

Hyemin Park

Educational Measurement · Quantitative Methodologies

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Summary

I got my Bachelor's and Master's Degrees from Seoul National University, both advised by Professor Sun-Geun Baek. Based on my ability to handle statistical programs proficiently, I have some experience in writing journal articles and data analysis; and am a creative and conscientious student with considerable educational experience. My research interest is in educational measurement and quantitative methodologies, especially the integration of educational data and deep learning, so we can have a deeper understanding of tests and items, human ability and attitude, or of the generalized latent variable modeling.

Education

Ph.D. in Education, UC Berkeley

USA

- Major: Social Research Methodology
- Advisor: Mark R. Wilson

Sep 2023 -

M.A. in Education, Seoul National University

Seoul, South Korea

- Major: Educational Measurement and Evaluation
- Advisor: Sun-Geun Baek
- GPA: 4.23/4.3
- Thesis: The Effects of Undergraduates' Interpersonal Relationships on University Educational Performance through Academic Resilience
Committee: Hyun-Jeong Park (chair), Yongnam Kim, Sun-Geun Baek

Sep 2020 - Aug 2022

B.A. in Education, Seoul National University

Seoul, South Korea

- Major: Education
- Advisor: Sun-Geun Baek
- GPA: 3.65/4.3 (overall) 3.72/4.3 (major)
- Degree Honors: Cum Laude

Mar 2016 - Aug 2020

Publications

Journal Articles (Peer-reviewed)

- **Understanding Students' Problem-Solving Patterns: Evidence from an allotted response time in a PISA 2012 item**, Hyun-Jeong Park, Dayeon Lee, [Hyemin Park](#) (**corresponding author**), *Frontiers in Psychology*, 2023 (in English)
- **Development and Validation of the Transformative Compacity Scale for Highschool Students Using Scenario Method**, Sun-Geun Baek, Seojin Kim, [Hyemin Park](#) (**co-author**), *The SNU Journal of Education Research*, 2023 (in English)
- **Development and Validation of the Academic Resilience Scale for Undergraduate Students Using Scenario Method**, Sun-Geun Baek, Jiwoo Kim, [Hyemin Park](#) (**co-author**), *The SNU Journal of Education Research*, 2021 (in Korean)

Research Interests

Machine Learning and Deep Learning to implicate process-centered performance assessment and individualized learning with semi-structured or unstructured educational data

Item Response Theory that concerning accurate test scoring, the development of test items, and the parameter estimation of students

Generalized latent variable modeling such as multi-level, longitudinal, and structural equation models
And a meaningful unification of these methods in educational research contexts

Presentations

- **The Effects of School Transfer in Adolescence on the peer attachments: Comparing Instrumental Variables Methods and Gain Score Approach**, Dayeon Lee, [Hyemin Park](#) (**presenter**), *Nov 2022 (in Korean)*
 - Poster presented at the 16th Korean Educational Longitudinal Study Conference (KELS), Seoul, Korea
 - Hosted by Korea Educational Development Institute (KEDI)
- **Measurement and Analysis of Transformative Compacity of H Highschool Students**
Sun-Geun Baek, Seojin Kim, [Hyemin Park](#), *Oct 2022 (in English)*
 - Journal presented at the 22nd International Conference on Education Research (ICER), Seoul, Korea
 - Hosted by Brain Korea 21 FOUR Program (BK21-FOUR)
- **Measurement and Analysis of Academic Resilience of S University Students**,
Sun-Geun Baek, Jiwoo Kim, [Hyemin Park](#), *Feb 2022 (in Korean)*
 - Poster presented at the SNU BK21 FOUR Conference, Seoul, Korea
 - Hosted by Brain Korea 21 FOUR Program (BK21-FOUR)

Grants \$ Scholarships

- Three-time Recipient of **University Full Scholarships for Graduate Student Instructor (GSI)**, Seoul National University
 - 2nd, 3rd, 4th M.A. Graduate Semesters
- Two-time Recipients of the **Research Scholarship and Grant** for National Research Foundation of Korea's **Brain Korea 21 FOUR Program (BK21-FOUR)** "Innovation and Coexistence Education Research" at the College of Education as a **Participating Graduate Student**, Seoul National University
 - 3rd, 4th M.A. Graduate Semesters

Selected Projects

Research for the implementation of Jeju dream actualization individual education accounts

RESEARCHER

Educational Policy Development Projects, South Korea

- Advised by Professor Sun-Geun Baek *Dec 2020 - Feb 2021*
- In order to implement the 'Jeju Dream Actualization Individual Education Accounts' that support all residents of a certain age to receive higher education or vocational preparation education, a comparative analysis of cases by country is presented, and the purpose, legal basis, and specific implementation method for establishing the policy are presented

SNU-G

EMPLOYEE

SNU, South Korea

Mar 2021 - Aug 2021

- Online Platform for Seoul National University-Siheung City Education Cooperation Projects
- As a researcher and R&D Planning Team Manager, planned lecture contents, recruited professors, made lecture PPTs
- To overcome the limitations of offline education that there are few beneficiaries, and to expand education for teachers, parents, students, and principals in Siheung City, SNU-G produced these lectures into video

The Educational Measurement: Issues and Practice (EM:IP) Cover Visualization Competition

GROUP PROJECT

NCME, USA

Dec 2021 - Feb 2022

- Hosted by National Council on Measurement in Education (NCME)
- Using the log data of an item in the PISA 2012 CPS, visually compare and present how the process map appears differently depending on the problem-solving speed for each country

Selected Experiences

Professional Experience

DATA ANALYST

- Data and item analysis for National Assessment of Academic Achievement, hired by Korea Institute for Curriculum and Evaluation (KICE), 2022
- CTT and IRT analysis of mock exam of the 'agro-healing', conducted by Korea Productivity Center, 2021
- Data analysis of the applicants of the 'agro-healing' program, conducted by Korea Productivity Center, 2021
- A study on achievement and adaptation patterns of students in the College of Future Convergence, Seoul National University of Science and Technology, conducted by the Center for Educational Research at Seoul National University, 2021
- A study and data analysis on the actual condition of freshman and transfer students in the first semester of 2021, conducted by Korea National Open University, 2021
- A study and data analysis on the actual condition of freshman and transfer students in the second semester of 2020, conducted by Korea National Open University, 2020
- Data analysis of the applicants by year, region, and age, conducted by Korea National Open University, 2020
- A study and data analysis of the survey of students, parents, and teachers across the country regarding distance education in elementary, middle, and high school due to COVID-19, conducted by the Ministry of Education, 2020

RESEARCH ASSISTANT

- Grading creative problem-solving tasks, conducted by Kongju National University, 2022
- The literature review for the study on the development of the curriculum of public education based on the national and social needs and improvements to respond to the future society, conducted by the Ministry of Education, 2021
- Organized open-ended questions for the 2020 Future Core Competency Promotion Program Operation report (PR 2020-07), conducted by Seoul National University-Siheung City Education Cooperation Projects, 2020
- Coding satisfaction survey of programs to promote career and academic interest, programs to develop leadership and career competencies, 2020 Core Competency Research
- Assistant staff of the expert workshop, conducted by the Ministry of Education - Korea Chamber of Commerce and Industry commissioned research, 2020
- Pre-analysis of Digital Competency Training Projects, conducted by the Ministry of Education, 2020

On-Campus & Extra-Curricular Activities

- Passed the 3rd stage of the Samsung Open Sharing Project, 2020
- SKY Union presentation society (Insight Graphy), Sep 2019 - Aug 2020
- Completed Arduino training program (at SNU College of Education), 2019
- Completed web development/JAVA/Android operating system training (at Korea IT Academy), 2017
- Committee on freshman membership training (at SNU College of Education), 2016
- Selected as a BBC News reporter on behalf of high school students in Korea, 2013

Volunteer Activities

- Preparing and distributing meals to the homeless (Kkottongnae House of love), - present
- Teaching Elementary, Middle, and High School Students
 - Teacher of an alternative school for North Korean Defectors (Durihana), Mar 2021 - Feb 2022
 - Project designer and operator of a career program for students who live in educational underprivileged areas (NGO Dream Consultant), Sep 2018 - Aug 2019
 - Mentor for students who live in Geochang-gun, which is an educational underprivileged area, winter 2019, 2020
 - After-school teacher in elementary school (SAM mentoring), Mar 2016 - Feb 2017
 - Reading English books at local libraries for children, - Feb 2016
- Cultural and Language Exchange Program
 - Seoul National University Dream Together Master (DTM), Aug 2021 - Dec 2021
 - College of Education Language Exchange Program for Foreign Exchange Students (LEP), Aug 2020 - Feb 2021
 - Cultural Exchange Program for Foreign Exchange Students (SNU Buddy), Mar 2018 - Aug 2018

Teaching

- **Main TA for Introduction to Education (Spring 2022), for Prof. Sun-Geun Baek**
Assessed and managed overall attendance and engagement, and graded mid and final papers
- **Peered TA for Introduction to Education (Winter 2021), for Prof. Hyun-Jeong Park**
Assessed and Managed overall attendance, engagement, and group projects
- **Main TA for Educational Evaluation (Winter 2020), for Lecturer Kyung-In Park**
Organized format and compiled multifaceted evaluation contents and scores among peers for handouts and final evaluation
- **Guest Tutor for SNU Writing Class, Curriculum Associated Writing Instruction Program (Spring 2021, Spring 2022)**
Tutor for writing an undergraduate thesis
Tutored total 5 students and they were praised by their advisor professors