

Preface

This book, titled *Knowledge Creation in Education*, highlights our research effort in introducing pedagogies of the knowledge-creation paradigm to Singapore classrooms. It documents our 12-year journey of integrating knowledge-building pedagogies into Singapore classrooms, across school levels from primary schools to high schools, working with both students and teachers. It also records our effort in developing teachers' capacity in building professional knowledge and in facilitating knowledge creation pedagogies. We also draw on the knowledge and research findings within the international community of knowledge innovation.

In the spirit of knowledge building, we are constantly pushing the boundary of knowledge-building pedagogy toward a more inclusive knowledge creation paradigm. We attempt to innovate knowledge building by working at the boundaries of different research fields, including knowledge building in teacher education, knowledge building and mobile learning, and forming collaborative research among researchers and practitioners. For these reasons, we use the term *knowledge creation* in the book title to reflect a more inclusive view of knowledge work in education that goes beyond K-12 classrooms.

Looking back, our journey began in the year 2001, when Seng Chee Tan – the first editor, then a fresh Ph.D. graduate – chanced upon a research project that focused on knowledge-building pedagogy. The initial joy of winning a research grant soon turned into a journey filled with frustration and trepidation. The challenges to make knowledge-building work in authentic classroom settings just seemed insurmountable. Fortunately, rays of light began to appear while Tan was exploring in the metaphorical dark abyss. In 2005, the establishment of the Learning Sciences Lab in the National Institute of Education, Singapore, provided further

funding support to continue research into knowledge building and fueled the expansion of the research community. Among them, Hyo-Jeong So (the second editor) ventured into the use of mobile technologies and the integration of knowledge-building pedagogy with out-of-the-classroom learning. Jennifer Yeo (the third editor) joined Tan as a Ph.D. student and began to explore new perspectives of analyzing the data with the Activity Theory and theory of Systemic Functional Linguistics. When the call for the book proposal was announced in 2012, we felt it was an opportune time to document our effort thus far.

Working on this book allows us to reflect on our journey, which, serendipitously, reflects a knowledge creation work in progress. We are able to come this far by “standing on the shoulders of giants.” We build on ideas suggested by pioneers like Carl Bereiter and Marlene Scardamalia, who have provided invaluable guidance through their publications and personal interactions. We are grateful to our international collaborators – Ming Ming Chiu, Nobuko Fujita, Kai Hakkarainen, Huang-Yao Hong, Nancy Law, and Sami Paavola – whose unique perspectives have inspired us in many ways; we are heartened and honored to have their contributions in this book. We would like to thank Timothy Koschmann and Peter Reimann, whose insightful and succinct comments have helped to enrich our intellectual discussions and are instrumental in shaping our future journey.

This book does not signify the conclusion of a journey, but a document that records our experience, our insights, and our projective goals for the ongoing research effort. In the knowledge-building vernacular, this is a knowledge artifact that contains ideas to be discussed and improved. We hope to continue with this journey with our international colleagues and many others whom we did not have the chance to work with in this project.

National Institute of Education
Nanyang Technological University
Singapore

Seng Chee Tan
Jennifer Yeo

Pohang University of Science and Technology (POSTECH)
Nam-gu, South Korea

Hyo-Jeong So



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Tan, S.C.; So, H.J.; Yeo, J. (Eds.)

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