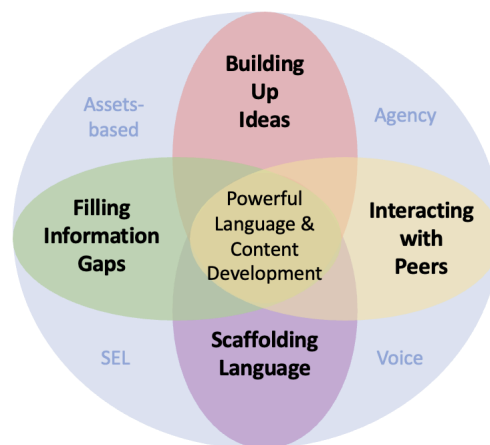


Fundamentals of Integrated Language & Content Learning

Introduction

An ongoing challenge in content area classrooms continues to be the development of language for (a) improving content area learning, (b) fostering disciplinary practices, and (c) cultivating relationships in school and beyond.

To address these needs, CSET¹/Understanding Language has identified four fundamentals that can guide substantive changes in integrating language and content (ILC) instruction. These ILC fundamentals provide guidance as to what curriculum makers, teachers, and instructional coaches should keep in mind as they either develop or enhance their own curricular units to build on the strengths and meet the needs of their multilingual learners. They are intended for multilingual learners at any level of English language proficiency. ILC instruction strategically weaves together activities that push students to read, write, listen, speak, converse, represent (e.g., art), interpret (e.g., symbols, graphs) in order to maximize their conceptual understandings, language use, and socioemotional growth.



Fundamental 1: Building Up Ideas

Deep understanding of core disciplinary ideas is essential for student academic success. These ideas, as opposed to simple facts, are complex in nature. They typically consist of claims (e.g., “Social media is harmful to mental health.”) and concepts (e.g., “Living things need water, air, and resources from the land, and they try to live in places that have the things they need.”)² Students build up these ideas by regularly engaging with peers and texts using two essential skills: clarifying essential terms and supporting their evolving understandings with evidence and examples.

¹ Center to Support Excellence in Teaching

² National Academies of Sciences, Engineering, and Medicine. 2012. A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas. Washington, DC: The National Academies Press. <https://doi.org/10.17226/13165>.

³ In ILC instruction, texts provide troves of rich language to help students build up and clarify their ideas. Often the text is written, but texts can also be visuals, websites, art, video, music, drama, etc.

Students also build ideas by using disciplinary practices such as sourcing and corroborating in history, controlling variables in science, interpreting in ELA, problem-solving in math, and collaboratively arguing with each other in every content area. Students produce and process lots of rich language all throughout this building.

Every unit where possible should culminate in an interesting project or performance that students work toward as they build up their ideas. Performances and products become ways to authentically communicate students' ideas to peers, families, and communities, and the world.

Examples of Building Up Ideas:

- Students work in pairs to build up claims with evidence for an upcoming small group Socratic Seminar on the causes of major political changes throughout history. Students ask each other clarifying questions (*What do you mean by that? Can you explain that to me in another way?*) and support questions (*Can we provide an example of that?*) to build up their ideas. In the latter half of the seminar the seven students in each group will co-generate ways to reduce the “bad” causes.
- In groups, students read about different historical pandemics, building up ideas of the best strategies for societies to mitigate the effects of the virus. They collaborate to figure out the best way to clarify challenging terms to their audiences, as well as support their ideas with evidence and examples. They then create a video public service announcement to help protect their community.
- Pairs solve problems given to them and then create their own math problems that show the idea, ‘We need to do the same thing to both sides of an equation when we are trying to isolate an unknown variable.’ They come to a common understanding of what *equation*, *isolate*, and *variable* mean. They will then present their ideas and sample problems to peers in small groups.
- ELA students are reading several stories in preparation to write their own stories. They are building up the idea that authors use dialogue to cleverly show what a character is thinking and wanting in the story. They meet to share different dialogue snippets from different stories to help one another build up the idea before and as they write their own stories.

Fundamental 2: Filling Information Gaps

Language serves to fill information gaps—to provide information that another person wants or needs to accomplish a task, to inform, convince, build an idea, and so on. This information can be basic (Where is the bathroom?), but in our work we emphasize filling information gaps in order to build up key ideas (concepts, claims, etc.) in each academic discipline. We also emphasize filling information gaps *orally* (e.g., in interactions, conversations, etc.), while reading, writing, visuals, and videos can also provide information that students need to build up ideas. So much of schooling involves asking students to collaborate with each other when there is commonly known information and, therefore, no need for students to communicate with each other except to please the teacher or get points. Activities with information gaps, however, require meaningful student engagement and interaction.

Examples of Filling Information Gaps:

- In a history jigsaw activity, each group of students reads and discusses a primary source letter from a different historical person in order to infer how the person viewed the events leading up to the American Revolutionary War. They then meet with other group members to share their interpretations and discuss commonalities and differences
- In math, pairs create a real world-ish math problem that shows the idea of what happens when you divide fractions (e.g., dividing an 8-slice pizza up for three people). Pairs then trade problems and solve them. Then the four come together, making sure the problems are clear and solved correctly. Finally, each group creates and shares a short presentation to another group on how fraction division works.
- In ELA, students read different stories around a similar theme (such as friendship). and come up with the most important or salient theme for each story they read. Then they meet in triads to share the theme of their story, why it's important, and how parts of the story support it. After all three share, they brainstorm ideas for themes for their own stories, along with possible characters and plots that might be able to communicate each theme to readers.
- In science, each pair of students share their results of a lab that they performed on plant growth with two other pairs of students. They share their measurements and final results to try to agree on a set of recommendations to others for maximizing the growth of plants.

Fundamental 3: Interacting with Peers

During high-quality peer interactions, students make new connections across ideas, clarify their previous (mis)understandings, rehearse their newly discovered ideas and challenge and build upon the ideas of others. When students know they are building up an idea in order to craft a product or performance of value, they are much more likely to use language to fill information gaps in their own minds and in the minds of peers. And if they feel like their idea is their own (i.e., a sense of agency), unique, and of value, their talk increases.

Peer interactions should be seen as central and complementary to content learning rather than as an add-on that takes place only if there is time left over. Peer interactions tend to span across a continuum from highly structured to not structured. More structured interactions (e.g., Think-pair-shares, Numbered Heads Together) are effective at practicing conversation skills and creating spaces for all students to talk. The other end is a more open conversation (e.g., A conversation in pairs in which students build up one theme of the story.) in which students are given a small block of time to engage in back-and-forth turns with little intervention from the teacher. Both structured and less structured interactions provide all students with opportunities to build up big ideas while expanding their linguistic “toolkit”³.

Examples of Interacting with Peers:

- Students build up an idea about the role of nationalism on historical events during the 20th century. They read different historical accounts and add their examples to a visual organizer, which they then share with a partner in conversation so that each can add to their visual.
- Students read firsthand accounts of people who moved westward in the 1800s despite the hardships of travel. In pairs, they list the authors’ varied motivations and compare this to modern reasons for moving.
- Students use a balance scale visual to organize evidence on both sides of the issue of cell phone use in schools. The teacher models and scaffolds the use of evaluation language such as “Even though that web page says that...., this other source is more credible, and it says....”, “This evidence outweighs the...because...”, or “I value and that’s why I think that this side is heavier.” Students then use this language to evaluate the arguments on both sides of this issue.

³ Ramón Antonio Martínez, Beyond the English Learner Label: Recognizing the Richness of Bi/Multilingual Students’ Linguistic Repertoires, *The Reading Teacher*, Volume 71, Issue 5. pp. 515-522 (2018).

Fundamental 4: Scaffolding Language

In supportive instructional environments, multilingual learners interact with their peers, filling information gaps and building up big disciplinary ideas. To foster these interactions, teachers scaffold language by modeling or rephrasing language, employing sentence frames and highlighting disciplinary vocabulary in context.

Furthermore, for instruction to promote student facility in oral and written communication, teachers should choose excerpts from disciplinary texts to take deeper dives into how disciplinary language works at the micro (e.g. word choice, use of cohesive ties) and the macro levels (e.g. text organization) across a variety of text types. As an example, after exploring the structure and language choices within a particular text type (e.g. sequential language within a description of the water cycle), students co-construct a similar text with their teacher (e.g. life of a butterfly) before they create a text independently on a scientific topic of their choosing. . Finally, students reflect on their own texts, with a focus on their micro and/or macro level linguistic choices.

Scaffolding language should not be confined to teaching isolated bits and pieces of language out of context. Rather, schools must promote language scaffolding as the explicit deconstruction and construction of a variety of text types within all subject areas.

Examples of Scaffolding Language:

- As students read about the origins of Japanese internment during World War Two, they identify the causal phrases (e.g. *due to*, *stemmed from*, *as a result of*) embedded in the text and use these phrases later in a presentation on the ongoing historical tension between individual liberty and national security.
- Students analyze several sentences from a scientific article about viruses to unpack the way in which science writers use nominalization to create semantically dense sentences. Students then use nominalization when they write their own scripts for their public service announcement.
- Students analyze biased and “loaded” language in several articles that argue for and against the use of social media. They prepare two versions of their own articles, one with biased language and one without. They then try both out on a different pair of students and ask them which article is more persuasive.

- The teacher helps students analyze the language of unknowns and variables in several related long word problems in math. They discuss how the writers could have been clearer in their wording of the problems. Then students create their own problems and use peer editing to clarify them.

Additional Elements

Woven throughout the four fundamentals are several key elements that strengthen ILC instruction even more:

Assets-based view of students and their learning

Valuing and incorporating student backgrounds, knowledge, interests, strengths, and ways of thinking and communicating into instruction and assessment.

Student agency

Students feel that they have control over what and how they are learning, along with how they show their learning.

Social and emotional learning (SEL)

Instruction (a) leverages and cultivates students' relationships in and out of the classroom, and (b) responds to and nurtures students' emotional growth.

Student voice

The classroom is a safe place for students to share their opinions, feelings, and ideas. The teacher and students authentically listen and respond to what students are saying, especially when they address changes that need to happen in the school, community, and beyond.

In summary, in our work with content teachers, coaches and leaders, we have seen how these ILC Fundamentals support teaching and learning. They provide guidance on how educators might reframe content instruction to maximize language development and content learning. They provide a potential framework for school and district leaders to develop classroom “look-fors” based on what students, rather than teachers, are saying, doing, and creating. We hope that the field uses these fundamentals to re-envision instruction so that it harnesses the strengths and interests of multilingual learners while providing the supports needed in our students' academic, linguistic and social-emotional development.

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