

THE SCIENCE OF LEARNING IN EDUCATION CENTRE

The Science of Learning in Education (SoLE) is an interdisciplinary field that integrates insights from multiple fields, including neuroscience, cognitive science, psychology, sociology, education and other areas to provide a scientific understanding of how learning occurs and to translate research evidence into educational practices and strategies that promote student’s well-being, development and learning.

SoLE Research Strands

-  Academic and Cognitive Development
-  Movement, Physical and Health / Lifestyle, Diet and Nutrition
-  Social and Emotional Development, Mental Well-being
-  Technologies / Multidisciplinary / Others
-  Special Education Needs / Learning Differences

Quick Facts about the SoLE Centre

- ① The centre is the first of its kind in Singapore.
- ② The centre is located at NIE, Singapore’s only teacher education institute.
- ③ The centre comprises two experimental rooms and one classroom, which are named after neuroscientists who played significant roles in shaping the field.



Experimental Rooms
Here is where quantitative data is collected using various neuro-physiological (e.g., EEGs and fNIRs) and other physiological tools (e.g., eye trackers).

Classroom
This room features a two-way mirror so that learning processes can be observed and studied under natural conditions.

Three Pillars of SoLE Centre



PILLAR #1 RESEARCH

Interdisciplinary in nature

SoLE research involves any projects that includes:

- biology;
- cognitive neuroscience and psychology; and
- at least one aspect of education (behavioural, contextual or sociocultural environment).

Examples of SoLE research include:

- language acquisition in children;
- eye-gaze patterns of experts and novices in graph interpretation;
- the role of parenting in child cognition; and
- the use of digital games in math learning.



PILLAR #2 TEACHING

Master of Science (Science of Learning)

Initial Teacher Preparation (ITP) Minor in SoL

SoL Mini-Masters and SkillsFuture courses

SoLE professional development workshops



PILLAR #3 COMMUNITY

Institutional capacity building and brokering the development of a research community in SoLE through the following:

- Monthly SoLE seminar series;
- Biannual ideation sessions; and
- Symposiums and other events.