



MENDAKI EDUCATION SYNPOSIUM 2020

NURTURING FROM YOUNG: FOUNDATIONS FOR
LIFELONG LEARNING IN POST-COVID WORLD

COMPENDIUM 2020

In collaboration with NIE:





PREAMBLE:

MENDAKI Education Symposium 2020

Nurturing from Young: Foundations for Lifelong Learning in Post-COVID World

MENDAKI Education Symposium 2020 on *Nurturing from Young: Foundations for Lifelong Learning in Post-COVID World* focuses on how professionals and practitioners in the pre-school sector as well as parents of young children can understand major developments during a child's early years. The fourth MENDAKI Education Symposium reflects MENDAKI's efforts to inculcate excellence in the Malay/Muslim community through strengthening the foundations of learning for young children and nurturing them to be lifelong learners of tomorrow.

For the first time, the annual Symposium was held over three days on Zoom, in line with safety measures taken to combat a COVID-19 world and beyond. The early childhood and development sector, along with many others, took it in its stride to accelerate efforts in adapting to the new normal, while ensuring the development and sustainability of children's social and emotional skills are not compromised. There are increasing efforts at strengthening collaborations between pre-schools and primary schools, along with collaborations amongst different stakeholders within the pre-school sectors. The three-day webinar serves as a platform to continuously support such collaborations, with inputs from stakeholders ranging from Early Childhood Care and Education (ECCE) practitioners to policymakers.

The keynote panellists offer in-depth analysis and understanding of the environments conducive for children to develop their emotional and social skills during their early years. **Dr Beth O'Brien** and **Dr Viniti Vaish** discuss how the home and classroom environments help build strong foundations in pre-school children to write effectively and speak fluently in their Mother Tongue and English. **Dr Nirmala Karuppiah** talks about how the quality of teacher-child interactions within the pre-school classroom plays a crucial role in children's development, learning, and behaviour, and provides tips to improve classroom pedagogy and practices. In ensuring a safe and healthy

environment for children, **Dr Anne Rifkin-Graboi** discusses why identifying signs of stress is important. She also provides tips on the various methods that parents and teachers can adopt to respond positively to children. **Dr Ng Ee Lynn** looks into why self-control skills in children are important, and possible ways parents and practitioners can help children develop and practise these skills. Lastly, **Dr Aishah Abdul Rahman** covers basics on brain development in early childhood and how this affects learning and behaviour in children.

This year's Symposium was graced by Minister of State for National Development and Manpower, and Deputy Chairman of Yayasan MENDAKI, Mr Zaqy Mohamad, as well as Chief Executive Officer of Yayasan MENDAKI, Mdm Nuraidah Abdullah. MENDAKI Education Symposium 2020 is supported by National Institute of Education's (NIE) Centre for Research in Child Development (CRCD) and MENDAKI Alliance of Pre-school Professionals (MAPP).

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Dr Beth A. O'Brien is Principal Research Scientist at the National Institute of Education, Singapore, and is Head of Early and Middle Childhood Research at the Centre for Research in Child Development. She leads the area of research on Bilingual and Biliteracy Development, and her research focuses on how different types of learners interact with different educational environments from a cognitive neuroscience perspective.



Dr Viniti Vaish

**Associate Professor, English Language
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Dr Viniti Vaish has a Ph.D. from University of Pennsylvania's Graduate School of Education. She is currently Associate Professor at National Institute of Education's English Language and Literature Academic Group. She has a special interest in the documentation, measurement and enhancement of bilingualism and biliteracy. Her latest book, *Translanguaging in Multilingual English Classrooms: An Asian Perspective and Contexts*, was published by Springer in 2020.





Mdm Sanesa Salleh
Malay Language Specialist,
PCF Professional and Education Division
PAP Community Foundation

Mdm Sanesa Salleh is a Malay Language Specialist in one of the leading pre-school operators. Mdm Sanesa has worked in early childhood for more than two decades. In the course of her career, Mdm Sanesa has taken on other pre-school-related commitment such as setting-up of new pre-school centres, managing the day-to-day operations of centres and coaching centres to attain the Singapore Pre-School Accreditation Framework (SPARK) certification.



Dr Nirmala Karuppiah
Head, Education
Centre for Research in Child Development (CRCDD),
National Institute of Education,
Nanyang Technological University

Dr Nirmala Karuppiah is the Head of Education at the Centre for Research in Child Development in National Institute of Education. She has served several years in the field of early childhood education, holding various positions including lecturer, practicum supervisor, curriculum consultant and research advisor. She also serves in various governmental and non-governmental Advisory Committees related to early childhood matters. Her areas of research interests include teacher-child interactions, children's use of screen devices, as well as diversity and social justice. She has presented at several local and international conferences, and published articles in local media and international journals. Her work experience spans several countries including Australia, Cambodia, India, Indonesia and Malaysia.



Ms Seri Rahayu Ariff

Executive Principal, PCF Sparkletots

PAP Community Foundation

Ms Seri Rahayu Ariff is the Executive Principal at PAP Community Foundation (PCF) Sparkletots and an Early Childhood Development Agency (ECDA) Fellow, with more than 20 years in the Early Childhood industry. Ms Rahayu believes in building a strong tripartite relationship among parents, community and school to enhance children’s learning and development.



Dr Anne Rifkin-Graboi

Head, Infancy and Early Childhood Research

*Centre for Research in Child Development (CRCD),
National Institute of Education,
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Anne Rifkin-Graboi is the Head of Infancy and Early Childhood Research at the National Institute of Education’s Centre for Research in Child Development, a mother of two, and has lived in Singapore for over ten years. Her research focuses on parents, children, and neurocognitive development. She is an Associate Editor of Attachment and Human Development and is on the Editorial Board of Infancy. Her work with the Singaporean GUSTO cohort was recently featured in the Netflix series “Babies.” She leads two Singaporean studies: SPACE (Singapore Parenting and Cognition in Early Childhood) and BE POSITIVE (Bedok-Punggol Ongoing Singaporean study beginning in Infancy: Twenty-first century skills, Individual differences, and Variance in the Environment).



Dr Noradlin Yusof

**Principal Educational and Clinical Psychologist,
Assistant Director**

Community Psychology Hub

Dr Noradlin Yusof's passion in supporting the community started early in her career, and she has devoted the last 20 years contributing and growing in the helping profession. She was a Child Welfare Officer with the then Ministry of Community Development. She joined the Ministry of Education (MOE) as a trained primary school teacher before being posted as a Senior Specialist, Educational Psychology, at MOE Headquarters, providing support to primary and secondary schools. At Kandang Kerbau Hospital, she led a team of professionals in implementing a nationwide programme for young children providing support in pre-schools. She completed further training in clinical psychology, deepening her passion in the areas of mental health. Currently, she works with a private group practice as well as at a community setting. She enjoys providing training, consultation as well as conducting psycho-educational assessments and intervention.



Dr Ng Ee Lynn

Research Scientist

*National Institute of Education,
Nanyang Technological University*

Dr Ng Ee Lynn is a Research Scientist at the National Institute of Education, Singapore. Dr Ng's research focuses on understanding the influence of cognitive and affective factors on learning and development in early childhood. Her work has mainly focused on children's self-regulation skills and academic anxieties. She also has an interest in the external factors that contribute to children's learning and development, such as the quality of the child's learning environment and teachers' stress and well-being.

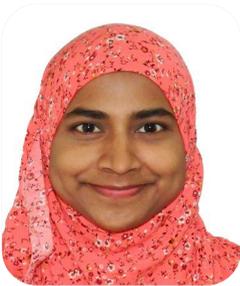


Mdm Hadijah Abu Bakar

Head of Education and Kindergarten Principal

Kampung Siglap Mosque

Mdm Hadijah Abu Bakar is the Head of Education and Kindergarten Principal at Kampung Siglap Mosque Kindergarten. She used to be a primary school teacher, and has been an Education Manager for childcare and kindergarten. In addition, she was also a Trainer and Field Supervisor for the private Early Childhood Education sector. Mdm Hadjiah has a Bachelor's degree in Early Childhood Education and a Specialist Diploma in Counselling and Psychology. She also provides counselling sessions to give back to the community.



Dr Aishah Abdul Rahman

Research Scientist

*National Institute of Education,
Nanyang Technological University*

Dr Aishah Abdul Rahman is a Research Scientist at the National Institute of Education in Singapore. She examines cognitive development in children and adolescents, with a focus on how they regulate their thoughts, actions and emotions. Her research examines how different factors influence these cognitive functions at the behavioural and neural level, and how we can better support their development.

A decorative graphic consisting of several colorful cubes (purple, green, yellow, blue, grey) arranged in a row. Each cube has a different illustration of people: a man and child, a woman and child, a man and child, a woman and child, and a group of people.

Dr Raudhah Yahya

**Lecturer, National Institute of Early
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*National Institute of Early Childhood Development,
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Dr Raudhah Yahya is a lecturer from the National Institute of Early Childhood Development, Singapore. She received her Master of Arts and Doctor of Education degrees in Early Childhood Education from the University of Sheffield, United Kingdom. Her teaching experiences in Singapore, Canada and Oman have been a driving force for her to study play pedagogy, home-school partnership, and children's and teachers' thinking and beliefs.

HOW DO WE TEACH OUR CHILDREN TO BE BILINGUAL AT HOME & IN SCHOOL?



BEING BILINGUAL IN Singapore IS IMPORTANT

CONTRIBUTES TO:
CULTURAL KNOWLEDGE & CULTURAL IDENTITY



HOW TO SUPPORT BILINGUAL DEVELOPMENT



- ### FACTORS:
- EARLY CHILDHOOD YEARS
 - 1 RELATIVE AMOUNT of EXPOSURE
 - 2 LANGUAGE USAGE
 - 3 HOME LITERACY experience
 - 4 LOW ANXIETY & A SECURE ATMOSPHERE!

CHALLENGES

- * DIFFICULTY IN ROLE SWITCHING & DUAL LANGUAGE PROFICIENCY for TEACHERS
- * ACCESS TO LINGUISTICALLY RICH ENVIRONMENT



ACTIVE ENGAGEMENT from PARENTS

- * NUTURE LOVE FOR READING
- * SHARED BOOK READING
- * HOME RESOURCES
MOVIES VIDEOS



PARENTS TO BE MORE CONFIDENT!

- USE TRANSLANGUAGE
- RE DISTRIBUTE YOUR LANGUAGE USE!
- USE MULTI-RESOURCES
 - SONGS & RHYMES
 - LEVERAGE ON TECH



MENDAKI EDUCATION SYMPOSIUM 2020





HOW DO WE TEACH OUR CHILDREN TO BE BILINGUAL AT HOME AND IN SCHOOL?

By Dr Beth O'Brien

HOME SCHOOL TRANSITION STUDY

By Dr Viniti Vaish

PRESENTATION 1a:

How do we teach our children to be bilingual at home and in school?

By Dr Beth O'Brien

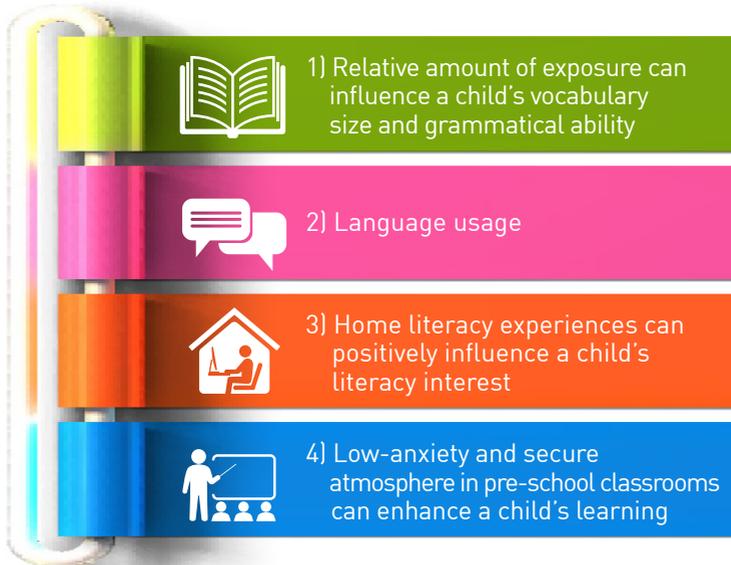
Head, Early and Middle Childhood Research

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Being bilingual is an **important cultural component that contributes to cultural knowledge** and **helps build one's cultural identity**. Furthermore, the skills that children pick up when reading and spelling in their Mother Tongue (MT) can contribute to their English language competency, and vice-versa.

Four factors that influence dual language learners' development:





Levels of complexity and sophistication in lessons

- i) Teachers should strive to incorporate **higher levels of complexity and sophistication** in their lessons when teaching different language forms.
- ii) Below are **three learning points** from a Kindergarten 2 Malay Language class observation that teachers could utilise to **help develop young children’s bilingualism**:

1) Language forms instruction during Circle Time

- i) **Break down words** into **syllables** through songs and rhythm
 - Use songs for memorising days of the week and months of the year
- ii) Use **songs and clapping** to emphasise **syllable structure** within the language
 - Clap by syllable when saying names of the week. For instance, *Is-nin, Se-la-sa, Ra-bu, Kha-mis, Ju-ma-at, Sab-tu, A-had*
- iii) **Draw differences in terms of pronunciation** of similar words present in both English and the child’s Mother Tongue language (cognates)
 - Pay close attention to words like *April*, that is spelt the same in both English and Malay, and ensure that pronunciation is correct

Conversation differentiating the pronunciation of ‘April’





Connecting letter names to sounds



2) Language forms instruction during Shared Book Reading

- i) **Read together** with the student, and include **questions to prompt discussions**
- ii) **Use gestures, pictures and sounds** to support understanding of words read
- iii) **Make quick references to associated vocabulary** in English to **enhance student's language learning**

3) Language forms instruction during Language & Literacy Instruction

- i) Encourage the student to **connect letter names to their sounds**
- ii) **Brainstorm words** that start with certain letters
- iii) **Link words** to everyday items and experiences
- iv) **Conduct drawing and writing activities** to learn words and letters



PRESENTATION 1b: Home School Transition Study

By Dr Viniti Vaish

Associate Professor, English Language and Literature (ELL)

National Institute of Education, Nanyang Technological University

Background of Study

The Home School Transition Study was inspired by studies in the United States which found that pre-schoolers from low social economic status (SES) homes did not have access to a linguistically rich environment at home or in school for adequate language development. In addition, this study also seeks to address the lack of information regarding pedagogy and language acquisition in pre-schools.

Methodology and Sample

The Home School Transition Study is a **longitudinal study** that analyses **17 pre-schoolers** (5 Malay, 6 Chinese and 6 Indian) through **three one-hour home observations** and **three one-hour school observations**. A total of 49 hours and 50 hours of video data were collected respectively.

The collection of video data aims to capture children's utterances during typical routines at home without any forms of intervention by the researcher. Coding of data was done to determine the:

1) Student's

- i) Development of vocabulary
- ii) Emerging grammatical and discourse features
- iii) Patterns of translanguaging

2) Parent and teacher talk

- i) Quantity (Amount of talk)
- ii) Quality (Richness of Talk)

Findings from longitudinal study of 17 children through home and school observations:

Legend:

MLU: MEAN LENGTH OF UTTERANCE	MLU is a measure of quantity of language produced and the nature of morphological knowledge that the child has acquired.
LD: LEXICAL DENSITY	LD is a measure of how much vocabulary the children know.
DC: DISCOURSE COMPLEXITY	DC is a measure of grammar at the level of discourse.

Table 1: Points of Evaluation for Study

Based on the data collected on the children:

1. All the children are found to be **English dominant**, and they have **better vocabulary in English** than their Mother Tongue (MT), i.e. they have **higher LD in English**.
2. Even though the children are English dominant, they **do not know more grammar or morphology in English than in their MT**, i.e. their **MLU and DC are not substantially higher in English**.
3. Children are **most expressive and produce the longest utterances when utilising both languages** in a sentence, i.e. their **MLU was the highest for translanguage utterances**.
4. There are **no discernible trends** across the home observations, indicating that the **children are not learning more vocabulary or grammar as they develop**.

Observations on the caregivers:

1. **Active role** by parents in engaging their children in both English and Mother Tongue (MT) leads to children having **higher competencies in vocabulary and grammar** in both English and MT.
2. Parents should **redistribute languages in terms of language use**, so that children are **exposed to rich quantity and quality** of language in both English and their MT.
 - i) Parents can **utilise technology or media** to create a **linguistically rich environment** at home, with a **50-50 distribution** across languages.

TAKEAWAYS FROM FINDING: IMPORTANCE OF PARENTS' ROLE

1. Parents' roles in terms of being involved in their child's learning progress are important in **ensuring a conducive learning environment**
 - i) "When parents are involved, students achieve more, regardless of socioeconomic status, ethnic or racial background, or the parent's education level." (Ma, Shen, Krenn, Hu and Yuan, 2016)

When parents are involved, students achieve more, regardless of socioeconomic status, ethnic or racial background, or the parent's education level.

(Ma, Shen, Krenn, Hu and Yuan, 2016)

It helps children **become sensitised to differences in languages** that possess similar morphological patterns like English and Malay.

Translanguage is a powerful resource of language learning, as it **creates awareness in language and the patterns present.**

It is **beneficial for children to be exposed to as many language learning as possible**, such as in the form of **dual-language books**, while **nurturing the love for reading** as well.

Dual-language books allow children to **make their own observations about the differences between the languages by discerning the different grammatical structures.**

Parents need to be more **comfortable and confident** using their Mother Tongue (MT) at home, so that children can observe and **be motivated** to use it as well.

Children are **very adaptable** and have the **capability to be completely fluent and competent** in more than one language.

Parents and teachers should **encourage and provide the environment** for children to pick up new languages when they are young, especially during their pre-school years.

TAKEAWAYS FROM PANEL DISCUSSION:

National Library Board's Book Recommendations:

1. *Bilingual Project Learning in a Singapore preschool: a guide for parents and educators* by Charmaine Teo
2. *Raising a bilingual child* by Barbara Zurer Pearson
3. *7 Steps to Raising a Bilingual Child* by Naomi Steiner and Susan Hayes

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HOW DO WE IMPROVE THE QUALITY OF TEACHER-CHILD INTERACTIONS IN THE PRE-SCHOOL CLASSROOM?

By Dr Nirmala Karuppiah

HOW DO WE IMPROVE THE QUALITY OF TEACHER-CHILD INTERACTIONS IN THE PRESCHOOL CLASSROOM ?



DR. NIRMALA KARUPPIAH

MEASURE WITH

CLASS:

CLASSROOM ASSESSMENT SCORING SYSTEM

REFLECT ON PEDAGOGY
DEVELOP EXAMPLES & RESOURCES

EMOTIONAL SUPPORT



- * POSITIVE CLIMATE
- * TEACHER SENSITIVITY
- * REGARD for STUDENT'S PERSPECTIVE

CLASSROOM ORGANISATION



- * BEHAVIOUR MANAGEMENT
- * PRODUCTIVITY
- * INSTRUCTIONAL LEARNING FORMATS

INSTRUCTIONAL SUPPORT



- * CONCEPT DEVELOPMENT
- * QUALITY of FEEDBACK
- * LANGUAGE MODELING

DEVELOP A WHY ENVIRONMENT



1. GIVE CHILDREN TIME TO RESPOND
2. ENCOURAGE CHILDREN TO ASK PEERS & TEACHERS QUESTIONS
3. RESPECT & COMMUNICATION

TEACHERS MAKE THE QUALITY of A SCHOOL!

- CONFIDENT → WELL-PREPARED
- KNOWS THEIR CHILDREN → RELAXED & ADAPTABLE

ASK FOR FEEDBACK!



MENDAKI EDUCATION SYMPOSIUM 2020



PRESENTATION 2: How do we improve the quality of teacher-child interactions in the pre-school classroom?



By Dr Nirmala Karuppiah

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Centre for Research in Child Development (CRCDD),

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Teacher-Child Interactions

- i) Teacher-child interactions can be defined as the **social and instructional exchanges** that teachers and children have throughout the day (Pianta & Hamre, 2009).
- ii) These interactions can be measured using the **Classroom Assessment Scoring System (CLASS)**, an observation tool.

CLASS assesses the classroom quality through three domains:

EMOTIONAL SUPPORT (ES)	Supporting children's social and emotional functioning
CLASSROOM ORGANISATION (CO)	Supporting classroom processes related to organisation and management of children's behaviour, time and attention
INSTRUCTIONAL SUPPORT (IS)	Supporting children's cognitive and language development

Table 1: The 3 Domains of CLASS

The three tables below define the different dimensions for each of the three domains stated above:

1. Emotional Support

POSITIVE CLIMATE	Level of emotional connection, respect and enjoyment demonstrated between teachers and students, and among children
NEGATIVE CLIMATE	Level of expressed negativity such as anger, hostility or aggression exhibited by teachers and/or children in the classroom
TEACHER SENSITIVITY	Level of teachers' awareness of and responsibility to children's academic and emotional concerns
REGARDS FOR STUDENT'S PERSPECTIVES	Level of emphasis placed on children's interests, motivations and points of view during teachers' interactions with children and classroom activities, as a form of respect for the children

Table 2: Dimensions of Emotional Support

2. Classroom Organisation

BEHAVIOUR MANAGEMENT	How effectively teachers monitor, prevent and redirect children's behaviour
PRODUCTIVITY	How well the classroom runs with respect to routines and the degree to which teachers organise activities and directions so that maximum time can be spent on learning activities
INSTRUCTIONAL LEARNING FORMATS	Supporting children's cognitive and language development

Table 3: Dimensions of Classroom Organisation

3. Institutional Support

CONCEPT DEVELOPMENT	How teachers use instructional discussion and activities to promote children's higher-order thinking skills in contrast to a focus on rote instruction <ul style="list-style-type: none"> • Go beyond getting the right answer or providing one word answers
QUALITY OF FEEDBACK	How teachers extend children's learning through their responses to children's ideas, comments and work <ul style="list-style-type: none"> • Let children know that their ideas can be expanded
LANGUAGE MODELLING	How teachers facilitate and encourage children's language

Table 4: Dimensions of Institutional Support

What can Teachers do?

- Teachers generally **did well in emotional support (ES) and classroom organisation (CO)**, but **not too well in instructional support (IS)**.
- Thus, teachers would need to review and reflect on their:
 - i) Teaching and learning processes
 - ii) Pedagogy and practice
- This exercise is important to **help teachers know where they performed well and where they did not**. To improve, teachers can:
 - i) Highlight domain on IS
 - ii) Develop teaching resources or exemplars

Teachers should strive to **form positive relationships with the children** and have **quality interaction** by:

- i) **Finding out more** about the child and **setting appropriate expectations and standards**
- ii) **Planning various strategies** to cater to children's diverse needs

01

The **kind of questions** that teachers ask is very important.

- i) Teachers are **encouraged to move away from one-word answers**, and instead **ask 'why' questions**
 - This will promote the child's higher order thinking skills
- ii) It is also crucial for teachers to **give the children some time** to respond to questions

02

As a learning process, children should be encouraged to **pose questions to both their teachers and classmates in class.**

03

TAKEAWAYS FROM PANEL DISCUSSION:

For teachers to develop, they should be encouraged to **have an open mind and be open to feedback.**

04

When faced with **limited time**, teachers can **distribute the questions** by **asking different questions to different children on different days.**

- i) This will help **promote a culture of 'Question and Answer' (Q&A) in the classroom**
- ii) This serves as an avenue for children to **articulate their ideas and encourage them to use longer sentences**, both of which will help in their language development

05

In a big group of students, teachers should plan for **differentiated learning.**

- i) Children can be **broken up into different learning centres** in class, where they will be **given different tasks**
- ii) Teachers can take advantage of this setting by **being mobile and attending to different, smaller groups** at any one time, or **direct their focus to those who may need more attention**

06

National Library Board's Book Recommendations:

1. *The parent backpack for kindergarten through Grade 5: How to support your child's education, end homework meltdowns, and build parent-teacher connections* by Marylisa Nichols
2. *Everyday playfulness: a new approach to children's play and adult responses to it* by Stuart Lester
3. *Play-responsive teaching in early childhood education* by Niklas Pramling

References

Pianta R. C. and Hamre B. K. (2009). Conceptualization, Measurement and Improvement of Classroom Processes: Standardized Observation can Leverage Capacity. *Educational Researcher* 38 (2), 109-119. <https://doi.org/10.3102/0013189X09332374>





HOW DO WE HELP CHILDREN FEEL SAFE AND READY TO LEARN?

By Dr Anne Rifkin-Graboi

HOW DO WE HELP CHILDREN FEEL SAFE & READY TO LEARN?



DR. ANNE RIFKIN-GRABOI



CARVE TIME FOR REST

DEFINE EMOTIONS TOGETHER ENCOURAGE & GET ON THEIR LEVEL EMOTIONALLY READY TO LISTEN

SEPARATION: EASE CHILD INTO NEW ENVIRONMENT

TEAM APPROACH GET KIDS TO HELP!



1. NOTICE
→ VERBAL
→ BEHAVIOURAL
2. INTERPRET SIGNAL/NEED
3. CONTEXT & DEVELOPMENT
4. TIMELY RESPONSE

CREATING SCAFFOLDING & COMFORT DURING FORMATIVE YEARS IS CRUCIAL.

DEVELOPMENT: YOU CAN SWITCH TRACKS, BUT HARDER TO DO SO THE FARTHER YOU GO.



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PRESENTATION 3: How do we help children feel safe and ready to learn?

By Dr Anne Rifkin-Graboi

Head, Infancy and Early Childhood Research

Centre for Research in Child Development (CRCD),

National Institute of Education, Nanyang Technological University

Parents serve as a “**secure base**” to children when they respond to children’s needs for both safety and exploration, and a parent’s behaviour **helps facilitate positive school experiences**. These positive experiences include **improved teacher-child and peer relationships, increased child executive functioning abilities, and fewer child problematic behaviours**.

How can caregivers encourage safe and healthy development?

-  1) Caregivers need to look out for signals, both big and small, by being fully present.
-  2) Caregivers need to interpret these signals.
 - It could be a signal for comfort, signal for play, signal for autonomy or signal for support.
-  3) In order to determine the child’s needs, the caregiver would have to evaluate the context and be aware of the child’s developmental stage.
-  4) After doing so, it is important to provide a timely response to the child, as a child perceives time differently and a lack of immediate response may cause distress.

Why the need for responsive and sensitive caregiving?

- i) It helps a child **explore new ideas and situations**, and **promote their brain development**.
- ii) The child is able to **focus on learning** when caregivers are there for them to provide safety and comfort.
- iii) If caregivers **are not consistent in providing comfort**, the child will be more focused on the caregivers themselves. Thus, the child **will not be able to take full advantage of the new experiences** around them.
- iv) If a child **experiences more rejection than comfort**, their **learning experiences will not be as complete and fulfilling**.
- v) However, **not all children are equally sensitive to the environment**.

The relationship between a child’s caregiving experience and their attachment security:

Based on a procedure called “The Strange Situation” by Mary Ainsworth in the 1970s, a child’s caregiving experience would influence their attachment security. From the findings of the procedure, **different types of caregiving experience relate to different types of reunion behaviour**, as shown below.

REGULAR EXPOSURE TO CAREGIVING THAT IS...	UPON REUNION WITH THE CAREGIVER IN QUESTION...	REUNION BEHAVIOUR REFERRED TO AS
SENSITIVE & RESPONSIVE	Seeks comfort, is comforted, returns to full exploration	Secure Attachment
INCONSISTENT	Seeks comfort but does not fully allow comfort, continues to focus on caregiver rather than exploration	Resistant / Ambivalent Attachment
REJECTING	Does not seek comfort, does not fully explore	Avoidant Attachment
FRIGHTENING	Exhibits odd conflict behaviour and/or notably dazed behaviour	Disorganised/ Disoriented Attachment

Table 1: Relationship between a child’s caregiving experience and their reunion behaviour

TAKEAWAYS FROM PANEL DISCUSSION:

Routine is important in both household and school settings.

- i) Helps keep things **predictable** and **ease everyone into the day**.

01

Avoid thinking about how you may have limited a child's growth, but rather **how important you are to their growth**.

02

An emotionally safe environment is an environment where a **child's views are heard and not dismissed**.

- i) Create a non-judgemental place, where responses **come from a place of empathy**.
- ii) It is beneficial to **help the child label their emotions**, as the **emotional vocabulary will be useful** in the future for the child to communicate them better.

03

Individualised care and concern is a huge advantage for any child.

- i) Behaviour is **unlikely to be the result of one specific factor** – people are individuals with their **own set of strengths, weaknesses and challenges**.
- ii) Thus, we have to **learn and understand a child's context**.

04

While positive engagement is important, caregivers will still need to help their child **differentiate right from wrong**.

- Caregivers can **explore a particular request** and adopt an **explanatory way of engagement** instead.
 - i) For instance, ask questions like, "I'm curious to know why you mentioned that," or "Where did you hear this from?"
 - ii) **Guide the child** to think through the rationale and reasons.
 - iii) **Utilise simple words** and **be aware of the tone used** when addressing these requests.

05

It is **natural for children to feel some anxiety in new settings**.

- i) Teachers need to come on board to **help ease the transition at the start of the day** by **implementing a routine**, to **help the child feel more comfortable** being in the school premises.
- ii) Caregivers can also **read stories about school** to the child to **convey a positive message** that school is a place where they can meet more friends.
- iii) Caregivers can **visit the school on a weekend** with the child to **'desensitise' them** and ensure them that school is not a place to worry about.

06

National Library Board's Book Recommendations:

1. *Coaching Parents of Vulnerable Infants* by Mary Dozier & Kristin Bernard
2. *Aroha's Way* by Craig Phillips
3. *Infants, Toddlers, and Caregivers: a curriculum of respectful, responsive, relationship-based care and education* by Janet Gonzalez-Mena

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Annex A: Dr Rifkin-Graboi's Caregiving Tips

As caregivers.... Let's understand that....

01

Even babies and young children want to learn



- i) Children learn by doing
- ii) Children learn by making "mistakes"
- iii) The "race" can be more important than the "finish line"
 - Children enjoy and learn by being involved in the process, the outcome might not matter as much

02

The world is new



- i) Don't always have knowledge of how things work
- ii) Don't always remember "simple" associations or rules
 - Children may not understand rules transfer from one context to another
 - Set clear expectations and reminders
 - Reinforce positive behaviour

03

Memory continues to develop into teenage years



- i) Not just being stubborn, without memory hard to plan, obey, and predict the future

04

Life is exciting!



- i) Need help with their emotions
- ii) Areas supporting perspective taking, planning, attention shifting and regulating continue to develop into early adulthood

05

Be "Proactive not Reactive"



- i) Better to be "proactive" in preventing a situation that would cause misbehaviour, rather than "reactively" thinking of means to resolve the solution
- ii) Ways to be proactive include making time for play and feelings of closeness, anticipating triggering situations (e.g., hunger or sleepiness)

06

Emotion is important and you have a big role in its development!



- i) Remind children of future opportunities for joy
- ii) Help them understand others' feelings
- iii) Promote eye contact

07



Children value your opinions

- i) Share in joy, work (like clean-up), relationships

08



You cannot praise a young child too much

- i) Regardless of age, you cannot praise effort too much
- ii) Praise the “process” not the “outcome”

09



Their “job” is to become independent

- i) Not being ‘naughty’ if they want to do things on their own
- ii) Pick your battles and try to be consistent
- iii) Understand children perceive time differently-things can feel like they take FOREVER
- iv) Recognise accomplishments

10



You are very important

- i) Children need caregivers even if they say they do not
- ii) Activities like playing and snuggling are fun and
 - Let children know you are there for them
 - Allow children to be more ready to listen/work at other times

11



Short Time Outs are Okay - Removal of Love is Not

- i) One minute per year is a guideline
- ii) Help children understand this is a time to calm down and that they are still loved
- iii) It’s always good for children to know you love them

12



All Children are Unique

- i) It’s important to consider general child development, but it’s also important to understand children develop at individual rates
- ii) Children react differently at different times





HOW DO WE HELP CHILDREN DEVELOP SELF- CONTROL SKILLS?

By Dr Ng Ee Lynn

HOW DO WE HELP CHILDREN DEVELOP SELF-CONTROL SKILLS?



DR. NG EE LYNN

SELF-CONTROL (EXECUTIVE FUNCTIONING) SKILLS

* LIKE THE CONTROL TOWER AT THE AIRPORT!



REGULATE FLOW OF INFORMATION

PAY ATTENTION

PLAN AHEAD

REMEMBER & FOLLOW RULES

DEVELOPMENT OF SELF-CONTROL SKILLS

* BEGINS AT INFANCY

* RAPID GROWTH FROM AGES 2 TO 6

* MALLEABLE & INFLUENCED BY POSITIVE & NEGATIVE EXPERIENCES

WORKING MEMORY

- KEEPING INFORMATION IN MIND & MANIPULATING IT IN SOME WAY

COGNITIVE FLEXIBILITY

- THINKING ABOUT SOMETHING IN MULTIPLE WAYS
- SHIFTING ATTENTION IN RESPONSE TO DIFFERENT DEMANDS

INHIBITORY CONTROL

- INTENTIONALLY SUPPRESSING ATTENTION & SUBSEQUENT RESPONDING TO SOMETHING



TIPS FOR ADULTS

* PROVIDE STRONG & SUPPORTIVE RELATIONSHIPS

- HELPS CHILDREN FEEL SAFE
- BUFFERS EFFECTS OF STRESSORS EG. POVERTY, ADVERSITY

CHILDREN WHO FEEL SAFE ARE MORE LIKELY TO EXPLORE!

SELF-CONTROL SKILLS HELP CHILDREN:



BE READY TO LEARN

INTERACT WITH FRIENDS

COPE WITH CHANGES

* ALLOW THEM TO PRACTISE AUTONOMY

- CREATE ROUTINES SO THEY KNOW WHAT TO EXPECT
- EG. PACK SCHOOLBAG, CLEAR THE TABLE AFTER MEALS

* USE PLAY TO PRACTISE SELF-CONTROL SKILLS!

- SIMON SAYS
- FREEZE DANCE
- WHAT TIME IS IT, MR WOLF?



EACH CHILD DEVELOPS AT THEIR OWN PACE!



MENDAKI EDUCATION SYMPOSIUM 2020





PRESENTATION 4:

How do we help children develop self-control skills?

By Dr Ng Ee Lynn

Research Scientist

National Institute of Education, Nanyang Technological University

During childhood years, the abilities to control one’s thoughts, emotions, actions, and attention undergo rapid development, all of which are **critical contributors to a child’s school readiness**.

What are self-control skills?

Skills	Definition	Examples
WORKING MEMORY	Keeping information in mind and manipulating it in some way.	Reading a story: Being able to combine different pieces of information into a coherent whole.
COGNITIVE FLEXIBILITY	Thinking about something in multiple ways , shifting attention in response to different demands.	Interacting with others: Being able to consider someone else’s perspectives and ideas.
INHIBITORY CONTROL	Intentionally suppressing attention and subsequently responding to something.	Learning math: Being able to overcome well-learned rules, like adding whole numbers to learn how to add fractions.

Table 1: Types of self-control skills and examples

How do children demonstrate self-control skills in different settings?

IN THE CLASSROOM:

1. **Ignore distracting thoughts and noises** during lessons
2. **Remember and follow** multi-step instructions
3. **Set goals** and come up with a plan to achieve those goals
4. **Manage frustration** during a challenging task
5. **Work cooperatively with peers** during a group activity



DURING PLAY OR AT HOME:

1. **Accept friend's ideas** when playing together
2. **Manage conflicts and disagreements** between friends
3. **Manage feelings of anger and disappointment** after losing



Self-control skills help children adjust to new environments

- i) Children with strong self-control skills are **better equipped to adjust to new environments** and **navigate the challenges**.
- ii) Children will also be **better equipped to cope with negative emotions such as frustration**.
- iii) Learning is a very **social experience** in Primary school, so children who are able to develop strong social relationships are in a **better position** and are **more ready to learn** from their teachers and friends.

Development of self-control skills

- i) Self-control skills **begin to develop at infancy**, and continue to develop throughout adolescence and early adulthood.
- ii) These skills **undergo rapid growth during early childhood**, from **ages 2 to 6**.
- iii) Self-control skills are **malleable** and are **influenced by both positive and negative experiences**. Thus, one's self-control skills can either improve, or get worse with time.

Positive Experiences	Negative Experiences
Supportive caregiving	Stress
High quality early education	Poverty
Practice and modelling opportunities	Adversity

Table 2: Examples of positive and negative experiences



What have we learned about pre-schoolers' self-control skills?

- i) Children's self-control skills were assessed using a variety of games at entry to Kindergarten 1 (K1) and entry to Primary 1.
- ii) Children **showed significant growth** in their self-control skills from K1 to P1.
- iii) Children's **self-control skills** at entry to K1 are **associated with their math skills** at P1.

Tips to help children develop and practise self-control skills

At any developmental age, children have different levels of self-control skills and are likely to develop their skills at different times from their peers.

1. Strong and supportive relationships with parents and teachers are important foundations.
 - i) Such relationships **help children to feel safe** and, in extension, **buffer the effects of stress** and **encourage the children to explore and develop their self-control skills**.
 - ii) Creating a **routine** and **setting clear and consistent rules at home and in school** would allow children to practise autonomy.
2. Provide opportunities to practise self-control skills during play by:
 - i) Allowing them to **make choices and decisions**
 - ii) Learning to **negotiate with friends** and **managing conflicts**
 - iii) **Directing their own play** with decreasing supervision over time

At any developmental age, children have different levels of self-control skills and are likely to develop their skills at different times from their peers.

National Library Board's Book Recommendations:

1. *How to be a superhero called self-control* by Lauren Brukner
2. *Want More: How to Know When I've Had Enough* by Dagmar Geisler

The foundation of self-control is trust. Adults who are responsive to children's needs foster that trust, and children will be able to learn self-control naturally.

TAKEAWAYS FROM PANEL DISCUSSION:

Games like Simon Says and What Time Is It, Mr Wolf? help children practise their self-control skills, as these games require them to listen to instructions to know what to do next.

- i) Beneficial for children **to take on different roles** during these games.
- ii) They could be appointed as the **game leader** after the teacher has modelled the role to them.

01

Every child develops their self-control skills at a different rate, and this can lead to:

- i) **Varying kinds of support** needed
- ii) **Differing strengths and weaknesses**

With these differences, teachers and parents should avoid focusing on the product, and they should shift that focus to the process instead.

- i) An example of focusing on the product is when a teacher or parent set a goal for their children to have good self-control skills by a particular age.
- ii) Instead, it is important for children to be given more opportunities to practise being in self-control.

04

School leaders and educators play important roles in supporting and responding positively to a child who may display lack of self-control in the classroom. To do so, school leaders and educators are encouraged to:

- i) **Study the environment:**
 - Is the environment **safe and conducive**?
 - Does the child feel **empowered**?
- ii) **Assess an educator's readiness and efforts on:**
 - Their **understanding** of the child
 - Their **intervention plan**
 - **Flexibility** in making adjustments to the initial plan

02

Rules and routine from a very young age is important.

03

When a child is frustrated, an adult should:

- i) Convey to the child that **expressing feelings are okay**, so that they are **allowed a proper outlet to express emotions**.
- ii) **Model and slowly guide** the child to try different ways of expressing their emotions in a **proper, more constructive manner**.
- iii) **Consistently** put in the work and model to the child.

05



Examples of methods that can be implemented to impart better self-control skills in the children in school and at home include:

In School:

- i) Teachers can provide children with more **leadership roles** like **setting up the table for snack time**, or **leading their group to clean up after eating**.
 - This will take time, as it requires the teachers to **observe and understand the children before scaffolding accordingly**.
 - **This will help create more opportunities for children to engage in more autonomous behaviour.**

At Home:

- i) Parents can give their child things to **be responsible for**, like **packing their bags for school**.
- ii) Parents can also **utilise technology** and teach their child to take their own photos and edit their own simple videos using the phone or tablet.
- iii) Parents have to **trust their child to learn these skills**, and provide their child with opportunities for practice after having modelled these skills to them.

The foundation of self-control is trust. Adults who are responsive to children's needs foster that trust, and children will be able to learn self-control naturally.

HOW CAN NEUROSCIENCE INFORM EDUCATION AND LEARNING?



DR. AISHAH ABDUL RAHMAN



NEUROSCIENCE
IS THE STUDY OF THE NERVOUS SYSTEM
→ WHICH THE BRAIN IS A PART OF!



THE BRAIN DEVELOPS MOST RAPIDLY IN THE FIRST 2 YEARS OF LIFE & CHANGES CONTINUALLY THROUGHOUT OUR LIFE



EXPERIENCES

PLAY SIGNIFICANT ROLE IN SHAPING BRAIN DEVELOPMENT



WHAT CHILDREN SEE AND HEAR

SOCIAL AND EMOTIONAL EXPERIENCES

PHYSICAL ACTIVITY

BOOSTS BRAIN FUNCTIONING!

- * CREATES NEW BRAIN CELLS
- * IMPROVES FUNCTIONS & CONNECTIONS WITHIN EXISTING CELLS
- * RELEASES CHEMICAL THAT
 - REPAIRS BRAIN CELLS
 - ENHANCES CELL SIGNALLING
 - IMPROVES MOOD



SLEEP

* A LOT OF GROWTH & DEVELOPMENT OCCUR DURING SLEEP!

* BEDTIME ROUTINES CAN HELP REGULATE INTERNAL BODY CLOCK



QUALITY CARE IS IMPORTANT

→ TIMELY & EFFECTIVE INTERVENTION CAN HELP MITIGATE ADVERSE EFFECTS

MENDAKI EDUCATION SYMPOSIUM 2020





HOW CAN NEUROSCIENCE INFORM EDUCATION AND LEARNING?

By Dr Aishah Abdul Rahman

PRESENTATION 5:

How can neuroscience inform education and learning?

By Dr Aishah Abdul Rahman

Research Scientist

National Institute of Education, Nanyang Technological University

Brain Development in Early Childhood

- i) The brain develops most rapidly in the **first two years of life**. By the time a child is two years old, their brain has reached **about 80%** the volume of an adult brain.
- ii) Early childhood is a **period where executive functioning skills that control thoughts and behaviours are developing rapidly**.
- iii) Brain does not develop in a vacuum, thus **early experiences are critical for healthy brain development**.
 - What children see and hear shape the brain development.
- iv) **Quality care** is important in brain development.
 - **Immediate or quick response** in **removing young children from adverse conditions** and transferring them to **enriching environments** will help to promote quality brain development.

How can we help children develop Executive Functioning (EF)?



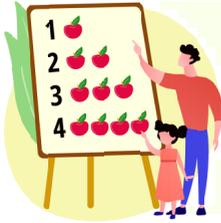
1. Adult guidance

- Adults need to **model good EF behaviour**
- **Setting routines** such as having regular mealtimes or bedtimes can **help children anticipate and prepare** for certain activities



2. Practice

- Through **play or games**
- Play is a good opportunity for children to practise their EF skills, such as when they are taking turns, or taking the role of someone else during pretend play



3. Reducing Stress

- Stressful environments are not conducive for learning
- Prolonged stress can affect the frontal brain regions that are key for EF

“Nothing fires the brain like play”

The Importance of Sleep for Brain Development and Functioning

- The brain is active during sleep as **connectivity between brain regions increases** then.
 - During this time, the brain replays activities that occur during the day when we sleep, and this is a process that is **crucial for learning and stabilisation of memories**.
- Inconsistent bedtime** in 3-year-olds is associated with **poor cognitive outcomes** in primary school.
- Sleep duration is associated with brain volume in children and adolescents.

How much sleep do children need?

Age	Sleep Duration (hours)
Newborn (0 – 3 months)	14 – 17
Infant (4 – 11 months)	12 – 15
Toddler (1 – 2 years)	11 – 14
Pre-School (3 – 5 years)	10 – 13
School age (6 – 13 years)	9 – 11
Teen (14 – 17 years)	8 – 10

Table 1: Recommended sleep duration according to age groups

What can Parents do to help children sleep?



- Set regular bedtime and routines** as these can **help signal and regulate the child’s internal body clock** and help them prepare for bed.
 - Routines include brushing of teeth and reading a bedtime story
- Avoid screen time 2 hours before bedtime.



3. Provide a conducive environment for sleep.
 - i) Minimal noise
 - ii) Optimal temperature and light
 - iii) Minimal stress

The Importance of Physical Activity for Brain Functioning/ Development



1. Creates new brain cells.
2. Improves functions and connections within existing cells.
3. Releases chemical that repairs brain cells, enhances cell signalling and improves mood.

Age Group	Timing	Examples
Infants	At least 30 minutes	Sitting up Tummy time Rolling over Crawling Standing
1 – 2 year olds	At least 180 minutes	Walking Chasing Jumping Running Dancing
3 – 5 year olds	At least 180 minutes, with minimum 60 minutes of moderate to vigorous activity	Cycling Swimming School PE Lessons
Above 5 year olds	60 – 90 minutes of moderate to vigorous activity	

Table 2: Guidelines from World Health Organisation, 2019

It is important to identify children with low EF skills, not with the intention of labelling or stigmatising them, but to teach and empower them ”



TAKEAWAYS FROM PANEL DISCUSSION:

An example of an Executive Functioning (EF) skill is **cognitive flexibility**.

- i) This skill **influences how adaptable a child is** and their **resilience** to bounce back despite the limitations.
- ii) Play is a good platform to develop this skill, as “Nothing fires the brain like play”.

01

Parent’s interactions with the child are crucial.

- i) Parents should not be merely giving their child top-down instructions.
- ii) Instead, parents should **give their child time and space to voice out their opinions and ideas**, and try them out where possible.
- iii) Parents should **ask open-ended questions** to their child, instead of a mere yes-or-no question.

03

An **enriching environment** is very important for a child’s healthy development.

- i) Environment is a teacher in itself, as **children observe and imitate what they see and hear** around them.
- ii) The microsystem of the child, or their immediate environment, will affect the child the most.
- iii) An enriching environment includes having **many different activities**, providing **sufficient care and guidance** to the child, and ensuring that the child is **not subjected to adverse circumstances**.

02

Tips for parents at home during this pandemic and beyond:

- i) **Set aside sufficient time** for the child and carry out different activities together.
- ii) Model good EF practices.
- iii) **Set routines** as it may be difficult for the child to differentiate timings at home for different activities like study time, snack time or nap time.
- iv) Having **structured timings for different activities** can help children expect different behaviours at different times.
- v) **Tap on the natural inclination of the child to play**, and parents should utilise this as a platform to **practise EF skills**.

04

The possibility of EF skills improving is largely dependent on:

i) The reasons for the lack of development of such skills

- If the main reason is due to the **lack of opportunities to practise certain skills**, children **can improve on these skills when they are given more opportunities** to work on them.
- If the reason is due to **chemical imbalances**, methods that work for typically developing children may not necessarily work for children with such chemical imbalances.

ii) It is important to identify children with low EF skills, not with the intention of labelling or stigmatising them, but to teach and empower them.

05

National Library Board's Book Recommendations:

1. *Thirty million words: Building a child's brain: tune in, talk more, take turns* by Dana Sunskind
2. *Hot Skills: Developing Higher-Order Thinking in Young Learners* by Steffan Saifer

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