Issue Brief

Jasmine Forde, Julie Bruch, and Megan Shoji

Teacher Factors That Drive Improvement in Secondary Writing Outcomes: A Landscape Analysis

Teachers – in both explicit and subtle ways – play a key role in engaging their students in writing and, in turn, improving writing outcomes. Teachers shape students' educational experiences overtly through their instructional practices, but also in less obvious ways as they engage with students, provide support, and offer feedback.

This brief summarizes a set of key teacher factors that could enhance or hinder the effectiveness of writing interventions such as curricula, technology, or other classroom supports. It identifies and explains important instructional skills and practices, teacher mindsets and attitudes, and features of classroom climate related to writing instruction. This work is funded by the Bill & Melinda Gates Foundation. The findings and conclusions contained within are those of the authors and do not necessarily reflect positions or policies of the Bill & Melinda Gates Foundation.

This brief can help:

/ **Developers, districts, and schools** identify factors they can leverage to make the most of their writing interventions

/ **Schools and teachers** understand areas where teachers may need support and practice to ensure the success of writing instruction

/ **Researchers** identify key factors they should measure to understand what practices in the classroom either enhance or hinder the implementation or effectiveness of writing interventions

This work is a part of a larger project funded by the Bill & Melinda Gates Foundation. The project seeks to increase the use of new solutions enabling more students who are Black, Latino, and/or experiencing poverty to be engaged in argumentative writing in grades 6 to 12 and be on track with college- and career-level competencies.

The findings in this brief are based on a landscape analysis of academic literature on teacher skills, practices, and attitudes (see box). Mathematica conducted the analysis in partnership with a panel of experts in the field of writing instruction and teacher development (see Appendix A). The landscape analysis builds on two prominent publications that summarize best practices in writing instruction: the What Works Clearinghouse's Practice Guide for Secondary Writing (Graham et al., 2016) and the National Council for Teacher Education's Beliefs about the Teaching of Writing (NCTE, 2016). This brief highlights some of the practices emphasized in those publications, along with influential teacher mindsets and attitudes and features of classroom climate. It touches on some teacher factors that have not been studied in rigorous impact studies, but for which there is promising correlational research or other theoretical importance supported by the panel of experts. The goal of this work was to inform the Bill & Melinda Gates Foundation's strategy to improve secondary writing outcomes for students who are Black, Latino, and/or experiencing poverty. It has broader implications for the field, including for educators and professional development providers who seek to improve the effectiveness of writing instruction.

The brief is organized by three sets of teacher factors: instructional skills and practices, teacher mindsets and attitudes, and classroom climate (Figure 1). Each section includes a list of specific areas for teacher development, including a brief explanation with relevant examples.

Figure 1. Important teacher factors to support and measure

Instructional skills and practices   Teacher mindsets and attitudes   Classroom climate

+

Intervention

Improved student writing outcomes
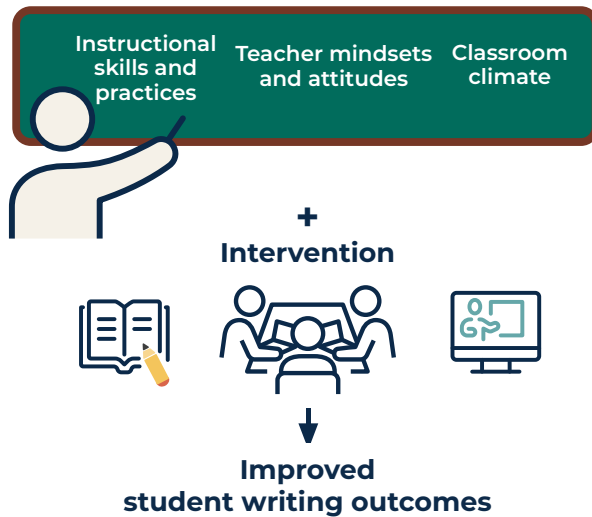
How we conducted the landscape analysis

Mathematica collaborated with a panel of seven experts in the areas of writing instruction and teacher development to identify and summarize key literature in the field of writing instruction. Drawing on their knowledge of relevant academic literature, the panelists identified key aspects of instruction, teacher mindsets and attitudes, and classroom climate that can impact student writing outcomes. Panelists identified key publications on these factors. Mathematica screened the 94 nominated publications and identified 15 that described teacher factors that research or practitioner literature link to improvements in student writing.

(1) Instructional skills and practices related to the teaching of writing

This section describes eight instructional skills or practices that support improvements in student writing, either based on empirical evidence or professional opinions of expert panelists.

Connecting the process of reading and the use of oral language to writing. Students should have opportunities to read others' written work and discuss revisions with teachers and peers (Graham et al., 2016; NCTE, 2016).

- Teachers can provide **opportunities to read published texts as well as other examples of student writing** (both high-quality work, as well as work that could use additional revision). Reading assignments should cover multiple genres such as narrative and argumentative writing.

- Teachers can also create **opportunities for students to talk about writing** through teacher-student and peer-to-peer writing conferences. Discussions can cover the writing process, writing structure, or themes and content of the writing.

Providing explicit criteria for writing goals. Students benefit from clear **criteria at the beginning of writing assignments** and to guide self-evaluation of written drafts (Graham & Perin, 2007; Graham et al., 2016; Troia, 2014).

- Teachers can provide criteria to communicate the purpose of the assignment (for example, to persuade as opposed to inform) and **specific, attainable characteristics of a high-quality final product.** For example, if teachers assign students to write a persuasive piece, a specific objective could be to include two or three reasons why others may disagree with the student's position and provide a counterargument for why those reasons are incorrect.

- Teachers can also **encourage students to use criteria in the form of rubrics** as formative tools for students to evaluate their own writing. Rubrics have the potential to prompt students to identify both strengths in their own writing as well as places for improvement. For example, teachers could adapt a formative rubric, such as the Literacy Design Collaborative grade 6-8 or 9-12 argumentative rubrics, for secondary student use (Literacy Design Collaborative, 2018a, 2018b).

Implementing the Model-Practice-Reflect instructional cycle. Teachers can teach writing through modeling writing (*"I do"*), having students practice writing independently or with a peer (*"We do"*), and then having students reflect on their writing through metacognitive analysis, both in talk and writing (*"You do"*) (Graham & Perin, 2007; Graham et al, 2016; NCTE, 2016).

- To help students improve their writing, teachers can **provide students with ongoing opportunities to practice the cycle** in class and out of class.

- The cycle can be **used throughout the writing process**, as students draft, rethink, revise, and draft again.

Teaching students to examine and emulate high-quality mentor texts. Teachers can use exemplars to illustrate specific features of effective writing for students to emulate (Applebee & Langer, 2013; Graham et al., 2016; Graham & Perin, 2007).

- Teachers can **reference exemplar texts** as a tool to teach students about the components of the writing process. For example, teachers can have students unpack the text to identify different literary devices or rhetorical flourishes, and then students can work to imitate these components and features in their own writing.

- Teachers can **provide ways for students to review their own work** to identify strengths and weaknesses in comparison to mentor texts.
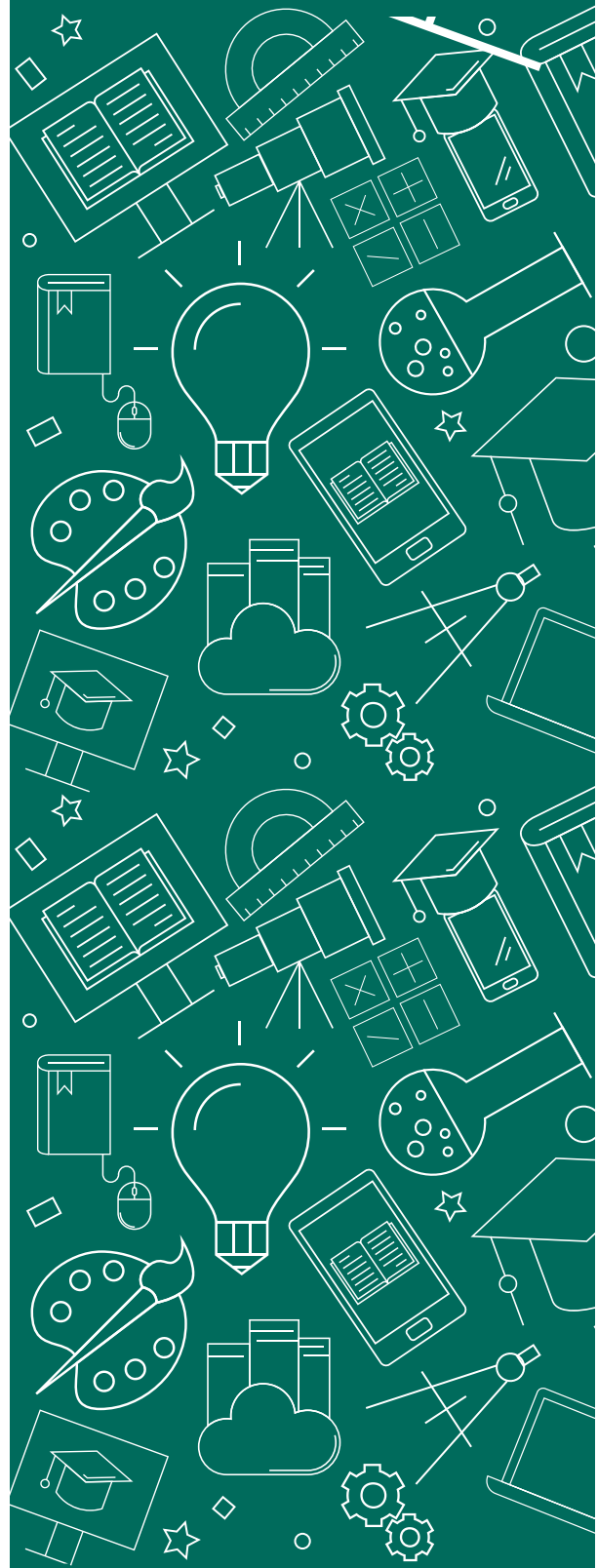
Assessing progress throughout the writing process. Teachers can use formative assessments to monitor and assess student progress periodically (Graham et al., 2011, 2016; NCTE, 2016; Troia, 2014).

- Teachers can **check progress at the beginning, middle, and end of a unit of instruction** to tailor instruction and make ongoing adjustments.

- Teachers can **assess intermediate goals** before teaching a new writing strategy or skill. For instance, they can use exit slips or brief questionnaires at the end of class.

- Best practices for reliable formative assessment include **masking the writer's identity when scoring, randomly ordering papers, and assessing multiple writing samples** that vary in topic and genre. Additionally, assessments should include options for students to write electronically or with paper and pencil.

Providing timely, specific, and goal-oriented feedback. Students can benefit from frequent and timely feedback throughout the writing process (Baker et al., 2014; Graham et al., 2011; NCTE, 2016; Troia, 2014).

- Teachers can **provide frequent feedback** throughout the writing process that is meant to improve writing with no or low stakes attached. Teachers can also provide **summative feedback** that includes an evaluation or grade on completed assignments.

- Teachers can provide **specific feedback** by focusing only on a specific instructional or writing objective. For example, if the objective is to successfully use research to support an argument, teachers can give specific feedback only about a student's success in using research to support an argument and not on other aspects of the writing, such as capitalization or spelling.

- Teachers can facilitate **opportunities for peers to discuss writing**, setting guidelines for when and how students talk about their writing. Teachers can explicitly teach students how to provide descriptive and constructive feedback.

Integrating technology into writing instruction. Writing instruction can be enhanced with digital tools for planning, drafting, and feedback (Graham & Perin, 2007; Graham et al., 2011; NCTE, 2016; Troia, 2014).

- Teachers can provide **explicit instruction on how to use technology** for a variety of writing purposes. For example, they can demonstrate to students how to use digital drawing tools for brainstorming their writing.

- Teachers can **use technology to provide timely and purposeful feedback**. For example, embedded text and voice comments can be an efficient, personalized way to provide feedback.

- Teachers can teach how to use **word processing software** for practice and assessments. Word processing can help some struggling writers, even in elementary grades that might rely more heavily on hand written work, by producing legible script and by making it easy to add, delete, and move text. For secondary students who already use word processing software, teachers can help students interact with specific features of the software such as grammar and passive voice checks.

Individualizing instruction through feedback and one-to-one and small group conferencing. Individualized instruction is tailored to the needs of specific students and is often delivered in small group settings (NCTE, 2016; Troia, 2014).

- For struggling students, individualized instruction might include **more explicit instructions, additional opportunities for practice, and additional scaffolding** compared to whole-classroom instruction. Examples of useful scaffolds are repetitive modeling, graphic aids, checklists, and incremental goals.

- Teachers can organize the timing of assignments to **allow time to discuss the work and provide support** in individual or small group meetings.

(2) Teacher mindsets and attitudes about the teaching of writing

This section describes four teacher mindsets and attitudes that support improvements in student writing, either based on empirical evidence or professional opinions of expert panelists. These mindsets and attitudes relate to writing itself, teaching writing, and how students learn writing. Although these mindsets and attitudes might be harder to influence through professional development than instructional skills and practices, they have the potential to impact the effectiveness of writing instruction and improvement in student writing outcomes.

Self-efficacy. Teachers who are self-efficacious view themselves as both effective writers and effective teachers of writing (Cremin & Oliver, 2017; Wierzbicki, 2018).

- Teachers can **develop their pedagogical content knowledge,** such as knowledge of genre components, to feel more effective as writers and teachers of writing.

Growth mindset about their students. Teachers with this mindset believe that everyone has the capacity to write and that writing can be taught (Carroll & Yeager, 2020; NCTE, 2016). Resources such as the PERTS [Mindset Kit](#) and Transforming Education's [Growth Mindset Toolkit](#) can help teachers learn about growth mindset and how to foster a growth mindset culture in the classroom.

- Teachers can **learn about growth mindset** and understand why it is important. Teachers can learn how to teach students about growth mindset and **convey to their students that all are capable of excellence** to foster their growth mindset about themselves. Teaching students about growth mindset includes teaching them about the brain and how it grows and gets stronger with effort; explicitly teaching how to identify and monitor students' own mindsets; and modeling and praising mistakes and the learning process.

- Teachers can create an **equitable and authentic growth-mindset culture** in the classroom by using consistent language and values that convey that all students can grow and develop their knowledge and skills. For example, when giving feedback on

an assignment, teachers can provide a grade of "not yet" instead of a fixed number or letter.

Belief in the value of culturally responsive practices and standards. Teachers with this belief think that writing instruction should be responsive to their students' cultural and linguistic diversity (Carroll & Yeager, 2020; Goldston, 2017; Holquist & Porter, 2020; Malik, 2020; NCTE, 2016; Weinstein et al., 2004; Wierzbicki, 2018).

- Teachers can **self-reflect on their beliefs** to foster culturally responsive practices and standards. Self-reflection can help teachers acknowledge their own ethnocentrism and how it affects their students. In addition to verbal interactions with students, teachers can examine their body language and nonverbal communication, as this might be biased toward students who are more like themselves.

- Teachers can **learn about students' individual backgrounds,** confidence levels, writing skills, struggles, and fears, and work with them to overcome these obstacles. Importantly, teachers should not only recognize the barriers that students face, but also students' assets and contributions.

- Teachers can deliberately teach students how to **intentionally and strategically incorporate their culture and home languages** into their writing. Teachers should offer opportunities to incorporate their lived experiences into their work, for example, through personalized and project-based assignments that allow them to highlight issues in their communities.

Belief that technology can support quality writing and teaching. Teachers with this belief think that incorporating technology into their practice can support their writing instruction and benefit student writing (Ertmer et al., 2012; Howell et al., 2016).

- Teachers can develop their **knowledge about technology** to feel more effective as a user of technology.

- Teachers can work on skills to **effectively integrate technology** into their writing pedagogy.

(3) Classroom climate broadly related to writing

Creating a positive learning environment is also an important part of supporting improvements in student writing. Students benefit from a learning environment that provides safety, security, and support (Berkowitz et al., 2017; Darling-Hammond & Cook-Harvey, 2018; Daily et al., 2019). Resources created and curated by the Culturally Responsive Education Hub at NYU Metro Center and the Association for Supervision and Curriculum Development can help teachers learn about culturally responsive education and what it looks like in practice. Although some aspects of the learning environment are not within teacher control, there are several examples of ways that teachers can foster support within the classroom.

- Develop **close teacher-student relationships** to create mutual understanding and a climate that is responsive to individual students' interests and needs. For example, teachers can hold student-teacher conferences to discuss academic and non-academic issues and solicit feedback.

- Support opportunities to **develop respectful teacher-student and student-peer relationships** through collaboration and discussion about common behavior norms or classroom rules.

- Support **student autonomy and relevance** by including writing opportunities that allow for students to write about topics related to their interest and background.

Implications

Improving secondary writing instruction for students who are Black, Latino, and/or experiencing poverty has the potential to support college and career readiness (Graham & Perin, 2007). Instructional interventions such as curricula, technology, or other classroom supports can play an important role in improving student writing, but they are not strictly "off the shelf." Teachers implement these interventions, and in doing so, play an important role in their effectiveness. Teachers layer their own instructional skills and practices on top of interventions. Their mindsets and attitudes shine through when they interact with and support students. And the classroom climate they foster makes it possible for students to feel safe and able to learn. For education stakeholders interested in improving secondary writing instruction, this brief provides ideas about key teacher factors to support, monitor, and measure. Examples of these stakeholders include the following:

/ **Developers, districts, and schools.** The factors included in this brief should be covered explicitly in preparation and professional development for teachers. Teachers should be taught which skills and practices are important for supporting improvements in student writing, and should receive opportunities to practice and reflect on these skills. As teachers become more fluent in implementing these skills and practices, their mindsets and attitudes about teaching writing might also improve. Teacher preparation and professional development should also focus on developing and maintaining positive mindsets and attitudes, and on fostering a positive learning environment.

/ **Schools and teachers.** School district staff and teachers may want to seek out professional development opportunities to incorporate these skills, practices, and attitudes into their own classrooms through experienced professional development providers that embrace these principles. District and school leaders may want to prioritize the teacher factors in this document when monitoring teachers and providing feedback. Although no one measurement instrument covers all of these factors, districts or schools that wish to track these factors could draw on existing tools such as the College Ready Writers Program Classroom Log (Gallagher et al., 2017) paired with surveys such as the National Survey of Teachers' Preparation and Practices in Teaching Writing (Brindle et al., 2016) and the Project for Education Research that Scales (PERTS) Co-Pilot Elevate Student Survey (Gripshover & Paunesku, 2019).

/ **Researchers.** There is a strong evidence base supporting the use of specific writing instructional practices, but less is known about the enabling contexts needed to effectively implement such practices, such as what technology-based supports teachers need. Additional research is also needed on teacher mindsets and attitudes and how they affect both pedagogy and student outcomes at the secondary level. Researchers can improve understanding of the implications of teacher mindsets and attitudes for student writing outcomes through qualitative exploration of how mindsets and attitudes develop and change, and by measuring how they affect implementation or effectiveness in intervention research.

References

Bold references were a part of the landscape analysis.

Applebee, A. N., & Langer, J. A. (2013). *Writing instruction that works: Proven methods for middle and high school classrooms.* Teachers College Press.

Baker, S., Lesaux, N., Jayanthi, M., Dimino, J., Proctor, C. P., Morris, J., Gersten, R., Haymond, K., Kieffer, M. J., Linan-Thompson, S., & Newman-Gonchar, R. (2014). *Teaching academic content and literacy to English learners in elementary and middle school* (NCEE 2014- 4012). National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. https://ies.ed.gov/ncee/wwc/PracticeGuide/19

Berkowitz, R., Moore, H., Astor, R. A., & Benbenishty, R. (2017). A research synthesis of the associations between socioeconomic background, inequality, school climate, and academic achievement. *Review of Educational Research, 87*(2), 425–469. https://doi.org/10.3102/0034654316669821

Brindle, M., Graham, S., Harris, K. R., & Hebert, M. (2016). Third and fourth grade teacher's classroom practices in writing: A national survey. *Reading and Writing, 29,* 929–954. https://doi.org/10.1007/s11145-015-9604-x

Carroll, J. M., & Yeager, D. (2020, December 8). Why teacher mindsets matter when it comes to racial inequality [Opinion]. *Education Week.* https://www.edweek.org/education/opinion-why-teacher-mindsets-matter-when-it-comes-to-racial-inequality/2020/06

Cremin, T., & Oliver, L. (2017). Teachers as writers: A systematic review. *Research Papers in Education, 32*(3), 269–295. https://doi.org/10.1080/02671522.2016.1187664

Daily, S., Mann, M., Kristjansson, A., Smith, M., & Zullig, K. (2019). School climate and academic achievement in middle and high school students. *Journal of School Health, 89*(3), 173–180. https://doi.org/10.1111/josh.12726

Darling-Hammond, L., & Cook-Harvey, C. M. (2018). *Educating the whole child: Improving school climate to support student success.* Learning Policy Institute.

Ertmer, P. A., Ottenbreit-Leftwich, A. T., Sadik, O., Sendurur, E., & Sendurur, P. (2012). Teacher beliefs and technology integration practices: A critical relationship. *Computers & Education, 59*(2), 423–435.

Gallagher, H. A., Arshan, N., & Woodworth, K. (2017). Impact of the National Writing Project's College-Ready Writers Program in high-need rural districts. *Journal of Research on Educational Effectiveness, 10*(3), 570–595. https://doi:10.1080/19345747.2017.1300361

Goldston, C. (2017). *Culturally responsive instruction: Best practices and supports.* Regional Educational Laboratory Midwest Blog. https://ies.ed.gov/ncee/edlabs/regions/midwest/blogs/culturally-responsive-instruction-best-practices.aspx

Graham, S., Bruch, J., Fitzgerald, J., Friedrich, L., Furgeson, J., Greene, K., Kim, J., Lyskawa, J., Olson, C. B., & Smither Wulsin, C. (2016). *Teaching secondary students to write effectively* (NCEE 2017-4002). National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. https://ies.ed.gov/ncee/wwc/Docs/PracticeGuide/508_WWCPG_SecondaryWriting_122719.pdf

Graham, S., Harris, K., & Hebert, M. A. (2011). *Informing writing: The benefits of formative assessment. A Carnegie Corporation Time to Act report.* Alliance for Excellent Education.

Graham, S., & Perin, D. (2007). *Writing next: Effective strategies to improve writing of adolescents in middle and high schools: A report to Carnegie Corporation of New York.* Alliance for Excellent Education.

Gripshover, S., & Paunesku, D. (2019). *How can schools support academic success while fostering healthy social and emotional development?* PERTS, Stanford University. https://perts.net/static/documents/Conditions_for_Learning-January_2020.pdf

Holquist, S., & Porter, T. (2020). Culturally responsive leading and learning: Addressing equity through student and family voice. *Regional Educational Laboratory Pacific Blog.* https://ies.ed.gov/ncee/edlabs/regions/pacific/blogs/blog27_culturally-responsive-leading-and-learning_addressing-equity.asp

Howell, E., Kaminski, R., & Hunt-Barron, S. (2016). Creating in a participatory culture: Perceptions of digital tools among teachers. *Teaching/Writing: The Journal of Writing Teacher Education, 5*(1), 9. https://scholarworks.wmich.edu/wte/vol5/iss1/9

Literacy Design Collaborative. (2018a). *Student work rubric: Argumentation task, grades 6–8.* https://ldc-production-secure.s3.amazonaws.com/resource_files/files/000/000/426/original/MASTER_Student_Work_Rubric_Argumentation-Task_Gr6-8.pdf

Literacy Design Collaborative. (2018b). *Student work rubric: Argumentation task, grades 9–12.* https://ldc-production-secure.s3.amazonaws.com/resource_files/files/000/000/428/original/MASTER_Student_Work_Rubric_Argumentation-Task_Gr9-12.pdf

Malick, S. (2020, April 23). Using culturally responsive practices to foster learning during school closures: Challenges and opportunities for equity. RELevant. https://ies.ed.gov/ncee/edlabs/regions/midatlantic/app/Blog/Post/1031

National Council of Teachers of English. (2016, February 28). *Professional knowledge for the teaching of writing.* https://ncte.org/statement/teaching-writing/

Troia, G. (2014). *Evidence-based practices for writing instruction* (Document No. IC-5). University of Florida, Collaboration for Effective Educator, Development, Accountability, and Reform Center. https://ceedar.education.ufl.edu/wp-content/uploads/2014/09/IC-5_FINAL_08-31-14.pdf

Weinstein, C. S., Tomlinson-Clarke, S., & Curran, M. (2004). Toward a conception of culturally responsive classroom management. Journal of Teacher Education, 55(1), 25–38.

Wierzbicki, B. J. (2018). *Developing a framework to understand teachers' self-efficacy in the teaching of writing.* https://core.ac.uk/display/230480345?source=

Appendix A. Expert panel members

Detra Price-Dennis, Associate Professor of Education, Teachers College, Columbia University

Eugenia Mora-Flores, Professor of Clinical Education, Rossier School of Education, University of Southern California

Karen Harris, Warner Endowed Professor of Education, Arizona State University

Kay Wijekumar, Houston Endowed Chair & Chancellor's EDGES Fellow, Texas A&M University; Director, ITSS, SWELL, We-Write, SEED, and FASCT grant Projects; Director, Center for Urban Schools Partnerships

Linda Friedrich, Director of the Strategic Literacy Initiative, WestEd

Nicole Merino, Director of Early Learning and Teacher Performance Assessment, Stanford Center for Assessment, Learning and Equity, Graduate School of Education, Stanford University

Troy Hicks, Professor of English and Education, Central Michigan University