

A PRACTICAL APPROACH TO SUPPORTING SCIENCE AND ENGINEERING STUDENTS WITH SELF-REGULATED LEARNING

Science and engineering practices tend to be more difficult to teach and monitor than content knowledge, because practices are skill based. This book presents tangible ways for teacher educators and teachers to design learning environments that involve student goal setting, monitoring, and reflection on their performance of science and engineering practices. It models ways teachers can support effective learning behaviors and monitor student progress in science and engineering practices. It also presents practical ways to set up preservice teacher instruction and inservice teacher professional development that address both self-regulated learning and science and engineering practices. Educational research designs are presented from qualitative, quantitative, and mixed methods traditions that investigate student and teacher engagement with science and engineering practices through self-regulated learning.

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Cambridge University Press is part of Cambridge University Press & Assessment, a department of the University of Cambridge.

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www.cambridge.org Information on this title: www.cambridge.org/9781009100014

DOI: 10.1017/9781009103800

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First published 2024

A catalogue record for this publication is available from the British Library.

Library of Congress Cataloging-in-Publication Data NAMES: Peters-Burton, Erin E., author.

TITLE: A practical approach to supporting science and engineering students with self-regulated learning / Erin E. Peters-Burton, George Mason University.

DESCRIPTION: Cambridge, United Kingdom; New York, NY: Cambridge University Press, 2023. | Includes bibliographical references and index.

IDENTIFIERS: LCCN 2023002771 (print) | LCCN 2023002772 (ebook) | ISBN 9781009100014 (hardback) | ISBN 9781009108270 (paperback) | ISBN 9781009103800 (epub) SUBJECTS: LCSH: Science–Study and teaching (Secondary) | Engineering–Study and teaching

(Secondary) | Self-managed learning. | Self-culture.

CLASSIFICATION: LCC Q181 .P3557 2023 (print) | LCC Q181 (ebook) |

DDC 507.1/2-dc23/eng20230508

LC record available at https://lccn.loc.gov/2023002771 LC ebook record available at https://lccn.loc.gov/2023002772

> ISBN 978-1-009-10001-4 Hardback ISBN 978-1-009-10827-0 Paperback

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I would like to dedicate this book to my wonderful husband, Stephen, who not only supported me emotionally while I wrote, but had lots of conversations with me about science practices.



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Acknowledgments

I would like to thank the Science Practices Innovation Notebook research team and teacher team. Without them I wouldn't have been able to have in-depth discussions about teaching science and engineering practices for the past five years. Thanks to Tim, Peter, Anastasia, Erin B., Erin W., Laura, Jake, Zach, Steph, Jessica, Connor, Hong, Britt, Suzanne, Matthew, Kat, Kevin, Lisa, Kim, Haley, Angela, Melissa, Charmaine, Emily, Candace, Swapna, Katie, and Jin. I am deeply grateful for being able to work with you all. Thanks, too, to my farm animals: Piobar, Chester, Mallow, Gusty, Noisy, Hank, Fia, Gabhy, Stormy, Bridget, and the chickens for spending my breaks between chapters with me.