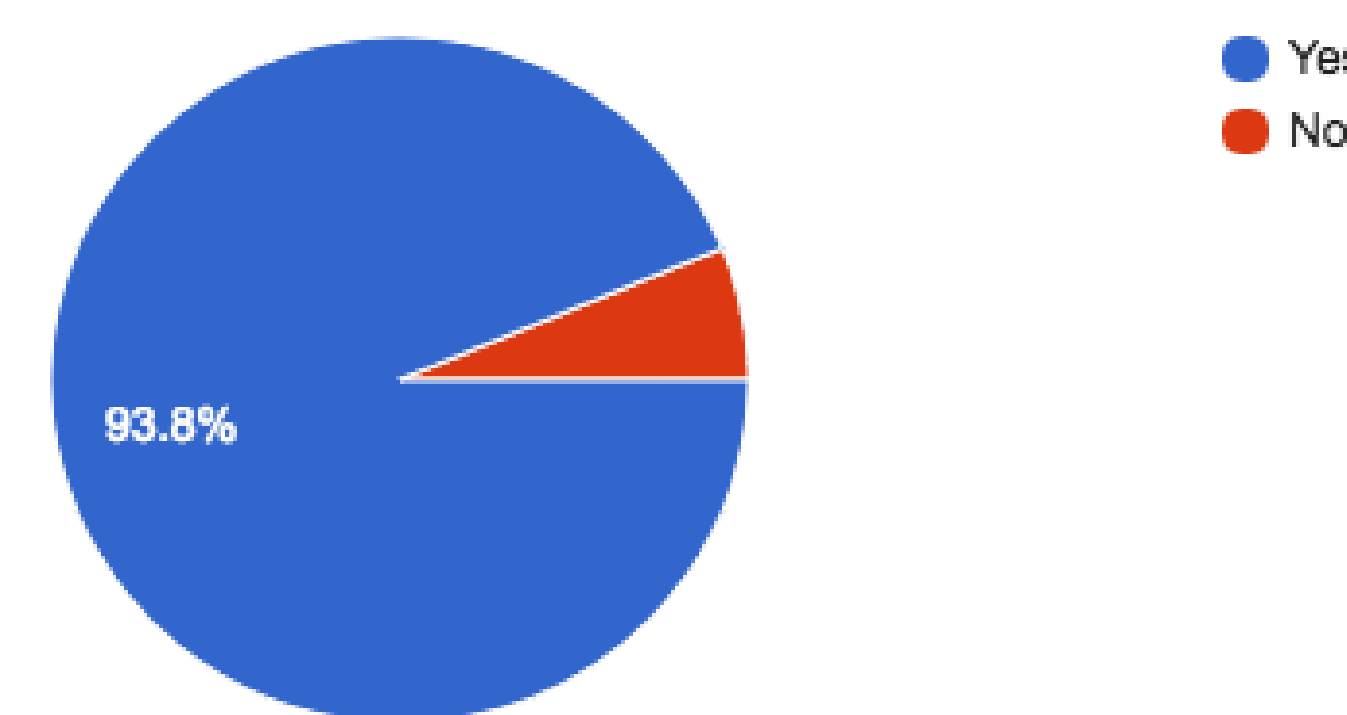
- Positive feeling or *good vibe* (emotional adaptation)
- Spatial impact (cognitive adaptation)
- Increased engagement (cognitive adaptation)
- Independence (behavioural adaptation)

Much of the qualitative data highlighted the boys' experiences of TBL in a NGLS:

"It's kind of a happier place.... You get a *better vibe* from this classroom compared to others."  
"In this area I notice you get a lot more independence which is really important."

### Were you successful in adapting to science class in Physneyland this term?

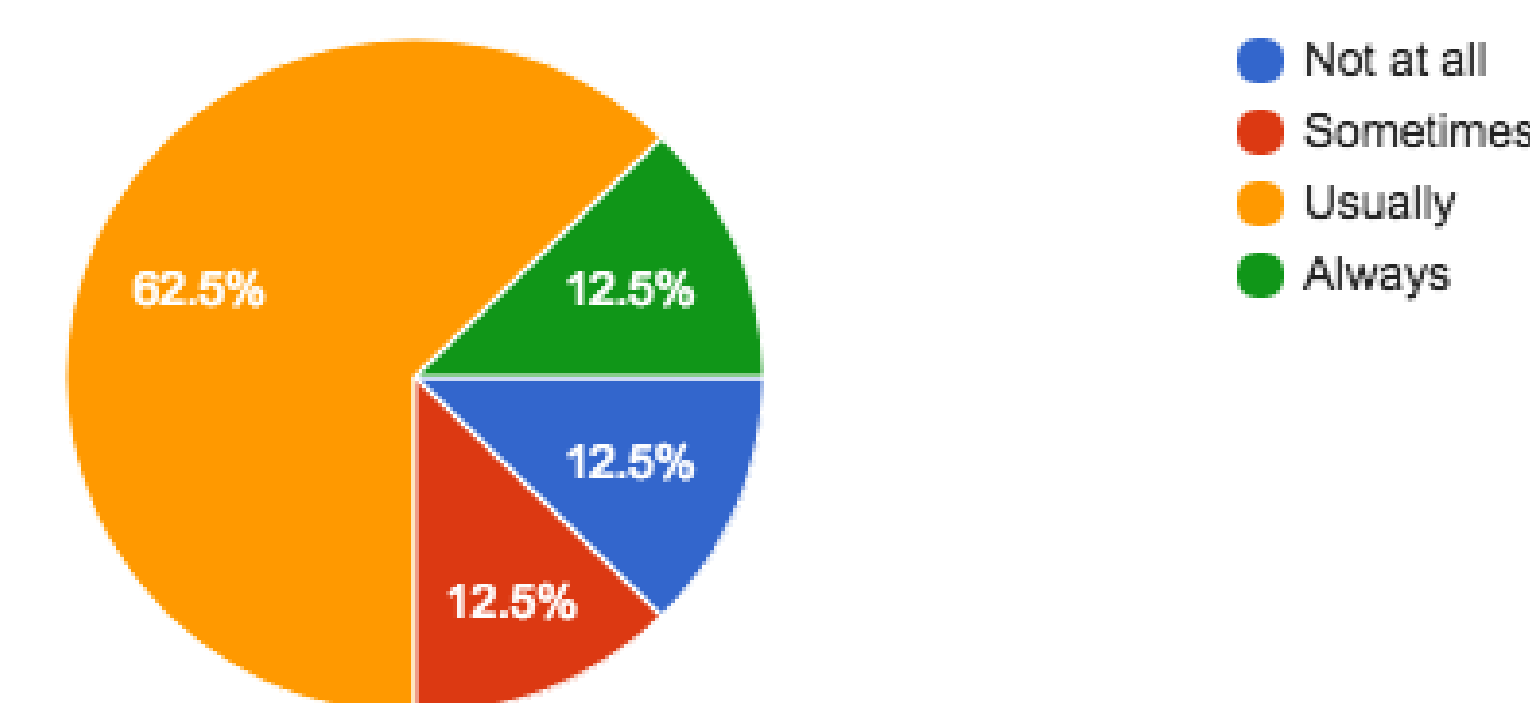
16 responses



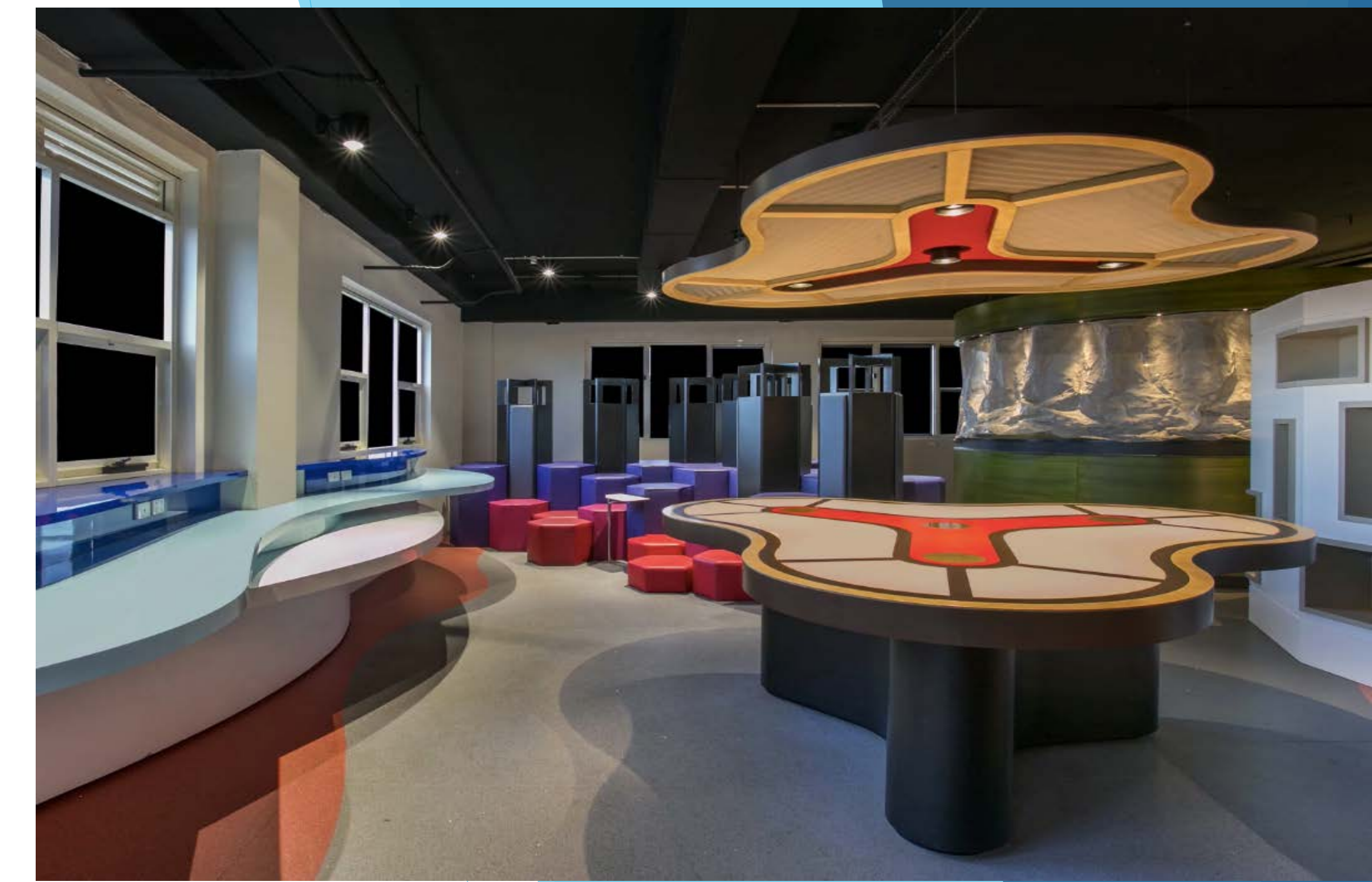
"It's kind of a happier place.... You get a *better vibe* from this classroom compared to others."

### Were you successful in changing the way you do things to work well in Physneyland?

16 responses



"In here it allows you to participate or act however you want, which makes it more enjoyable to act better."

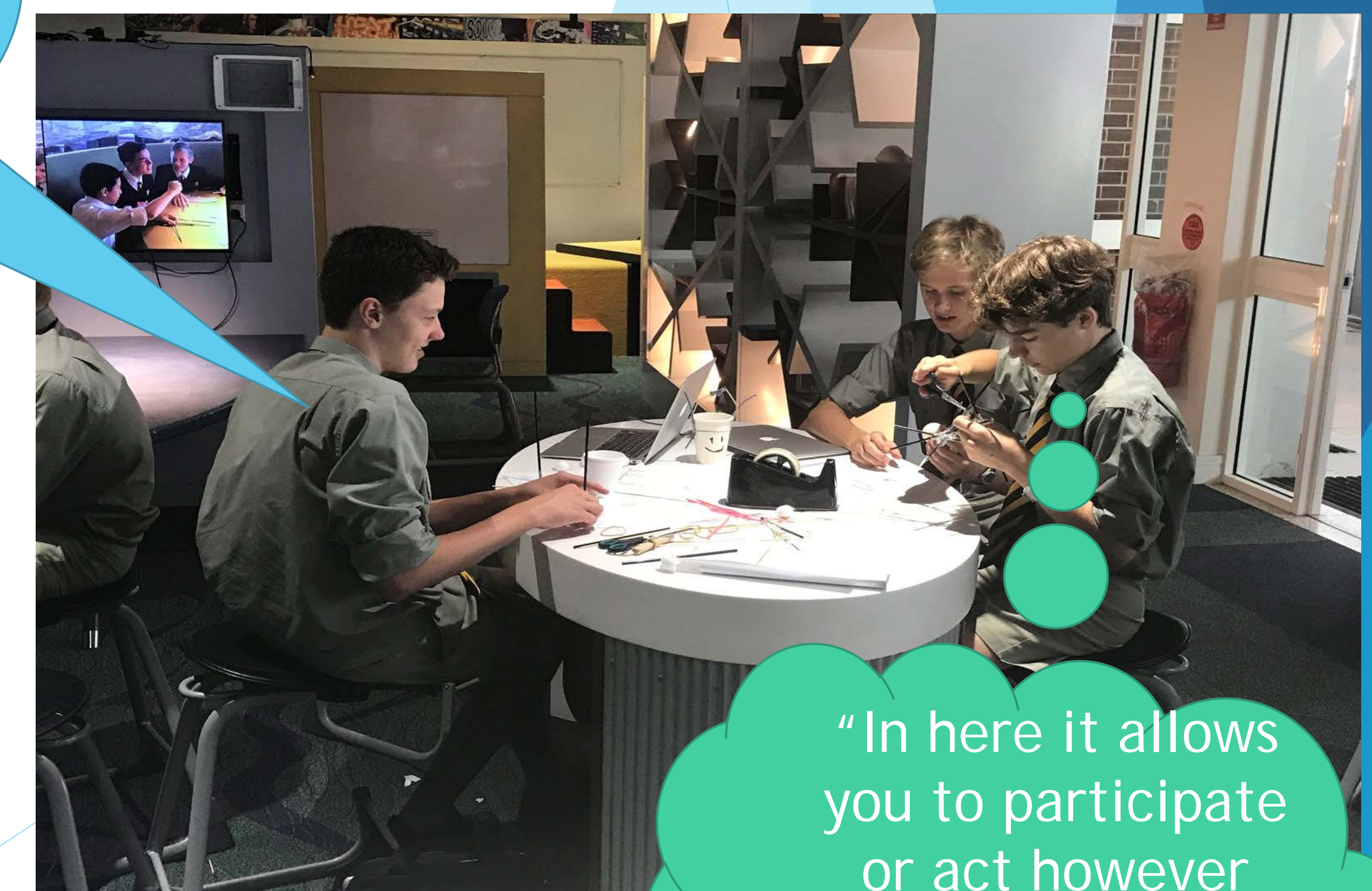


## Conclusions

- Adaptation in the boys was enhanced through TBL.
- TBL is one effective strategy to help boys adapt to a NGLS. There may also be many other strategies that are also effective for boys specifically and for students who find it hard to adapt to.
- Teaching strategies that fit the space are most likely to have maximum impact on student learning and adaptability.
- **Time and training** is required for teachers to be effective in NGLS.
- A team approach to teaching was embedded in this project, but not directly measured. This may be an important aspect to investigate further.

## Key Readings

- Carr, N., & Fraser, K. (2014) Factors that shape pedagogical practices in next generation learning spaces. In K. Fraser (Ed.), *The Future of learning and teaching in next generation learning spaces*, 12. International Perspectives on Higher Education Research. Bingley, UK: Emerald
- Martin, A. J., Nejad, H. G., Colmar, S., & Liem, G. A. (2013). Adaptability: How students' responses to uncertainty and novelty predict their academic and non-academic outcomes. *Journal of Educational Psychology*, 105(3), 728-746.
- Stringer, E. (2014). *Action Research*, 4th Edition, USA: Sage.



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