*Mathematics Framework*

Adopted by the State Board of Education on July 12, 2023

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## Chapter 1

Ainsworth, Shaaron, Peter Bibby, and David Wood. 2002. “Examining the Effects of Different Multiple Representational Systems in Learning Primary Mathematics.” *Journal of the Learning Sciences* 11: 25–61.

Blackwell, Lisa S, Kali H. Trzesniewski, and Carol S. Dweck. 2007. “Implicit Theories of Intelligence Predict Achievement Across an Adolescent Transition: A Longitudinal Study and an Intervention.” *Child Development* 78(1): 246–63.

Boaler, Jo, Lang Chen, Cathy Williams, and Montserrat Cordero. 2016. “Seeing as Understanding: The Importance of Visual Mathematics for Our Brain and Learning.” *Journal of Applied & Computational Mathematics* 5(5): 1–6.

Boaler, Jo, Jack Dieckmann, Graciela Pérez-Núñez, Kathy Sun, and Cathy Williams. 2018. “Changing Students Minds and Achievement in Mathematics: The Impact of a Free Online Student Course.” *Frontiers in Education* 3:26.

Bransford, John, Ann L. Brown, and Rodney R. Cocking. 2000. *How People Learn* (Vol. 11). Washington, DC: National Academy Press.

Burdman, Pamela, Kathy Booth, Chris Thorn, Peter R. Bahr, Jon McNaughtan, and Grant Jackson. 2018. “Multiple Paths Forward: Diversifying Mathematics as a Strategy for College Success.” WestEd and Just Equations.

Burnette, Jeni L., Joseph Billingsley, George C. Banks, Laura E. Knouse, Crystal L. Hoyt, Jeffrey M. Pollack, and Stefanie Simon. 2022. “A Systematic Review and Meta-analysis of Growth Mindset Interventions: For Whom, How, and Why Might Such Interventions Work?” *Psychological Bulletin*.

California Department of Education. n.d. *Test Results for California’s Assessments.* <https://caaspp-elpac.ets.org/caaspp/>.

California Department of Education. 2013. *California Common Core State Standards for Mathematics*. Sacramento: California Department of Education.

California Education and the Environment Initiative (CEEI). 2020. California’s Environmental Principles and Concepts. California Department of Resources Recycling and Recovery. <https://www.californiaeei.org/epc/>.

Callahan, Rebecca, Melissa Humphries, and Jenny Buontempo. 2020. “Making Meaning, Doing Math: High School English Learners, Student-led Discussion, and Math Tracking”. *International Multilingual Research Journal* 15(1): 82–103.

Canning, Elizabeth A., Katherine Muenks, Dorianne J. Green, and Mary C. Murphy. 2019. “STEM Faculty Who Believe Ability is Fixed Have Larger Racial Achievement Gaps and Inspire Less Student Motivation in their Classes.” *Science Advances* 5(2).

CAST. 2018. Universal Design for Learning Guidelines. [http://udlguidelines.cast.org](http://udlguidelines.cast.org/).

Charles, Randall. 2005. “Big Ideas and Understandings as the Foundation for Elementary and Middle School Mathematics,” *Journal of Mathematics Education Leadership* 7(3): 9–24.

Cheng, Peter C.-H. 2000. “Unlocking Conceptual Learning in Mathematics and Science with Effective Representational Systems.” *Computers & Education 33:* 109–130.

Common Core Standards Writing Team. 2022. Progressions for the Common Core State Standards for Mathematics (February 28, 2023). Tucson, AZ: Institute for Mathematics and Education, University of Arizona. <https://mathematicalmusings.org/wp-content/uploads/2023/02/Progressions.pdf>.

Council of the Great City Schools (CGCS). 2020. *Addressing Unfinished Learning after COVID-19 School Closures.*

Dana Center, Charles. A. 2019. *What Is Rigor in Mathematics Really?* Austin: University of Texas.

Daro, Phil, and Harold Asturias. 2019. *Branching Out: Designing High School Math Pathways for Equity*. Just Equations.

Deslauriers, Louis, Logan S. McCarty, Kelly Miller, Kristina Callaghan, and Greg Kestin. 2019. “Measuring Actual Learning Versus Feeling of Learning in Response to Being Actively Engaged in the Classroom.” *Proceedings of the National Academy of Sciences of the United States of America* 116(39): 19251–19257.

Devlin, Keith. 2003. *Sets, Functions, and Logic: An Introduction to Abstract Mathematics*. Boca Raton, FL: Chapman and Hall/CRC Press.

Devlin, Keith. 2006. *The Math Instinct: Why You're a Mathematical Genius (Along with Lobsters, Birds, Cats, and Dogs)*. New York: Thunder’s Mouth Press.

Dweck, Carol. 2008. *Mindset: The New Psychology of Success*. New York: Ballantine Books.

Elia, Iliada, Areti Panaoura, Anastasia Eracleous, and Athanasios Gagatsis. 2007. “Relations Between Secondary Pupils’ Conceptions about Functions and Problem Solving in Different Representations.” *International Journal of Science and Mathematics Education* 5: 533–556.

Feigenson, Lisa, Stanislas Dehaene, and Elizabeth Spelke. 2004. “Core Systems of Number.” *Trends in Cognitive Sciences* 8(7): 307–314.

Freiman, Victor. 2018. “Complex and Open-ended Tasks to Enrich Mathematical Experiences of Kindergarten Students.” *Mathematical Creativity and Mathematical Giftedness: Enhancing Creative Capacities in Mathematically Promising Students*, 373–404. Cham, Switzerland: Springer.

Gagatsis, Athanasios and Myria Shiakalli. 2004. “Ability to Translate from One Representation of the Concept of Function to Another and Mathematical Problem Solving.” *Educational Psychology* 24: 645–657.

Getz, Amy, Heather R. Ortiz, Rebecca Hartzler, and Francesca Leahy. 2016. *The Case for Mathematics Pathway*s. Charles A. Dana Center.

González, Norma, Luis C. Moll, and Cathy Amanti, Eds. 2006.*Funds of Knowledge: Theorizing Practices in Households, Communities, and Classrooms*. New York: Routledge.

Good, Catherine, Aneeta Rattan, and Carol S. Dweck. 2012. Why do women opt out? Sense of belonging and women’s representation in mathematics. *Journal of Personality and Social Psychology*, 102, 700–717.

Gresalfi, Melissa, Taylor Martin, Victoria Hand, and James Greeno. 2009. “Constructing Competence: An Analysis of Student Participation in the Activity Systems of Mathematics Classrooms.” *Educational Studies in Mathematics* 70(1): 49–70.

Guha, Roneeta, Tony Wagner, Linda Darling-Hammond, Terri Taylor, and Diane Curtis. 2018. The Promise of Performance Assessments: Innovations in High School Learning and College Admission. Learning Policy Institute. Retrieved from <https://learningpolicyinstitute.org/sites/default/files/product-files/Promise_Performance_Assessments_BRIEF.pdf>.

Hammond, Zaretta. 2014. *Culturally Responsive Teaching and the Brain*. Thousand Oaks, CA: Corwin Press.

Heyman, Gail D. 2008. “Talking about Success: Implications for Achievement Motivation.” *Journal of Applied Developmental Psychology* 29(5): 361–370.

Hyde, D. C. 2011. “Two Systems of Non-symbolic Numerical Cognition.” *Frontiers In Human Neuroscience* 5, 150.

Iuculano, Theresa, Miriam Rosenberg-Lee, Jennifer Richardson, Caitlin Tenison, Lynn Fuchs, Kaustubh Supekar, and Vinod Menon. 2015. “Cognitive Tutoring Induces Widespread Neuroplasticity and Remediates Brain Function in Children with Mathematical Learning Disabilities.” *Nature Communications* 6(1): 1–10.

Lambert, Rachel, and Trisha Sugita. 2016. “Increasing Engagement of Students with Learning Disabilities in Mathematical Problem-solving and Discussion.” *Support for Learning* 31: 347–366.

Lieberman, Gerald. 2013. *Education and the Environment: Creating Standards-Based Programs in Schools and Districts*. Cambridge, MA: Harvard Education Press.

Martin, Danny B. 2009. “Researching Race in Mathematics Education.” *Teachers College Record* 11(2): 295–338.

Moschkovich, Judit. 2013. “Principles and Guidelines for Equitable Mathematics Teaching Practices and Materials for English Language Learners.” *Journal of Urban Mathematics Education* 6(1): 45–57.

Moses, Robert, and Charles E. Cobb. 2002. *Radical Equations: Civil Rights from Mississippi to the Algebra Project*. Boston: Beacon Press.

Nasir, Na’ilah Suad. 2002. “Identity, Goals, and Learning: Mathematics in Cultural Practice.” *Mathematical Thinking and Learning* 4(2-3): 213–247.

National Assessment of Educational Progress. 2022. State Achievement-Level Results. <https://www.nationsreportcard.gov/mathematics/states/achievement/?grade=4>.

National Council of Supervisors of Mathematics (NCSM) & TODOS: Mathematics for ALL. 2016. Mathematics Education Through the Lens of Social Justice: Acknowledgement, Actions, and Accountability.

National Research Council. 2000. *How People Learn: Brain, Mind, Experience, and School: Expanded Edition*. Washington, DC: The National Academies Press.

Organization for Economic Co-operation and Development (OECD). 2021. *Mathematics Performance (PISA).* <https://data.oecd.org/pisa/mathematics-performance-pisa.htm>.

Piaget, Jean, and Margaret Cook. 1952. *The Origins of Intelligence in Children* 8(5): 18. New York: International Universities Press.

Picard, Emile. 1905. “On the Development of Mathematical Analysis and Its Relation to Certain Other Sciences.” *Bulletin of the American Mathematical Society* 11(8): 404–426.

Rege, Mari, Paul Hanselman, Ingeborg F. Solli, Carol S. Dweck, Sten Ludvigsen, Eric Bettinger, ... and Davis S. Yeager. 2021. “How Can We Inspire Nations of Learners? An Investigation of Growth Mindset and Challenge-seeking in Two Countries.” *American Psychologist* 76(5), 755.

Report by State Superintendent of Public Instruction Tom Torlakson’s Environmental Literacy Task Force. 2015. *A Blueprint for Environmental Literacy: Educating Every Student In, About, and For the Environment*. Sacramento: Californians Dedicated to Education Foundation.

Schifter, Deborah. 2010. “Representation-based Proof in the Elementary Grades.” In *Teaching and Learning Proof Across the Grades* (71–86). New York: Routledge.

Schmidt, William H., Richard T. Houang, and Leland S. Cogan. 2002. “A Coherent Curriculum: The Case of Mathematics.” The American Educator 26: 10.

Sokolowski, H. M., Hawes, Z., & Ansari, D. 2023. “The Neural Correlates of Retrieval and Procedural Strategies in Mental Arithmetic: A Functional Neuroimaging Meta‐analysis.” *Human Brain Mapping* 44(1), 229–244.

Stein, Mary, Margaret Smith, Marjorie Henningsen, and Edward Silver. 2000. *Implementing Standards-based Mathematics Instruction: A Casebook for Professional Development*, p. 16. New York: Teachers College Press.

Sun, Kathy Liu. 2019. “The Mindset Disconnect in Mathematics Teaching: A Qualitative Analysis of Classroom Instruction.” *The Journal of Mathematical Behavior* 56: 100706.

Turner, Erin E., and Sylvia Celedón-Pattichis. 2011. “Mathematical Problem Solving Among Latina/o Kindergartners: An Analysis of Opportunities to Learn.” *Journal of Latinos and Education*10(2): 146–169.

Vogel, S. E., & De Smedt, B. 2021. “Developmental Brain Dynamics of Numerical and Arithmetic Abilities.” *npj Science of Learning* 6(1), 22.

Walton, Gregory M., and David S. Yeager. 2020. “Seed and Soil: Psychological Affordances in Contexts Help to Explain Where Wise Interventions Succeed or Fail.” *Current Directions in Psychological Science*, 29(3): 219–226.

Williams, Talithia. 2018. *Power in Numbers: The Rebel Women of Mathematics*. New York: Race Point Publishing.

Yeager, David S., Paul Hanselman, Gregory M. Walton, Jared S. Murray, Robert Crosnoe, Chandra Muller, Elizabeth Tipton, Barbara Schneider, Chris S. Hulleman, Cintia P. Hinojosa, David Paunesku, Carissa Romer, Kate Flint, Alice Roberts, Jill Trott, Ronaldo Iachan, Jenny Buontempo, Sophia Man Yang, Carlos M. Carvalho, P. Richard Hahn, Maithreyi Gopalan, Pratik Mhatre, Ronald Ferguson, Angela L. Duckworth, Carol S. Dweck. 2019. “A National Experiment Reveals Where a Growth Mindset Improves Achievement.” *Nature*, 573(7774): 364–369.

Yeager, David S., Carroll, Jamie M., Buontempo, Jenny, Cimpian, Andrei, Woody, Spencer, Crosnoe, Robert, ... and Dweck, Carol S. 2022. “Teacher Mindsets Help Explain Where a Growth-mindset Intervention Does and Doesn’t Work.” *Psychological Science* 33(1), 18–32.

## Chapter 2

Aguirre, Julia M. 2012 Developing Culturally Responsive Mathematics Teaching. Fall 2012 TODOS Newsletter TODOS- Mathematics For All. [http://www.todos-math.org](http://www.todos-math.org/).

Baxter, Juliet A., John Woodward, and Deborah Olson. 2005. “Writing in Mathematics: An Alternative Form of Communication for Academically Low-achieving Students.” *Learning Disabilities Research and Practice* 20(2): 119–135.

Bieda, Kristen N. & Megan Staples. 2020. “Justification as an Equity Practice.” *Mathematics Teacher: Learning and Teaching PK-12* 113(2): 102–108.

Berry, Robert, Basil Conway, Brian Lawler, and John Staley. 2020. *Mathematics Lessons to Explore, Understand, and Respond to Social Justice*. Corwin Mathematics Series. Thousand Oaks, CA: Corwin Press.

Bishop, Jessica Pierson. 2012. “‘She's Always Been the Smart One. I've Always Been the Dumb One’: Identities in the Mathematics Classroom.” *Journal for Research in Mathematics Education* *43*(1): 34–74.

Boaler, Jo, and James G. Greeno. 2000. “Identity, Agency, and Knowing in Mathematics Worlds.” In *Multiple Perspectives on Mathematics Teaching and Learning*, Boaler, Jo (ed.). Westport, CT: Praeger Publishers.

Boaler, Jo, and Megan Staples. 2008. “Creating Mathematical Futures Through an Equitable Teaching Approach: The Case of Railside School.” *Teachers College Record* 110(3): 608–645.

Boaler, Jo, Lang Chen, Cathy Williams, and Montserrat Cordero. 2016. “Seeing as Understanding: The Importance of Visual Mathematics for our Brain and Learning.” *Journal of Applied and Computational Mathematics* 5(5).

Boaler, Jo. 2016. *Mathematical Mindsets: Unleashing Students’ Potential through Creative Math, Inspiring Messages and Innovative Teaching*. Chappaqua, NY: Jossey-Bass/Wiley.

Boykin, A. Wade and Pedro Noguera. 2011. *Creating the Opportunity to Learn: Moving from Research to Practice to Close the Achievement Gap*. Alexandria, VA: ASCD.

Brady, Shannon T., Geoffrey L. Cohen, Shoshana N. Jarvis, and Gregory M. Walton. 2020. “A Brief Social-belonging Intervention in College Improves Adult Outcomes for Black Americans.” *Science Advances* 6(18).

Bransford, John, Nancy Vye, Reed Stevens, Pat Kuhl, Dan Schwartz, Philip Bell, Andy Meltzoff, Brigid Barron, Roy Pea, Byron Reeves, Jeremy Roschelle, and Nora Sabelli. 2005. “Learning Theories and Education: Toward a Decade of Synergy.” In P. Alexander and P. Winne (Eds.), *Handbook of Educational Psychology* (2nd ed., 209–244). Mahwah, NH: Erlbaum.

Bright, Anita. 2016. “Education for Whom? Word Problems as Carriers of Cultural Values.” *Taboo: The Journal of Culture and Education* 15(1).

Cabana, Carlos, Barbara Shreve, and Estelle Woodbury. 2014. “Working Toward an Equity Pedagogy.” In Na’ilah Nasir, Carlos Cabana, Barbara Shreve, Estelle Woodbury, and Nicole N. Louie (Eds.) *Mathematics for Equity: A Framework for Successful Practice*. New York: Teachers College Press.

California Department of Education. n.d.a. *Test Results for California’s Assessments.* <https://caaspp-elpac.ets.org/caaspp/>.

California Department of Education. 2012. *California English Language Development Standards Kindergarten Through Grade 12.* <https://www.cde.ca.gov/sp/el/er/documents/eldstndspublication14.pdf>.

California Department of Education. n.d.b. *2021-22 Four-Year Adjusted Cohort Graduation Rate.* <https://dq.cde.ca.gov/dataquest/dqcensus/CohRate.aspx?cds=00&agglevel=state&year=2021-22>.

California Department of Education. 2021a. California Common Core State Standards and California English Language Development Standards Resources. <https://www.cde.ca.gov/re/cc/eldresources.asp>.

California Department of Education. 2021b. *Asset-Based Pedagogies*. <https://www.cde.ca.gov/pd/ee/assetbasedpedagogies.asp>.

California Department of Education. 2021c. *Digital Learning Integration and Standards Guidance*. <https://www.cde.ca.gov/ci/cr/dl/dlintergstdsguidance.asp>.

California Education Learning Lab. 2019. *Enrollment and Completion Gaps in STEM Higher Education*. <https://calearninglab.org/wp-content/uploads/2021/02/20190916-Learning_Lab_Brief-Enrollment_and_Completion_Gaps.pdf>

CAST (2018). Universal Design for Learning Guidelines version. [https://udlguidelines.cast.org](https://udlguidelines.cast.org/).

Carpenter, T.P., Fennema, E.H., Franke, M. L., Levi, L., and Empson, S B. 2014. *Children’s Mathematics: Cognitively Guided Instruction*. Portsmouth, NH: Heinemann.

Carter, Prudence L., and Kevin G. Welner. 2013. *Closing the Opportunity Gap: What American Must Do to Give Every Child an Even Chance*. Cambridge: Oxford University Press.

Chao, Theodore, and DeAndrea Jones. 2016. “That’s Not Fair and Why: Developing Social Justice Activists in Pre-K.” In Aguirre, Julia M., and Marta Civil (Eds.) *Teaching Excellence and Equity in Mathematics: Special Issue, Mathematics Education: Through the Lens of Social Justice* 7(1) 15–21.

Chapin, Suzanne H., Catherine O'Connor, and Nancy C. Anderson. 2013. *Classroom Discussions: Using Math Talk to Help Students Learn, Grades K–6*. Boston: Math Solutions.

Chapin, Suzanne H., Catherine O’Connor, and Nancy Canavan Anderson. 2013. *Talk Moves: A Teacher’s Guide for Using Classroom Discussions in Math, 3rd Edition.* Chicago, IL: Math Solutions.

Cirillo, Michelle and Jennifer M. Langer-Osuna. 2018. “Using Classroom Discourse as a Tool for Formative Assessment.” In Edward A. Silver and Valerie L. Mills, Eds., *A Fresh Look at Formative Assessment in Mathematics Teaching*. Reston, VA: National Council of Teachers of Mathematics.

Clements, Douglas H. and Julie Sarama. 2014. *Learning and Teaching Early Math: The Learning Trajectories Approach (2nd ed.)*. New York, NY: Routledge.

Cohen, Elizabeth G., and Rachel A. Lotan. 1997. *Working for Equity in Heterogeneous Classrooms: Sociological Theory in Practice*. Sociology of Education Series. New York: Teachers College Press.

Conger, Dylan, Mark C. Long, and Patrice Iatarola. 2009. “Explaining Race, Poverty, and Gender Disparities in Advanced Course-taking.” *Journal of Policy Analysis and Management*, *28*(4): 555–576.

Darling, Felicia. 2019. *Teachin' It!: Breakout Moves that Break Down Barriers for Community College Students*. New York: Teachers College Press.

Darragh, Lisa. 2015. “Recognising ‘Good at Mathematics’: Using a Performative Lens for Identity.” *Mathematics Education Research Journal*, *27*(1): 83–102.

Demi. 1997. *One Grain of Rice: A Mathematical Folk*tale. New York: Scholastic Press.

Deslauriers, Louis, Logan S. McCarty, Kelly Miller, Kristina Callaghan, and Greg Kestin. 2019. “Measuring Actual Learning Versus Feeling of Learning in Response to Being Actively Engaged in the Classroom.” *Proceedings of the National Academy of Sciences* 116(39): 19251–19257.

Duckworth, Eleanor. 2006. *The Having of Wonderful Ideas and Other Essays on Teaching and Learning*. New York: Teachers College Press.

The Education Trust. 2018. *Checking In: Are Math Assignments Measuring Up?* Washington, DC: The Education Trust. Available at: <https://edtrust.org/wp-content/uploads/2014/09/CheckingIn_MATH-ANALYSIS_FINAL_5.pdf>

Esmonde, Indigo, and Beverly Caswell. 2010. “Teaching Mathematics for Social Justice in Multicultural, Multilingual Elementary Classrooms.” *Canadian Journal of Science, Mathematics and Technology Education* 10(3): 244–254.

Esmonde, Indigo, and Jennifer M. Langer-Osuna. 2011. “Power in Numbers: Student Participation in Mathematical Discussions in Heterogeneous Spaces.” *Journal for Research in Mathematics Education*: 44 (1): 288–315.

Franklin, Christine, and Bargagliotti, Anna. 2020. “Introducing GAISE II: A Guideline for Precollege Statistics and Data Science Education.” *Harvard Data Science Review 2*(4).

Featherstone, Helen, Sandra Crespo, Lisa Jilk, Joy Oslund, Amy Parks, and Marcy Wood. 2011. *Smarter Together! Collaboration and Equity in the Elementary Math Classroom.* Reston, VA: National Council of Teachers of Mathematics.

Foote, Mary Q., and Rachel Lambert. 2011. “I Have a Solution to Share: Learning Through Equitable Engagement in a Mathematics Classroom.” *Canadian Journal of Science, Mathematics and Technology Education* 11(3): 247–260.

Freeman, Scott, Sarah L. Eddy, Miles McDonough, Michelle K. Smith, Nnadozie Okoroafor, Hannah Jordt, and Mary Pat Wenderoth. 2014. “Active Learning Increases Student Performance in Science, Engineering, and Mathematics.” *Proceedings of the National Academy of Sciences* 111(23): 8410–8415.

Goffney, Imani, Rochelle Gutiérrez, and Boston. Melissa. 2018. *Annual Perspectives in Mathematics Education: Rehumanizing Mathematics for Black, Indigenous and Latinx Students*. Reston, VA: National Council of Teachers of Mathematics.

González, Norma, Luis C. Moll, and Cathy Amanti, Eds. 2006. *Funds of Knowledge: Theorizing Practices in Households, Communities, and Classrooms*. New York: Routledge.

Goodman, Joshua. 2019. “The Labor of Division: Returns to Compulsory High School Math Coursework.” *Journal of Labor Economics*, *37*(4): 1141–1182.

Gutiérrez, Rochelle. 2009. “Framing Equity: Helping Students ‘Play the Game’ and ‘Change the Game.’” *Teaching for Excellence and Equity in Mathematics* 1(1): 4–8.

Gutiérrez, Rochelle. 2013. “The Sociopolitical Turn in Mathematics Education.” *Journal for Research in Mathematics Education* 44(1), 37–68.

Gutiérrez, Rochelle. 2018. “The Need to Rehumanize Mathematics.” In I. Goffney, R. Gutiérrez, and M. Boston. *Annual Perspectives in Mathematics Education: Rehumanizing Mathematics for Black, Indigenous and Latinx Students*. Reston, VA: National Council of Teachers of Mathematics.

Gutstein, Eric. 2003. “Teaching and Learning Mathematics for Social Justice in an Urban Latino School.” *Journal for Research in Mathematics Education* 34(1): 37–73.

Gutstein, Eric. 2006. *Reading and Writing the World with Mathematics: Toward a Pedagogy for Social Justice*. New York: Routledge.

Gutstein, Eric, and Bob Peterson. 2005. *Rethinking Mathematics: Teaching Social Justice by the Numbers*. Milwaukee, WI: Rethinking Schools.

Hand, Victoria M. 2014. “‘Taking Up Our Space’: Becoming Competent Learners in Mathematics Classrooms.” In Na’ilah Nasir, Carlos Cabana, Barbara Shreve, Estelle Woodbury, and Nicole Louie (Eds.) *Mathematics for Equity: A Framework for Successful Practice*. New York: Teachers College Press.

Hammond, Zaretta L. 2020. *Culturally Responsive Teaching and The Brain: Promoting Authentic Engagement and Rigor Among Culturally and Linguistically Diverse Students*. Thousand Oaks, CA: Corwin Press.

Hammond, Zaretta. 2021. *Zaretta Hammond on Equity and Student Engagement*. <https://www.ascd.org/el/articles/zaretta-hammond-on-equity-and-student-engagement>.

Hanushek, Eric A., Paul E. Peterson, Laura M. Talpey, and Ludger Woessmann. 2019. *The Unwavering SES Achievement Gap: Trends in US Student Performance (No. w25648)*. National Bureau of Economic Research.

Hiebert, J., & Wearne, D. 1993. “Instructional tasks, Classroom Discourse, and Students' Learning in Second-grade Arithmetic.” *American Educational Research Journal* 30(2), 393–425.

Joseph, Nicole M., Meseret Hailu, and Denise Boston. 2017. “Black Women’s and Girls’ Persistence in the P–20 Mathematics Pipeline: Two Decades of Children, Youth, and Adult Education Research.” *Review of Research in Education* 41(1): 203–227.

Kokka, Kari. 2019. “Healing-informed Social Justice Mathematics: Promoting Students’ Sociopolitical Consciousness and Well-being in Mathematics Class.” *Urban Education* 54(9): 1179–1209.

Krainer, Konrad. 1993. “Powerful Tasks: A Contribution to a High Level of Acting and Reflecting in Mathematics Instruction.” *Educational Studies in Mathematics* 24(1): 65–93.

Krause, Marina. 2000. *Multicultural Mathematics Materials*. Reston, VA: National Council of Teachers of Mathematics.

Ladson-Billings, Gloria. 2009. *The Dream-Keepers. Successful Teachers of African-American Children*. San Francisco: Jossey-Bass.

Lagunoff, Rachel, Pamela Spycher, Robert Linquanti, Cathy Carroll, and Kathy DiRanna. 2015. *Integrating the CA ELD Standards into K–12 Mathematics and Science Teaching and Learning*. WestEd.org.

LaMar, Tanya, Miriam Leshin, and Jo Boaler. 2020. "The Derailing Impact of Content Standards–an Equity Focused District Held Back by Narrow Mathematics." *International Journal of Educational Research* *Open* 1(2020): 100015.

Lambert, Rachel. 2020. Increasing Access to Universally Designed Mathematics Classrooms. Stanford, CA: PACE.

Lambert, Rachel, and Trisha Sugita. 2016. “Increasing Engagement of Students with Learning Disabilities in Mathematical Problem-solving and Discussion.” *Support for Learning* 31: 347–366.

Langer-Osuna, Jennifer. M. 2011. “How Brianna Became Bossy and Kofi Came Out Smart: Understanding the Trajectories of Identity and Engagement for Two Group Leaders in a Project Based Mathematics Classroom.” *Canadian Journal of Science, Mathematics and Technology Education* 11(3): 207–225.

Langer-Osuna, Jennifer M. 2014. “From Getting ‘Fired’ to Becoming a Collaborator: A Case of the Co-construction of Identity and Engagement in a Project-based Mathematics Classroom.” *Journal of the Learning Sciences* 24(1): 53–92.

Langer-Osuna, Jennifer M., and Indigo Esmonde. 2017. “Identity in Research on Mathematics Education.” *Compendium for Research in Mathematics Education,* 637–648.

Langer-Osuna, Jennifer, Jen Munson, Emma Gargroetzi, Immanuel Williams, and Rosa Chavez. 2020. “‘So, What Are We Working On?’: Examining Shifts in Student Authority Relations During Collaborative Mathematics Activity in a Fourth Grade Classroom.” *Educational Studies in Mathematics* 104(2)*.*

Larnell, Gregory V., Erika C. Bullock, and Christopher C. Jett. 2016. “Rethinking Teaching and Learning Mathematics for Social Justice From a Critical Race Perspective.” *Journal of Education* 196(1): 19–29.

Lawrence, Jacob, and Walter Myers. 1995. *The Great Migration: An American Story.* New York: Harper Collins.

Lee, Carol D. 2001. “Is October Brown Chinese? A Cultural Modeling Activity System for Underachieving Students.” *American Educational Research Journal* 38(1): 97–141.

Leonard, Jacqueline, Cara M. Moore, and Wanda Brooks. 2013. “Multicultural Children’s Literature as a Context for Teaching Mathematics for Cultural Relevance in Urban Schools.” *Urban Review* 46(3): 325–348.

Lerman, Stephen. 2000. “The Social Turn in Mathematics Education Research.” *Multiple Perspectives on Mathematics Teaching and Learning* 1*:* 19–44. Westport, CT: Ablex Pub.

Long, Mark C., Dylan Conger, and Patrice Iatarola. 2012. “Effects of High School Course-taking on Secondary and Postsecondary Success.” *American Educational Research Journal* *49* (2): 285–322.

Louie, Nicole L. 2017. “The Culture of Exclusion in Mathematics Education and its Persistence in Equity-oriented Teaching.” *Journal for Research in Mathematics Education* 48(5): 488–519.

Maaman, Martina, Siti Mistima Maat, and Zanaton H. Iksan. 2022. “The Influence of Student Engagement on Mathematical Achievement Among Secondary School Students,” *Mathematics, 10*(1), 41.

Mathematics Assessment Project. n.d. *Welcome to the Mathematics Assessment Project.* <https://www.map.mathshell.org/index.php>.

Mendez, Phil, and Carole Byard. 1989. *The Black Snowman*. New York: Scholastic.

Milner, H. Richard, and Judson C. Laughter. 2015. “But Good Intentions Are Not Enough: Preparing Teachers to Center Race and Poverty.” *The Urban Review* 47(2): 341–363.

Mlodinow, Leonard. 2018. *Elastic: Flexible Thinking in a Time of Change.* New York: Pantheon Books.

Moll, Luis C., Cathy Amanti, Deborah Neff, and Norma Gonzalez. 1992. “Funds of Knowledge for Teaching: Using a Qualitative Approach to Connect Homes and Classrooms.” *Theory Into Practice* 31(2): 132–141.

Möller, Jens, Steffen Zitzmann, Friederike Helm, Nils Machts, and Fabian Wolff. 2020. “A Meta-analysis of Relations between Achievement and Self-concept.” *Review of Educational Research, 90*(3): 376–419.

Moschkovich, Judit. 1999. “Supporting the participation of English language learners in mathematical discussions.” *For the Learning of Mathematics* 19(1): 11–19.

Moschkovich, Judit. 2009. “Using Two Languages When Learning Mathematics.” *Educational Studies in Mathematics* 64 (2): 121–144.

Moschkovich, Judit. 2013. “Principles and Guidelines for Equitable Mathematics Teaching Practices and Materials for English Language Learners.” *Journal of Urban Mathematics Education* 6(1): 45–47.

Moschkovich, Judit. 2014. “Building on Student Language Resources During Classroom Discussions.” In M. Civil and E. Turner (Eds.) *The Common Core State Standards in Mathematics for English Language Learners: Grades K–8*. Alexandria, VA: TESOL International Association.

Moses, Robert P., and Charles E. Cobb. 2001. *Radical Equations: Math Literacy and Civil Rights*. Boston: Beacon Press.

Muñiz, Jenny. 2019. *Culturally Responsive Teaching: A 50-State Survey of Teaching Standards.* Published by Education Policy. Retrieved from <https://newamerica.org/education-policy/reports/culturally-responsive-teaching/>.

Munson, Jen. 2018. *In the Moment: Conferring in the Elementary Math Classroom*. Portsmouth, NH: Heinemann.

National Academies of Sciences, Engineering, and Medicine (NASEM). 2018. *How People Learn II: Learners, Contexts, and Cultures*. Washington, DC: The National Academies Press.

National Research Council 2000. *How People Learn: Brain, Mind, Experience, and School: Expanded Edition.* Washington, DC: The National Academies Press.

National Research Council. 2001. *Adding It Up: Helping Children Learn Mathematics*. Washington, DC: National Academies Press.

Nasir, Na’ilah Suad, Ann S. Rosebery, Beth Warren, and Carol D. Lee. 2014. “Learning as a Cultural Process: Achieving Equity Through Diversity.” In R. K. Sawyer (Ed.), *Cambridge Handbook of the Learning Sciences* (2nd ed., 686–706). Cambridge University Press.

National Council of Teachers of Mathematics (NCTM). 2014a. *Access and Equity in Mathematics Education.* <https://www.nctm.org/uploadedFiles/Standards_and_Positions/Position_Statements/Access_and_Equity.pdf>.

NCTM. 2014b. *Principles to Actions: Ensuring Mathematical Success for All*.

NCTM. 2020. *Catalyzing Change in High School Mathematics: Initiating Critical Conversations*. Reston, VA: National Council of Teachers of Mathematics.

NCTM Research Committee. 2018. “Asset-based Approaches to Equitable Math Education Research and Practice.” *Journal for Research in Mathematics Education, 49*(4), 373–389.

Oakes, Jeannie. 1999. “Limiting Students’ School Success and Life Chances: The Impact of Tracking.” In A. C. Ornstein, L. S. Behar-Horenstein, and E. F. Pajak (Eds.), *Contemporary Issues in Curriculum* (2nd ed., pp. 224–237). Allyn & Bacon.

Organisation for Economic Co-operation and Development. 2014. “*PISA 2012* Results in Focus: What 15-year-olds Know and What They Can Do with What They Know.”Retrieved from <https://www.oecd.org/pisa/keyfindings/pisa-2012-results-overview.pdf>.

Parks, Amy Noelle. 2015. *Exploring Mathematics Through Play in the Early Childhood Classroom.* Early Childhood Education Series. New York: Teachers College Press.

Perez, L. King. 2002. *First Day in Grapes*. New York: Lee & Low Books.

Plumb, Amy, Carla M. Roberts-Caudle, Frances K. Harper, and Durrell A. Jones. 2017. “Flint, Michigan, Water Crisis: Connecting to Local Issues in Mathematics Classrooms.” *Teaching Children Mathematics 23*(9): 518-520.

Reardon, Sean, Chris Doss, Josh Gagné, Rebecca Gleit, Angela Johnson, and Victoria Sosina. 2018. “A Portrait of Educational Outcomes in California.” *Getting Down to Facts II*.

Reardon, Sean F. 2019. “Educational Opportunity in Early and Middle Childhood: Using Full Population Administrative Data to Study Variation by Place and Age.” *RSF: The Russell Sage Foundation Journal of* *the Social Science* 5(2): 40–68.

Rivas‐Drake, Deborah, Eleanor K. Seaton, Carol Markstrom, Stephen Quintana, Moin Syed, Richard M. Lee, Seth J. Schwartz, Adriana J. Umaña-Taylor, Sabine French, Tiffany Yip.Ethnic and Racial Identity in the 21st Century Study Group. 2014. “Ethnic and Racial Identity in Adolescence: Implications for Psychosocial, Academic, and Health Outcomes*.” Child Development* 85(1): 40–57.

Rogoff, Barbara. 2003. *The Cultural Nature of Human Development.* Oxford University Press.

Schoenfeld, Alan H. 2002. “Making Mathematics Work for All Children: Issues of Standards, Testing, and Equity.” *Educational Researcher* 31(1):13–25.

Schwartz, Daniel, and John Bransford. 1998. “A Time for Telling.” *Cognition and Instruction* 16(4): 475–522.

Shah, Niral. 2017. “Race, Ideology, and Academic Ability: A Relational Analysis of Racial Narratives in Mathematics.” *Teachers College Record* 119 (070304).

Simpson, Amber, Stefani Mokalled, Lou Ann Ellenburg, and S. Megan Che. 2014. “A Tool for Rethinking Teachers’ Questioning.*” Mathematics Teaching in the Middle School* 20(5): 294–302.

Stein, Margaret K., and Suzanne Lane. 1996. Instructional Tasks and the Development of Student Capacity to Think and Reason: An Analysis of the Relationship between Teaching and Learning in a Reform Mathematics Project. *Educational Research and Evaluation* 2:1, 50–80.

Stein, Mary, Margaret Smith, Marjorie Henningsen, and Edward Silver. 2000. *Implementing Standards-based Mathematics Instruction: A Casebook for Professional Development*, p. 16. New York: Teachers College Press.

Smith, Margaret S., and Mary Kay Stein. 2018. *5 Practices for Orchestrating Productive Mathematics Discussions, 2nd edition*. Reston, VA: National Council of Teachers of Mathematics.

Su, Francis. 2020. *Mathematics for Human Flourishing*. New Haven: Yale University Press.

Sullivan, Peter. 2002. *Good Questions for Math Teaching*. Boston: Math Solutions.

The Teaching Maths for Social Justice Network (TMSJN). n.d. <https://mathsocialjustice.org/>.

Thanheiser, Eva, and Amanda Sugimoto. 2022. “Justification in the Context of Elementary Grades: Justification to Develop and Provide Access to Mathematical Reasoning.” In Kristen N. Bieda, AnnaMarie Conner, Karl W. Kosko, and Megan Staples (Eds.), *Conceptions and Consequences of Mathematical Argumentation, Justification, and Proof:* pp. 35–48. New York: Springer.

TNTP. 2018. “The Opportunity Myth: What Students Can Show Us About How School Is Letting Them Down—and How to Fix It.” <https://tntp.org/assets/documents/TNTP_The-Opportunity-Myth_Web.pdf>.

TODOS. n.d. *TODOS: Mathematics for ALL: Excellence and Equity in Mathematics.* <https://www.todos-math.org/assets/documents/TEEM/teem7_final1.pdf>.

TRU Framework. 2018. Teaching for Robust Understanding. <https://truframework.org/>.

Turner, Erin E., and Sylvia Celedón-Pattichis. 2011. “Mathematical Problem Solving Among Latina/o Kindergartners: An Analysis of Opportunities to Learn.” *Journal of Latinos and Education* 10(2): 146–169.

Turner, Erin, Higinio Dominguez, Luz Maldonado, and Susan Empson. 2013. “English Learners’ Participation in Mathematical Discussion: Shifting Positionings and Dynamic Identities.” *Journal for Research in Mathematics Education* 44(1), Equity Special Issue: 199–234.

Wager, Anita. 2013. “Practices that Support Mathematics Learning in a Play-Based Classroom.” In: English, Lyn D., and Joanne T. Mulligan (eds). *Reconceptualizing Early Mathematics Learning*. Advances in Mathematics Education. Dordrecht: Springer.

Walton, Gregory, Geoffrey L. Cohen, David Cwir, Steven J. Spencer. 2012. “Mere Belonging: The Power of Social Connections.” *Journal of Personality and Social Psychology* 102(3): 513–532.

Wilson, Alison, and Angela Urick. 2021. “Cultural Reproduction Theory and Schooling: The Relationship Between Student Capital and Opportunity to Learn.” *American Journal of Education 127:* 193–232.

Wolfram, Conrad. 2020. *The Math(s) Fix: An Education Blueprint for the AI Age*. Champaign, IL: Wolfram Media Inc.

Wong, Ngai-Ying, Chi-Chung Lam, and Qi-Ping Kong. 2003. “The Relationship Between Student Engagement and Learning Outcome in Mathematics.” [*Curriculum and Teaching*](https://www.ingentaconnect.com/content/jnp/ct;jsessionid=2ukdnonmb7ukb.x-ic-live-02) *18*(1): 81-95.

Xenofontos, Constantinos. 2019. *Equity in Mathematics Education: Addressing a Changing World*. Information Age Publishing.

Xenofontos, Constantinos, Sally Fraser, Andrea Priestley, and Mark Priestley, M. 2021. “Mathematics Teachers and Social Justice: A Systematic Review of Empirical Studies.” *Oxford Review of Education 47*(2): 135–151.

Yeh, Cathery, and Brande M. Otis. 2019. “Mathematics for Whom: Reframing and Humanizing Mathematics.” Occasional Paper Series 41. Retrieved from <https://educate.bankstreet.edu/occasional-paper-series/vol2019/iss41/8/>.

Youcubed. n.d. *The Four 4s*. <https://www.youcubed.org/tasks/the-four-4s/>.

## Chapter 3

Boaler, Jo, Jen Munson, and Cathy Williams. 2018. What is Mathematical Beauty? Teaching through Big Ideas and Connections. Youcubed.

Boaler, Jo. 2016. *Mathematical Mindsets: Unleashing Students’ Potential through Creative Math, Inspiring Messages and Innovative Teaching*. Chappaqua, NY: Jossey-Bass/Wiley.

California Department of Education. 2015a. *Mathematics Framework for California Public Schools: Kindergarten Through Grade Twelve.* California Department of Education, Sacramento. Retrieved from <https://www.cde.ca.gov/ci/ma/cf/documents/transitionalkinder.pdf>.

California Department of Education. 2015b. *Glossary: Mathematical Terms, Tables, and Illustrations of the Mathematics Framework for California Public Schools: Kindergarten Through Grade Twelve.* <https://www.cde.ca.gov/ci/ma/cf/documents/mathfwglossary.pdf>.

California Department of Education. 2017. *History–Social Science Framework.* <https://www.cde.ca.gov/ci/hs/cf/hssframework.asp>.

California Council on Economic Education. n.d. *Meet $martpath* <https://ccee.org/>.

Carbonneau, Kira J., Scott C. Marley, and James P. Selig. 2013. “A Meta-analysis of the Efficacy of Teaching Mathematics with Concrete Manipulatives.” *Journal of Educational Psychology* 105(2): 380–400.

Cardone, Tina and MTBoS. 2015. Nix the Tricks. Retrieved from: [https://nixthetricks.com](https://nixthetricks.com/).

Carroll, William M. 1997. Mental and written computation: Abilities of students in a reform-based curriculum. *The Mathematics Educator*, 2(1), 18-32.

Carroll, William and Andrew Isaacs. 2020. Achievement of students using the University of Chicago School Mathematics Project’s Everyday Mathematics. In Sharon Senk and Denisse Thompson, *Student outcomes in Standards-oriented school mathematics curriculum projects*. Hillsdale, NJ: Erlbaum.

Common Core Standards Writing Team. 2022. Progressions for the Common Core State Standards for Mathematics (February 28, 2023). Tucson, AZ: Institute for Mathematics and Education, University of Arizona. <https://mathematicalmusings.org/wp-content/uploads/2023/02/Progressions.pdf>.

Council for Economic Education. n.d. *National Standards for Financial Literacy.* <https://www.councilforeconed.org/wp-content/uploads/2013/02/national-standards-for-financial-literacy.pdf>.

Daro, Phil. 2014. “Against ‘Answer-Getting’”. [Video]. Strategic Education Research Partnership. https://serpmedia.org/daro-talks/.

Franke, Megan L., Kazemi, Elham, Turrou, Angela Chan. 2018. *Choral Counting and Counting Collections.* Portsmouth, NH: Stenhouse Publishers.

Feikes, David, and Keith Schwingendorf. 2008. “The Importance of Compression in Children’s Learning of Mathematics and Teacher’s Learning to Teach Mathematics.” *Mediterranean Journal for Research in Mathematics Education* 7(2).

Financial Industry Regulatory Authority (FINRA). 2019. National Study by FINRA Foundation Finds Financial Prosperity Eludes Many Americans Despite Strong Economy.

Gfletchy. n.d. Progression videos.<https://gfletchy.com/progression-videos/>.

Grawe, Nathan D. 2011. “Beyond Math Skills: Measuring Quantitative Reasoning in Context.” *New Directions for Institutional Research* 149: 41–52.

Illustrative Mathematics. n.d.a. *Grade 4-Operations and Algebraic Thinking.* <http://tasks.illustrativemathematics.org/content-standards/4/OA>.

Illustrative Mathematics. n.d.b. *Grade 4-Rounding to the Nearest 100 and 1000.* <http://tasks.illustrativemathematics.org/content-standards/4/NBT/A/3/tasks/1806>.

Illustrative Mathematics. n.d.c. *Grade 3-Locating Fractions Less than One on the Number Line.* <http://tasks.illustrativemathematics.org/content-standards/3/NF/A/2/tasks/168>.

Illustrative Mathematics. n.d.d. *Grade 3-Find 1/4 Starting from 1, Assessment Version.* <http://tasks.illustrativemathematics.org/content-standards/3/NF/A/2/tasks/1350>.

Jump$tart and Council for Economic Education. 2021. *National Standards for Personal Financial Education.* <https://www.jumpstart.org/what-we-do/support-financial-education/standards/>.

Kamii, Constance and Barbara A. Lewis. 1993. The harmful effects of algorithms in primary arithmetic. *Teaching K–8*, 23(4), 36-38.

Kamii, Constance, Barbara A. Lewis, and Sally J. Livingston. 1993. Primary arithmetic: Children inventing their own procedures. *The Arithmetic Teacher*, 41(4), 200-203.

Karp, Karen S., Sarah B. Bush, and Barbara J. Dougherty. 2014. “13 Rules That Expire.” *Teaching Children Mathematics* 21(1): 18–25.

Kling, Gina, and Jennifer M. Bay-Williams. 2014. “Assessing Basic Fact Fluency.” *Teaching Children Mathematics* 20(8).

Math Playground. n.d. *Math Playground. Give Your Brain a Workout.* [https://www.mathplayground.com*/*](https://www.mathplayground.com/).

National Council of Teachers of Mathematics (NCTM). 2000. Principles and Standards for School Mathematics. Reston, VA: National Council of Teachers of Mathematics.

National Council of Teachers of Mathematics (NCTM). 2014. Principles to Actions: Ensuring Mathematical Success for All. Reston, VA: National Council of Teachers of Mathematics.

National Governors Association Center for Best Practices and Council of Chief State School Officers (NGA Center and CCSSO). 2010. Common Core State Standards. Washington, D.C.: National Governors Association Center for Best Practices and Council of Chief State School Officers.

Parrish, Sherry. 2011. “Number Talks Build Numerical Reasoning.” *Teaching Children Mathematics* 18(3): 198-206.

Reys, Barbara J., and Robert E. Reys. 1998. “Computation in the Elementary Curriculum: Shifting the Emphasis.” *Teaching Children Mathematics* 5(4): 236–242.

Schwerdtfeger, Julie Kern, and Angela Chan. 2007. “Counting Collections.” *Teaching Children Mathematics* 13(7): 356–361.

Shapiro, Edward S. n.d. “Tiered Instruction and Intervention in a Response-to-Intervention Model.” RTI Action Network. <http://www.rtinetwork.org/essential/tieredinstruction/tiered-instruction-and-intervention-rti-model>.

Siegler, Robert, Thomas Carpenter, Francis Fennell, David Geary, James Lewis, Yukari Okamoto, Laurie Thompson, Jonathan Wray. 2010. Developing Effective Fractions Instruction for Kindergarten Through 8th Grade: A Practice Guide (NCEE #2010-4039). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

Teach To One. 2021. “Mapping Middle School Math.” <https://teachtoone.org/mapping-middle-school-math/>.

Turrou, Angela Chan, Megan L. Franke, and Nicholas Johnson. 2017. “Choral Counting.” *Teaching Children Mathematics* 24(2): 128–135.

University of Cambridge. n.d. *Nrich Maths at Home.* [https://nrich.maths.org](https://nrich.maths.org/).

Van de Walle, John, Karen S. Karp, LouAnn H. Lovin, Jennifer M. Bay-Williams. 2014. *Teaching Student-Centered Mathematics; Developmentally Appropriate Instruction for Grades 3–5, Second Edition.* Upper Saddle River, NJ: Pearson.

Usiskin, Zalman. 1999. “Conceptions of School Algebra and Uses of Variables.” In Moses, Barbara (ed.), *Algebraic Thinking, Grades K–12: Readings from NCTM’s School-Based Journals and Other Publications*. Reston, VA: National Council of Teachers of Mathematics.

## Chapter 4

ACT, Inc. 2007. “Aligning Postsecondary Expectations and High School Practice: The Gap Defined, Policy Implications of the ACT National Curriculum Survey Results, 2005–2006.”

ACT, Inc. 2020. ACT National Curriculum Survey 2020. <http://www.act.org/content/act/en/research/reports/act-publications/national-curriculum-survey.html>.

Barnes, Bill, and Mona Toncheff. 2016. *Activating the Vision: The Four Keys of Mathematics Leadership*. Bloomington, IN: Solution Tree Press.

Boaler, Jo. 2002. “The Development of Disciplinary Relationships: Knowledge, Practice and Identity in Mathematics Classrooms.” *For the Learning of Mathematics* 22(1): 42–47.

Boaler, Jo. 2009. “Can Mathematics Problems Help with the Inequities in the World?: Discussion of Part II: Sociocultural Factors.” In *Words and Worlds*: Modeling Verbal Descriptions of Situations, 131–139. Boston: Brill Sense.

Boaler, Jo. 2019. “Prove it To Me!” *Mathematics Teaching in the Middle School* 24(7): 422–428.

California Department of Education (CDE). 2014. *California English Language Development Standards: Kindergarten Through Grade 12*. <https://www.cde.ca.gov/sp/el/er/eldstandards.asp>.

Education Development Center. 2016. *Implementing the Mathematical Practice Standards.* <http://mathpractices.edc.org/index.html>.

Fosnot, Catherine T., and Maarten Dolk. 2002. *Young Mathematicians at Work: Constructing Fractions, Decimals, and Percents*. Portsmouth, NH: Heinemann.

Gravemeijer, Koeno. 1997. “Mediating between Concrete and Abstract.” In T. Nunes, and P. Bryant (Eds.), *Learning and Teaching Mathematics. An International Perspective* (315–345). Psychology Press Ltd.

Gutstein, Eric. 2003. “Teaching and Learning Mathematics for Social Justice in an Urban, Latino School.” *Journal for Research in Mathematics Education* 34(1): 37–73.

Inside Mathematics. n.d. *Standard 7: Look for and Make Use of Structure*. <https://www.insidemathematics.org/common-core-resources/mathematical-practice-standards/standard-7-look-for-make-use-of-structure>.

Intersegmental Committee of the Academic Senates of the California Community Colleges, the California State University, and the University of California (ICAS). 2013. *Statement on Competencies in Mathematics Expected of Entering College Students.* <https://icas-ca.org/resources/competencies/>.

Jeannotte, Doris, and Carolyn Kieran. 2017. “A Conceptual Model of Mathematical Reasoning for School Mathematics.” *Educational Studies in Mathematics* 96(1): 1–16.

Kelemanik, Grace, and Amy Lucenta. n.d. *Connecting Representations (MP7)*. Fostering Math Practices. <http://www.fosteringmathpractices.com/connecting-representations/>.

Langer-Osuna, Jennifer M., and Mary A. Avalos. 2015. “‘I’m Trying to Figure This Out. Why Don’t You Come up Here?’: Heterogeneous Talk and Dialogic Space in a Mathematics Discussion.” *ZDM* 47(7): 1313–1322.

Lerman, Stephen. 2000. “The Social Turn in Mathematics Education Research.” In Boaler, Jo (ed). *Multiple Perspectives on Mathematics Teaching and Learning*, 19–44. Westport, CT: Ablex Publishing.

Maciejewski, Wes, and Jon Star. 2016. “Developing Flexible Procedures in First-year Calculus.” *Research in Mathematics Education* 18(3): 299–316.

Mathematics Education Collaborative. n.d. <https://www.mec-math.org/>.

McNeill, Katherine L., and Dean M. Martin. 2011. “Claims, Evidence, and Reasoning: Demystifying Data during a Unit on Simple Machines.” *Science and Children* 48(8): 52–56.

National Academies of Sciences, Engineering, and Medicine. 2018. How people learn II: Learners, contexts, and cultures. Washington, DC: National Academies Press.

National Council of Teachers of Mathematics (NCTM). 2014. Principles to Actions: Ensuring Mathematical Success for All. Reston, VA: National Council of Teachers of Mathematics.

National Governors Association Center for Best Practices and Council of Chief State School Officers. 2010. Common Core State Standards. Washington, D.C.: National Governors Association Center for Best Practices and Council of Chief State School Officers.

New York State Education Department (NYSED). 2019. *Culturally Responsive-Sustaining Education Framework*. <http://www.nysed.gov/bilingual-ed/culturally-responsive-sustaining-education-framework>.

Oxford University Press. 2019. *Lexico*. <http://lexico.com/>.

Özgün-Koca, S. Asli, Kenneth Chelst, Thomas Edwards, and Jennifer Lewis. 2019. “A Framework for Authentic Mathematics Problems.” *Mathematics Teaching* 267: 17–20.

Pickering, Andrew. 1995. *The Mangle of Practice: Time, Agency, and Science*. Chicago: University of Chicago Press.

San Francisco Unified School District Mathematics Department. n.d. “Rule of Four.” Retrieved from <http://www.sfusdmath.org/rule-of-four.html>.

Smith, Margaret S., and Mary Kay Stein. 2018. *5 Practices for Orchestrating Productive Mathematics Discussions (2nd ed.)*. Thousand Oaks, CA: Corwin Press.

Swan, Malcolm, and Hugh Burkhardt. 2014. “Lesson Design for Formative Assessment.” *Educational Designer* 2(7).

Van Den Heuvel-Panhuizen, Marja. 2003. “The Didactical Use of Models in Realistic Mathematics Education: An Example from a Longitudinal Trajectory on Percentage.” *Educational Studies in Mathematics* 54(1), 9–35.

Webb, Norman L. 2002. “Depth-Of-Knowledge Levels for Four Content Areas.” *Language Arts* 28(March).

Wikimedia Commons. 2014. Euler's Polyhedron Formula. Retrieved from <https://commons.wikimedia.org/wiki/File:Euler%27s_Polyhedron_Formula.svg>.

Zwiers, Jeff, Jack Dieckmann, Sara Rutherford-Quach, Vinci Daro, Renae Skarin, Steven Weiss, and James Malamut. 2017. “Principles for the Design of Mathematics Curricula: Promoting Language and Content Development.” Retrieved from Stanford University, UL/SCALE website: <http://ell.stanford.edu/content/mathematics-resources-additional-resources>.

## Chapter 5

Bargagliotti, Anna, Christine Franklin, Pip Arnold, Rob Gould, Sheri Johnson, Leticia Perez, Denise Spangler. 2020. *Pre-K–12 Guidelines for Assessment and Instruction in Statistics Education II (GAISE II): A Framework for Statistics and Data Science Education*. Alexandria, VA: American Statistical Association.

Boaler, Jo, Montse Cordero, and Jack Dieckmann. 2019. “Pursuing Gender Equity in Mathematics Competitions. A Case of Mathematical Freedom.” Mathematics Association of America, FOCUS, Feb/March 2019. [http://digitaleditions.walsworthprintgroup.com/publication/?m=7656&l=1#{%22issue\_id%22:566588,%22page%22:18](http://digitaleditions.walsworthprintgroup.com/publication/?m=7656&l=1#%7B%22issue_id%22:566588,%22page%22:18).

Bureau of Labor Statistics. 2022. *Occupational Outlook Handbook: Data Scientists*. Available at <https://www.bls.gov/ooh/math/data-scientists.htm>.

California Department of Education. 2013a. *California Next Generation Science Standards.* <https://www.cde.ca.gov/pd/ca/sc/ngssstandards.asp>.

CDE. 2013b. Appendix 2: Connections to Environmental Principles and Concepts. *California Next Generation Science Standards.* <https://www.cde.ca.gov/ci/sc/cf/documents/scifwappendix2.pdf>.

California State Board of Education. 2022. Computer Science Education: Computer Science Content Standards Development. Available at: <https://www.cde.ca.gov/be/st/ss/computerscicontentstds.asp>.

Chestnut, Eleanor K., Ryan F. Lei, Sarah-Jane Leslie, and Andrei Cimpian. 2018. “The Myth That Only Brilliant People Are Good At Math and Its Implications For Diversity.” *Education Sciences* 8(2): 65.

Common Core Standards Writing Team. 2022. Progressions for the Common Core State Standards for Mathematics (February 28, 2023). Tucson, AZ: Institute for Mathematics and Education, University of Arizona. <https://mathematicalmusings.org/wp-content/uploads/2023/02/Progressions.pdf>.

DataScience4everyone. 2022. International Landscape in Data Science Education. Available at: <https://www.datascience4everyone.org/international>.

Drozda, Zarek, Davis Johnstone, and Brooke Van Horne. n.d. “Previewing the National Landscape of K–12 Data Science Implementation.” Paper commissioned for the Workshop on Foundations of Data Science for Students in Grades K–12. Available at: (<https://www.nationalacademies.org/documents/embed/link/LF2255DA3DD1C41C0A42D3BEF0989ACAECE3053A6A9B/file/D688ED916E82498DA0E2171A109936D679FD5DE26556?noSaveAs=1>).

Education Development Center. 2016. “Building Global Interest in Data Literacy: A Dialogue.” Workshop report. Waltham, MA: EDC Oceans of Data Institute.

International Data Science in Schools Project (IDSSP) Curriculum Team, Curriculum Frameworks for Introductory Data Science. Available at: <http://idssp.org/files/IDSSP_Frameworks_1.0.pdf>.

Kader, Gary D., Tim Jacobbe, Patricia Wilson and Rose Mary Zbiek. 2013. *Developing Essential Understanding of Statistics for Teaching Mathematics in Grades 6–8*. Reston, VA: National Council of Teachers of Mathematics.

Lieberman, Gerald, and K. Brown. 2020. Recommended Edits to Math Framework Chapter 5: Data Science (public comment to Curriculum Framework and Evaluation Criteria Committee. 9 December 2020).

National Academies of Sciences, Engineering, and Medicine. 2018. *Data Science for Undergraduates: Opportunities and Options.* Washington, DC: The National Academies Press.

National Center for Education Research. 2021. “Catalyzing a New Field: Data Science Education in K–12.” Institute of Education Services Technical Working Group Meeting. <https://ies.ed.gov/ncer/whatsnew/techworkinggroup/pdf/DataScienceTWG.pdf>.

National Oceanic and Atmospheric Administration, National Centers for Environmental Information. 2023. Climate Data Online Search. Retrieved January 13, 2023, from <https://www.ncdc.noaa.gov/cdo-web/>.

National Research Council. 2013. *Next Generation Science Standards: For States, By States*. Washington, DC: The National Academies Press.

National Science Foundation Computer and Information Science and Engineering Advisory Committee Data Science Working Group. 2016. “Realizing the potential of data science: Final report from the National Science Foundation Computer and Information Science and Engineering Advisory Committee Working Group.” National Science Foundation. Available at: <https://www.nsf.gov/cise/ac-data-science-report/CISEACDataScienceReport1.19.17.pdf>.

Paris, Django. 2012. “Culturally Sustaining Pedagogy: A Needed Change in Stance, Terminology, and Practice.” *Educational Researcher* 41(3): 93–97.

Peck, Roxy, Rob Gould, Stephen Miller, and Rose Mark Zbiek. 2013. “Developing Essential Understanding of Statistics for Teaching Mathematics in Grades 9–12” Reston, VA: National Council of Teachers of Mathematics

Pelesko, John. 2015. “‘The’ Modeling Cycle.” [http://modelwithmathematics.com/2015/08/the-modeling-cycle/](https://urldefense.proofpoint.com/v2/url?u=http-3A__modelwithmathematics.com_2015_08_the-2Dmodeling-2Dcycle_&d=DwMGaQ&c=SIStQSL0VMIUJoLS-Q8giiFlA-AKdP7tpJHyQh8DeXk&r=BXeygBX5GbRONobNrgKjiGlMs3ebFm2pjdr6wM3atPE&m=q9UGi3Ls7qTPraitkiX_HQHUTZL20ZSq7Hbq6byNFdI&s=wIcMvbPXyBCmJ7W8JXo8QFOk2ReqPYpkraO3szRkqkg&e=).

Rawlings-Goss, Renata, Lillian (Boots) Cassel, Melissa Cragin, Catherine Cramer, Angela Dingle, Shawnta Friday-Stroud, Al Herron, Nicholas Horton, Tasha R. Inniss, Kari Jordan, Patti Ordóñez, Mary Rudis, Robert Rwebangira, Karl Schmitt, Dale Smith, Sonya Stephens. 2018. “Keeping Data Science Broad: Negotiating the Digital & Data Divide.” Workshop: Bridging the Digital and Data Divide. Retrieved from <https://par.nsf.gov/biblio/10075971-keeping-data-science-broad-negotiating-digital-data-divide-among-higher-education-institutions>.

Walton, Gregory M., Christine Logel, Jennifer M. Peach, Steven J. Spencer, and Mark P. Zanna. 2015. “Two Brief Interventions to Mitigate a ‘Chilly Climate’ Transform Women’s Experience, Relationships, and Achievement in Engineering.” *Journal of Educational Psychology* 107(2): 468–485.

Wolff, Annika, Daniel Gooch, Jose J. Cavero Montaner, Umar Rashid, Gerd Kortuem. 2016. “Creating an Understanding of Data Literacy for a Data-driven Society.” *The Journal of Community Informatics* 12(3): 9–26.

## Chapter 6

Achieve the Core. 2018. Mathematical Routines. <https://achievethecore.org/content/upload/Mathematical%20Routines.pdf>.

Arizona Department of Education (ADE). 2010. Arizona’s College and Career Ready Standards - Mathematics. 1st Grade Standards. <https://k12standards.az.gov/archived-english-language-arts-and-mathematics-standards-revisions/read-2010-standards>.

Bartell, Tonya Gau, and Alfinio Flores, Editors. 2014. TODOS, Research Monograph 3. *Embracing Resources of Children, Families, Communities and Cultures in Mathematics Learning.* <https://toma.memberclicks.net/assets/documents/Monographs/todosmonograph3.pdf>.

Boaler, Jo. 2016. *Mathematical Mindsets: Unleashing Students’ Potential Through Creative Math, Inspiring Messages and Innovative Teaching*. Chappaqua, NY: Jossey-Bass/Wiley.

Boaler, Jo, Cathy Williams, and Amanda Confer. 2015. “Fluency Without Fear: Research Evidence on the Best Ways to Learn Math Facts.” Youcubed. Retrieved from <https://www.youcubed.org/evidence/fluency-without-fear/>.

Boaler, Jo and Thesha Sengupta-Irving. 2016. The many colors of algebra: The impact of equity focused teaching upon student learning and engagement. *Journal of Mathematical Behavior* 41, 179–190.

Brenner, Mary E., Richard E. Mayer, Bryan Moseley, Theresa Brar, Richard Durán, Barbara Smith Reed, and David Webb. 1997. Learning by understanding: The role of multiple representations in learning algebra. *American Educational Research Journal*, 34(4), 663–689.

Breyfogle, Lynn M., and Courtney M. Lynch. 2010*. “*Van Hiele, Revisited.” *Mathematics Teaching in the Middle School* 16(4): 238–232.

Burns, Marilyn. 2001*. Teaching Arithmetic: Lessons for Introducing Fractions*. Sausalito, California: Math Solutions.

California Department of Education. n.d. Multi-Tiered System of Supports. California Department of Education. <https://www.cde.ca.gov/ci/cr/ri/>.

California Department of Education. 2013. *California Common Core State Standards for Mathematics*. Sacramento: California Department of Education.

Carpenter, Thomas P., Megan L. Franke, Victoria R. Jacobs, Elizabeth Fennema, and Susan B. Empson. 1997. “A Longitudinal Study of Invention and Understanding in Children’s Multidigit Addition and Subtraction.” *Journal for Research in Mathematics Education* 29(1): 3–20.

Carpenter, Thomas, Elizabeth Fennema, Megan Loef Franke, Linda Levi, and Susan Empson. 2014. *Children's Mathematics: Cognitively Guided Instruction*. Portsmouth, NH: Heinemann.

Carroll, William M. 1997. Mental and written computation: Abilities of students in a reform-based curriculum. *The Mathematics Educator*, 2(1), 18-32.

CAST. n.d. *About Universal Design for Learning*, <http://www.cast.org/impact/universal-design-for-learning-udl>.

Common Core Standards Writing Team. 2022. Progressions for the Common Core State Standards for Mathematics (February 28, 2023). Tucson, AZ: Institute for Mathematics and Education, University of Arizona. <https://mathematicalmusings.org/wp-content/uploads/2023/02/Progressions.pdf>.

Confer, Chris. 2005a.“Feet Under the Table.” In *Teaching Number Sense, Kindergarten.* Sausalito, CA: Math Solutions Publications.

Confer, Chris. 2005b.“The Pocket Game.” In T*eaching Number Sense, Kindergarten.* Sausalito, CA: Math Solutions Publications.

Daro, Phil. Against “Answer-Getting” [video]. Strategic Education Research Partnership (SERP). <https://serpmedia.org/daro-talks/>.

Davis, Edward. 2006. “A Model for Understanding in Mathematics.” *Mathematics Teaching in the Middle School* 12(4).

DREME TE. n.d. Counting Collections Overview. Early Math Resources for Teacher Educators. <https://prek-math-te.stanford.edu/counting/counting-collections-overview>.

Empson, Susan B. 1999. “Equal Sharing and Shared Meaning: The Development of Fraction Concepts in a First-Grade Classroom.”*Cognition and Instruction* 17(3): 283–342.

Empson, Susan B., and Linda Levi. 2011. *Extending Children’s Mathematics: Fractions and Decimals.* Portsmouth, NH: Heinemann.

Featherstone, Helen, Sandra Crespo, Lisa Jilk, Joy Oslund, Amy Parks, and Marcy Wood. 2011. *Smarter Together! Collaboration and Equity in the Elementary Math Classroom.* Reston, VA: National Council of Teachers of Mathematics.

Ferlazzo, Larry. 2020. “Twelve Ways to Make Math More Culturally Responsive.” Education Week Opinion Blog. <https://www.edweek.org/teaching-learning/opinion-twelve-ways-to-make-math-more-culturally-responsive/2020/12>.

Fischer, Jean-Paul, [Bruno Vilette](https://link.springer.com/article/10.1007/s10649-019-09884-9#auth-Bruno-Vilette), [Sophie Joffredo-Lebrun](https://link.springer.com/article/10.1007/s10649-019-09884-9#auth-Sophie-Joffredo_Lebrun), [Mireille Morellato](https://link.springer.com/article/10.1007/s10649-019-09884-9#auth-Mireille-Morellato), [Céline Le Normand](https://link.springer.com/article/10.1007/s10649-019-09884-9#auth-C_line-Normand), [Calliste Scheibling-Seve](https://link.springer.com/article/10.1007/s10649-019-09884-9#auth-Calliste-Scheibling_Seve), and [Jean-François Richard](https://link.springer.com/article/10.1007/s10649-019-09884-9#auth-Jean_Fran_ois-Richard). 2019.

“Should we continue to teach standard written algorithms for the arithmetical operations? The example of subtraction.” [*Educational Studies in Mathematics*](https://link.springer.com/journal/10649) 101: 105–121.

Fuson, Karen C., and Sybilla Beckmann. 2013. “Standard Algorithms in the Common Core State Standards.” *NCSM Journal* 14(2): 14–30.

Gardner, Anne. 2013. “Number Paths – A Fabulous Tool for Kindergarten and First Grade Math.” Toronto, ON: Tapfun.

Hansen, Pia, and Donna Mathern. 2008. “Shifting Roles and Responsibilities to Support Mathematical Understanding.” *Teaching Children Mathematics* 15(3): 162–167.

Illustrative Mathematics. 2016a. Button Diameters. Illustrative Mathematics. <http://tasks.illustrativemathematics.org/content-standards/4/MD/B/4/tasks/1039>.

Illustrative Mathematics. 2016b. Comparing Money Raised. Illustrative Mathematics. <http://tasks.illustrativemathematics.org/content-standards/4/OA/A/2/tasks/263>.

Illustrative Mathematics. 2016c. Doubling Numerators and Denominators. Illustrative Mathematics. <http://tasks.illustrativemathematics.org/content-standards/4/NF/A/2/tasks/183>.

Illustrative Mathematics. n.d.a. Dividing by One-Half. Illustrative Mathematics. <http://tasks.illustrativemathematics.org/content-standards/5/NF/B/7/tasks/12>.

Illustrative Mathematics. n.d.b Box of Clay. Illustrative Mathematics. <http://tasks.illustrativemathematics.org/content-standards/5/MD/C/tasks/1031>.

Kazemi, Elham, and Allison Hintz. 2014. *Intentional Talk: How to Structure and Lead Productive Mathematical Discussions.* Portland, ME: Stenhouse Publishers.

Kling, Gina, and Jennifer M. Bay-Williams. 2014. “Assessing Basic Fact Fluency.” *Teaching Children Mathematics* 20(8).

Kling, Gina, and Jennifer M. Bay-Williams. 2015. “Three Steps to Mastering Multiplication Facts.” *Teaching Children Mathematics* 21(9): 548–559.

Langer-Osuna, Jennifer M., and Indigo Esmonde. 2017. “Identity in Research on Mathematics Education.” *Compendium for Research in Mathematics Education,* 637-648.

Moschkovich, Judit. 1999. “Supporting the Participation of English Language Learners in Mathematical Discussions.” *For the Learning of Mathematics* 19(1): 11–19.

National Governors Association Center for Best Practices, Council of Chief State School Officers (NGA/CCSSO). 2010. Common Core State Standards. Washington, DC.

National Research Council. 2001. *Adding It Up: Helping Children Learn Mathematics*. Washington, DC: National Academy Press.

National Research Council. 2009. *Mathematics Learning in Early Childhood: Paths Toward Excellence and Equity.* Washington, DC: National Academies Press.

NCTM Principles and Standards for School Mathematics. 2000. <https://www.nctm.org/Standards-and-Positions/Principles-and-Standards/>.

PBS Learning Media. 2008. *Data Clusters and Distributions,* <https://www.pbslearningmedia.org/resource/vtl07.math.data.col.lpcluster/data-clusters-and-distributions/>.

PBS Learning Media. n.d. What’s Typical, Based on the Shape of Data Charts? PBS Learning Media Mathematics. <https://www.pbslearningmedia.org/>.

Sengupta-Irving, Tesha, and Noel Enyedy. 2014. “Why Engaging in Mathematical Practices May Explain Stronger Outcomes in Affect and Engagement: Comparing Student-Driven with Highly Guided Inquiry.” *Journal of the Learning Sciences* 24(4): 550–592.

SERP Media. 2014. Formative Principles of the Common Core State Standards. Mathematics Common Core State Standards. <https://serpmedia.org/daro-talks/>.

Sfard, Anna. 2007. “When the Rules of Discourse Change, But Nobody Tells You: Making Sense of Mathematics Learning from a Commognitive Standpoint.” *Journal of the Learning Sciences* 16 (4): 565–613.

Siegler, Robert, Thomas Carpenter, Francis Fennell, David Geary, James Lewis, Yukari Okamoto, Laurie Thompson, Jonathan Wray. 2010. Developing Effective Fractions Instruction for Kindergarten Through 8th Grade: A Practice Guide (NCEE #2010-4039). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

Smith, Margaret, and Mary Kay Stein. 2018. *5 Practices for Orchestrating Productive Mathematics Discussions*, 2nd edition. Reston, VA: National Council of Teachers of Mathematics.

Sullivan, Peter and Lilburn, Pat, 2002. *Good Questions for Math Teaching, Why Ask Them and What to Ask.* Math Solutions Publications, Sausalito, California.

University of California, Berkeley. n.d. Learning Mathematics Through Representations. Berkeley Graduate School of Education. <https://sites.google.com/view/lmrberkeleyedu>.

University of Texas at Austin. n.d. Inside Mathematics. The University of Texas at Austin, Charles A. Dana Center.

Van de Walle, John, Karen S. Karp, LouAnn H. Lovin, Jennifer M. Bay-Williams. 2014. *Teaching Student- Centered Mathematics; Developmentally Appropriate Instruction for Grades 3–5, Second Edition.* Upper Saddle River, NJ: Pearson.

Youcubed n.d.a. Moving Colors. <https://www.youcubed.org/tasks/moving-colors/>.

Youcubed n.d.b. The Pocket Game. <https://www.youcubed.org/tasks/the-pocket-game/>.

Zwiers, Jeff, Jack Dieckmann, Sara Rutherford-Quach, Vinci Daro, Renae Skarin, Steven Weiss, and James Malamut. 2017. “Principles for the Design of Mathematics Curricula: Promoting Language and Content Development.” Retrieved from Stanford University, UL/SCALE website: <http://ell.stanford.edu/content/mathematics-resources-additional-resources>.

## Chapter 7

Arbaugh, Fran, and Catherine A. Brown. 2005. “Analyzing Mathematical Tasks: A Catalyst for Change?” *Journal of Mathematics Teacher Education* 8(6): 499–536.

Boaler, Jo, and Cathlee Humphreys. 2005. *Connecting Mathematical Ideas: Middle School Video Cases to Support Teaching and Learning*. Portsmouth, NH: Heinemann.

California Department of Education. 2013. *California Common Core State Standards for Mathematics*. Sacramento: California Department of Education.

California Department of Education. 2021. *Digital Learning Integration and Standards Guidance*.  [https://www.cadlsg.com/](https://www.cde.ca.gov/ci/cr/dl/dlintergstdsguidance.asp).

Carpenter, Thomas P., C. Gomez, C. Rousseau, Olaf B. Steinthorsdottir, C. Valentine, and L. Wagner, et al. 1999. “An Analysis of Student Construction of Ratio and Proportion Understanding.” Paper presented at the American Educational Research Association, Montreal, Canada.

CAST. 2018. *Universal Design for Learning Guidelines version 2.2.* Retrieved from <http://udlguidelines.cast.org/?utm_source=castsite&lutm_medium=web&utm_campaign=none&utm_content=aboutudl>.

CODAP. n.d. *Common Online Data Analysis Platform (CODAP).* Retrieved from <https://codap.concord.org/>.

Driscoll, Mark J., Rachel W. DiMatteo, Johanna Nikula, and Michael Egan. 2017. *Fostering Geometric Thinking: A Guide for Teachers, Grades 5–10*. Portsmouth, NH: Heinemann.

English Learners Success Forum. n.d. *Math Guidelines.* Retrieved from <https://www.elsuccessforum.org/math-guidelines/math-area-of-focus-1>.

Falco, Lia D. 2019. “An Intervention to Support Mathematics Self-Efficacy in Middle School.” *Middle School Journal* 50(2): 28–44.

Fossum, Astrid. 2018. How to Select Math Intervention Content. Classroom Strategies, Research and Reflections. Achieve the Core. <https://achievethecore.org/aligned/select-math-intervention-content/>.

Freeman, Yvonne S., and David E. Freeman. 2002. *Closing the Achievement Gap: How to Reach Limited-Formal-Schooling and Long-Term English Learners*. Portsmouth, NH: Heinemann.

Intersegmental Committee of the Academic Senates. 2013. “Statement of Competencies in Mathematics Expected of Entering College Students.” Retrieved from <https://www2.calstate.edu/csu-system/faculty-staff/academic-senate/Documents/reports/ICAS-Statement-Math-Competencies-2013.pdf>.

Lamon, Susan J. 1993. “Ratio and Proportion: Connecting Content and Children's Thinking.” *Journal for Research in Mathematics Education* 24(1): 41–61.

Lamon, Susan J. 2012. “Changing Instruction.” In *Teaching Fractions and Ratios for Understanding: Essential Content Knowledge and Instructional Strategies for Teachers*. New York: Routledge.

Langer-Osuna, Jennifer M., and Indigo Esmonde. 2017. “Identity in Research on Mathematics Education.” *Compendium for Research in Mathematics Education*, 637–648.

Moschkovich, Judit. 1999. “Supporting the Participation of English Language Learners in Mathematical Discussions.” *For the Learning of Mathematics* 19(1): 11–19.

Moschkovich, Judit. 2013. *Principles for Mathematics Instruction for ELLs*. Retrieved from Stanford University, UL/SCALE website:<https://ell.stanford.edu/teaching_resources/math>.

National Research Council. 2013. *Next Generation Science Standards: For States, By States*. Washington, DC: The National Academies Press.

New York Times. n.d. *What’s Going on in This Graph?* Retrieved from <https://www.nytimes.com/column/whats-going-on-in-this-graph>.

Pajares, Frank, and Laura Graham. 1999. “Self-efficacy, Motivation Constructs, and Mathematics Performance of Entering Middle School Students.” *Contemporary Educational Psychology* 24(2): 124–139.

Pelesko. 2015. “’The’ Modeling Cycle.” Model with Mathematics. Retrieved from <http://modelwithmathematics.com/2015/08/the-modeling-cycle/>.

Petersen, Jennifer L., and Janet S. Hyde. 2017. “Trajectories of Self-perceived Math Ability, Utility Value and Interest Across Middle School as Predictors of High School Math Performance.” *Educational Psychology* 37(4): 438–456.

San Francisco Unified School District Mathematics Department. 2015. Re-engagement. Retrieved from San Francisco Unified School District website: <http://www.sfusdmath.org/reengagement.html>.

Sfard, Anna. 2007. “When the Rules of Discourse Change, But Nobody Tells You: Making Sense of Mathematics Learning from a Commognitive Standpoint.” *Journal of the Learning Sciences* 16(4): 565–613.

Steinthorsdottir, Olof B., and Bharath Sriraman. 2009. “Icelandic 5th-grade Girls’ Developmental Trajectories in Proportional Reasoning.” *Mathematics Education Research Journal* 21(1): 6–30.

Su, Francis. 2020. *Mathematics for Human Flourishing*. New Haven, CT: Yale University Press.

The University of Arizona. n.d. *Progression Documents for the Common Core Math Standards.* Retrieved from <https://mathematicalmusings.org/wp-content/uploads/2023/02/Progressions.pdf>.

Walqui, Aida, and Leo Van Lier. 2010. *Scaffolding the Academic Success of Adolescent English Language Learners: A Pedagogy of Promise*. San Francisco, CA: WestEd.

Williams, Krystal L., Brian A. Burt, and Adriel A. Hilton. 2016. “Math Achievement: A Role Strain and Adaptation Approach.” *Journal for Multicultural Education* 10(3): 368–383.

Youcubed. 2018. *Youcubed Border Problem Week 1 – Days 1 & 2.* Retrieved from <https://www.youcubed.org/wp-content/uploads/2018/09/Border-Problem-final-copy.pdf>.

Youcubed. 2020a. *Youcubed Data Talk Women’s Soccer.* Retrieved from <https://www.youcubed.org/wp-content/uploads/2020/11/Womens-Soccer-1.pdf>.

Youcubed. 2020b. *Youcubed Data Talk Endangered Species.* Retrieved from <https://www.youcubed.org/wp-content/uploads/2020/09/EndangeredSpecies.pdf>.

Zwiers, Jeff, Jack Dieckmann, Sara Rutherford-Quach, Vinci Daro, Renae Skarin, Steven Weiss, and James Malamut. 2017. “Principles for the Design of Mathematics Curricula: Promoting Language and Content Development.” Retrieved from Stanford University, UL/SCALE website: <http://ell.stanford.edu/content/mathematics-resources-additional-resources>.

Zwiers, Jeff. 2018. “Developing Reasoning and its Language in Secondary Mathematics Instruction.” *Soleado—Promising Practices from the Field* 11(1): 1–11. Retrieved from [https://www.dlenm.org/wp-content/uploads/2019/11/Soleado\_Fall\_2018\_Final\_8\_17.pdf](https://www.dlenm.org/wp-content/uploads/2019/11/Soleado_Fall_2018_Final_8_17.pdf" \o "Promising Practices from the Field).

## Chapter 8

Burris, Carol Corbett, Jay P. Heubert, and Henry M. Levin. 2006. “Accelerating Mathematics Achievement Using Heterogeneous Grouping.” *American Educational Research Journal*, *43*(1), 137–154.

Cabana, Carlos, Barbara Shreve, and Estelle Woodbury. 2014. “Working Toward an Equity Pedagogy.” In Na’ilah Nasir, Carlos Cabana, Barbara Shreve, Estelle Woodbury, and Nicole N. Louie (Eds.) *Mathematics for Equity: A Framework For Successful Practice*. New York: Teachers College Press.

Cai, Jinfa, and Stephen Hwang. 2019. “Learning to Teach Through Mathematical Problem Posing: Theoretical Considerations, Methodology, and Directions for Future Research.” *International Journal of Educational Research* 102.

California Department of Education (CDE). 2013, 2014. *California Common Core State Standards: Mathematics.* <https://www.cde.ca.gov/BE/st/ss/documents/ccssmathstandardaug2013.pdf>.

Chouinard, Roch, and Normand Roy. 2008. Changes in high‐school students' competence beliefs, utility value and achievement goals in mathematics. *British Journal of Educational Psychology* 78(1): 31–50.

Daro, Phil. 2013. Against “Answer-Getting” [Video]. Strategic Education Research Partnership.<https://serpmedia.org/daro-talks/>.

Deslauriers, Louis, Logan S. McCarty, Kelly Miller, Kristina Callaghan, and Greg Kestin. 2019. “Measuring Actual Learning Versus Feeling of Learning in Response to Being Actively Engaged in the Classroom.” *Proceedings of the National Academy of Sciences of the United States of America* 116(39): 19251–19257.

Domina, Thurston, Andrew M. Penner, Emily K. Penner, and Annmarie Conley. 2014. “Algebra for All: California’s Eighth-Grade Algebra Initiative as Constrained Curricula.” *Teachers College Record 116*(8), 1–32.

Domina, Thurston, Andrew McEachin, Andrew Penner, and Emily Penner. 2015. “Aiming High and Falling Short: California’s Eighth-Grade Algebra-for-All Effort.” *Educational Evaluation and Policy Analysis* 37(3): 275–295.

Duckworth, Eleanor. 2006. *The Having of Wonderful Ideas and Other Essays on Teaching and Learning*. New York: Teachers College Press.

Grouws, Douglas A, James E. Tarr, Óscar Chávez, Ruthmae Sears, Victor M. Soria, and Rukiye D. Taylan. 2013. “Curriculum and implementation effects on high school students' mathematics learning from curricula representing subject-specific and integrated content organizations.” *Journal for Research in Mathematics Education* 44(2): 416–463.

Gutstein, Eric. 2006. *Reading and Writing the World with Mathematics: Toward a Pedagogy for Social Justice*. New York: Routledge.

Gutstein, Eric. 2008. “Connecting Community, Critical, and Classical Knowledge in Teaching Mathematics for Social Justice.” In *International Perspectives on Social Justice in Mathematics Education*, edited by Bharath Sriraman. Charlotte, NC: Information Age Publishing.

Hemmi, Kirsti, Kajsa Bråting, and Madis Lepik. 2021. “Curricular Approaches to Algebra in Estonia, Finland and Sweden – A Comparative Study.” *Mathematical Thinking and Learning* 23(1): 49–71.

Hõim, Terge, Carita Hommik, and Ülle Kikas. 2016. “Changing Mathematics Education in Estonia: Computer-based Statistics Project.” Proceedings of the CIDREE-STEM expert meeting, 23–29.

House, P. A. 2003. “Integrated mathematics: An Introduction.”In *Integrated Mathematics Choices and Challenges,* edited by S. A. McGraw. Reston, VA: National Council of Teachers of Mathematics: 3–12.

Hulleman, Chris, Jeff John Kosovich, Kenneth E. Barron, and David B. Daniel. 2017. “Making Connections: Replicating and Extending the Utility Value Intervention in the Classroom.” *Journal of Educational Psychology* 109(3): 387–404.

Intersegmental Committee of the Academic Senates of the California Community Colleges, the California State University, and the University of California. 2010, 2013. *Statement on Competencies in Mathematics Expected of Entering College Students*. <https://icas-ca.org/wp-content/uploads/2020/05/ICAS-Statement-Math-Competencies-2013.pdf>.

Johnson, Sydney. 2020. “University of California Expands List of Courses That Meet Math Requirement for Admission.” EdSource. <https://edsource.org/2020/university-of-california-expands-list-of-courses-that-meet-math-requirement-for-admission/643173>.

Liang, Jian-Hua, Paul E. Heckman and Jamal Abedi. 2012. “What Do the California Standards Test Results Reveal about the Movement Toward Eighth Grade Algebra for All?” *Educational Evaluation and Policy Analysis* 34(3): 328–343.

Los Angeles Unified School District (LAUSD). n.d. Three-Phase Lesson Structure. <https://achieve.lausd.net/cms/lib/CA01000043/Centricity/domain/335/lessons/integrated%20math/integrated%20math%20pd/Three-PhaseLessonStructure.pdf>.

Mathematical Association of America and National Council of Teachers of Mathematics. 2012, April 5. A Joint Position Statement of the Mathematical Association of America and the National Council of Teachers of Mathematics on Teaching Calculus. Mathematical Association of America. <https://www.maa.org/programs/faculty-and-departments/curriculum-department-guidelines-recommendations/joint-statement-teaching-calculus>.

Meyer, Dan. 2010. *Math Class Needs a Makeover* [Video file]. Retrieved from <https://www.ted.com/talks/dan_meyer_math_class_needs_a_makeover/up-next?language=en>.

Ministry of Education, Japan. 2010. Japanese Curriculum. <https://www.futureschool.com/japan-curriculum/#552f669b6a75b>.

National Center on Education and the Economy (NCEE). n.d. Top Performing Countries: Estonia. <https://ncee.org/country/estonia/>.

National Governors Association Center for Best Practices, Council of Chief State School Officers (NGA/CCSSO). 2010. Mathematics, High School: Modeling. Washington, DC: National Governors Association Center for Best Practices, Council of Chief State School Officers..

Okano, Kaori, and Motonori Tsuchiya. 1999. *Education in Contemporary Japan: Inequality and Diversity.* Cambridge: Cambridge University Press.

Organization for Economic Cooperation and Development (OECD) and Programme for International Student Assessment (PISA). 2012. *PISA 2012 Technical Report*. Paris: OECD.

Paik, Sun-Yun. 2004. “Mathematics Curriculum in Korea.” Part of Korean Presentation at ICME-10, Copenhagen, Demark, July 6, 2004. <http://matrix.skku.ac.kr/For-ICME-11/ICME/cp2.pdf>.

Sahlberg, Pasi. 2021. *Finnish Lessons 3. 0: What Can the World Learn from Educational Change in Finland?* New York: Teachers College Press.

Schwartz, Daniel, and John Bransford. 1998. “A Time for Telling.” *Cognition and Instruction* 16(4): 475–522.

Stigler, James, and James Heibert. 1997. “Understanding and Improving Classroom Mathematics Instruction: An Overview of the TIMSS Video Study.” *Phi Delta Kappan* 79(1): 14–21.

Tarr, James E., Douglas A. Grouws, Óscar Chávez, and Victor M. Soria. 2013. “The Effects of Content Organization and Curriculum Implementation on Students' Mathematics Learning in Second-Year High School Courses.” *Journal for Research in Mathematics Education* 44(4): 683–729.

University of California. 2020. *Policy Announcement on Area C*.

Usiskin, Zalman. 2003. “The Integration of the School Mathematics Curriculum in the United States: History and Meaning.” In *Integrated Mathematics Choices and Challenges*, edited by S. A. McGraw. Reston, VA: National Council of Teachers of Mathematics: 13–32.

## Chapter 9

Antonovics, Kate, Sandra E. Black, Julie B. Cullen, and Akiva Y. Meiselman. 2022. “Patterns, Determinants, and Consequences of Ability Tracking: Evidence from Texas Public Schools (Working Paper No. 30370).” National Bureau of Economic Research.

Bacher-Hicks, Andrew, and Christopher Avery. 2018. “The Effect of Classroom Assignment Policies on Equitable Access to High-Quality Teachers.” Paper presented at the 2018 annual meeting of the Association for Public Policy Analysis and Management. Available at: <https://appam.confex.com/appam/2018/webprogram/Paper28440.html>.

Beal, Carol, R. Walles, I. Arroyo, and B.P. Woolf. 2007. “On-line Tutoring for Math Achievement Testing: A Controlled Evaluation.” *Journal of Interactive Online Learning* 6(1): 43–55.

Betts, Julian R., Andrew Zau, and Lorien Rice. 2003. “Determinants of Student Achievement: New Evidence from San Diego.” San Francisco, CA: Public Policy Institute of California.

Boaler, Jo, and Megan Staples. 2008. “Creating Mathematical Futures through an Equitable Teaching Approach: The Case of Railside School.” *Teachers’ College Record* 110(3): 608-645.

Boaler, Jo. 2016. *Mathematical Mindsets: Unleashing Students’ Potential through Creative Math, Inspiring Messages and Innovative Teaching*. Chappaqua, NY: Jossey-Bass/Wiley.

Boaler, Jo, Jack Dieckmann, Graciela Pérez-Núñez, Kathy Sun, and Cathy Williams. 2018. “Changing Students Minds and Achievement in Mathematics: The Impact of a Free Online Student Course.” *Frontiers in Education* 3:26.

Boaler, Jo, and David Foster. 2021. “Raising Expectations and Achievement: The Impact of Two Wide Scale De-Tracking Mathematics Reforms.” Youcubed and Silicon Valley Mathematics Initiative. <https://www.youcubed.org/wp-content/uploads/2017/09/Raising-Expectations-2021.pdf>.

Briars, Diane J., Harold Asturias, David Foster, and Mardi A. Gale. 2013. “Implementing the Teaching-Assessing-Learning- Cycle.” In *Common Core Mathematics in a PLC at Work Grades 6-8*. Bloomington, IN: Solution Tree Press.

California Department of Education. 2016. Implementing the California Mathematics Placement Act of 2015.

California Department of Education. 2021. *Digital Learning Integration and Standards Guidance*.  [https://www.cadlsg.com/](https://www.cde.ca.gov/ci/cr/dl/dlintergstdsguidance.asp).

Callahan, Rebecca M., Melissa Humphries, and Jenny Buontempo. 2020. “Making Meaning, Doing Math: High School English Learners, Student-Led Discussion, and Math Tracking.” *International Multilingual Research Journal* 15(1): 82–103.

Card, David, and Laura Giuliano. 2016. "Can Tracking Raise the Test Scores of High-Ability Minority Students?" *American Economic Review* 106(10): 2783–2816.

Chestnut, Eleanor K., Ryan F. Lei, Sarah-Jane Leslie, and Andrei Cimpian. 2018. “The Myth That Only Brilliant People Are Good at Math and Its Implications for Diversity.” *Education Sciences* 8(2): 65.

Collins, C.A. & Gan, L. 2013. “Does Sorting Students Improve Scores? An Analysis of Class Composition (Working Paper 18848)”. Cambridge, MA: National Bureau of Economic Research. Available at: <http://www.nber.org/papers/w18848>.

Core-Plus Mathematics. n.d. *Evaluation.* Retrieved from <http://core-plusmath.org/evaluation.html>.

Darling-Hammond, Linda, Molly Zielezinski, and Shelley Goldman. 2014. *Using Technology to Support At-Risk Students’ Learning.* Stanford, CA: Stanford Center for Opportunity Policy in Education.

Del Pinal, Guillermo, Alex Madva, and Kevin Reuter. 2017. “Stereotypes, Conceptual Centrality and Gender Bias: An Empirical Investigation.” *Ratio* 30(4): 384–410.

Deunk, Marjolein I., Annemieke E. Smale-Jacobse, Hester de Boer, Simoe Doolaard, and Roel J. Bosker. 2018. “Effective Differentiation Practices: A Systematic Review and Meta-Analysis of Studies on the Cognitive Effects of Differentiation Practices in Primary Education.” *Educational Research Review* 24 (June 2018): 31–54.

Dietrichson, Jens, Martin Bøg, Trine Filges, and Anne-Marie Klint Jørgensen. 2017. “Academic Interventions for Elementary and Middle School Students with Low Socioeconomic Status: A Systematic Review and Meta-Analysis.” *Review of Educational Research* 87(2), 243–282.

Doidge, Norman. 2007*. The Brain That Changes Itself*. New York: Penguin.

Elmore, Kristen C., and Myra Luna-Lucero. 2017. “Light Bulbs or Seeds? How Metaphors for Ideas Influence Judgments about Genius.” *Social Psychological and Personality Science* 8(2): 200–208.

Fennema, Elizabeth, Penelope L. Peterson, Thomas P. Carpenter, and Cheryl Lubinski. 1990. “Teachers' Attributions and Beliefs About Girls, Boys, and Mathematics.” *Educational Studies in Mathematics* 21(1): 55–69.

Foster, David, and Audrey E. Poppers. 2011.“How Can I Get Them to Understand? Formative Assessment and Reengaging Students in Core Mathematics.” *New Frontiers in Formative Assessment.* Cambridge, MA: Harvard University Press.

Guyon, Nina and Maurin, Eric and McNally, Sandra. 2011. “The Effect of Tracking Students by Ability into Different Schools: A Natural Experiment (January 5, 2011).” FEEM Working Paper No. 152.2010.

Hanushek, Eric A. and Ludger Woessmann (2006), “Does Early Tracking Affect Educational Inequality and Performance? Differences-in-Differences Evidence across Countries”, *Economic Journal* 116 (510), C63–C76.

Hemmi, Kirsti, Kajsa Bråting, and Madis Lepik. 2021. “Curricular Approaches to Algebra in Estonia, Finland and Sweden – a Comparative Study.” *Mathematical Thinking and Learning* 23(1): 49–71.

Herold, Benjamin. 2019. “What is Personalized Learning?” Education Week Special Report. <https://www.edweek.org/technology/what-is-personalized-learning/2019/11>.

J-PAL Evidence Review. 2019. “Will Technology Transform Education for the Better?” Available at: <https://www.povertyactionlab.org/publication/will-technology-transform-education-better>.

Kalogrides, Demetra and Susanna Loeb. 2013. “Different Teachers, Different Peers: The Magnitude of Student Sorting Within Schools.” *Educational Researcher*, 42(6), 304–316.

Kwon, Hyunkyung, Robert M. Capraro, and Mary Margaret Capraro. 2021. “When I Believe, I Can: Success STEMs from My Perceptions.” *Canadian Journal of Science, Mathematics and Technology Education* 21(1): 67–85.

Langer-Osuna, Jennifer M. 2007. “Toward A Framework for the Co-Construction of Learning and Identity in the Mathematics Classroom.” In *Proceedings from the 2nd Sociocultural Theory in Education Conference: Theory, Identity and Learning*.

Langer-Osuna, Jennifer M. 2017. “Authority, Identity, and Collaborative Mathematics.” *Journal for Research in Mathematics Education* 48(3): 237–247.

Letchford, Lois. 2018. *Reversed: A Memoir*. Irvine, CA: Acorn Publishing.

Loveless, Tom. 2021. “Does Detracking Promote Educational Equity?” Brookings. <https://www.brookings.edu/articles/does-detracking-promote-educational-equity/>.

Maguire, Eleanor A., Katherine Woollett, and Hugo J. Spiers. 2006. “London Taxi Drivers and Bus Drivers: A Structural MRI and Neuropsychological Analysis.” *Hippocampus* 16(12): 1091–1101.

Margolis, Jesse. 2019. Three-Year MAP Growth at Schools Using Teach to One: Math. MarGrady Research.

Math Circle Network. n.d. *Homepage.* Retrieved from <https://mathcircles.org/>.

Mathematical Olympiads for Elementary & Middle Schools. n.d. *Welcome to MOEMS.* Retrieved from <https://moems.org/>.

Modern Classrooms Team. 2021. “An Instructional Model That Supports Students, Both Inside and Outside the Classroom.” <https://www.swivl.com/2021/02/22/an-instructional-model-that-supports-students-both-inside-and-outside-the-classroom/>.

Moses, Robert, and Charles Cobb. 2002. *Radical Equations: Civil Rights from Mississippi to the Algebra Project*. Boston: Beacon Press.

Murphy, Robert, Lawrence Gallagher, Andrew Krumm, Jessica Mislevy, and Amy Hafter. 2014. *Research on the Use of Khan Academy in Schools*. Menlo Park, CA: SRI Education.

Na'ilah Suad Nasir, Carlos Cabana, Barbara Shreve, Estelle Woodbury, and Nicole Louie (Eds). 2014. *Mathematics for Equity: A Framework for Successful Practice*. New York: Teachers College Press.

National Center on Education and the Economy. n.d. Top Performing Countries: Estonia. <https://ncee.org/country/estonia/>.

National Council of Teachers of Mathematics. 2020. *Catalyzing Change in Middle School Mathematics*. Reston, VA: National Council of Teachers of Mathematics.

National Student Support Accelerator. n.d. Research overview. <https://studentsupportaccelerator.com/>.

Nickow, Andre, Philip Oreopoulos, and Vincent Quan. 2020. “The Impressive Effects of Tutoring on PreK-12 Learning: A Systemic Review and Meta-Analysis of the Experimental Evidence.” Cambridge, MA: National Bureau of Economic Research.

Oakes, Jeannie. 2005. *Keeping Track: How Schools Structure Inequality.* New Haven: Yale University Press.

Okano, Kaori, and Motonori Tsuchiya. 1999. *Education in Contemporary Japan: Inequality and Diversity.* Cambridge: Cambridge University Press.

Phillips, Andrea, John F. Pane, Rebecca Reumann-Moore, and Shenbanjo Oluwatosin. 2000. “Implementing an Adaptive Intelligent Tutoring System as an Instructional Supplement.” *Educational Technology Research and Development* 68: 1049-1437.

Rui, Ning. 2009. “Four Decades of Research on the Effects of Detracking Reform: Where Do We Stand?—a Systematic Review of the Evidence.” *Journal of Evidence‐Based Medicine* 2(3): 164–183.

Schwartz, Laurent. 2001. *A Mathematician Grappling With His Century*. Basel: Birkhäuser.

Stigler, James W., and James Hiebert. 2009. *The Teaching Gap: Best Ideas from the World's Teachers for Improving Education in the Classroom*. New York: Simon and Schuster.

Tiedemann, Joachim. 2000. “Gender-Related Beliefs of Teachers in Elementary School Mathematics.” *Educational Studies in Mathematics* 41(2): 191–207.

US Department of Education. 2017. Issue Brief: Academic Tutoring in High Schools. <https://www2.ed.gov/rschstat/eval/high-school/academic-tutoring.pdf>.

US Department of Education. 2018. Issue Brief: Academic Support Classes. <https://www2.ed.gov/rschstat/eval/high-school/academic-support.pdf>.

White, Sara, Megan Carey, Annie O’Donnell, and Susanna Loeb. n.d. Early lessons from implementing high-impact tutoring at scale. National Student Support Accelerator. Available at: <https://studentsupportaccelerator.com/sites/default/files/Early%20Lessons%20from%20Implementing%20High-Impact%20Tutoring%20at%20Scale.pdf>.

Woessmann, Ludger. 2009. International Evidence on School Tracking: A Review. ifo DICE Report, ifo Institute - Leibniz Institute for Economic Research at the University of Munich 7(1).<https://www.ifo.de/DocDL/dicereport109-rr1.pdf>.

YouCubed. 2018. Border Problem. [https://www.youcubed.org/wp-content/uploads/2018/09/Border-Problem-final-copy.pdf](https://www.youcubed.org/wp-content/uploads/2018/09/Border-Problem-final-copy.pdf" \o "Youcubed Border Problem).

## Chapter 10

Anderson, Robin K., Jo Boaler, Jack A. Dieckmann. 2018. “Achieving Elusive Teacher Change through Challenging Myths about Learning: A Blended Approach.” *Education Sciences* 8(3): 98.

Ball, Deborah. 2018. “Just Dreams and Imperatives: The Power of Teaching in the Struggle for Public Education.” Paper presented at the Annual Meeting of the American Educational Research Association (AERA), New York. <https://www.aera.net/Events-Meetings/Webcasts-of-Lectures-Events>.

California Department of Education (CDE). 2014. *English Language Arts/English Language Development Framework*. <https://www.cde.ca.gov/ci/rl/cf/>.

California Department of Education (CDE). 2017. *California English Learner Roadmap: Strengthening Comprehensive Educational Policies, Programs, and Practices for English Learners.* <https://www.cde.ca.gov/sp/el/rm/>.

CDE. 2016. *Science Framework for California Public Schools: Kindergarten through Grade Twelve*. <https://www.cde.ca.gov/ci/sc/cf/cascienceframework2016.asp>.

CDE. n.d. Multi-Tiered System of Support. <https://www.cde.ca.gov/ci/cr/ri/mtsscomprti2.asp>.

California Action Network for Mathematics Excellence and Equity. n.d. <https://cmpso.org/canmee/>.

Campbell, Patricia F., and Matthew J. Griffin. 2017. “Reflections on the Promise and Complexity of Mathematics Coaching.” *The Journal of Mathematical Behavior* 46: 163–176.

Coggshall, Jane. 2012. Toward the Effective Teaching of New College- and Career-Ready Standards: Making Professional Learning Systemic. National Comprehensive Center for Teacher Quality. <https://eric.ed.gov/?id=ED532774>.

Conference Board of the Mathematical Sciences. 2012. “The Mathematical Education of Teachers II.” *Issues in Mathematics Education* 17. Providence, RI: American Mathematical Society.

Darling, Felicia. 2019. *Teachin' It!: Breakout Moves that Break Down Barriers for Community College Students*. New York: Teachers College Press.

Darling-Hammond, Linda. 2006. *Powerful Teacher Education: Lessons from Exemplary Programs*. Hoboken, NJ: John Wiley & Sons.

Darling-Hammond, Linda, Maria E. Hyler, and Madelyn Gardner. 2017. *Effective Teacher Professional Development.* Palo Alto, CA: Learning Policy Institute.

Desimone, Laura M., and Katie Pak. 2017. “Instructional Coaching as High-Quality Professional Development.” *Theory Into Practice* 56(1): 3–12.

DuFour, Richard. 2004. “What is a ‘Professional Learning Community’?” *Educational Leadership* 61(8): 6–11.

Ermeling, Bradley A., and Ronald Gallimore. 2013. “Learning to Be a Community: Schools Need Adaptable Models to Create Successful Programs.” *Journal of Staff Development* 34(2): 42–45.

Fixsen, Dean L., and Karen A. Blase. 2009. “Implementation: The Missing Link Between Research and Practice.” *NIRN Implementation Brief #1*: 218–227.

Fixsen, Dean L., Sandra Naoom, Karen Blase, Robert Friedman, and Frances Wallace. 2005. *Implementation Research: A Synthesis of the Literature.* Tampa. FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network (FMHI Publication #231).

Fullan, Michael. 2015. *The New Meaning of Educational Change*. New York: Teachers College Press.

Fulton, Kathleen, and Ted Britton. 2010. *STEM Teachers in Professional Learning Communities: A Knowledge Synthesis*. National Commission on Teaching and America’s Future and WestEd.

Gersten, Russell, Mary Jo Taylor, Tran D. Keys, Eric Rolfhus, and Rebecca Newman-Gonchar. 2014. “Summary of Research on the Effectiveness of Math Professional Development Approaches.” Washington, DC: US Department of Education, Institute of Education Sciences. National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southeast.<https://ies.ed.gov/ncee/edlabs/regions/southeast/pdf/REL_2014010.pdf>.

Gibbons, Lynsey. 2017. “Examining Mathematics Coaching Practices That Help Develop Schoolwide Professional Learning.” In Maggie B. McGatha and Nicole R. Rigelman (eds.). *Elementary Mathematics Specialists: Developing, Refining, and Examining Programs That Support Mathematics Teaching and Learning*. Charlotte, NC: Information Age Publishing.

Gibbons, Lynsey K., and Paul Cobb. 2017. “Focusing on Teacher Learning Opportunities to Identify Potentially Productive Coaching Activities.” *Journal of Teacher Education* 68(4): 411–425.

Heyder, Anke, Anne F. Weidinger, Andrei Cimpian, and Ricarda Steinmayr. 2020. “Teachers’ Belief That Math Requires Innate Ability Predicts Lower Intrinsic Motivation Among Low-Achieving Students.” *Learning and Instruction* 65: 101220.

Hopkins, Megan, James P. Spillane, Paula Jakopovic, and Ruth M. Heaton. 2013. “Infrastructure Redesign and Instructional Reform in Mathematics: Formal Structure and Teacher Leadership.” *The Elementary School Journal* 114(2): 200–224.

Hord, Shirley M., and William A. Summers. 2008. *Leading Professional Learning Communities: Voices from Research and Practice*. Thousand Oaks, CA: Corwin.

Horn, I.S. 2005. “Learning on the Job: A Situated Account of Teacher Learning in High School Mathematics Departments.” *Cognition and Instruction* 23:2, 207–236

Hull, Ted H., Don S. Balka, and Ruth H. Miles (Eds.). 2009. *A Guide to Mathematics Coaching: Processes for Increasing Student Achievement*. Thousand Oaks, CA: Corwin Press.

Ishimaru, A.M., Barajas-López, F. and Bang, M. 2015. “Centering Family Knowledge to Develop Children’s Empowered Mathematics Identities.” *Journal of Family Diversity in Education* 1(4), 1–21.

Kaser, Joyce, Susan E. Mundry, Katherine E. Stiles, and Susan Loucks-Horsley. (Eds.). 2013. *Leading Every Day: Actions for Effective Leadership* (3rd ed.). Thousand Oaks, CA: Corwin Press.

Kazemi, Elham, Lynsey Gibbons, Rebecca Lewis, Alison Fox, Allison Hintz, Megal Kelley-Petersen, Adrian Cunard, Kendra Lomax, Anita Lenges, and Ruth Balf. 2018. “Math Labs: Teachers, teacher educators, and school leaders learning together with and from their own students.” *NCSM Journal of Mathematics Education Leadership* 19(1): 23–36.

Kouzes, James M., and Barry Z. Posner. 2003. *The Leadership Practices Inventory (LPI): Participant's Workbook* (Vol. 47). Hoboken, NJ: John Wiley & Sons.

Lewis, Catherine, and Jacqueline Hurd. 2011. *Lesson Study Step by Step: How Teacher Learning Communities Improve Instruction*. Portsmouth, NH: Heinemann.

Lewis, Catherine, and Rebecca Perry. 2017. “Lesson Study to Scale-up Research-Based Knowledge: A Randomized, Controlled Trial of Fractions Learning.” *Journal for Research in Mathematics Education* 48(3), 262–300.

Lieberman, Ann, and Lynne Miller. 2008. *Teachers in Professional Communities: Improving Teaching and Learning*. New York: Teachers College Press.

Little, Judith W. 2006. *Professional Community and Professional Development in the Learning-Centered School.* Washington, DC: National Education Association.

Loucks-Horsley, Susan, Katherine E. Stiles, Susan Mundry, Nancy Love, and Peter W. Hewson. 2010. *Designing Professional Development for Teachers of Science and Mathematics* (3rd ed.). Thousand Oaks, CA: Corwin Press.

Loughran, John. 2019. “Pedagogical Reasoning: The Foundation of the Professional Knowledge of Teaching.” *Teachers and Teaching: Theory and Practice* 25(5): 523–535.

Louie, Nicole L. 2017. “The Culture of Exclusion in Mathematics Education and Its Persistence in Equity-Oriented Teaching.” *Journal for Research in Mathematics Education* 48(5): 488–519.

Louis, Karen S., Helen M. Marks, and Sharon Kruse. 1996. “Teachers’ Professional Community in Restructuring Schools.” *American Educational Research Journal* 33(4): 757–798.

Mapp, Karen L., and Eyal Bergman. 2019. Dual Capacity-Building Framework for Family-School Partnerships (Version 2).

Martin, Danny B. 2019. “Equity, Inclusion, and Antiblackness in Mathematics Education.” *Race Ethnicity and Education* 22(4): 459–478.

Martin, Danny B., Celia Rousseau Anderson, and Niral Shah. 2017. “Race and Mathematics Education.” *Compendium for Research in Mathematics Education*, 607-636. National Council of Teachers of Mathematics.

Mills College. n.d. The Lesson Study Group. About Lesson Study. Retrieved from <https://lessonresearch.net/about-lesson-study/what-is-lesson-study/>.

Moschkovich, Judit. 2012. “Mathematics, the Common Core, and Language: Recommendations for Mathematics Instruction for ELs Aligned with the Common Core. *Commissioned papers on language and literacy issues in the Common Core State Standards and Next Generation Science Standards* 94: 17.

National Council of Teachers of Mathematics (NCTM). n.d. *Professional Development Guides*. <https://www.nctm.org/pdguides/>.

National Council of Teachers of Mathematics (NCTM). 2014. *Principles to Actions: Ensuring Mathematical Success for All.* NCTM. <https://www.nctm.org/PtA/>.

National Research Council (NRC). 2010. Preparing Teachers: Building Evidence for Sound Policy. Washington, DC: The National Academies Press.

Niebuhr, Deanna, Sean Arseo, and Araceli Simeón. “2021 Family Engagement in the Time of COVID-19: Lessons Learned From Learning Continuity Plans.” Berkeley, CA: Opportunity Institute.

Penuel, William R., Christopher J. Harris, and Angela H. DeBarger. 2015. “Implementing the Next Generation Science Standards.” *Phi Delta Kappan* 96(6): 45–49.

Perry, Rebecca, Catherine Lewis. 2009. “What Is Successful Adaptation of Lesson Study?” *Journal of Educational Change* 10(4), 365–391.

Ramirez, Nora, and Sylvia Celedón-Pattichis. 2012. “Second Language Development and Implications for the Mathematics Classroom.” In *Beyond Good Teaching: Advancing Mathematics Education for ELLs*, 19–37. Reston, VA: National Council of Teachers of Mathematics.

Senge, Peter M. 1990. “The Leader’s New Work: Building Learning Organizations.” MIT *Sloan Management Review* 32(1): 1–5.

Sherin, Miriam G., Vicki R. Jacobs, and Randy A. Philipp. 2011. “Situating the Study of Teacher Noticing.” In Miram G. Sherin, Vicki R. Jacobs, and Randy A. Philipp (Eds.), *Mathematics Teacher Noticing: Seeing Through Teachers’ Eyes* (3–13). New York: Routledge.

STEM Task Force. 2014. *Innovate: A Blueprint for Science, Technology, Engineering, and Mathematics in California Public Education*. Dublin, CA: Californians Dedicated to Education Foundation.

Stipek, Deborah, Karen Givvin, Julie Salmon, and Valanne MacGyvers. 2001. “Teachers' Beliefs and Practices Related To Mathematics Instruction*.” Teaching and Teacher Education* 17(2): 213–226.

Task Force on Educator Excellence. 2012. *Greatness by Design: Supporting Outstanding Teaching to Sustain a Golden State*. Sacramento: California Department of Education.

TODOS: Mathematics for ALL. 2020. Black, Indigenous, and Latinx Parents as Partners in Mathematics Education. <https://www.todos-math.org/assets/documents/PositionPapers/Final%20Parental%20Involvement%20Commentary%20Paper.pdf>.

Waters, Tim, Robert J. Marzano, and Brian McNulty. 2003. *Balanced Leadership: What 30 Years of Research Tells Us About the Effect of Leadership on Student Achievement*. Aurora, CO: Mid-continent Research for Education and Learning.

Weiss, Iris R., and Joan D. Pasley. 2009. *Mathematics and Science for a Change: How to Design, Implement, and Sustain High-Quality Professional Development*. Portsmouth, NH: Heinemann.

Weissglass, Julian. 1998. *Ripples of Hope: Building Relationships for Educational Change*. Center for Educational Change in Mathematics and Science, University of California.

Wenger-Trayner, Etienne, and Beverly Wenger-Trayner. 2015. “Introduction to Communities of Practice: A Brief Overview of the Concept and Its Uses.” <https://wenger-trayner.com/introduction-to-communities-of-practice/>.

Wenner, Julianne A., and Todd Campbell. 2017. “The Theoretical and Empirical Basis of Teacher Leadership: A Review of the Literature.” *Review of Educational Research* 87(1): 134–171.

York-Barr, Jennifer, and Karen Duke. 2004. “What Do We Know About Teacher Leadership? Findings from Two Decades of Scholarship.” *Review of Educational Research* 74(3): 255–316.

Yow, Jan A., and Christine Lotter. 2016. “Teacher Learning in a Mathematics and Science Inquiry Professional Development Program: First Steps in Emergent Teacher Leadership.” *Professional Development in Education* 42(2): 325–351.

## Chapter 11

Archambault, Leanna, and Kathryn Kennedy, K. 2018. “Teacher Preparation for K–12 Online and Blended Learning.” In K. Kennedy & R. Ferdig (Eds). *Handbook of K–12 Blended and Online Learning Research* (pp. 221–246). Pittsburgh, PA: Carnegie Mellon University ETC Press.

Association of Mathematics Teacher Educators. 2009. *Mathematics TPACK (Technological Pedagogical Content Knowledge) Framework*. <https://amte.net/sites/all/themes/amte/resources/MathTPACKFramework.pdf>.

California Department of Education. 2021. *California Digital Learning Integration and Standards Guidance*. Retrieved from <https://www.cde.ca.gov/ci/cr/dl/dlintergstdsguidance.asp>.

California Department of Education. n.d.a. “California Assessment of Student Performance and Progress (CAASPP) System.” Retrieved from <https://www.cde.ca.gov/ta/tg/ca/>.

California Department of Education. n.d.b. “Distance Learning Instruction Planning Guidance.” Retrieved from <https://www.cde.ca.gov/ls/he/hn/guidanceplanning.asp>.

California Department of Education. n.d.c. “Distance Learning Frequently Asked Questions.” Retrieved from <https://www.cde.ca.gov/ci/cr/dl/distlearningfaqs.asp>.

International Telecommunication Union (ITU). 2009. Measuring the Information Society – The ICT Development Index. Geneva, Switzerland: International Telecommunication Union. Retrieved from <https://www.itu.int/en/ITU-D/Statistics/Documents/publications/mis2009/MIS2009_w5.pdf>.

Koehler, Matthew, and Punya Mishra. 2009. “What Is Technological Pedagogical Content Knowledge (TPACK)?” *Contemporary Issues in Technology and Teacher Education* 9(1): 60–70.

Kolb, Liz, and Victoria Carter. 2020. “Integrating Digital Technologies in Remote K–12 Learning: Lessons for Higher Education Preparation Programs.” Panel hosted by the International Society for Technology in Education, University of Michigan School of Education, & American Association of Colleges for Teacher Education. Retrieved from <https://drive.google.com/file/d/1T2F45QUO5i9KiM7oW5Z-b1iXCZ3l72SV/view?usp=sharing>.

Land the Plane. n.d. Retrieved from <https://teacher.desmos.com/activitybuilder/custom/582b81f4bf3030840aacf265>.

Mishra, Punya, and Matthew J. Koehler. 2006. “Technological Pedagogical Content Knowledge: A Framework for Teacher Knowledge.” *Teachers College Record* 108(6): 1017–1054.

National Council of Teachers of Mathematics. 2015. *Strategic Use of Technology in Teaching and Learning Mathematics*. Reston, VA.

Policy Analysis for California Education. 2020. “Supporting Learning in the COVID-19 Context: Research to Guide Distance and Blended Instruction.” Retrieved from <https://edpolicyinca.org/sites/default/files/2020-07/r_myung_jul20.pdf>.

Reys, Barbara, and Fran Arbaugh. 2001. “Clearing up the Confusion over Calculator Use in Grades K-5.” *Teaching Children Mathematics* 8(2): 90–94.

US Department of Education, Office of Planning, Evaluation, and Policy Development 2010. Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies, Washington, DC.

Zheng, Binbin, Mark Warschauer, Jin Kyong Hwang, and Penelope Collins. 2014. “Laptop Use, Interactive Science Software, and Science Learning Among At-Risk Students.” *Journal of Science Education and Technology* 23(4): 591–603.

Zinger, Doron, Tamara Tate, and Mark Warschauer. 2017. “Learning and Teaching with Technology: Technological Pedagogy and Teacher Practice.” In *The Sage Handbook of Research on Teacher Education*, edited byD.J. Clandinin and J. Husu. United Kingdom: SAGE Publications: 577–593.

## Chapter 12

Aguirre, Julia, Karen Mayfield-Ingram, and Danny Martin. 2013. *The Impact of Identity in K–8 Mathematics: Rethinking Equity-Based Practices*. Reston, VA: National Council of Teachers of Mathematics.

Banks, James. 2014. “Series Foreword.” In Na’ilah Nasir, Carlos Cabana, Barbara Shreve, Estelle Woodbury, and Nicole N. Louie (Eds.) *Mathematics for Equity: A Framework for Successful Practice*. New York: Teachers College Press.

Beilock, Sian L. 2011. *Choke: What the Secrets of the Brain Reveal about Getting it Right When You Have To*. New York: Simon and Schuster, Free Press.

Black, Paul, Christine Harrison, Clare Lee, Bethan Marshall, and Dylan Wiliam. 2002. “Working Inside the Black Box: Assessment for Learning in the Classroom.” London: Department of Education and Professional Studies, King’s College.

Boaler, Jo, and Megan Staples. 2014. “Creating Mathematical Futures Through an Equitable Teaching Approach.” In Na’ilah Nasir, Carlos Cabana, Barbara Shreve,

Estelle Woodbury, and Nicole N. Louie (Eds.). Mathematics *for Equity: A Framework for Successful Practice*. New York: Teachers College Press.

Boaler, Jo. 2016. *Mathematical Mindsets: Unleashing Students’ Potential through Creative Math, Inspiring Messages and Innovative Teaching*. Chappaqua, NY: Jossey-Bass/Wiley.

Boaler, Jo, Kristina Dance, and Estelle Woodbury. 2018. “From Performance to Learning: Assessing to Encourage Growth Mindsets.” YouCubed.

Cabana, Carlos, Barbara Shreve, Estelle Woodbury. 2014. “Working Toward an Equity Pedagogy.” In Na’ilah Nasir, Carlos Cabana, Barbara Shreve, Estelle Woodbury, and Nicole N. Louie (Eds.). *Mathematics for equity: A framework for successful practice*. New York: Teachers College Press.

California Department of Education. n.d. *California Assessment of Student Performance and Progress.* <https://caaspp.org/>.

California Department of Education. 2014. *English Language Arts/English Language Development Framework*. Sacramento.

CDE. 2021. *California Digital Learning Integration and Standards Guidance*. Retrieved from <https://www.cde.ca.gov/ci/cr/dl/dlintergstdsguidance.asp>.

Carpenter, Thomas P., Elizabeth Fennema, Megan Loef Franke, Linda Levi, and Susan B. Empson. 2014. *Children’s Mathematics: Cognitively Guided Instruction, Second Edition*. Portsmouth, NH: Heinemann.

Cohen, Elizabeth G., and Rachel A. Lotan. 2014. *Designing Groupwork: Strategies for the Heterogeneous Classroom, Third Edition*. Teachers College Press.

David Douglas School District. n.d. “Elementary Report Cards.” Portland, Oregon. Retrieved from <https://www.ddouglas.k12.or.us/departments/curriculum-and-instruction/elementary-report-cards/>.

DeSilva, Eran. 2020. “Students in the Center.” In Gardner, Trevor (Ed). *Leading in the Belly of the Beast: School Leadership in a School System Designed to Fail* (95–112). Lanham, MD: Rowman and Littlefield.

Dieckmann, Jack, and Kari Kokka. 2016. “SCALE Math Performance Assessment Rubric, Grades 3–12.” Stanford Center for Assessment, Learning, and Equity (SCALE) for the George Lucas Educational Foundation's Learning Through Performance project. Retrieved from <https://performanceassessmentresourcebank.org/system/files/PARB%20CC%20BY%204.0%20SCALE%20Math%20PA%20Rubric%20Gr3-12%202016.pdf>.

Elewar, Maria C., and Lyn Corno. 1965. “A Factorial Experiment in Teachers' Written Feedback on Student Homework: Changing Teacher Behavior a Little Rather Than a Lot.” *Journal of Educational Psychology* 77(2): 162–173.

Engle, Randall W. 2002. “Working Memory Capacity as Executive Attention.” *Current Directions in Psychological Science* 11:19–23.

Feldman, Joe. 2019. *Grading for Equity, What It Is, Why it Matters, and How it Can Transform Schools and Classrooms*. Thousand Oaks, CA: Corwin Press.

Gonzalez, Jennifer. 2015. “Meet the Single Point Rubric.” Retrieved from <https://www.cultofpedagogy.com/single-point-rubric/>.

Gough, Jill, and Jennifer Wilson. 2014. “Math Practices Learning Progressions #LL2LU.” Retrieved from <https://jplgough.blog/ll2lu-learning-progressions-smp/> and <https://easingthehurrysyndrome.wordpress.com/math-practices-learning-progressions-ll2lu/>.

Henry, Valerie, and Richard Brown. 2008. First Grade Basic Facts: An Investigation Into Teaching and Learning of an Accelerated, High-Demand Memorization Standard. *Journal for Research in Mathematics Education* 39:2, 153-183.

Heuer, Stephen. 2008. “Math: High Dive Unit Problem.” Retrieved from <https://stephanheuer.wordpress.com/2008/05/09/math-high-dive-unit-problem/>.

Iamarino, Danielle L. 2014. “The Benefits of Standards-Based Grading: A Critical Evaluation of Modern Grading Practices.” *Current Issues in Education* 17(2).

Illinois Standards Based Reporting (ISBR). n.d. “Sample Report Cards.” Retrieved from <http://www.isbestandardsbasedreporting.com/report-card-examples.html>.

LaMar, Tanya, Miriam Leshin, and Jo Boaler. 2020. "The Derailing Impact of Content Standards–an Equity Focused District Held Back By Narrow Mathematics." *International Journal of Educational Research* *Open* 1(2020): 100015.

Lambert, Rachel. 2020.” Increasing Access to Universally Designed Mathematics Classrooms.” Stanford, CA: PACE. Retrieved from <https://edpolicyinca.org/publications/increasing-access-universally-designed-mathematics-classrooms>.

Linquanti, Robert. 2014. “Supporting Formative Assessment for Deeper Learning: A Primer for Policymakers.” Council of the Chief State School Officers.

Loma Prieta Joint Union School District. n.d. “Loma Prieta Elementary School Report Card.”

MAC & CAASPP. 2015. Technical Report, Years 2014 and 2015, Morgan Hill, CA: Educational Data Systems.

Meyer, Anne, David H. Rose, and David T. Gordon. 2014. *Universal Design for Learning: Theory and Practice*. CAST Professional Publishing.

National Research Council and Mathematics Learning Study Committee. 2001. Adding It Up: Helping Children Learn Mathematics. National Academies Press.

Prekinders. n.d. “Pre–K Math Portfolios.” Retrieved from <https://www.prekinders.com/math-portfolios/>.

Ramirez, Gerardo, Elizabeth A. Gunderson, Susan C. Levine, and Sian L. Beilock. 2013. “Math Anxiety, Working Memory and Math Achievement in Early Elementary School.” *Journal of Cognition and Development* 14 (2): 187–202.

Regents of the University of California. 2021. “Understanding the Formative Assessment Process.” Retrieved from <https://portal.smarterbalanced.org/library/en/formative-assessment-process.pdf>.

Rhode Island Department of Education. n.d. “I Can Statements.”

Selbach-Allen, Megan E., Sarah J. Greenwald, Amy E. Ksir, and Jill E. Thomley. 2020. “Raising the Bar with Standards-Based Grading.” *PRIMUS* 30(8-10): 1110–1126.

Stanford Center for Assessment, Learning, & Equity (SCALE), Envision Schools, and New Tech Network. 2013. “Math Performance Assessment Rubric (Grades 9-12).” Retrieved from <https://performanceassessmentresourcebank.org/system/files/PARB%20CC%20BY%204.0%20SCALE%20Math%20Performance%20Assessment%20Rubric%20Gr%209-12%202013.pdf>.

Stassen, Martha, Kathryn Doherty, and Mya Poe. 2001. “Program-Based Review and Assessment.” Office of Academic Planning and Assessment, University of Massachusetts Amherst. <http://www.umass.edu/oapa/sites/default/files/pdf/handbooks/program_assessment_handbook.pdf>.

Swan, Gerry M., Thomas R. Guskey, and Lee Ann Jung. 2014. Parents’ and teachers’ perceptions of standards-based and traditional report cards. *Education Assessment, Evaluation and Accountability* 26, 289-299.

Tools for Teachers. n.d. <https://smartertoolsforteachers.org/>.

Townsley, Matt, and Tom Buckmiller. 2016. “What Does the Research Say about Standards-Based Grading?” [Blog post, January 14, 2016.] Retrieved from <http://mctownsley.net/standards-based-grading-research/>.

Tsu, Ruth, Rachel Lotan, and Ruth Cossey. 2014. “Building a Vision for Equitable Learning.” In Na’ilah Nasir, Carlos Cabana, Barbara Shreve, Estelle Woodbury, and Nicole N. Louie (Eds.). *Mathematics for Equity: A Framework for Successful Practice*. New York: Teachers College Press.

Zwiers, Jeff, Jack Dieckmann, Sara Rutherford-Quach, Vinci Daro, Renae Skarin, Steven Weiss, and James Malamut. 2017. “Principles for the Design of Mathematics Curricula: Promoting Language and Content Development.” Retrieved from Stanford University, UL/SCALE website: <http://ell.stanford.edu/content/mathematics-resources-additional-resources>.

## Chapter 13

California Department of Education. 2013. *Standards for Evaluating Instructional Materials for Social Content, 2013 Edition.* Social Content Review. <https://www.cde.ca.gov/ci/cr/cf/lc.asp>.

CDE. 2015. *Guidelines for Piloting Instructional Materials.* Instructional Materials Adoptions. <https://www.cde.ca.gov/ci/cr/cf/imagen.asp>.

CDE. 2020. *Improving Education for Multilingual and English Learner Students: Research to Practice.* <https://www.cde.ca.gov/sp/el/er/documents/mleleducation.pdf>.

CDE. 2021. *California Digital Learning Integration and Standards Guidance*. <https://www.cde.ca.gov/ci/cr/dl/dlintergstdsguidance.asp>.

CDE. n.d.a. Approved Social Content Review Search. <https://www.cde.ca.gov/ci/cr/cf/ap2/search.aspx>.

CDE. n.d.b. Clearinghouse for Specialized Media & Technology*.* <https://www.cde.ca.gov/re/pn/sm/>.

Moschkovich, Judit. 2012. “Mathematics, the Common Core Standards, and Language: Mathematics Instruction for ELS Aligned with the Common Core.” North American Chapter of the International Group for the Psychology of Mathematics Education, Paper presented at the Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (34th, Kalamazoo, MI, Nov –4, 2012).

National Council of Teachers of Mathematics. 2009. *Focus in High School Mathematics: Reasoning and Sense Making*. Reston, VA: National Council of Teachers of Mathematics.

National Research Council. 2001. *Adding It All Up: How Children Learn Mathematics*. Washington, DC: National Academy Press.

National Governors Association Center and Council of Chief State School Officers. 2013. *High School Publishers’ Criteria for the Common Core State Standards for Mathematics*. Core Standards. Washington, D.C.: National Governors Association Center and Council of Chief State School Officers.

## Chapter 14

Bargagliotti, Anna, Christine Franklin, Pip Arnold, Rob Gould, Sheri Johnson, Leticia Perez, and Denise Spangler. 2020. “Pre-K-12 Guidelines for Assessment and Instruction in Statistics Education II (GAISE II): A Framework for Statistics and Data Science Education.” American Statistical Association.

California Department of Education. 2012. *California English Language Development Standards Kindergarten Through Grade 12.* <https://www.cde.ca.gov/sp/el/er/documents/eldstndspublication14.pdf>.

Coalition for English Learner Equity. n.d. Reimagining a Better System for ELs. <https://www.elequity.org/>.

Common Core Standards Writing Team. 2022. Progressions for the Common Core State Standards for Mathematics (February 28, 2023). Tucson, AZ: Institute for Mathematics and Education, University of Arizona. <https://mathematicalmusings.org/wp-content/uploads/2023/02/Progressions.pdf>.

Ellenberg, Jordan. 2014. *How Not To Be Wrong: The Power of Mathematical Thinking*. London: Penguin.

Gay, Geneva. 2002. “Preparing for Culturally Responsive Teaching.” *Journal of Teacher Education* 53(2): 106–116.

Gay, Geneva. 2018. *Culturally Responsive Teaching: Theory, Research, and Practice*. New York: Teachers College Press.

Gutiérrez, Rochelle. 2012. “Context Matters: How Should We Conceptualize Equity in Mathematics Education?” In Beth Herbel-Eisenmann, Jeffrey Choppin, David Wagner, and David Pimm (Eds). *Equity in Discourse for Mathematics Education* (17–33). Dordrecht: Springer.

Ladson-Billings, Gloria. 1994. *The Dreamkeepers: Successful Teachers of African-American Children.* San Francisco, CA: Josey-Bass.

Ladson-Billings, Gloria. 1995a. “Toward a Theory of Culturally Relevant Pedagogy.” *American Educational Research Journal* 32(3): 465-491.

Ladson‐Billings, Gloria. 1995b. “But That's Just Good Teaching! The Case for Culturally Relevant Pedagogy.” *Theory into Practice* 34(3): 159–165.

Paris, Django. 2012. “Culturally Sustaining Pedagogy: A Needed Change in Stance, Terminology, and Practice.” *Educational Researcher* 41(3): 93–97.

Webb, Noreen M., Megan L. Franke, Marsha Ing, Jacqueline Wong, Cecilia H. Fernandez, Nami Shin, and Angela C. Turrou. 2014. “Engaging with Others’ Mathematical Ideas: Interrelationships Among Student Participation, Teachers’ Instructional Practices, and Learning.” *International Journal of Educational Research* 63: 79–93.

## Appendix A

Partnership for Assessment of Readiness for College and Careers (PARCC). 2012. PARCC Model Content Frameworks for Mathematics Grades 3–11.

## Appendix C

Berry, Robert Q, III, Basil M. Conway, IV, Brian R. Lawler, and John W. Staley. 2020. *High School Mathematics Lessons to Explore, Understand, and Respond to Social Injustice.* Thousand Oaks, CA: Corwin Press.

Boaler, Jo, Jen Munson, and Cathy Williams. 2018. “What is Mathematical Beauty? Teaching through Big Ideas and Connections.” Youcubed.

Cabana, Carlos, Barbara Shreve, and Estelle Woodbury. 2014. “Working Toward an Equity Pedagogy.” In Na’ilah Nasir, Carlos Cabana, Barbara Shreve, Estelle Woodbury, and Nicole N. Louie (Eds.) *Mathematics for Equity: A Framework for Successful Practice*. New York: Teachers College Press.

California Department of Education. 2014a. English Language Arts/English Language Development Framework for California Public Schools: Kindergarten Through Grade Twelve. Sacramento: California Department of Education.

CDE. 2014b. California English Language Development Standards, Kindergarten Through Grade 12. Sacramento: California Department of Education.

CDE. 2018. *Science Framework for California Public Schools: Kindergarten through Grade Twelve.* Sacramento.

California Education and the Environment Initiative, n.d. “Climate Change in the Golden State.” Retrieved from <https://californiaeei.org/media/1329/greenhouse-cc.pdf>.

CAST. 2018. “Universal Design for Learning Guidelines version 2.2.” Retrieved from [https://udlguidelines.cast.org](https://udlguidelines.cast.org/).

Centers for Disease Control and Prevention. 2017. New CDC report: More than 100 million Americans have diabetes or prediabetes – infographic. <https://www.cdc.gov/media/releases/2017/p0718-diabetes-report-infographic.html>.

Chapin, S., O’Connor, C. & Anderson, N. (2013). *Talk Moves: A Teacher’s Guide for Using Classroom Discussions in Math, 3rd Edition.* Chicago, IL: Math Solutions.

Cohen, Elizabeth, and Rachel A. Lotan. 2014. *Designing Groupwork: Strategies for the Heterogeneous Classroom, Third Edition*. New York: Teachers College Press.

Deslauriers, Louis, Logan S. McCarty, Kelly Miller, Kristina Callaghan, and Greg Kestin. 2019. “Measuring Actual Learning Versus Feeling of Learning in Response to Being Actively Engaged in the Classroom.” *Proceedings of the National Academy of Sciences of the United States of America* 116(39): 19251–19257.

Diez-Palomar, Javier, and Carlos Lopez Leiva. 2018. “Rethinking the Teaching and Learning of Latina/Latino Students to Promote a Multicultural Mathematics Education.” In Christine Clark, Amanda Vandehei, Kenneth Fasching-Varner, and Zaid Haddad. (Eds). *Multicultural Curriculum Transformation in Science, Technology, Engineering, And Mathematics.* Lanham, MD: Lexington Books.

Gargroetzi, Emma. 2020. Becoming a Math Student in an American High School: An Ethnography of Math, Identity, and Imagined Futures. Unpublished doctoral dissertation.

HUD User. n.d. *Office of Policy Development and Research (PD&R).* Retrieved from [http://huduser.gov](http://huduser.gov/).

Illustrative Mathematics. n.d. *Comparing Money Raised*. <http://tasks.illustrativemathematics.org/content-standards/4/OA/A/2/tasks/263>.

Illustrative Mathematics. 2016a. “Thousands and Millions of Fourth Graders.” Illustrative Mathematics. <http://tasks.illustrativemathematics.org/content-standards/4/OA/A/1/tasks/1808>.

Illustrative Mathematics. 2016b. “Rectangle Perimeter 2.”Retrieved from <https://www.illustrativemathematics.org/content-standards/6/EE/A/4/tasks/461>.

Inside Mathematics. n.d. “Formative Re-Engaging Lessons.” University of Texas at Austin, Charles A. Dana Center. Retrieved October 9, 2020 from <https://www.insidemathematics.org/classroom-videos/formative-re-engaging-lessons>.

Langer-Osuna, Jennifer, Mary Trinkle, and Faith Kwon. 2019. *Becoming Collaborative: Examining the Development of Early Collaborative Problem-Solving Capacities.* National Council of Teachers of Mathematics Annual Meeting, April 6, 2019, San Diego, CA.

Lieberman, Gerald, Director, State Education and Environment Roundtable, in Collaboration with Kyndall Brown, Ph.D., Executive Director, California Math Subject Matter Project. Public Comment recommendations to Mathematics Framework, November, 2020.

Lindsey, Rebecca. 2023. “Climate Change: Atmospheric Carbon Dioxide.” National Oceanic and Atmospheric Administration. Retrieved from <https://www.climate.gov/news-features/understanding-climate/climate-change-atmospheric-carbon-dioxide>.

Math Talks. n.d. “Are There More Inches in a Mile or Seconds in a Day?”

Munson, Jen. 2018a. *Responding to Student Thinking in the Moment: Examining Conferring Practices and Teacher Learning in the Elementary Mathematics Classroom*. Doctoral Dissertation. Stanford University.

Munson, Jen. 2018b. *In the Moment: Conferring in the Elementary Math Classroom*. Portsmouth, NH: Heinemann.

National Low Income Housing Coalition. 2015. Annual Report 2015. Washington, DC.

San Francisco Unified School District. 2015. SFUSD Signature Strategy #2: Three Read Protocol. Sfusdmath.org.

San Francisco Unified School District Mathematics Department. 2015. Re-engagement. Retrieved from San Francisco Unified School District website: <http://www.sfusdmath.org/reengagement.html>.

Smith, Margaret S., and Mary Kay Stein. 2011, 2018. *5 Practices for Orchestrating Productive Mathematics Discussions*. Reston, Virginia: National Council of Teachers of Mathematics.

Understanding Language and Stanford Center for Assessment, Learning and Equity (SCALE). 2017.

University of Nottingham. 2016. “Maximizing Area: Gold Rush.” Retrieved from <https://www.map.mathshell.org/lessons.php?unit=7300&collection=8>.

Van de Walle, John A., and Sandra Folk. 2005. *Elementary and Middle School Mathematics: Teaching Developmentally*. Toronto: Pearson Education Canada.

Van de Walle, John, Karen S. Karp, and Jennifer M. Bay-Williams. 2012. *Elementary and Middle School Mathematics: Teaching Developmentally* (8th ed.). Boston: Allyn and Bacon.

Wei, Gina, and Emma Gargroetzi. 2019. “Opportunities to Identify: Teaching for Dignity in Math.” Paper presented at the 62nd annual conference of the California Math Council, Northern Section (December 7, 2019). Asilomar, CA.

Youcubed. n.d.a *Data Science Online Course Lessons.* Retrieved from <https://www.youcubed.org/resources/data-science-online-course-lessons/>.

Youcubed. n.d.b. *Youcubed Sponge Art Transformations (K-10) [video].* Retrieved from <https://www.youcubed.org/resources/sponge-art-transformations-k-10-video/>.

Zwiers, Jeff. 2018. “Developing Reasoning and its Language in Secondary Mathematics Instruction.” *Soleado—Promising Practices from the Field* 11(1): 1–11.

California Department of Education, October 2023