

Anna, Yi LEUNG

Curriculum Vitae

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Research Interests

- Causes and subtypes of developmental dyslexia
- Cognition of reading in Chinese language
- Psychometric evaluation of psycholinguistic measures
- Meta-analytic methodology for psycholinguistics and language education

Academic Background

- 10/2021 – Present **Dr. rer. biol. hum. in Psycholinguistics**
Munich Medical Research School, Ludwig-Maximilians-University of Munich
- Thesis title: Falsifiability of cognitive theories of developmental dyslexia
 - Supervisors: PD Dr. Xenia Schmalz, Prof. Dr. Gerd Schulte-Körne, PD Dr. Kristina Moll, Prof. Dr. Moritz Heene
- 10/2019 – 08/2021 **M.Sc. in Psychology: Learning Sciences**
Ludwig-Maximilians-University of Munich
- Overall GPA: 1.21/4.00 (Equivalent to 3.8/4.0)
 - Thesis title: Acquisition of Chinese characters: Necessity and role of phonology (Full marks awarded; equivalent to Grade A)
 - Supervisors: PD Dr. Xenia Schmalz, PD Dr. Kristina Moll
- 09/2018 – 08/2019 **M.A. in Psychology**
The Chinese University of Hong Kong
- Thesis title: Subtyping of Chinese developmental dyslexia (Grade A awarded)
 - Supervisor: Prof. Urs Maurer
- 09/2012 – 05/2016 **B.Ed. in Chinese Language (Awarded with First Class Honours)**
The Education University of Hong Kong
- Overall GPA: 3.49/4.00
 - Thesis title: Phonetic variation of Hong Kong Cantonese affricate consonants (Grade A awarded)
 - Supervisor: Prof. Yuan Liang

Skills and Abilities

Statistics, Data Processing, and Programming

- Frequentist and Bayesian multilevel modelling, structural equation modelling, cluster analysis, item response theory, parametric bootstrapping simulation, meta-analysis, multiverse analysis, natural language processing (NLP)
- R and Shiny App, Python, SPSS, PsychoPy, OpenSesame, HTML, Praat, CLAN

Teaching

- Classroom assessment and test development, curriculum design, language pedagogies, cooperative learning and problem-based learning pedagogies, co-teaching, counselling and mediation

Language

- English (Bilingual proficiency), Cantonese (Native), Mandarin Chinese (Bilingual proficiency), German (Professional working proficiency), French (Elementary proficiency)

Research-Related Work Experience

- 10/2021 – Present **Scientific Research Associate (Wissenschaftliche Mitarbeiterin)**
Department of Child and Adolescent Psychiatry, Psychosomatics, and Psychotherapy, University Hospital, Ludwig-Maximilians-University of Munich
- Supervisors: PD Dr. Xenia Schmalz, PD Dr. Kristina Moll
- 04/2020 – 03/2021 **Graduate Research Assistant and Research Intern**
Department of Child and Adolescent Psychiatry, Psychosomatics, and Psychotherapy, University Hospital, Ludwig-Maximilians-University of Munich
- Supervisors: PD Dr. Xenia Schmalz, PD Dr. Kristina Moll
- 09/2018 – 12/2018 **Student Research Assistant**
Cognitive Neuroscience of Language Laboratory
The Chinese University of Hong Kong
- Supervisor: Prof. Urs Maurer
- 09/2018 – 12/2018 **Student Research Assistant**
Laboratory for Language, Learning, and the Brain
The Chinese University of Hong Kong
- Supervisor: Dr. Xin Kang
- 10/2015 – 06/2016 **Student Research Assistant**
Department of Linguistics and Modern Language Studies, Faculty of Humanities
The Education University of Hong Kong
- Supervisor: Prof. Andy Chi-On Chin
- 03/2014 – 06/2016 **Student Research Assistant**
Department of Chinese Language Studies, Faculty of Humanities
The Education University of Hong Kong
- Supervisors: Prof. Yuan Liang, Prof. Pui-Lee Liu

Teaching- and Education-Related Work Experience (Selected)

- 04/2022 – 03/2023 **Research Seminar Instructor and Project Leader**
Research Seminar for the M.Sc. Psychology: Learning Sciences Programme,
Ludwig-Maximilians-University of Munich
- 09/2018 – 07/2019 **Substitute Teacher (Chinese Language, Mandarin)**
S.K.H. Tin Wan Chi Nam Primary School, Hong Kong
- 09/2018 – 07/2019 **Substitute Teacher (Chinese Language, Mandarin, Mathematics, General Studies, Music)**
S.K.H. Chai Wan St. Michael's Primary School, Hong Kong
- 09/2016 – 07/2018 **Full-Time Teacher (Chinese Language, Mandarin, General Studies, Music)**
S.K.H. Tin Wan Chi Nam Primary School, Hong Kong
- 06/2015 – 06/2016 **Freelance Textbook Editor (Chinese Language for Primary and Secondary Curricula)**
The Commercial Press, Hong Kong
- 09/2013 – 12/2014 **Public Speaking Tutor**
Belilios Public School (Public Secondary School), Hong Kong
- 07/2013 – 06/2016 **Violin and Viola Teacher**
Tsang Fook Music Centre, Hong Kong
- 09/2012 – 12/2012 **Public Speaking Tutor**
Shun Lee Catholic Secondary School, Hong Kong

On-Going and Past Research Projects

- 07/2022 – Present **Multiverse Analysis on Profiling Methods: Subtyping Developmental Dyslexia as a Use Case**
Ludwig-Maximilians-University of Munich
- Principal Investigator of an early career researcher project, funded by the German Research Foundation; funding co-applied with Dr. Daniel Kristanto
 - Collaborators: Prof. Andrea Hildebrandt, PD Dr. Xenia Schmalz, Prof. John Ioannidis, Prof. Urs Maurer, Dr. Carsten Gießing, Prof. Dr. Marcus Hasselhorn, Prof. Dr. Linda Visser
- 04/2022 – Present **Psychometric Evaluation and Development of Morphological Awareness Tests Across Languages**
Ludwig-Maximilians-University of Munich
- Principal Investigator
 - Collaborators: Dr. Danielle Colenbrander, PD Dr. Xenia Schmalz

- 10/2021 – Present **Towards a Falsifiable Framework for Causal Theories in Developmental Dyslexia**
Ludwig-Maximilians-University of Munich
- Doctoral Candidate and Scientific Research Associate
 - Supervisor: PD Dr. Xenia Schmalz
 - Collaborators: Prof. Moritz Heene, PD Dr. Kristina Moll, Dr. Daniel Kristanto, Prof. Claudio Mulatti, Mr. Ivan Melev
- 04/2021 – Present **Magnocellular Deficits in Developmental Dyslexia: A Systematic Review and Meta-Analysis**
Ludwig-Maximilians-University of Munich
- Graduate Research Assistant
 - Supervisor: PD Dr. Xenia Schmalz
- 04/2021 – 10/2021 **Temporal Sampling Deficits in Developmental Dyslexia: A Systematic Review and Meta-Analysis**
Ludwig-Maximilians-University of Munich
- Graduate Research Assistant
 - Supervisors: PD Dr. Xenia Schmalz, Dr. Sarolta Bakos
- 04/2020 – 10/2021 **The Learning of Semantic Regularities in Novel Words**
Ludwig-Maximilians-University of Munich
- Graduate Research Student
 - Supervisor: PD Dr. Xenia Schmalz
- 09/2018 – 12/2018 **Meta-Linguistic vs. Working-Memory Training in Chinese Dyslexia Children: Behavioural and Neural Evaluation**
The Chinese University of Hong Kong
- Student Research Assistant
 - Supervisor: Prof. Urs Maurer
- 09/2018 – 12/2018 **Visual Attention in Autism Spectrum Disorder: An Eye Tracking Study Across Eastern and Western Cultures**
The Chinese University of Hong Kong
- Student Research Assistant
 - Supervisor: Dr. Xin Kang
- 09/2015 – 06/2016 **The Development of a Corpus of Mid-20th Century Hong Kong Cantonese**
The Education University of Hong Kong
- Student Research Assistant
 - Supervisor: Prof. Chi-On Chin
- 03/2014 – 06/2016 **Taxonomic Analysis of the Chinese Reading Comprehension Skills Tested in the Hong Kong Territory-Wide System Assessment (TSA) (Primary Levels)**
The Education University of Hong Kong
- Student Research Assistant
 - Supervisor: Prof. Pui-Lee Liu

Preprints and Publications

Anna Yi Leung, Daniel Kristanto, & Xenia Schmalz. (2025). Re-SearchTerms: A Shiny App for Navigating Open Scholarship Terminology. OSF Preprints. <https://doi.org/10.31219/osf.io/qsp7x>

Xenia Schmalz[†], Johannes Breuer[†], Mario Haim[†], Andrea Hildebrandt[†], Phillip Knöpfle[†], **Anna Yi Leung**[†], Timo B. Roettger[†]. (2025; accepted). Let's Talk About Language—And Its Role for Replicability. *Humanities and Social Sciences Communications*. (†Equal contributions)

Anna Yi Leung, Ivan Melev, & Xenia Schmalz. (2024). Quantifying Concept Definition Heterogeneity in Academic Texts: Insights into Variability in Conceptualization. OSF Preprints. <https://doi.org/10.31219/osf.io/gu7b5>

Anna Yi Leung, & Xenia Schmalz. (2023). In Search of Proxy Measures of Heterogeneity in Conceptual Definitions: A Cognitive Linguistic Perspective. *Proceedings of the Annual Meeting of the Cognitive Science Society*, 45. <https://escholarship.org/uc/item/2c80j0rx>

Manuscripts (Under Review)

Anna Yi Leung[†], Tatiana Logvinenko[†], & Xenia Schmalz. (Under review). Dyslexia Research and Replicability: Should We Be Worried? (†Shared first authorship)

Manuscripts (In Preparation)

Anna Yi Leung[^], Daniel Kristanto[^], Carsten Gießing[†], John. P. A. Ioannidis[†], Andrea Hildebrandt^{*†}, & Xenia Schmalz^{*†}. (In preparation). A Multiverse Analysis on Profiling Methods: Subtyping Developmental Dyslexia as a Use Case. (^Project Co-PIs; *Shared senior authorship; †In alphabetical order)

Anna Yi Leung^{*^}, Xiaoshu Wu^{*}, Danielle Colenbrander, & Xenia Schmalz. (In preparation). Tell Me More About the Wug: Do Contextual Cues in Morphological Awareness Tests Affect Item Difficulty? (Supervisees underlined; *Shared first authorship; ^Project PI)

Anna Yi Leung[^], Sanha Lee, Peter Roßmeier, Danielle Colenbrander, & Xenia Schmalz. (In preparation). Psychometric Properties of Morphological Awareness Tests Across Languages: A Systematic Review. (Supervisees underlined; ^Project PI)

Anna Yi Leung, Ivan Melev, Moritz Heene, Kristina Moll, & Xenia Schmalz. (In preparation). A Study Protocol for Evaluating Construct Validity of Concepts in Developmental Dyslexia Research.

Anna Yi Leung, Olga Drobina, Alvaro Darcourt, Salim K. Osei, Lilli Kugelmann, & Xenia Schmalz. (In preparation). Magnocellular/Dorsal Deficit in Developmental Dyslexia? Meta-Analyses on Contrast Sensitivity, Coherent Motion, and Serial Search Tasks.

Anna Yi Leung, Kristina Moll, & Xenia Schmalz. (In preparation). When Do CFL Learners Need Phonology for Learning Chinese Characters' Meanings?

Sanha Lee, Salim K. Osei, Peter Roßmeier, Aakash Balani, Xenia Schmalz, & **Anna Yi Leung**[^]. (In preparation). Item Difficulty of English Morphological Awareness Tests in a Mixed Sample. (Supervisees underlined; [^]Project PI)

Elen Le Foll[†], **Anna Yi Leung**[†], Désirée Nießen[†], Caroline Poppa[†]. (In preparation). A Comment on Arechar et al. (2023)'s "Understanding and Combating Misinformation Across 16 Countries on Six Continents". ([†]Equal contributions; in alphabetical order)

Conference Presentations

Anna Yi Leung, Ivan Melev, Moritz Heene, & Xenia Schmalz*. (2024, June). Quantifying Concept Definitions in Academic Texts: Insights into Variability in Conceptualisation. Oral presentation "The Role of Language for Replicability in the Social and Behavioural Sciences" Symposium at *the Meta-Rep 2024 Conference*, Munich, Germany. (*Main presenter)

Anna Yi Leung*, Ivan Melev, Moritz Heene, & Xenia Schmalz. (2024, June). Is It an Issue that Constructs Are Not Measured as Defined? An Empirical Evaluation of Dyslexia Research as a Case Study. Oral presentation "The Role of Language for Replicability in the Social and Behavioural Sciences" Symposium at *the Meta-Rep 2024 Conference*, Munich, Germany. (*Main presenter)

Anna Yi Leung^{^*}, Daniel Kristanto[^], Carsten Gießing[†], John. P. A. Ioannidis[†], Andrea Hildebrandt^{&†}, & Xenia Schmalz^{&†}. (2024, October). Exploration of Data Processing and Model Multiverse in Developmental Dyslexia. Oral presentation at *the 6th All-European Dyslexia & Dyscalculia Conference*, Athens, Greece. ([^]Project Co-PIs; [&]Shared senior authorship; [†]In alphabetical order; *Main presenter)

Anna Yi Leung^{^*}, Daniel Kristanto[^], Carsten Gießing[†], John. P. A. Ioannidis[†], Andrea Hildebrandt^{&†}, & Xenia Schmalz^{&†}. (2024, September). Multiverse Analysis for Profiling Methods: Application to Subtyping Developmental Dyslexia. Oral presentation in the "Facilitating Replication through Automation, Standardisation of Procedures and Machine Learning" Symposium at *the 53rd DGPs Congress / 15th ÖGP Conference*, Vienna, Austria. ([^]Project Co-PIs; [&]Shared senior authorship; [†]In alphabetical order; *Main presenter)

Anna Yi Leung^{^*}, Daniel Kristanto[^], Carsten Gießing[†], John. P. A. Ioannidis[†], Andrea Hildebrandt^{&†}, & Xenia Schmalz^{&†}. (2024, September). Multiverse Analysis of Developmental Dyslexia Subtyping Methods Oral presentation at *the 15th International Conference of Health Sciences*, Pristina Kosovo. ([^]Project Co-PIs; [&]Shared senior authorship; [†]In alphabetical order; *Main presenter)

Anna Yi Leung*, Ivan Melev, Moritz Heene, & Xenia Schmalz. (2024, June). Is It an Issue That Constructs Are Not Measured as Defined? An Empirical Evaluation of Dyslexia Research as a Case Study. Poster presentation in *the Extraordinary Brain Symposium XX*, Malta. (*Main presenter)

Anna Yi Leung^{^*}, Xiaoshu Wu^{*}, Danielle Colenbrander, & Xenia Schmalz. (2024, February). Tell Me More About the Wug: Do Contextual Cues in English Morphological Awareness Tests Affect Item

Difficulty? Oral presentation at *the 8th Annual Conference for the Association for Reading and Writing in Asia*, Jeju, South Korea. (Supervisees underlined; *Shared first authorship; ^Project PI)

Anna Yi Leung*, Xiaoshu Wu, & Xenia Schmalz. (2023, November). Does the Contextual Information in Test Items Influences English Morphological Awareness Measures' Psychometric Properties? Oral presentation at *the 3rd virtual Words in the World International Conference*, Canada. (Supervisee underlined; *Main presenter)

Anna Yi Leung*, & Xenia Schmalz. (2023, July). In Search of Proxy Measures of Heterogeneity in Conceptual Definitions: A Cognitive Linguistic Perspective. Poster presentation at *the 44th Annual Meeting of the Cognitive Science Society*, Sydney, Australia. (*Main presenter)

Anna Yi Leung*, Olga Drobina, Alvaro Darcourt, Salim K. Osei, Lilli Kugelmann, & Xenia Schmalz. (2023, July). Are There Magnocellular/Dorsal Deficits in Developmental Dyslexia? A Meta-Analysis on Contrast Sensitivity, Coherent Motion, and Serial Search Tasks. Poster presentation at *the Society for the Scientific Study of Reading Conference (SSSR) 2023*, Port Douglas, Australia. (*Main presenter)

Xenia Schmalz, **Anna Yi Leung**, & Claudio Mulatti. (2023, June). How Do We Falsify Causal Theories of Dyslexia? Oral presentation at *the International Workshop on Reading and Developmental Dyslexia (IWORDD)*, San Sebastian, Spain.

Sanha Lee, Salim K. Osei, Peter Roßmeier, Aakash Balani, Xenia Schmalz, & **Anna Yi Leung**. (2023, March). The Adaptation and Validation of Open-Source Morphological Awareness Tests for Web-Based Experiments. Poster presentation at *the TeaP, The Annual Meeting of the General Psychology Section of the German Psychological Society (DGPs)*, Trier, Germany. (Supervisees underlined)

Salim K. Osei, Peter Roßmeier, Sanha Lee, Aakash Balani, Xenia Schmalz, & **Anna Yi Leung***. (2023, February). Item Discriminability of English Morphological Awareness Tests in a Mixed Sample. Oral presentation at *the 7th Annual Conference for the Association for Reading and Writing in Asia*, Hong Kong. (Supervisees underlined; *Main presenter)

Peter Roßmeier, Sanha Lee, Salim K. Osei, Aakash Balani, Xenia Schmalz, & **Anna Yi Leung**. (2023, February). Adapting and Validating Open-Source Morphological Awareness Tests for Web-Based Experiments. Oral presentation at *the Cognitive Science Arena 2023*, Brixen, Italy. (Supervisees underlined)

Yi Leung*, Kristina Moll, & Xenia Schmalz. (2021, March). Is Phonological Information Necessary for Learning the Meanings of Chinese Semantics-Phonetic Compound Characters? Poster presentation at *the 5th Annual Conference for the Association for Reading and Writing in Asia*, Taipei, Taiwan. (*Main presenter)

Thesis Supervision

2023 **Xiaoshu Wu, M.Sc.**
 M.Sc. Psychology: Learning Sciences
 Ludwig-Maximilians-University of Munich
 Thesis title: The measurement of morphological awareness: Does the contextual information in test items influence the tests' psychometric properties?

Grants, Scholarships, and Awards

08/2024 **Project Grant: Systematising Theory Building in Dyslexia and Reading Research**
 META-REP Priority Programme, funded by German Research Foundation (DFG)
 Co-Applicant (Main Applicant: PD Dr. Xenia Schmalz)
 Amount awarded: EUR 287,950

02/2024 **Student Conference Scholarship**
 The 8th Annual Conference for the Association for Reading and Writing in Asia (ARWA 2024), Jeju, South Korea

11/2022 **“Treasure Box” Research Grant for Early-Career Researchers**
 META-REP Priority Programme, funded by German Research Foundation (DFG)
 Co-Applicant (with Dr. Daniel Kristanto)
 Amount awarded: EUR 2,000 (Full amount)

02/2016 **Shun Hing Chinese Language Scholarship**
 The Education University of Hong Kong

08/2015
 & 08/2016 **Dean’s Honour List**
 The Education University of Hong Kong

Organisational Roles and Academic Services

09/2025 **Symposium Organiser and Chair**
 The “Exploring Cognitive and Linguistic Mechanisms in Word Processing Across Diverse Languages and Contexts” Symposium at *the 24th Conference of the European Society for Cognitive Psychology*, Sheffield, UK. (Accepted)

10/2024 **Conference Organiser & Webmistress**
The International Meeting on Quantifying Semantic-Orthographic Regularities Across Languages (QuaSemO 2024), Munich, Germany.

2024 – Present **Conference Reviewer**
CogSci 2024, CogSci 2025

- 2023 – Present **Ad-Hoc Journal Reviewer**
Child Development, Dyslexia
- 2023 – Present **Journal Club Secretary and Webmistress**
The German Word Nerd Network (GeWoNN)
Website: <https://sites.google.com/view/gewonn/home>
Bluesky: @gewonnofficial.bsky.social

Professional Qualifications and Memberships

- 10/2024 – Present **Associate Member**
European Society for Cognitive Psychology (ES COP)
- 04/2023 – Present **Student Member**
Cognitive Science Society (CSS)
- 12/2022 – Present **Student Member**
Society for the Scientific Study of Reading (SSSR)
- 09/2022 – Present **Postgraduate Member**
Experimental Psychology Society (EPS), United Kingdom
- 01/2021 – Present **Student Member**
The Association for Reading and Writing in Asia (ARWA)
- 05/2017 **Language Proficiency Assessment for Teachers (Mandarin Chinese)**
Hong Kong Examinations and Assessment Authority
- 06/2016 **Registered Teacher for Primary and Secondary Education**
Education Bureau, Hong Kong SAR Government
- 12/2014 **The Putonghua Proficiency Test (PSC) (Level 1B Awarded)**
The Putonghua Training and Testing Centre, The Hong Kong Institute of Education

Whole-Person Development (Selected)

- 02/2023 **Psicostat Workshop: Outlier Analysis**
Cognitive Science Arena 2023, Brixen, Italy
- 10/2022 **Workshop on Advanced Power Analyses**
LMU Open Science Center, Ludwig-Maximilians-University of Munich
- 09/2022 **The Sixth Summer School on Statistical Methods for Linguistics and Psychology**
University of Potsdam

- 08/2022 **Workshop on Good Scientific Practice**
Ludwig-Maximilians-University of Munich
- 03/2021 – Present **Member**
Philosophia Munich, Germany
- 10/2018 – 09/2019 **Volunteer Tutor**
Hong Kong Red Cross Princess Alexandra School, Hong Kong
- 06/2018 **Volunteer Training Programme**
The Society of Rehabilitation and Crime Prevention, Hong Kong
- 05/2014 – 07/2014 **Mandarin Chinese Immersion Programme**
Southwest University, Chongqing, China
- 05/2014 – Present **Violin Player**
Belilios Public School Old Girls' String Orchestra, Hong Kong
- 12/2008 – 11/2016 **Financial Secretary**
S.K.H. Chai Wan St. Michael's Primary School Alumni Association, Hong Kong