CONTENTS

Section 1. The Process and Structure of Problem-Based Learning Edited by Cindy E. Hmelo-Silver Overview of Problem-Based Learning: Definitions and Distinctions John R. Savery All Problems Are Not Equal: Implications for Problem-Based Learning David H. Jonassen and Woei Hung The Learning Space in Problem-Based Learning Cindy E. Hmelo-Silver Theoretical Anchors for Barrows' PBL Tutor Guidelines Kareen McCaughan Problem-Based Learning: Goals for Learning and Strategies for Facilitating Cindy E. Hmelo-Silver and Howard S. Barrows Section 2. New Contexts for Problem-Based Learning Edited by Peggy A. Ertmer Essentials for Ontexts for Problem-Based Learning Peggy A. Ertmer and Krista D. Glazewski Blended Learning and PBL: An Interactional Ethnographic Approach to Understanding Knowledge Construction In Situ Susan Bridges, Judith Green, Michael Botelho, and Peter CS Tsang Examination of Content Acquisition Using Problem-Based Learning in Career and Technical Education Courses at the Middle School Level Kimberly Hodges The GlobalEd 2 Simulations: Promoting Positive Academic Dispositions in Middle School Students in a Web-Based PBL Environment	Foreword Sophie M. M. Loyens	v entropi la manda de la vicini v
Edited by Cindy E. Hmelo-Silver Overview of Problem-Based Learning: Definitions and Distinctions John R. Savery All Problems Are Not Equal: Implications for Problem-Based Learning David H. Jonassen and Woei Hung The Learning Space in Problem-Based Learning Cindy E. Hmelo-Silver Theoretical Anchors for Barrows' PBL Tutor Guidelines Kareen McCaughan Problem-Based Learning: Goals for Learning and Strategies for Facilitating Cindy E. Hmelo-Silver and Howard S. Barrows Section 2. New Contexts for Problem-Based Learning Edited by Peggy A. Ertmer Essentials for PBL Implementation: Fostering Collaboration, Transforming Roles, and Scaffolding Learning Peggy A. Ertmer and Krista D. Glazewski Blended Learning and PBL: An Interactional Ethnographic Approach to Understanding Knowledge Construction In Situ Susan Bridges, Judith Green, Michael Botelho, and Peter CS Tsang Examination of Content Acquisition Using Problem-Based Learning in Career and Technical Education Courses at the Middle School Level Kimberly Hodges The GlobalEd 2 Simulations: Promoting Positive Academic Dispositions in Middle School Students in a Web-Based PBL Environment	Acknowledgments	ix
All Problems Are Not Equal: Implications for Problem-Based Learning David H. Jonassen and Woei Hung The Learning Space in Problem-Based Learning Cindy E. Hmelo-Silver Theoretical Anchors for Barrows' PBL Tutor Guidelines Kareen McCaughan Problem-Based Learning: Goals for Learning and Strategies for Facilitating Cindy E. Hmelo-Silver and Howard S. Barrows Section 2. New Contexts for Problem-Based Learning Edited by Peggy A. Ertmer Essentials for PBL Implementation: Fostering Collaboration, Transforming Roles, and Scaffolding Learning Peggy A. Ertmer and Krista D. Glazewski Blended Learning and PBL: An Interactional Ethnographic Approach to Understanding Knowledge Construction In Situ Susan Bridges, Judith Green, Michael Botelho, and Peter CS Tsang Examination of Content Acquisition Using Problem-Based Learning in Career and Technical Education Courses at the Middle School Level Kimberly Hodges The GlobalEd 2 Simulations: Promoting Positive Academic Dispositions in Middle School Students in a Web-Based PBL Environment		ning 1
The Learning Space in Problem-Based Learning Cindy E. Hmelo-Silver Theoretical Anchors for Barrows' PBL Tutor Guidelines Kareen McCaughan Problem-Based Learning: Goals for Learning and Strategies for Facilitating Cindy E. Hmelo-Silver and Howard S. Barrows Section 2. New Contexts for Problem-Based Learning Edited by Peggy A. Ertmer Essentials for PBL Implementation: Fostering Collaboration, Transforming Roles, and Scaffolding Learning Peggy A. Ertmer and Krista D. Glazewski Blended Learning and PBL: An Interactional Ethnographic Approach to Understanding Knowledge Construction In Situ Susan Bridges, Judith Green, Michael Botelho, and Peter CS Tsang Examination of Content Acquisition Using Problem-Based Learning in Career and Technical Education Courses at the Middle School Level Kimberly Hodges The GlobalEd 2 Simulations: Promoting Positive Academic Dispositions in Middle School Students in a Web-Based PBL Environment		5
Theoretical Anchors for Barrows' PBL Tutor Guidelines Kareen McCaughan Problem-Based Learning: Goals for Learning and Strategies for Facilitating Cindy E. Hmelo-Silver and Howard S. Barrows Section 2. New Contexts for Problem-Based Learning Edited by Peggy A. Ertmer Essentials for PBL Implementation: Fostering Collaboration, Transforming Roles, and Scaffolding Learning Peggy A. Ertmer and Krista D. Glazewski Blended Learning and PBL: An Interactional Ethnographic Approach to Understanding Knowledge Construction In Situ Susan Bridges, Judith Green, Michael Botelho, and Peter CS Tsang Examination of Content Acquisition Using Problem-Based Learning in Career and Technical Education Courses at the Middle School Level Kimberly Hodges The GlobalEd 2 Simulations: Promoting Positive Academic Dispositions in Middle School Students in a Web-Based PBL Environment		17
Problem-Based Learning: Goals for Learning and Strategies for Facilitating Cindy E. Hmelo-Silver and Howard S. Barrows Section 2. New Contexts for Problem-Based Learning Edited by Peggy A. Ertmer Essentials for PBL Implementation: Fostering Collaboration, Transforming Roles, and Scaffolding Learning Peggy A. Ertmer and Krista D. Glazewski Blended Learning and PBL: An Interactional Ethnographic Approach to Understanding Knowledge Construction In Situ Susan Bridges, Judith Green, Michael Botelho, and Peter CS Tsang Examination of Content Acquisition Using Problem-Based Learning in Career and Technical Education Courses at the Middle School Level Kimberly Hodges The GlobalEd 2 Simulations: Promoting Positive Academic Dispositions in Middle School Students in a Web-Based PBL Environment		43
Section 2. New Contexts for Problem-Based Learning Edited by Peggy A. Ertmer Essentials for PBL Implementation: Fostering Collaboration, Transforming Roles, and Scaffolding Learning Peggy A. Ertmer and Krista D. Glazewski Blended Learning and PBL: An Interactional Ethnographic Approach to Understanding Knowledge Construction In Situ Susan Bridges, Judith Green, Michael Botelho, and Peter CS Tsang Examination of Content Acquisition Using Problem-Based Learning in Career and Technical Education Courses at the Middle School Level Kimberly Hodges The GlobalEd 2 Simulations: Promoting Positive Academic Dispositions in Middle School Students in a Web-Based PBL Environment		57
Essentials for PBL Implementation: Fostering Collaboration, Transforming Roles, and Scaffolding Learning Peggy A. Ertmer and Krista D. Glazewski Blended Learning and PBL: An Interactional Ethnographic Approach to Understanding Knowledge Construction In Situ Susan Bridges, Judith Green, Michael Botelho, and Peter CS Tsang Examination of Content Acquisition Using Problem-Based Learning in Career and Technical Education Courses at the Middle School Level Kimberly Hodges The GlobalEd 2 Simulations: Promoting Positive Academic Dispositions in Middle School Students in a Web-Based PBL Environment		tating 69
Transforming Roles, and Scaffolding Learning Peggy A. Ertmer and Krista D. Glazewski Blended Learning and PBL: An Interactional Ethnographic Approach to Understanding Knowledge Construction In Situ Susan Bridges, Judith Green, Michael Botelho, and Peter CS Tsang Examination of Content Acquisition Using Problem-Based Learning in Career and Technical Education Courses at the Middle School Level Kimberly Hodges The GlobalEd 2 Simulations: Promoting Positive Academic Dispositions in Middle School Students in a Web-Based PBL Environment		85
Blended Learning and PBL: An Interactional Ethnographic Approach to Understanding Knowledge Construction In Situ Susan Bridges, Judith Green, Michael Botelho, and Peter CS Tsang Examination of Content Acquisition Using Problem-Based Learning in Career and Technical Education Courses at the Middle School Level Kimberly Hodges The GlobalEd 2 Simulations: Promoting Positive Academic Dispositions in Middle School Students in a Web-Based PBL Environment	Transforming Roles, and Scaffolding Learning	89
in Career and Technical Education Courses at the Middle School Level Kimberly Hodges The GlobalEd 2 Simulations: Promoting Positive Academic Dispositions in Middle School Students in a Web-Based PBL Environment	Blended Learning and PBL: An Interactional Ethnographic Approach to Understanding Knowledge Construction In Situ	107 Sang
in Middle School Students in a Web-Based PBL Environment	in Career and Technical Education Courses at the Middle School Level	131
2000 200 200 200 200 200 200		ns 147

Section 3. Combining Problem-Based Learning With Other Interventions Edited by Heather Leary	161
Building Theory-Practice Nexus in Pre-Service Physics Teacher Education Through Problem-Based Learning Jennifer Yeo	165
Problem-Based Learning as the Instructional Approach to Field Learning in the Secondary School Setting Loretta M. W. Ho and Lung S. Chan	179
Distributing Scaffolding Across Multiple Levels: Individuals, Small Groups, and a Class of Students Sadhana Puntambekar	207
Preparation for Future Learning: Exploring the Efficacy of Problem-Based Learning and Cross-Curricular Experiences Karen Swan, Phil Vahey, Ken Rafanan, Tina Stanford, Louise Yarnall, Mark van 't Hooft, Annette Kratcoski, and Dale Cook	223
Problem-Based Learning as a Means of Revealing Unseen Academic Potential Shelagh A. Gallagher and James J. Gallagher	239
Drugs, Devices, and Desires: A Historical Exploration of Medical Technology Patangi K. Rangachari	261
Section 4. Summarizing and Assessing the Impact of Problem-Based Learning Edited by Andrew Walker	275
A Scientometric, Large-Scale Data, and Visualization-Based Analysis of the PBL Literature Hanjun Xian and Krishna Madhavan	281
A Meta-Analysis of Problem-Based Learning: Examination of Education Levels, Disciplines, Assessment Levels, Problem Types, Implementation Types, and Reasoning Strategies Andrew Walker, Heather Leary, and Mason Lefler	303
Exploring the Relationships Between Tutor Background, Tutor Training, and Student Learning: A Problem-Based Learning Meta-Analysis Heather Leary, Andrew Walker, Brett E. Shelton, and M. Harrison Fitt	331
PBL Effectiveness, Tensions, and Practitioner Implications Johannes Strobel and Angela van Barneveld	355
Epilogue: The Future of PBL Andrew Walker, Heather Leary, Peggy A. Ertmer, and Cindy E. Hmelo-Silver	373
Index	377