

Jun Ho Chai

CURRICULUM VITAE

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Education

2016 - 2021 (graduated 27 Feb 2022)	PhD in Psychology Thesis Title: Developing very short computerised early vocabulary assessments in a multilingual setting for the Malay, Mandarin and English language. Funded by the Ministry of Science, Technology and Innovation (MOSTI).	University of Nottingham Malaysia
2013 - 2016 (graduated 23 July 2016)	BSc (Hons) Psychology Final Year Project: Role of memory constraint in emergence of language structure, a simulation study.	University of Nottingham Malaysia
2012	South Australian Certificate of Education (SACE) - ATAR: 85.75	Taylor's College, Malaysia

Research Experience

June 2023 - present	Postdoctoral Researcher (Research Assistant Professor) Research activities about learning mechanism of early language development, with a focus on: <ul style="list-style-type: none">- eye-tracking studies- naturalistic recordings- corpus analysis Leadership activities: <ul style="list-style-type: none">- Supervising research assistants in data preparation and coding.- Modular teaching: AFFECTIVE CODING FOR HUMAN MEDIA (45548-10) including R for data analysis	Chosun University, South Korea
June 2022 - May 2023	Postdoctoral Researcher - Linked mother-child interaction patterns to early language development	Chosun University, South Korea

	<ul style="list-style-type: none"> - Conducted corpus analyses with transcribed mother-child interaction. - Investigated eye-tracking measures to assess early vocabulary - Researched early language development using LENA, IPLP and multimodal data 	
October 2021 - May 2022	Visiting Researcher (remotely) <ul style="list-style-type: none"> - Conducting research on early language development using LENA recordings - Preparing manuscripts for research work 	Chosun University, South Korea
June 2021 - July 2021	Research Associate <ul style="list-style-type: none"> - Conducted Exploratory Factor Analysis and interpreted results from the UNM Equality, Diversity and Inclusion Survey 	University of Nottingham Malaysia
February - March 2021	Associate Software Developer (Part Time - Remote) <ul style="list-style-type: none"> - Implemented computerised adaptive testing on a Django platform containerized with Docker - Developed automated scripts to prepare data files for language-specific vocabulary assessments 	University of Oslo, Norway
2017 - 2021	Postgraduate Researcher <ul style="list-style-type: none"> - Developed a Bayesian IRT-based computerised adaptive testing system for brief tablet-based language assessments in children under 3 - Analysed vocabulary and response data using generalised linear mixed-effects models 	University of Nottingham Malaysia

Teaching Experience

Fall 2023	Lecturer (Part Time) Affective Coding for Human Media (45548-10) including R for data analysis (College of Global Humanities)	Chosun University, South Korea
September - December 2020	Lecturer (Part Time) <ul style="list-style-type: none"> - Facilitator and lecturer for 10 weekly lectures of Research Methods & Analysis (previously Statistical Methods 2). 	University of Nottingham Malaysia

Invited talks/workshops

25 June 2024	Investigating the Convergence of Child Language Assessment Measures with 14-month-old Korean Infants - Chosun Center for Data Science in Humanities (조선대 인문데이터과학연구소) Annual Workshop	Chosun University, South Korea
25 June 2024	Accessing and analyzing Peekbank's eye-tracking datasets - Chosun Center for Data Science in Humanities (조선대 인문데이터과학연구소) Annual Workshop	Chosun University, South Korea
24 June 2024	R workshop based on behavioural data - Chosun Center for Data Science in Humanities (조선대 인문데이터과학연구소) Annual Workshop	Chosun University, South Korea
30 January 2024	Refining Infant Word Recognition Analysis through Optimised Gaze Feature Selection based on Random Forest	Chosun University, South Korea
25 January 2024	Going beyond reporting of main effects (영어로 진행) [2023 실험음성학연구회 동계워크숍]	Hankuk University of Foreign Studies
27 - 29 December 2022	Basic and intermediate statistics using R	Chosun University, South Korea
7 & 29 April 2020	Introduction to doing statistics in R	University of Nottingham Malaysia
5 December 2019	Research Workshop - Analysing Quantitative Surveys	University of Nottingham Malaysia

Publications

Manuscripts under review or in prep

- Chai, J. H., Jung, J., & Ko, E-S. Bidirectional patterns of agentivity in dyadic interactions and the importance of adults' initiative role in children's language development.
<https://osf.io/preprints/psyarxiv/ks4xq>
- Jung, J., Chai, J. H. & Ko, E-S. The Interplay of Family Socioeconomic Status, Parental Engagement, and Maternal Employment on Vocabulary Development in Korean Children. <https://osf.io/preprints/psyarxiv/depvx>
- Ko, E.-S., Jo, J., & Chai, J. H. Word-order adaptation and lexical repetition in Korean child-directed speech: Implications for infants' learning nouns in a verb-dominant language. <https://osf.io/preprints/psyarxiv/dxbhm>
- Chai, J. H., Mun, S., & Ko, E-S. Word Segmentation: Dissecting the Interplay between Statistical Properties and Register Advantages in Naturalistic Corpus.
https://docs.google.com/presentation/d/1N60utxjGdj5AG-nhtQQOzUviKr2ksD_BAewaH0kNFoY/
- Chai, J. H., Mun, S., & Ko, E-S. Input features mediate word segmentation efficacy, peaking at 14 months: A computational modelling study.
https://docs.google.com/presentation/d/1N60utxjGdj5AG-nhtQQOzUviKr2ksD_BAewaH0kNFoY/
- Chai, J. H., McDonald, M., & Ko, E.-S. Investigating the convergent validity of child language assessment measures: A Korean study. <https://osf.io/preprints/psyarxiv/5q24v>
- Chai, J.H., Kim M., Shim M., Lee Y., Ko, E.-S. Refining Infant Word Recognition Analysis through Optimised Gaze Feature Selection based on Random Forest.
<https://docs.google.com/presentation/d/1evKGybzXWLiboKZYkzGsyYXUU6CeFaxGhyQjzLY6hCo/>

Journal Articles

- Chai, J. H., Low, H. M., Wong, T. P., Onnis, L., & Mayor, J. (2021). Extra-linguistic modulation of the English noun-bias: Evidence from Malaysian bilingual infants and toddlers. *Journal of Cultural Cognitive Science*, 5, 49–64.
<https://link.springer.com/article/10.1007/s41809-021-00078-5>
- Lo, C. H., Rosslund, A., Chai, J. H., Mayor, J., & Kartushina, N. (2021). Tablet assessment of word comprehension reveals coarse word representations in 18-20-month-old toddlers. *Infancy*. <https://onlinelibrary.wiley.com/doi/full/10.1111/infa.12401>
- Chai, J. H., Lo, C. H., & Mayor, J. (2020). A Bayesian-Inspired Item Response Theory–Based framework to produce very short versions of Macarthur–Bates Communicative Development Inventories. *Journal of Speech, Language, and Hearing Research*, 63(10), 3488–3500. doi:http://dx.doi.org/10.1044/2020_JSLHR-20-00361

PhD Thesis

Chai, J. H. (2022). Developing very short computerised early vocabulary assessments in a multilingual setting (Doctoral dissertation, University of Nottingham).
<https://eprints.nottingham.ac.uk/67007/>

Awards

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| 2022 | The LEGO foundation Scholar Travel Awards for ICIS 2022 (unclaimed, VISA delayed due to COVID-19) |
| 2018 | Postgraduate Cross Cultural Travel Award from School of Psychology, University of Nottingham Malaysia. Travelled to University of Oslo for research purposes. |

Conferences (past 5 years)

- Chai, J.H.**, Kim, M., Shim, M., Lee Y., Ko, E-K. (2024). Refining Infant Word Recognition Analysis through Optimized Gaze Feature Selection based on Random Forest. ICIS 2024 Congress, Glasgow, UK.
- Chai, J.H.**, Zapiór, B., Ko, E-K. (2024). How do mothers and children initiate conversational exchanges?: The dynamics of multimodal cue usage in beginning vocal exchanges across child development. ICIS 2024 Congress, Glasgow, UK.
- Chai, J.H.**, McDonald., M., Ko, E-K. (2024). Investigating the Convergence of Child Language Assessment Measures in 14-month-old Korean Infants
- Chai, J.H.**, Mun, S., Ko, E. S. (2023). How Child-Directed Speech Enhances Word Segmentation: Insights from a Computational Modeling Study of Korean. In THE 48TH BOSTON UNIVERSITY CONFERENCE ON LANGUAGE DEVELOPMENT (USA)
- Jung, J., **Chai, J.H.**, & Ko, E. S. (2023). Socioeconomic Status, Parental Play and Book-reading, Maternal Work Status and Vocabulary Development in Young Korean Children. In THE 48TH BOSTON UNIVERSITY CONFERENCE ON LANGUAGE DEVELOPMENT (USA)
- Chai, J.H.**, Mun, S., Ko, E. S. (2023). How caregivers' speech patterns enhance word segmentation: Insights from a computational modelling study on a Korean corpus. In Many Paths to Language (MPaL) 2023. (Netherland)
- Jung, J., **Chai, J.H.**, & Ko, E. S. (2023). Socioeconomic status, parental play and book-reading, maternal work status and vocabulary development in young Korean children. In Many Paths to Language (MPaL) 2023. (Netherland)
- Chai, J. H.**, Jung, J., Kwon, T., Ko, E. S. (2022). Mother's initiative role in conversational exchanges and its effect on children's language outcome. In the XXIII International Congress of Infant Studies 2022 Developmental Cascades. (Canada)
- Jung, J., **Chai, J. H.**, Ko, E. S. (2022). The effect of socioeconomic status on early vocabulary size in South Korean children. In the XXIII International Congress of Infant Studies 2022 Developmental Cascades. (Canada)

Mayor, J., **Chai, J. H.**, Lo, C. H., & Mani, N. (2020). Babylex-IRT: Estimating early vocabulary sizes using a Bayesian-inspired item-response theory approach. In The International Congress of Infant Studies 2020. (Canada)

Academic Services

Reviewed for the following journals:

Current Psychology

Journal of Child Language

Infant and Child Development

Asia Pacific Journal of Educators and Education

Technical Skills

Data Analysis Pipeline/Computational: R; Python; UNIX/Linux; SPSS; Matlab;

Corpus/Speech: Praat; CLAN; ELAN; **Experimentation:** PsychoPy

Language

Mandarin (Native); Cantonese (Native); English (Bilingual Proficiency); Malay (Professional Working Proficiency); Korean (Limited Working Proficiency); German (Elementary Proficiency)

References

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