

EVIDENCE-BASED PRACTICES FOR TEACHING WRITING IN MIDDLE AND HIGH SCHOOL

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**Overview
Brief**



ABOUT THE PROJECT

EdResearch for Action
edresearchforaction.org

EdResearch for Action is an initiative based at the Annenberg Institute at Brown University that brings together researchers and education leaders to improve how evidence is used in decision-making. The initiative synthesizes rigorous research into clear, actionable guidance designed for school, district, and state leaders.

EdResearch for Action briefs draw on a wide range of studies, including randomized controlled trials, quasi-experimental research, and descriptive evidence, to identify practices that improve student outcomes. Rather than focusing on individual studies, the briefs highlight patterns across the research base and translate those findings into practical strategies that can be implemented in real-world contexts.

A core component of the EdResearch model is collaboration with practitioners. Through an advisory board of school, district, and state leaders, EdResearch works to ensure that each brief addresses high-priority challenges, reflects the realities of implementation, and provides guidance that is both evidence-based and actionable.

The goal of EdResearch for Action is to bridge the gap between research and practice—helping education leaders not only understand what the evidence says, but also use it to make informed decisions that improve teaching, learning, and student outcomes.

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We also acknowledge support from Steve Graham in the early stages of this brief. Much of the evidence in this brief is included in [Steve Graham et al.'s 2023 meta-analysis](#) of writing treatments for students in grades 6-12, the IES Practice Guide on [Teaching Secondary Students to Write Effectively](#), and a report called [Writing Next: Effective Strategies to Improve Writing of Adolescents in Middle and High Schools](#) for the Carnegie Corporation.

We also thank the many researchers whose work informed this synthesis, including those who have contributed to foundational studies and meta-analyses on writing instruction, motivation, and feedback. Their research provides the evidence base for the practices highlighted in this brief.

This research brief summarizes decades of research on instructional practices that consistently improve students' writing quality, motivation, and confidence.

Research on effective writing instruction shows many consistent principles across grade levels. This brief focuses specifically on studies conducted with students in middle and high school to ensure that the recommendations are grounded in evidence from older learners.

EXPLICITLY TEACH AND SCAFFOLD THE WRITING PROCESS

- Explicit instruction in writing strategies, such as how to plan, draft, revise, and edit, leads to substantial improvements in student writing quality and confidence.
- Structured supports, such as prewriting activities, studying strong writing models, and using rubrics, consistently produce meaningful improvements in students' writing quality.

EXTEND WRITING BEYOND THE ENGLISH CLASSROOM

- Writing in non-ELA courses improves writing proficiency and content understanding in subjects such as math and science.
- Ongoing professional development and collaboration that helps teachers learn how to teach writing strategies and provide targeted feedback can improve the quality and consistency of writing instruction across classrooms.

PROVIDE ACTIONABLE FEEDBACK

- Effective teacher feedback is clear about how to improve, focused on a few priorities, given during drafting, and paired with revision opportunities.
- When students regularly engage in peer feedback, both those receiving feedback and those giving it revise more deeply, stay more engaged, and develop stronger writing skills.
- Automatic feedback generated by rule-based or algorithm technology systems can save teachers' time and improve students' writing, especially regarding grammar and readability.
- AI-generated feedback can produce small improvements in revision and boost students' motivation, but it rarely supports deeper skills like reasoning, interpretation, and argumentation—areas most closely tied to long-term writing growth.

FOSTER MOTIVATION AND SELF-EFFICACY

- Students are more motivated and produce higher-quality writing when instruction builds their confidence through goal-setting, self-monitoring, and visible progress.
- Students are more engaged and persistent in writing when they experience positive feedback, collaboration, and opportunities for choice and authentic expression.

EVIDENCE-BASED PRACTICES FOR TEACHING WRITING IN MIDDLE AND HIGH SCHOOL

CENTRAL QUESTION: How can schools and teachers support evidence-based writing instruction practices that improve student outcomes in secondary schools?

A note on AI: With the rapid rise of generative AI, some may question whether writing skills still matter. However, writing remains a foundational skill for thinking, learning, and communicating clearly. Students must still learn to organize ideas, evaluate information, and express their own perspectives, which are skills AI cannot replace. In fact, as AI becomes more common, strong writing skills may become even more important, as students need to critically evaluate AI-generated text, refine ideas, and use these tools thoughtfully. This brief synthesizes evidence-based strategies for teaching writing effectively, while also highlighting emerging research on how AI can support students' writing development.

BREAKING DOWN THE ISSUE

Why does writing matter for secondary students?

Writing strengthens students' ability to think critically, communicate clearly, and construct evidence-based arguments.

- **Critical thinking and reasoning:** A large body of research finds that writing helps students analyze ideas and organize their thinking. Writing instruction and writing-to-learn activities have been shown to strengthen students' ability to evaluate evidence, develop claims, and [construct evidence-based arguments](#).
- **Communication skills:** Writing also helps students learn to organize ideas logically, use precise language, and adapt their communication for different audiences and purposes. Through drafting, revising, and receiving feedback, students develop the ability to [communicate complex ideas clearly and persuasively](#).
- **Reading and academic performance:** Writing about what they read helps students deepen their understanding of academic content. Studies show that writing activities such as summarizing, explaining, and responding to texts can [improve reading comprehension and learning across subjects](#).

College access and success often depend on writing skills, such as coherent and clear expression of ideas and critical thinking.

- College access tests require writing. [The ACT requires a 40-minute essay](#) in which students compare and analyze perspectives, and AP English exams require three essays to be completed within 135 minutes.
- College applications often require personal statements and essays. In data from nearly 2,000 “selective” higher education institutions, [one-third required a personal essay for admission](#), and another third noted that personal essays were considered if submitted.
- Writing skills are also associated with college success. A study of over 1,000 Australian college students found that those with satisfactory essay writing skills were five times more likely to [maintain a 3.0 GPA average](#), and a study of about 500 students at six universities found that students whose writing samples were of higher quality were significantly [less likely to drop out](#).

Writing skills are prioritized in many professional fields, where clear, concise writing is essential for collaboration, reporting, and problem-solving.

- The National Association of Colleges and Employers reports that [77% of employers rate written communication as “essential.”](#)
- In a survey of more than 400 employers and over 600 college students, 81% of employers reported that they would be [more likely to hire students who took multiple writing-intensive courses](#) in college. Yet, just 27% of surveyed employers classified recent college graduates as “well-prepared” for written workplace communication.
- In a field experiment involving nearly 500,000 job seekers, improved resume writing led to an [8% increase in the probability of being hired](#).

What does current writing proficiency and instruction look like?

Fewer than half of U.S. students graduate ready to meet the expectations of first-year college coursework, and deep gaps by race, gender, and income persist.

- The most recent National Assessment of Educational Progress (NAEP) writing assessment was administered in 2011, in which only [27% of twelfth-graders](#) and [27% of eighth-graders](#) performed at or above the “Proficient” level. In both grade 8 and 12 writing, female students outscored males. Asian, White, and multiracial students perform above average, while Black, Hispanic, and American Indian/Alaska Native students score below average.
- For the ACT Writing Test (essay portion), the average score in recent years has been around [6-7 out of 12](#), with White and Asian students averaging 6.4 and 6.8, respectively, and Black and Hispanic students averaging 5.3 and 5.8. This suggests that many students can write a basic, structured response, but may struggle with well-reasoned, evidence-based writing associated with strong college readiness.
- In 2025, the College Board reported that [39% of SAT takers met or exceeded the Reading and Writing “college-readiness” benchmark](#).

State middle and high school exams often lack writing components, and students receive little direct teaching on how to write effectively.

- Because state exams are [major drivers of instruction](#), what they assess tends to shape what gets taught. Because the Every Student Succeeds Act (ESSA) [does not mandate extended, multi-draft](#), discipline-specific writing assessments for accountability, writing often receives less emphasis in state testing systems and, therefore, less emphasis in classrooms.
- Research suggests that dedicating about 30 minutes per day to writing activities can improve students' writing quality. However, NAEP survey data shows that only about [25% of middle school students and 31% of high school students write for 30 minutes or more per day](#) in their ELA class. Outside of schools, about 40% of middle and high school students report writing a page or less per week for homework. Additionally, a multi-state study found that [most writing assignments asked students to respond to texts rather than compose for varied audiences and purposes](#).
- National surveys show that [most teachers say they don't have enough time during their regular work hours](#) to complete tasks like grading and lesson planning, which can discourage frequent writing assignments that require extensive feedback.
- Writing assignments are more prevalent in advanced courses. In a survey of 2,000 Advanced Placement (AP) and National Writing Project (NWP) teachers, [58% reported assigning short essays, short responses, or opinion pieces at least once a week](#), and three-quarters reported having students complete a research paper.

Teachers don't feel adequately trained to teach writing, likely because preparation programs and the field lack a shared, detailed roadmap for how writing develops.

- In a national survey, [71% of high school teachers](#) reported receiving either no or minimal formal preparation to teach writing in their teacher preparation program.
- In a survey of middle school preservice teachers, [nearly two-thirds reported that they did not feel adequately prepared to teach writing](#), even though they generally valued writing and believed it was important, reflecting a gap in teacher preparation coursework or clinical experience.
- In the American Teacher Panel survey, 64% of ELA teachers strongly agreed that they [knew what good writing instruction looked like](#), compared to 28% of non-ELA teachers.
- There is no widely agreed-upon, detailed national scope and sequence for writing development comparable to what exists in reading (e.g., phonics progressions), and [expectations for writing skills often vary](#) across standards, curricula, and grade levels. There is strong agreement on certain instructional principles (e.g., explicit strategy instruction, opportunities for revision), but experts do not yet converge on a single progression model that defines writing instruction across contexts.

EVIDENCE-BASED PRACTICES

Decades of research have identified a number of instructional practices that consistently improve students' writing quality, motivation, and confidence. The practices below highlight the approaches that have the strongest evidence of effectiveness for secondary students.

EXPLICITLY TEACH AND SCAFFOLD THE WRITING PROCESS

Explicit instruction in writing strategies, such as how to plan, draft, revise, and edit, leads to substantial improvements in student writing quality and confidence.

- Decades of research show that [explicit instruction in writing strategies](#) improves the quality of secondary students' writing. These structured supports make writing more accessible for learners who may otherwise struggle to express their thinking
- Teaching students how to construct [varied, complex sentences strengthens their writing](#), while strategy instruction that focuses on [planning, revising, and editing consistently produces large gains](#) across writing products.
- When students are also given structured opportunities and time to revise drafts, [they are more likely to make meaningful improvements](#) rather than just surface-level edits.

Structured supports, such as prewriting activities, studying strong writing models, and using rubrics, consistently produce meaningful improvements in students' writing quality.

- Prewriting and inquiry activities, where students brainstorm, analyze evidence, or discuss ideas before drafting, [yield medium to large improvements in writing outcomes](#). Prewriting activities can include using semantic webs, mind maps, brainstorming, and discussing ideas with others.
- Meta-analyses show that supports such as [prewriting activities, goal-setting, feedback, and peer collaboration](#) each produce meaningful gains in writing quality.
- Reviewing and analyzing models of effective writing [helps students internalize features of high-quality text](#), such as structure, tone, and use of evidence, and apply them in their own work.
- A study of high school writing instruction found that when students were taught the elements of a writing rubric and given access to it during writing tasks, their [writing quality improved compared to students who did not use the rubric](#).
- Research on [formative assessment](#) shows that learning improves when success criteria are clearly defined, when students understand the criteria used to evaluate their work, and feedback aligns with those criteria. Common rubrics and frameworks help make these criteria visible.

EXTEND WRITING BEYOND THE ENGLISH CLASSROOM

Writing in non-ELA courses improves writing proficiency and content understanding in subjects such as math and science.

- Across 56 high-quality experiments, writing-to-learn activities [improved](#) middle and high school students' [understanding](#) of content in science, social studies, and math. Tasks such as writing explanations, summaries, arguments, or reflections require students to analyze and connect ideas, helping them learn content more deeply than peers who studied the material through reading or other non-writing tasks.
- Another meta-analysis found that [students enhance their comprehension, fluency, and word recognition](#) when they write about what they read.
- In a qualitative study, secondary teachers reported that frequent writing led to [deeper disciplinary understanding and more independent student writing](#).

Ongoing professional development and collaboration that helps teachers learn how to teach writing strategies and provide targeted feedback can improve the quality and consistency of writing instruction across classrooms.

- The [IES practice guide](#) on teaching secondary writing recommends that teachers receive training in explicit writing strategy instruction, including how to model and teach processes such as planning, drafting, revising, and editing.
- [Collaborative analysis of student work \(e.g., scoring using shared rubrics\)](#) is a practice supported by research on effective professional learning, and supports teachers to develop common expectations for writing quality and align instruction and feedback across classrooms.
- [The National Writing Project's College-Ready Writers Program \(CRWP\)](#) is a multi-year professional development model focused on improving argument writing in grades 7–10. A large, randomized study across 44 high-poverty rural districts found that the program significantly improved student writing quality, particularly in content, structure, and stance, demonstrating that well-designed PD can impact student outcomes at scale. CRWP's effectiveness is attributed to key features of high-quality professional learning: (1) a sustained focus on learning over time with explicit modeling, engagement in, and feedback on pedagogical writing strategies; (2) collaboration among teachers; and (3) a focus on analyzing student work and applying instructional strategies directly in the classroom.

PROVIDE ACTIONABLE FEEDBACK

Effective teacher feedback is clear about how to improve, focused on a few priorities, given during drafting, and paired with revision opportunities.

- Meta-analyses show that teacher feedback improves secondary students' writing quality, with stronger effects when feedback [emphasizes how to revise rather than simply what to correct](#).
- When teachers provide process-oriented feedback without a grade, especially during drafting, students are [more likely to engage with feedback](#) and improve their work than when feedback is accompanied by a score.
- Students respond most positively when feedback is clear and specific, includes concrete comments about what to improve, explains what was expected, and includes [questions and suggestions for next steps](#).

- Providing targeted [feedback on one to three key areas at a time improves writing more effectively](#) and is more manageable for teachers.
- When students have time to reflect on feedback and revise their work, they not only produce higher-quality writing but also develop greater [confidence in their ability to improve](#).
- Research suggests that many students [struggle to apply feedback effectively](#). Explicitly teaching students how to read, interpret, and act on feedback helps them see themselves as active participants in the revision process rather than passive recipients of comments.

When students regularly engage in peer feedback, both those receiving feedback and those giving it revise more deeply, stay more engaged, and develop stronger writing skills.

- In a meta-analysis, “peer assistance” (including peer feedback, peer planning, and collaborative revising) showed a positive effect on students’ writing, meaning students who worked with peers [produced measurably stronger writing than those who worked alone](#). When students reviewed each other’s drafts, discussed ideas, or collaborated on revisions, they improved across multiple aspects of writing quality (e.g., organization, ideas, and clarity), likely because peer interaction prompts them to explain their thinking, notice strengths and weaknesses in text, and apply feedback in revision.
- Students who gave and received more peer feedback were more likely to revise their drafts, and [the number and depth of revisions were linked to stronger writing on future assignments](#), not just improvement on the current paper. This suggests that regularly sharing work and engaging with others’ writing helps build transferable writing skills over time. Additionally, this study found that providing feedback to peers was also directly linked to improved writing ability, likely because it helps students internalize what strong writing looks like by analyzing others’ work.

Automatic feedback generated by rule-based or algorithm technology systems can save teachers’ time and improve students’ writing, especially regarding grammar and readability.

- Automated writing feedback tools work by comparing student writing to built-in linguistic rules or models trained on large samples of text. When a student submits writing, the software quickly scans the text and generates feedback that can help students identify errors, revise sentences, or strengthen parts of their writing. Common tools are ETS Criterion, MY Access!, and WriteToLearn.
- Research suggests that automated feedback tools can lead to [small but positive improvements in writing](#), particularly when used to support revision and self-correction. Studies of Automated Writing Evaluation systems have found [improvements in writing quality and scores on state writing assessments](#), especially in areas such as grammar, mechanics, and readability. However, these tools are generally most effective when used alongside teacher feedback, rather than replacing it.

AI-generated feedback can produce small improvements in revision and boost students' motivation, but it rarely supports deeper skills like reasoning, and argumentation—areas most closely tied to long-term writing growth.

- AI-generated feedback uses large language models (LLMs), like ChatGPT can to analyze text and then generate contextual, adaptive responses. A randomized study found that LLM-generated feedback [led to modest improvements in essay revision and increased students' motivation and positive emotions about writing](#) compared to revising without feedback
- However, a recent qualitative study found that [although LLM feedback provided surface-level revision guidance](#), it did not help students develop their thinking. By contrast, teachers more often provided feedback that builds thinking, such as asking questions that prompted students to clarify purpose, strengthen reasoning, and reconsider ideas. In content-area writing, teachers also grounded feedback in disciplinary knowledge, whereas LLMs offered suggestions that were not well connected to disciplinary thinking.
- LLMs are not yet reliable substitutes for high-stakes scoring of writing quality. A study that compared LLM and traditional machine-learning (ML) methods for scoring student essays (4th-7th grade and 10th grade) found that [ML methods did a much better job at predicting human scores of overall writing quality](#).

FOSTER MOTIVATION AND SELF-EFFICACY

Students are more motivated and produce higher-quality writing when instruction builds their confidence through goal-setting, self-monitoring, and visible progress.

- Writing [motivation is a strong predictor of writing success](#). Across dozens of studies, students with higher self-efficacy, more positive attitudes, and greater value for writing consistently produce higher-quality work.
- Practices like goal-setting, self-monitoring, and guided revision improve motivation by making progress visible and achievable. When students have clear, specific targets (e.g., improving evidence or transitions), writing feels more manageable and builds a sense of control.
- Combining [explicit writing instruction with self-regulation strategies](#) (e.g., goal-setting and self-monitoring) leads to greater gains in both writing quality and students' confidence compared to instruction alone.

Students are more engaged and persistent in writing when they experience positive feedback, collaboration, and opportunities for choice and authentic expression.

- Feedback that highlights [growth and improvement can strengthen students' belief](#) that they can become better writers, increasing motivation and engagement.
- Opportunities to [collaborate with peers to plan, draft, and revise writing](#) increase engagement, strengthen motivation, and improve outcomes.
- When students write about topics that matter to them or connect to their own experiences, they are more engaged and more likely to persist through challenges.
- Providing [choice, ownership, and opportunities to write for authentic audiences](#) increases students' motivation, helping them see writing as meaningful rather than purely academic.
- A UK study of teacher interviews and student focus groups found that [when teachers gave students greater autonomy and choice over their writing](#), students experienced increased confidence and motivation to write.

PRACTICES TO AVOID

Increasing the amount of writing students do without direct instruction or feedback can lead them to repeat the same mistakes and, ultimately, to minimal improvement.

- A [consistent finding across studies](#) is that simply increasing how often secondary students write, without changes to instruction or support, does not lead to meaningful improvements in writing quality or related outcomes.
- In a study of secondary English students, students receiving little substantive feedback [did not show significant writing improvement](#) compared to those with structured feedback.
- Writing tasks that prioritize quantity may encourage students to rush through assignments, neglecting the deeper cognitive processes involved in good writing.

Isolated grammar instruction has little impact on student writing and can even have negatively impacts by taking time away from more helpful writing instruction.

- A meta-analysis of adolescent writing instruction found that among 11 types of interventions, [explicit grammar instruction alone showed a negative effect on writing quality](#).
- Research continues to show that standalone grammar drills and worksheets are not sufficient and that [grammar instruction should be embedded in authentic writing tasks](#).

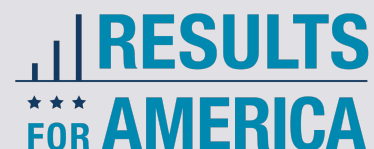
When feedback is overwhelming, unclear, or very delayed, students are less likely to engage with it.

- When feedback is overly dense or dominated by teacher comments, students are [less likely to engage with it](#), often ignoring or [selectively addressing suggestions](#).
- Unclear or overwhelming feedback [can reduce motivation and participation](#).
- In contrast, high school AP students engaging in peer feedback were much more likely to [address comments that included clear explanations and specific, concrete solutions](#).

This EdResearch for Action brief is a collaboration among:



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