What Does Teaching and Learning Look Like in Different Classroom Environments?

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Evaluating the Effects of Different Classroom Spaces on Teaching and Learning

School A

- **Equal Impact to Teacher**
- **Effect Size** $g = 0.51$
- **15% Average Academic Gain**
- **7% Variation in Results**
- **2/3 Grade Gain on Likeability Peers**
Evaluating the Effects of Different Classroom Spaces on Teaching and Learning

School B

3 Quantitative Impacts

Impact of a teacher was the greatest effect

5% Avg Academic Gain

Effect size: $g = 0.29$
Understanding in what way Different Classroom Spaces Affect how Teachers’ Work and Students’ Learn

YEARS: 2014 – 2017

SAMPLE: 207 observations of 52 teachers (at least 3 observations)

SPATIAL TYPES: Type A (General Learning Area Classrooms), Type B (Science Laboratories) and Type D (Hayward Midson Creative Precinct and Centenary Library)

RESEARCH DESIGN: Quasi-experimental approach facilitated by a Single Subject Research Design

METHOD: Linking Pedagogy, Technology and Space (LPTS) Observational Metric
Three Spatial Types

Dovey and Fisher’s (2014) learning spaces typologies, as adapted in Imms et al, (2016)
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Are Teacher Practices Shaped by Different Spatial Types?

![Bar chart showing the proportion of lesson types for different spatial types.]

- Direct instruction
- Interactive Instruction
- Facilitating
- Providing Feedback
- Class Discussion
- Questioning

Type A (n = 81)
Type B (n = 31)
Type D (n = 85)
How Does Subject Type Influence Teacher Practices in Different Spatial Types?
Student Learning Experiences in Different Spatial Layouts

Proportion of Lesson (%)

- Type A (n = 81)
- Type B (n = 31)
- Type D (n = 85)
Student Learning Experiences of Similar Subjects in Different Spatial Types

![Bar Graph]

- **Maths in a Type A (n = 29)**
- **Science in a Type B (n = 31)**
- **Engineering in a Type D (n = 27)**
How do Teacher Utilise Technologies in Different Spatial Types?

![Bar chart showing the proportion of lessons for different modes and technologies for Type A (n = 81), Type B (n = 31), and Type D (n = 85). Modes include:

- Mode 1: Teacher-centred
- Mode 2: Student-centred
- Mode 3: Informal
- Outside Classroom
- Tablet/Laptop (Typing)
- Tablet/Laptop (Stylus)
- Front Data Projector]
How do Teacher from Similar Subjects Utilise Technologies in Different Spatial Types?

Proportion of Lesson (%)

- Maths in a Type A (n = 29)
- Science in a Type B (n = 31)
- Engineering in a Type D (n = 27)
Impact of Different Spatial Layouts is more about Context and Correlation, than Cause and Effect

• Develop a deeper understanding of the pedagogic possibilities of different subjects in the full spectrum of spatial types (What works for whom and when for what and why?)

• Better understand the mediating role teacher environment/spatial competencies

• A deeper appreciation of how teacher beliefs/mind frames influence the pedagogical use of different spaces

• Translate this understanding into teacher practice to transform student learning from good to great
FOR FURTHER INFORMATION
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