High-Impact Instructional Strategy Categories

Engagement and Interaction

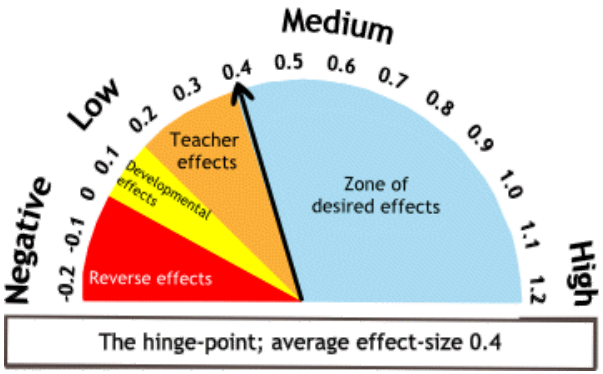
Comprehension and Knowledge Building

Critical Thinking and Analysis

Advanced Graphic Organizers and Writing

What are High-Impact Instructional Strategies?

High-impact instructional strategies are teaching methods that significantly improve student learning outcomes, supported by robust research and evidence. These strategies are designed to engage students actively, promote deeper understanding, and foster critical thinking. **John Hattie's extensive meta-analysis on educational interventions identifies that strategies with an effect size of 0.4 or higher substantially impact student achievement.** For example, an effect size of 0.4 represents a one-year advancement in learning beyond what is typically expected within a year of schooling. Hattie emphasizes that educators should prioritize strategies with high effect sizes to maximize their instructional effectiveness (Hattie, 2009). Robert Marzano's research also highlights the importance of high-yield strategies that align with Bloom's Taxonomy, which categorizes cognitive skills from basic recall to higher-order thinking. These strategies encourage students to engage in analysis, synthesis, and evaluation, promoting comprehensive understanding and retention of material (Marzano, 2001). By incorporating high-impact instructional strategies, teachers can create a dynamic and effective learning environment and ensure that students not only meet but exceed academic expectations.



Why Have We Chosen These Strategies?

We have chosen the strategies highlighted in this document because they are backed by extensive research and have demonstrated a substantial impact on student learning. Here are some key reasons:

1. **Evidence-Based Effectiveness**: These strategies have high effect sizes, as identified by John Hattie's research, meaning they are proven to enhance student achievement (Hattie, 2009) significantly.
2. **Engagement and Critical Thinking**: Strategies like those promoted by Robert Marzano engage students in higher-order thinking, aligning with Bloom's Taxonomy to ensure comprehensive understanding and retention (Marzano, 2001).
3. **Versatility and Applicability:** These strategies can be adapted across various subjects, grade levels, and educational contexts, making them versatile tools for teachers.
4. **Enhanced Student Outcomes:** Implementing these high-impact strategies helps create a dynamic and effective learning environment, ensuring that students not only meet but exceed academic expectations.

Are schools only allowed to use the strategies outlined in this resource?

Schools are not limited to the strategies outlined in this resource. Our team identified four categories of high-impact instructional strategies that our Academic Advancement Team will support through resources, professional learning, and modeling of implementation. These categories serve as a framework to guide schools in selecting and applying strategies that best meet their unique needs.

Who are the High-Impact Instructional Strategies for?

The High-Impact Instructional Strategies are designed for teachers, school-based teams, professional learning communities, and school leaders.

Citations

- Hattie, J. (2009). *Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement*. Routledge.
- Hattie, J. (December 2017) visiblelearningplus.com
- Kagan, S. (2024). *Cooperative Learning Structures*. Kagan Publishing.
- Marzano, R. J. (2001). *Classroom Instruction That Works: Research-Based Strategies for Increasing Student Achievement*. ASCD.
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High-Impact Instructional Strategies Related to **Engagement and Interaction**

	Distributed Summarizing	Discourse Techniques	Peer Learning
Overview	Distributed summarizing reinforces understanding and retention by periodically having students summarize information throughout a lesson. This technique actively engages students, solidifying their comprehension and recall, enhances student engagement, promotes deeper understanding, and supports academic success through active participation and collaboration.	Discourse techniques enhance learning by fostering structured classroom discussions that promote deeper understanding and critical thinking. These techniques support academic success by improving communication skills, enhancing comprehension, and fostering a collaborative learning environment where students learn to think critically and work together effectively.	Peer learning enhances education through collaborative activities that encourage students to learn from and with each other. These strategies actively involve students, improving comprehension and critical thinking skills, fostering communication, encouraging teamwork, and creating an interactive learning environment where students engage deeply with the material and share responsibility for their learning.
Key Strategies	**Collaborative Pairs** Students are paired during lesson instruction to think about and discuss the information they are learning collaboratively. A variety of collaborative pairs activities should be thoughtfully planned and implemented to engage students purposefully, incorporate movement to boost engagement, and deepen their understanding of the content. **Effect Size:** 0.62	**Math Talk** Math Talk involves structured classroom discussions focused on mathematical reasoning and problem-solving. Students explain their thought processes, share different approaches, and engage in dialogue about concepts, enhancing their understanding and critical thinking. This strategy fosters collaboration, improves communication skills, and deepens math comprehension. **Effect Size:** 0.82	**Reciprocal Teaching** Reciprocal teaching is a cooperative learning strategy that aims to improve students' reading comprehension skills. It has four components: predicting, clarifying, questioning, and summarizing. A group of students takes turns acting as the teacher in guiding the comprehension of the material. **Effect Size:** 0.75
	Think-Ink-Pair-Share Students use wait time to think about an idea or question, write down their responses, and then pair with a partner for discussion. Individuals return to what they wrote and modify their first ideas to reflect new thinking. Students can then share their reflections within a small group or with a partner. **Effect Size:** 0.79	**Accountable Talk** Accountable talk involves meaningful conversations that promote learning because students are required to speak, listen, explain, confirm, extend, clarify, justify, and verbalize thoughts and opinions related to the text or subject at hand. **Effect Size:** 0.82	**Written Conversations** Both students in each pair begin writing their thoughts on paper. After 2-3 minutes, the students exchange papers. The students read what their partner wrote and responded in writing. For example, students might agree, disagree, ask a question, affirm their partner's thinking, or relate a personal anecdote. **Effect Size:** 0.45
	Numbered Heads Numbered heads is a cooperative learning activity consisting of four steps. Students are assigned a number. The teacher announces the task and time limit. Students put their heads together, do the activity, and ensure the whole group completes the task. **Effect Size:** 0.92	**Jigsaw** Jigsaw is a cooperative learning strategy that asks groups of students to become "experts" on different aspects of a topic and then share what they learn with their classmates. **Effect Size:** 1.2	**Kagan Cooperative Learning Structures** Cooperative Learning is an instructional method in which students work in structured small groups under the guidance of a teacher to accomplish a common learning goal. **Effect Size:** 0.92

High-Impact Instructional Strategies Related to **Comprehension and Knowledge Building**

	Vocabulary Instruction	Activating Thinking	Formative Assessments and Visual Supports
Overview	High-impact vocabulary instruction enhances understanding and retention by engaging students in strategic activities that clarify and reinforce the meanings of words throughout lessons. This approach actively involves students, solidifying their comprehension and recall, enhancing student engagement, promoting deeper understanding, and supporting academic success through active participation and collaboration.	Activating thinking strategies engage students' prior knowledge or build new understanding, enhancing their ability to contextualize and retain information. These techniques stimulate cognitive engagement by fostering personal connections, organizing concepts, and expanding vocabulary, promoting deeper comprehension and critical thinking.	Formative assessments and visual supports are key tools for gauging student understanding and enhancing communication. Admit and Exit Tickets quickly check comprehension and identify misconceptions, guiding instructional adjustments. Anchor Charts and Visual Supports display important concepts and strategies, aiding communication and understanding, especially for students with speech and language needs.
Key Strategies	**Frayer Model** A Frayer Model is a graphic organizer that helps students determine or clarify the meaning of vocabulary words encountered while listening, reading, and viewing texts. **Effect Size:** 0.62	**Previewing** A previewing strategy can either link to students' prior knowledge, or help them to build new knowledge. Linking activities help students to make a personal connection or share an opinion to activate their thinking, while building activities introduce important concepts or vocabulary, providing context for students to better contextualize new information. **Effect Size:** 0.93	**Admit and Exit Tickets** Admit and Exit Slips provide the teacher with evidence of students' understanding and possible misconceptions. They are most effective as a "temperature check" after learning and as a precursor to deeper discussion or thinking, not as something to be graded. Admit Tickets: This strategy starts the class with a short activity that gets students thinking about the content. Exit Tickets · Check students' understanding by having them summarize key points from the lesson. **Effect Size:** 0.72
	Annotating Text Annotating is any action that deliberately interacts with a text to enhance the reader's understanding of, recall of, and reaction to the text. Sometimes called "close reading," annotating usually involves highlighting or underlining key pieces of text and making notes in the margins of the text. **Effect Size:** 0.63	**List-Group-Label** List-Group-Label is a semantic map strategy that helps students improve their vocabulary and categorization skills and learn to organize concepts. This strategy helps students organize new concepts in relation to previously learned concepts by grouping and labeling words. **Effect Size:** 0.64	**Anchor Charts and Visual Supports** An anchor chart displays procedures, processes, strategies, or concepts that are important to current units of work. It serves as an instructional support tool or " anchor." A visual support refers to using a visual item, such as an object, photograph, sign, or picture, to communicate. Visual supports aid and enhance communication. They provide children and adults with speech, language, and communication needs (SLCN) through an alternative mode of communication. **Effect Size:** 0.55

High-Impact Instructional Strategies Related to **Critical Thinking and Analysis**

	Higher-Order Thinking	Scaffolding Techniques	Effective Questioning
Overview	High-order thinking strategies enhance understanding and retention by engaging students in complex cognitive processes that promote critical analysis and deeper comprehension. These techniques actively involve students, solidifying their problem-solving skills, enhancing engagement, promoting deeper understanding, and supporting academic success through active participation and collaboration.	Scaffolding Techniques provide structured support to help students achieve a deeper understanding of concepts and develop their skills progressively. These strategies actively engage students by offering guidance, modeling processes, and gradually shifting responsibility to the learners. Scaffolding techniques enhance comprehension, promote active learning, and support academic success through structured and interactive learning experiences.	Effective Questioning strategies are designed to engage students in deeper thinking, enhance comprehension, and promote active learning. These techniques encourage students to explore ideas, articulate their thoughts, and interact with their peers. Effective questioning fosters a dynamic learning environment, supports critical thinking, and helps students develop a more profound understanding of the subject matter.
Key Strategies	**Determining Patterns** Determining Patterns is a strategy that involves identifying recurring elements or themes within a given set of data, text, or problems. This technique encourages students to recognize and understand patterns, which can aid in problem-solving, comprehension, and critical thinking. By focusing on patterns, students can make connections between different pieces of information, enhancing their ability to analyze and interpret complex concepts. **Effect Size:** 0.75	**Think Aloud** During a think-aloud, you read a text aloud while verbalizing thoughts, predictions, questions, connections, and reflections. This helps students understand how to actively engage with the text, make inferences, and monitor their own comprehension. **Effect Size:** 0.55	**Open-Ended Questioning** Open-ended questioning promotes critical thinking and deeper understanding by encouraging students to think beyond simple, factual responses. This technique involves posing questions that require more elaborate answers, fostering discussion and exploration of ideas. By using open-ended questions, teachers can enhance student engagement, stimulate intellectual curiosity, and support the development of higher-order thinking skills. **Effect Size:** 0.74
	Error Analysis Error Analysis is a strategy that involves examining mistakes in students' work to identify misunderstandings and areas for improvement. This technique helps students learn from their errors, develop critical thinking skills, and deepen their understanding of the subject matter. **Effect Size:** 0.75	**Modeling** In the modeling strategy, the teacher engages students by showing them how to perform a skill while describing each step with a rationale. This provides students with both a visual and verbal example of what they will be expected to do. **Effect Size:** 0.75	**Wait Time** Wait time is a powerful instructional strategy that involves pausing after asking a question or after a student's response to give students time to think and formulate their answers. This technique improves the quality of student responses, encourages deeper thinking, and increases participation. **Effect Size:** 0.48
	Role Play Role-playing is an active learning strategy in which students act out roles or scenarios to explore real-world situations, concepts, or historical events. This technique engages students in experiential learning, helping them develop empathy, communication skills, and a deeper understanding of the subject matter. **Effect Size:** 0.75	**Partially Completed Graphic Organizer** Providing students with partially completed graphics can be more advantageous than simply providing them with complete versions. This method allows them to be more active as the teacher explains the key information because they must take a limited amount of notes as they fill in blanks with keywords. **Effect Size:** 0.65	**Student-Generated Questions** Student-generated questions empower learners by involving them directly in the inquiry process, fostering ownership of their learning, and enhancing engagement and critical thinking skills. This strategy encourages students to develop their own questions about the material, leading to deeper exploration and understanding. **Effect Size:** 0.86

High-Impact Instructional Strategies Related to **Advanced Graphic Organizers and Writing**

	Advanced Graphic Organizers	Structured Writing Support	Writing Development
Overview	Advanced Graphic Organizers utilize visual tools to deepen students' understanding and retention of information. These strategies engage students in organizing and connecting ideas, identifying cause-and-effect relationships, and mapping narrative structures. By visually representing information, advanced graphic organizers enhance comprehension, facilitate critical thinking, and support the integration of new knowledge with prior learning, promoting academic success through active participation and collaboration.	Structured Writing Support strategies provide frameworks and collaborative opportunities that guide students through the writing process. These techniques actively engage students in organizing their ideas, constructing coherent texts, and refining their writing skills. Structured writing support enhances student engagement, promotes a deeper understanding of writing genres and structures, and supports academic success through scaffolding and collaborative learning.	Writing Development strategies are designed to enhance students' writing skills by engaging them in various writing processes and activities. These techniques actively involve students in constructing, sharing, and reflecting on their writing, promoting deeper understanding, critical thinking, and continuous improvement. Writing development strategies support academic success by fostering effective communication skills and encouraging active participation and collaboration.
Key Strategies	**Concept Maps** Concept maps are visual representations students create to connect ideas, concepts, and terms. Students can use them to organize information they already know and to incorporate new learning with this prior knowledge. Concept maps help you see how students understand content. **Effect Size:** 0.64	**Writing Frames** Writing frames provide a scaffold for writing in different genres. They model how learners should organize their work, the language structures they need to use for a specific genre, as well as ways to link sentences or paragraphs. **Effect Size:** 0.82	**Think Aloud Writing** Also called modeled writing, writing aloud demonstrates how an experienced writer constructs different kinds of texts. During a think-aloud, the teacher narrates their thinking while writing, helping the learner understand the writing processes. **Effect Size:** 0.64
	Fishbone Diagrams Fishbone diagrams (commonly known as Ishikawa diagrams, herringbone diagrams, or cause-and-effect diagrams) are diagrams used to identify the cause of an effect or a problem. Their name is derived from their fishbone shape, with the problem at the head of the diagram and its causes along the spine of the "fish." **Effect Size:** 0.65	**Summary Writing Frames** Using Summary Frames is a strategy that provides students with fillable statements to use when summarizing a text. As students become proficient at summarizing a text, they will decrease their use of the summary frames and use the structures independently within their own summary writing. **Effect Size:** 0.82	**Peer Review and Feedback** Peer review refers to the many ways in which students can share their writing with peers for constructive feedback and then use this feedback to revise and improve their work. For the writing process, revision is as important as drafting. **Effect Size:** 0.89
	Story Maps A story map is a graphic organizer that helps students learn the elements of literature by identifying characters, plot, and setting. It is used during and after reading a text. **Effect Size:** 0.88	**Shared Writing** In shared writing, the students collaborate with the teacher to construct a written text jointly. The teacher acts as a scribe, prompting, questioning, and supporting the students as the text is shaped. **Effect Size:** 0.54	**Writing to Learn** Generally, writing-to-learn activities are short, impromptu, or otherwise informal, low-stakes writing tasks that help students think through key concepts or ideas presented in a course. These writing tasks are often limited to less than five minutes of class time. **Effect Size:** 0.58