

Twelfth Family Research Network Forum:

"Understanding the Early Years in Childhood — A Singapore Perspective"

15 July 2014

Mochtar Riady Auditorium, SMU

Organised by the Institute of Policy Studies and supported by the Early Childhood Development Agency (ECDA), presentations at the 12th Family Research Network (FRN) Forum examined the findings of recent research undertaken on the development of children in their early years. The speakers shared information and ideas that were especially applicable to policymakers, practitioners and stakeholders from the early childhood sectors, which are implicitly or explicitly involved in the shaping and developing of early childhood policies and programmes. Early childhood development is a key issue on the family agenda and topic of interest, given the setting up of ECDA in 2013 which resulted in the subsequent channelling of substantial resources and support to the establishment of a network of childcare centres and kindergartens across Singapore.

The forum began with opening remarks by Dr Jane Ching-Kwan, Chief Executive Officer and Principal, KLC International, and Chair of the Professional and Leadership Development sub-committee of the Child Development Network, ECDA. She highlighted the importance of a child's early years, as it influences their consequent behaviours, shapes the brain, constructs the foundation for life-long learning and nurtures the capacity to learn and form meaningful relationships with others. She noted that the sharing by the four speakers on their research projects would help to raise public awareness and contribute ideas and expertise that could correctly build the foundation for a child's early years.

Presentation 1: "Pre-School Teachers' and Parents' Beliefs and Knowledge with Regard to Early Childhood Temperament" by Dr Kang Ying Qi, Registrar at the Khoo Teck Puat-National University Hospital's Children's Medical Institute

With little existing temperament research conducted in Singapore's context, the study was significant in its cultural specificity and its establishment of the relationships between temperament, a child's outcomes, classroom outcomes, and parental impact. For example, research has demonstrated a positive relationship between a child's temperament and his or her general intelligence and actual education achievement. Moreover, providing teachers and parents access to knowledge and a better understanding of a child's temperament would also positively influence their perceptions, enabling them to adapt teaching methods and build a better relationship with the child. Since findings revealed that teachers report inadequate training in temperament, there is a need to evaluate teachers' needs regarding childhood temperament and its management within training as well as "equip parents and teachers with different skill sets to deal with differing childhood temperaments." Such measures could prevent premature conclusions and assumptions about a child's behaviour. Interestingly, the study also rectified the commonly held misconception that temperament is influenced by gender and that it can be controlled by discipline and the environment. While there were a few limitations to the

study, e.g., the exclusion of the population that did not attend pre-school, it is assumed that non-attendeers are comparatively small. Overall, the findings are noteworthy in inspiring further temperament research that could improve early childhood education.

Presentation 2: “Childcare Staff’s and Parents’ Perception of Quality Care for Infants” by Dr Nirmala Karuppiah, Lecturer, Early Childhood & Special Needs Education, National Institute of Education

Pointing out the “mushrooming” of infant and toddler care centres across the island, Dr Karuppiah highlighted that the study was an essential start to understanding the quality of care provided at these centres. Funded by the Ministry of Social & Family Development’s (MSF) Family Research Fund, the study involved interviewing supervisors, edu-carers and parents regarding their beliefs, practices and professional training for quality infant and toddler care. It is interesting to note that when asked about their perspectives on the importance of “care” and “education” for infants and toddlers, there was divided opinion as to which had primacy even as some expressed that both went hand-in-hand. Furthermore, the study concluded that individuals who received higher education were relatively more sophisticated, because of their exposure to multiple theoretical perspectives. This included an ability to conceptualise knowledge and knowing as fluid and evolving. Hence, the study concluded that formal education — in terms of formal qualifications and professional training in early childhood education — is the best predictor of quality care. This finding implies that attention should be given to effective and professional training of childcare staff, where staff should be viewed as a researcher and educator rather than a substitute mother. A study carried out in Queensland, Australia corroborated the aforementioned research findings, thereby underscoring the need for continuous thinking and reflection, receptiveness to multiple perspectives and a knowledge base for the good practice of quality care.

Presentation 3a: “On the Improvement of Executive Function in Pre-Schoolers” by Associate Professor (A/P) Kerry Lee, Programme Head, Educational & Cognitive Development Lab, National Institute of Education

Executive function (EF) is defined as the process “required for the goal-directed regulation and conscious control of thought, emotion and action”. A/P Lee noted that the significance of the early development of EF lies in its established positive connection to school readiness, academic performance, a lack of behavioural problems, and good mental health during the later years. As such, his team felt that there is a pressing need to develop a relatively low-cost intervention programme to promote the development of EF. This could be designed in the form of a more affordable game (relative to CogMed¹). He was optimistic about such a prospect because past research has demonstrated the possibility for EF to be improved during preschool

¹ Cogmed Working Memory Training is a computer-based solution for attention problems caused by poor working memory. See www.cogmed.com.

years via the constant practice of a component of EF, such as working memory or attention control. While the study's results indicated that there were improvements to working memory, this advantage was not transferred to academic tasks. Thus, the questions that followed were: How are children with a newfound memory capacity applying it to everyday tasks? Is there a need to teach children how to use their newfound memory?

Presentation 3b: “A Problem-solving Approach to Improve Executive Function in Preschoolers” by Tony Lim, Master’s candidate, Nanyang Technological University

Mr Lim reiterated the importance and the possibility of promoting the early development of EF in pre-schoolers. The study, which involved guiding pre-schoolers through different scenarios, aimed to improve pre-schoolers' working memory, inhibition, cognitive flexibility, problem-solving skills and ability to shift between tasks more effectively. The results revealed that cognitive flexibility was enhanced in the post-test, indicating that programmes can be designed to improve EF. Together with previous findings, this study showed that further research could be dedicated to create low-cost intervention programmes for EF. Also, integrating group-based training programmes — purportedly designed to stimulate the early development of EF — into curricular and extra-curricular activities at pre-schools can be explored. In this aspect, early childcare providers can play a vital role in “helping pre-schoolers develop EF, self-regulation and problem-solving abilities through daily activities.”

Question-and-Answer, moderated by Dr Jane Ching Kwan (Chief Executive Officer and Principal, KLC International, and Chair of the Professional and Leadership Development sub-committee of the Child Development Network, ECDA)

The first question was posed to Dr Kang, who asked what we should equip teachers with and if temperament should be taught at various centres. Dr Kang responded that there is currently a temperament-related module being taught, which has been well-received by teachers. She suggested that given the opportunity to build temperament-related content into the curriculum training for teachers, it would be useful in helping them see the children differently, i.e., in a more positive light. For example, while there are particular overactive children who may not be suitable for traditional forms of assessment, the temperament approach might be more appropriate. At the clinic, parents could be taught ways to deal with their children so that subsequent parent-child interaction can proceed in a more positive direction. When asked if there were a possibility that students could be grouped based on their temperament, Dr Kang responded that this is not recommended as the learning process often “comes from being with children who are different from you”. Dr Karupiah also added that children might get fixated with the label and a self-fulfilling prophecy would follow; she explained that children in the early years develop at a different pace and grouping might only be possible if one were very careful and cautious in doing so.

With regard to A/P Lee's findings on EF, a question was raised as to why improvements in EF did not translate to actual academic results. In response, A/P Lee expressed that the literature demonstrates a significant relation between working memory and math-related subjects. However, he recognised that an improvement in children's EF capacity does not necessarily

equate to the attainment of good results. This is because the student may still need to learn new math material and improvements are not immediate. Despite this, he acknowledged that his follow-up studies did not yield any positive results; similarly, students' utilisation of CogMed showed a significant improvement in results in the immediate phase but their performance reverted to that of the control group six months later. Hence, it was suggested that more studies needed to be conducted.

A question that was posed to Dr Karuppiah was whether there is ample time and opportunities for early childhood educators to come together to discuss issues ranging from curriculum to best practices. Drawing a comparison between pre-school and the Ministry of Education's (MOE) mainstream schools, the forum participant who was a former teacher conveyed that MOE mainstream schools often allotted time for teachers to collectively reflect and brainstorm on issues. In contrast, the pre-school system often perceives the care component as more important, thereby leaving little space for collective deliberation on issues related to teaching and learning. She suggested the possibility of institutionalising such practices so that pre-schools can constantly improve in all aspects (such as curriculum, care processes, etc). Dr Karuppiah agreed that such a proposition is ideal, and highlighted the importance of coming together to construct knowledge and discuss problems faced, henceforth cultivating a culture of brainstorming and sharing in order to best find solutions. However, a potential problem to be considered is that some centres are understaffed and the many demands by various stakeholders mean that childcare teachers often lack the time to stop and reflect.

Another question directed at Dr Karuppiah was how one could ensure the implementation of ideas and skills being taught to the teachers, i.e., the "service delivery". Dr Karuppiah noted that for teachings to be translated into practice, one needed to go beyond increasing the qualifications of teachers, and instead emphasise continuous learning. For instance, there could be coaching and mentoring programmes, and other efforts to cultivate a nurturing environment to "put all the things you have learnt together".

While it was generally agreed that parents are the main caregivers of young children, some also put forth the idea that in reality a considerable proportion of children whose parents are working lacked parental involvement. A member of the audience articulated that there is hence a need to consider other caregivers such as grandparents who play or could play quite a significant role in the caring of young children. The audience member proposed that there could be some form of help provided to aid grandparents with childcare. For those who do not have grandparents, domestic caregivers could be an alternative, although the full implications of this on quality care remains debatable. Dr Karuppiah further expressed that centres need to continue looking for creative ways to improve the community and involve parents, especially those who are busy.