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──────── **Abstract** ────────

This article includes the findings from a formative experiment implementing inquiry with informational texts in a fifth-grade bilingual classroom after the completion of state assessments. The pedagogical goals were focused on facilitating engaged reading and writing for native Spanish-speakers and building content knowledge and related academic vocabulary in English. The intervention was designed to emphasize modeling of research, strategies of the inquiry process, self-selected reading, informational text-creation and peer interactions, discussions and feedback regarding inquiry. In this article, the author shares initial instructional plans for implementation as well as modifications that were made based on factors inhibiting and advancing the pedagogical goals throughout the six-week study.

A Formative Study: Inquiry and Informational Text with Fifth-Grade Bilinguals

Katie, a fifth-grade teacher at a local bilingual elementary school, requested assistance in promoting engagement with reading and writing informational texts in her classroom. As with every classroom, there are varying amounts of flexibility allowed in terms of instructional approaches as well as student outcomes and products. This particular school followed a strictly paced curriculum leading up to state assessments in the spring, but allowed for academic freedom the final six weeks with the only requirement being a research presentation during the last week of school. Katie was aware of my research on inquiry with younger bilinguals and requested support for integrating more experiences with reading and writing informational texts utilizing an inquiry approach.

> Katie: I really want to reward my kids with meaningful and engaging projects after the state assessments. They have been working so hard, and it seems like everything we have been doing this semester has been focused on test prep. After the tests are done, we don't have any required curriculum to cover for the rest of the year except they have to have a final research project. But, it can be about anything- maybe we could do the solar system this year. They seemed pretty interested in that.
> Researcher: Do they all have to research on the same general topic and theme, or could they individually select an inquiry project that interests them?
> Katie: Well, I guess they could do whatever they wanted, but I only have so many informational books at their reading level that are not textbooks. And, they have to have something to present because all the fifth graders will be presenting reports the last week of school. I don't know...it seems like any topic would be a little chaotic, but I want them to engage with texts to answer their own curiosities, not ideas that I mandate (Initial planning conversation).

I offered to gather resources before and during the inquiry project process to alleviate the limited access to texts. We brainstormed our goals and ideas for this project. Katie had attempted to follow instructional guidelines for facilitating inquiry and research in previous years with frustration and little success, so she invited me to team teach the lessons with constant reflection and revision of our

instructional approach in order to best support the students and simultaneously address new informational text demands found in the Common Core State Standards (CCSS). We agreed we wanted to use a formative experiment (Bradley et al., 2012) design to facilitate engaged reading and writing and build content knowledge and related academic vocabulary in English for native Spanish-speakers who were assigned to the "ESL/bilingual" classroom.

A formative experiment focuses on what is required to reach a pedagogical goal and factors that enhance or hinder the effectiveness of the intervention (Reinking & Bradley, 2004b). While there are many available commercial interventions to support language and literacy development, our goal was to facilitate engagement with informational texts and research on self-selected topics, and this required an intervention that could not be standardized or replicated with a commercial intervention. We selected inquiry projects as our intervention. Reinking and Bradley (2004a) explain, "Formative experiments, unlike experimental or naturalistic studies of instructional interventions, accommodate both the variation inherent in classrooms and the need to adapt interventions in response to relevant variation" (p. 153). The purpose of this study was to examine the effectiveness of literacy interventions based on teacher-designed, pedagogical goals in a Title 1, fifth-grade classroom with emerging bilinguals. The formative experiment allowed for us to adjust our instruction accordingly as we analyzed instruction and engagement based on student monitoring, student surveys and teacher reflection during the six-week study. We continually revisited three research questions to guide our modification of instruction:

1. What factors enhance and inhibit the effectiveness of the intervention in achieving the pedagogical goals?

2. How can the intervention be modified to achieve the pedagogical goals more effectively?

3. Has the instructional environment changed as a result of the intervention?

Setting and Participants

Katie taught fifth grade in a bilingual elementary school in the Western United States with 65 percent of the students receiving free or reduced lunch. This Spanish and English speaking bilingual school was modeled after an early exit transitional approach that included first-language instruction in Spanish with increasing amounts of English instruction. All literacy and content instruction was provided in Spanish when students first entered the school, but the instruction

was increasingly provided in English over time. Native Spanish-speakers remained in bilingual classrooms until they demonstrated proficiency on the state English language assessment, at which time they transitioned into English-only speaking classrooms. There were no English as a Second Language (ESL) supports once a student entered an English-only classroom. All students were required to take the state assessments in English by third grade, and most students were transitioned into an English-only classroom after two years in a bilingual classroom.

Katie's classroom was supposed to provide the majority of instruction in English with minimal bilingual supports. All students in the classroom spoke Spanish as their first language. The students in Katie's classroom of 25 consisted of three new immigrants from Mexico, four transfer students from other schools, and 18 students who have attended this school and received bilingual instruction since kindergarten. These students were required to be assessed in English on the state assessments, but were not yet demonstrating proficiency on the state English language assessment. While these test scores provide useful information regarding English language proficiency, it is important to note that all 25 students were able to read, write, speak and comprehend Spanish.

Katie's end-of-year curricular freedom provided an opportunity to engage students in learning about content and the research/inquiry process in English. The only requirement included having her students present a research project in English during the last week of school. During this time, peers, teachers, and family members would be invited to walk around the classroom as students explained their project and answered any questions posed by the guests. This provided a perfect opportunity for Katie to engage her students in meaningful reading and writing guided by their interests.

Methodology

Formative Experiment

As previously mentioned, this study utilized a formative experiment approach in order to address pedagogical goals and answer the research questions. We began the study by identifying two pedagogical goals: (1) Facilitate engaged reading and writing for native Spanish-speakers who were assigned to the "ESL/bilingual" classroom for the entire year; and (2) build content knowledge and related academic vocabulary in English. The initial intervention was designed to facilitate (a) modeling of research strategies/inquiry process; (b) self-selected reading, research and informational text-creation; and, (c) peer interactions,

discussions and feedback regarding inquiry (interventions are addressed in greater detail in subsequent sections). Utilizing the framework for formative experiments (Reinking & Watkins, 2000), this study is based on the six recommended components of designing, conducting and reporting a formative experiment:

1. Identifying a pedagogical goal and offering a theoretical justification for its value.

2. Determining an instructional intervention that has the potential to meet the pedagogical goal.

3. Identifying factors that inhibit or advance the effectiveness of the intervention toward reading the pedagogical goal.

4. Modifying the intervention and implementation to more efficiently address the pedagogical goal.

5. Noting changes in the instructional environment resulting from the intervention.

6. Considering unanticipated positive or negative effects of the intervention (p.388).

Data Collection and Analysis

Data collection included the following: daily classroom observations (including instruction, student interactions, student work); teacher reflections; pre-, mid-, and post-unit student surveys; and student documents (inquiry notebooks, sticky notes, note taking, initial drafts, informational text feature creations for research posters, and research posters). We analyzed the instructional intervention on a weekly basis when we met to review the data collected, student progress, and discuss the research questions:

1. What factors enhance and inhibit the effectiveness of the intervention in achieving the pedagogical goals?

2. How can the intervention be modified to achieve the pedagogical goals more effectively?

3. Has the instructional environment changed as a result of the intervention?

This weekly review of data collection and ongoing analysis provided us the opportunity to modify instructional supports, adapt the process, and to provide additional scaffolds and support to students as needed to ensure that they were reaching the pedagogical goals. These modifications are outlined in the findings below.

Theoretical Justification

The theoretical justification for our pedagogical goals and interventions include sociocultural theories of learning that support inquiry-based instruction and the use of informational texts for effective instruction with bilinguals.

Sociocultural theorists and researchers report the most effective means of constructing knowledge is through dialogue arising from cooperative inquiry (Beach & Myers, 2001; Gutierrez, Baquedano-Lopez, & Tejeda, 1999; Rosebery, Warren, & Conant, 1992). In many traditional classrooms, students have minimal opportunities for these types of interactions. For example, the classroom in this study had limited opportunities for collaboration and inquiry throughout the year. Dyson (2008) reports children negotiate meaning with one another in classrooms that encourage talk. Wells (1999) claims that shifting from a highly structured, teacher-directed model to creating a collaborative community causes students to learn with and from each other as they engage in dialogic inquiry. There is an additional need for this type of dialogic inquiry in the instruction of bilinguals because discourse plays an essential social role as a semiotic mediator in the construction of knowledge (Haneda & Wells, 2008). Drawing on this work, we selected pedagogical goals that aligned with sociocultural theory.

Pedagogical Goals: Inquiry

Inquiry instruction has been reported to increase student motivation and attitudes toward learning (Mansfield, 1989) in addition to enhancing content knowledge and reading comprehension (Romance & Vitale, 2005). Researchers have documented the significant cognitive and social benefits that arise from the engaging, interactive and meaningful learning found in inquiry-based classrooms (Guccione, 2011; Schweinhart & Weikart, 1997; Schweinhart & Weikart, 1998). Because of this, we adopted an inquiry stance to our formative study with the bilingual students.

The inquiry stance gives student more agency with curriculum and instruction as it is guided by students' interests and changing needs (Ray, 2006). Self-selected inquiry was the focus of students' research projects. In order to support students' independent inquiry, we provided the modeling and guided practice of literacy and research skills. Reflection on student inquiry, student surveys and instructional practice guided our curriculum and pedagogical planning for modifications to instructional approaches, lessons, and how we facilitated peer interactions. This approach to inquiry with students, teachers and researchers provides opportunities for reflection and change as teachers are

experiencing the new demands and increased expectations with the Common Core State Standards (CCSS).

Addressing the CCSS with Informational text

The CCSS highlight the importance of increasing meaningful experiences with informational texts and deepening students' thinking and responses to literature. In the CCSS, there is also an emphasis on preparing students for college and career expectations by focusing on text complexity, rigor and preparing students to construct meaning with complex texts. With this shift in instruction and performance expectations, teachers are attempting to increase engagement and rigor in their instruction with informational text.

Researchers have documented the benefits of providing increased exposure, access and knowledge about informational texts (Pappas, 1991; Purcell-Gates, Duke & Martineau, 2007). In addition to the new requirements with CCSS, informational text can motivate learners and encourage overall literacy development (Caswell & Duke, 1998). Multiple studies examining teachers' and students' work with informational text "suggest the importance of providing students multiple opportunities for engagement with informational text within literature-rich and instructionally supportive environments" (Maloch & Zapata, 2012, p.308). Drawing on this solid research base supporting the use of informational texts and motivating learners, we identified the pedagogical goals of facilitating engaged reading and writing for native Spanish-speakers and building content knowledge and related academic vocabulary in English.

Supporting Bilinguals

Historically, many English learners receive decontextualized, rote-based instruction focused on skill acquisition (Allington, 1991; Darling-Hammond, 1995) and are more frequently placed in lower ability groups than native English speakers (Ruiz-de-Velasco & Fix, 2000). This emphasis on language as a form robs English learners of the opportunity to draw on the variety of potential resources they already possess, such as background knowledge related to the reading topic, reading comprehension strategies, interests and motivation (Bernhardt, 2011). English learners may be learning English in school, but they already possess linguistic resources that enable them to participate in a range of communicative settings in at least one language (MacSwan, Rolstad, & Glass, 2002; Valdés, Bunch, Snow, Lee, & Matos, , 2005) and have knowledge of conventions and discourses used in their own communities (Gutiérrez, Morales, & Martinez, 2009; Gutiérrez & Orellana, 2006; Orellana & Gutiérrez, 2006). Drawing on their conceptual

knowledge in their first language will help support the acquisition of their second language (Cummins, 1991).

Self-selected inquiry allows students to select topics of interest. This provides an opportunity for them to build on background knowledge in meaningful ways. Inquiry-based approaches in primary classrooms with Spanish-speaking students have been reported to facilitate progress in second-language acquisition, an increase in student participation in content- related discussions, and an increase in the use of comprehension strategies (Varelas & Pappas, 2006). The academic benefits of inquiry for bilinguals are vast because of the rich experiences with language and content. "ELLs learn language as they engage in meaningful content-rich activities (projects, presentations, investigations) that encourage language growth through perception, interaction, planning, research, discussion, argument, and co-construction of academic products" (Hakuta & Santos, 2012, p. iii). These meaningful content-rich activities are the foundation for self-selected inquiry.

Instructional Intervention

The insights from the previous research conducted on inquiry-based instruction, informational texts, and effective pedagogy for bilinguals provided a general framework for the instructional intervention. The classroom teacher and I decided that our intervention would consist of three basic components: (1) Teacher-initiated strategy instruction for inquiry with informational texts (reading, writing and general research skills); (2) Self-selected inquiry (reading, research and research poster creation); and (3) Peer-interactions, discussions and feedback surrounding their inquiry. First I describe the plan for teacher-directed instruction. Then, initial goals, expectations and plans for self-selected inquiry and peer interactions are shared. After weekly analysis and reflection, the intervention was modified with adaptations and additional scaffolds and support, as we deemed appropriate for reaching the pedagogical goals. These modifications will be addressed in subsequent sections (Modifications: What We Changed Along the Way).

Plan for Teacher-Initiated Instruction

Our goals to facilitate engaged reading and writing were guided by the three-component intervention previously mentioned that began with teacher-initiated instruction. We wanted to focus on integrated instruction by teaching skills for engaging with informational text and conducting research on a self-selected topic. Based on students' language and literacy proficiency performance in English and

their lack of prior instruction engaging with informational texts, we decided to focus on teaching informational text features, inquiry research strategies, and text creation for sharing research (this ranged from informational text features to summaries to completed projects and research posters). This instruction would be modeled by the researcher and supported by both the teacher and researcher as the students worked on their self-selected inquiry projects. I selected a topic for my inquiry project to model the process and progression throughout the six-week period. As seen in Table 1, I introduced a new strategy and mini-lessons by modeling with my project before asking the students to apply the strategy with their self-selected topic every week.

Table 1: Schedule and Instructional Plan

Schedule	Instructional Plan
Week 1: Informational Text Features	Modeling and book exploration with the following informational text features as tools to support comprehension: Headings, bold words, glossary, images, captions, labels, diagrams, cutaways, charts, maps, graphs
Week 2: Inquiry Strategies	Modeling and guided practice with the following inquiry research strategies to support research process: Questions; Answers; Documenting Information; Sources (finding books, articles, website, etc. and citations)
Week 3: Continued Inquiry Modeling	Modeling and guided practice with the following inquiry research strategies to support research process: Synthesize and Summarize; Fascinating Facts; Visual Representations
Week 4: Text Organization and Creation	Modeling and guided practice of the integration of inquiry process/collected research and informational text features to create a research "text" (poster, report, etc)
Week 5: Text Organization, Creation and Presentation	Guided practice with revisions, editing and initial presentation rehearsals of text creation.
Week 6: Rehearsal and Presentation	Presentation rehearsal with peer and teacher feedback Formal presentation to teachers, adults and invited community members

Goals, Expectations and Plans for Self-Selected Inquiry

The goals and expectations for student self-selected inquiry were straightforward. We expected students would observe modeled strategies and implement them into their self-selected inquiry projects. We anticipated topic selection would take one to two days while exploring and learning about informational texts, reading books of interest at the library or online until they decided on a topic of interest. At that point, students would focus their guided inquiry of the strategies and research on their selected topic. This would include utilizing books from the classroom, independently collecting books during their 30 minute library time, gaining information from various articles or websites online, taking turns on the two classroom computers or during their 60 minutes a week in the computer lab.

We expected all students to utilize each of the strategies to support comprehension and document their understanding through the guided practice. However, we wanted students to have choice in research skills and how they documented and shared their information in a way that was meaningful to their project and learning style. We envisioned this including multiple kinds of text creation such as note taking, summaries, reports, research posters, and informational text features (captions, labels, diagrams, bold words, glossary, etc.). Because of this, we did not create a formal rubric or requirements for the research or text creation. We anticipated continued research during weeks two through three focused mostly on documenting important information gained from their inquiry research. This would be followed by two weeks of continued research, inquiry project creation (a poster, report, representation of their learning) and revision utilizing informational text features. The final week would be focused on rehearsals and presentations of their projects. We believed these opportunities for self-selected inquiry would facilitate engaged reading and writing and build content knowledge and related academic vocabulary in English.

Goals, Expectations and Plans for Peer Interactions

To expand students' engagement and understanding, we wanted extensive opportunities for peer interactions, discussions and feedback. Understanding the benefits of dialogue for bilingual students, we encouraged conferring with peers and teachers without structured guidance other than sharing their work and soliciting feedback. We set aside 10 minutes for sharing their "thinking and research in progress" in small groups every day. We planned for this time to include student questions that would further enhance the research in progress. We

anticipated that students would be actively engaged in conversations, debate and critical feedback about important topics, so other than carving out time, we did minimal planning for scaffolding their interactions. Needless to say, we had to modify our plans to support these interactions along the way.

Findings

Modifications: What We Changed Along the Way

Following the initial pedagogical goal setting and identification of instructional interventions grounded in research literature, we began to implement the inquiry interventions. The data analysis was ongoing and included assessing the first two research questions:

1. What factors enhance and inhibit the effectiveness of the intervention in achieving the pedagogical goals?

2. How can the intervention be modified to achieve the pedagogical goals more effectively?

As we identified factors that were inhibiting the effectiveness, we modified the instructional to reach the pedagogical goals more effectively. In the following findings sections, the hindrances, modifications and enhancements to the intervention are reported in the following areas: Teacher-initiated instruction, self-selected inquiry, and peer interactions. We addressed each identified hindrance during Part One (the initial intervention) with an instructional modification that took place in Part Two (altering intervention from part one) in order to enhance the intervention and student learning.

Teacher-Directed Instruction: Hindrances, Modifications and Enhancements

In Part One of the intervention, the teacher-initiated instruction progressed with the planned instructional mini-lessons followed by guided practice and support. However, we also made modifications after initial observations of factors hindering progress toward the pedagogical goals. We observed students attempting to only read, write, and speak in English; this appeared to be hindering their access to information and discussion about information. Because of this, we encouraged students to read, write, and speak in Spanish when it assisted in their independent inquiry during Part Two. We reminded them their research final project would ultimately be written in English, but that using two languages and resources in two languages could greatly assist their research process of

questioning, researching, reporting, and sharing. In addition to this broad change/reminder, there were some specific lessons that required additional modification.

The two particular mini-lessons from Part One that had to be revisited and modified were asking questions, and synthesizing and summarizing. The progress of new learning was hindered when many students asked questions about information they already knew or read in the text. They were not asking questions to guide their research. Instead, they were reading information and creating questions that corresponded with the reading. For example, Julio was researching about the *Negro National League* baseball. He included the following questions and answers (nearly direct quotes) all found on the first two pages of the text, *We are the Ship: The Story of Negro League Baseball* (Nelson, 2008): 1). "Who was the first Negro to play professional baseball? Answer- Bud Fowler was the first Negro to play professional baseball."; 2). "How did he protect his legs from being spiked by base runners? Answer- He attached wooden staves from a barrel to his legs for protection." After reviewing his questions and answers, it was clear by his vocabulary (wooden staves from a barrel), language use (the repeated use of the word Negro, as used in the book), and specific questioning and answers found on the first two pages that his questions were not stemming from his curiosities and research. Instead, he was using a format similar to test preparation and state assessments, where he was creating a question based on information that could be quoted and found directly in the text. We observed multiple examples of this type of reading, comprehension question creation, and text-based answers among the students during their independent inquiry. While these strategies had served students well in the recent assessments, in Part Two we had to reteach asking questions with specific and explicit instruction that the questions were *their* curiosities and some questions would remain unanswered. Based on observations, the re-teaching of the mini-lesson with explicit focus addressed the previous issue of asking questions that they already knew the answer to.

An additional challenge and re-teaching modification came with synthesizing and summarizing, when we observed multiple students copying information straight from the text. Their research progress was being hindered by an inaccurate view of summarizing and synthesizing. In Part One, Malia had created two beautiful illustrations with labels, captions and an accompanying paragraph-length summary that included a page number citation. Katie asked her to talk about her work, but Malia had difficulty pronouncing many of the words and seemed frustrated and embarrassed. Katie suggested going back to the text to revisit the ideas, but then realized Malia had copied the images, labels, captions,

and summary. When she reminded Malia she needed to put her learning in her own words, Malia said she didn't think she needed to because she cited the page number. It was clear we needed to revisit synthesizing, summarizing, and citations.

We had a small group of students who had grasped the concept of putting the information they were learning into their own words, but they were basically rewording every sentence on the page and including many details that were not relevant to their questions. During Part Two, we returned to the model lesson and practiced oral retelling without looking at the book, as well as identified the difference between "Fascinating Facts" and essential information to be included in a summary. The re-teaching and explicit instruction about the difference between copying and summarizing provided a solution to the previously observed copying.

Unanticipated enhancement. We noticed students were utilizing additional research strategies that were not introduced by the teacher or researcher. Two students were creating their own glossaries that included vocabulary words, definitions, and accompanying visual representations (see Image 1). These students were keeping track of the words they encountered that they did not know and thought they might need to reference at a later time during the project. Another student wanted to conduct an interview with an expert as a way to gather information. A third student wanted to present their information in a mobile to scale of the animal they were researching (see Image 2). We felt all students could benefit from a mini-lesson on the new strategies these students were utilizing, so we asked the students to teach a mini- lesson on what they were doing and what purpose it served their project. Other classmates began utilizing the strategies presented by their peers to enhance their understanding and research presentation.
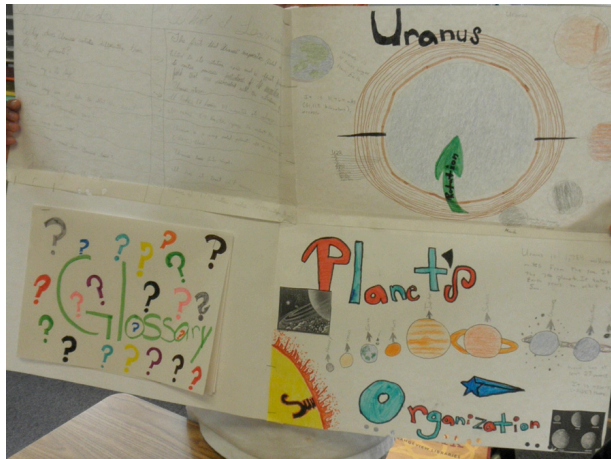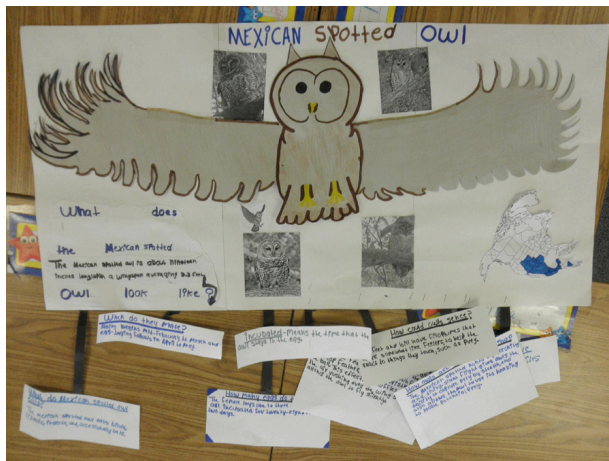
Image 1

Image 2

Self-Selected Inquiry: Hindrances, Modifications and Enhancements

Most students were highly engaged in reading, researching and documenting information on their self-selected topic. Nevertheless, some students would participate in the guided practice lesson, but were not documenting additional research or understanding. They were not seeking out new texts or discussing their topic with teachers or peers. When asked what they were working on, one student responded with a shrug of their shoulders and said, "I think I am done. I don't know what to do next." Katie, the teacher, was feeling frustrated with some students' lack of output and initiative on their inquiry project. She worried they would not collect enough information to create an informational text for their final research presentation. The lack of structure and accountability seemed to paralyze these students who appeared to be looking for more support and direction.

In Part Two, we implemented two instructional scaffolds/modifications to support this challenge: goal setting and a menu. Each day after the mini-lesson, we asked students to write their personal goal for productivity on a small sheet of paper and share it with their neighbor. The following are some examples of student goals: "ask two new questions and read for information"; "find answers to my questions"; "draw a map and highlight where my animal lives"; "summarize all of my facts." Students would set goals and then self-assess their goals at the end of the period with their neighbors before turning them in to the teacher. To help remind students of the strategies, mini-lessons and options for representing their understanding, we created a class chart documenting the information text features, research skills, and text creation options. As a new strategy was presented, we

added it to the list. Then, students each had an individual "menu" from which they could choose what strategies they wanted to use (see Image 3). We asked students to place tallies on their menus as a visual reference to self-assess their strategy and text creation variety. These two alterations assisted in supporting students with setting goals, staying on-task, and making progress on their projects.

Image 3

Inquiry project menus

• Sample Checklist/Menu:

Questions	I Learned	Presentation Plan
I Think	Connections	Written feedback
Illustrations	Captions	Author Info
Labels	Diagrams	Maps
Models	Cutaways	Editing Checklist
Summaries	Report	Key Terms
Sources	Glossary	Headings
Bibliography	Charts	Annotated Bibliography

Peer Interactions: Hindrances, Modifications and Enhancements

In similar fashion as the teacher-initiated instruction and self-selected inquiry, we modified our supports for peer interaction in order to meet our pedagogical goals of facilitating engaged reading and writing, and building content knowledge and related academic vocabulary in English. In addition to giving students time to discuss their self-selected inquiry, we realized we needed to model ways to interact and respond to students "thinking and research in progress." We wanted students to build content knowledge and academic vocabulary related to their peers' topics, but we also wanted students to provide comments and questions that would enhance the presenter's research. Students listened to sharing of inquiry projects and read the work of their partners and group mates. This was followed by written and orally shared responses.

Initially, we heard a lot of, "I like your research," but these surface level responses were hindering deeper learning and discussion about important topics. To address this, I created an additional scaffold for soliciting and receiving helpful feedback for enhancing their research presentations during Part Two. I asked the presenter to seek feedback by asking their group to provide specific feedback of their choice. For example, one student said, "Tell me what needs more

information." Another student said, "What part do you like the best? And, what part do you think needs the most work?" The group was only allowed to respond to the feedback requested by the presenter. They would write down their feedback and give it to the presenter when they shared it orally. Students could then continue to discuss the research and presentation. This provided more specific and critical feedback that supported the revision and rehearsal process for the presenter.

I observed that many of the less proficient English speakers were not contributing to the discussion. I believed that language proficiency was hindering some of the students' participation surrounding both their research and the research of their peers. As a modification, I encouraged students to write feedback, questions, comments and facilitate discussions in Spanish when they felt it would enhance the conversation and eventually their research. These discussions also helped guide students' goals and work during the following days as they revised their inquiry project.

Changing Environment and Students' Perceptions

In this section, I address the findings related to the third and final research question: Has the instructional environment changed as a result of the intervention? The instructional environment changed in multiple ways. There was a shift from a focus on test preparation and narrative texts to self-selected research projects. The initial shift appeared to be a change in focus on text structures from narrative to informational. However, the informational text (and instruction of text structures) was utilized in conjunction with research skills as tools to seek out information on a topic of students' choice. This information seeking was based on their own self- selected inquiry and was presented to peers, adults and other community members. The teacher reported that the shift in audience from teacher/test assessor to peers and community members sparked a great deal of commitment and pride in their presentations. Choice and access to informational texts allowed students to build on their background knowledge as they became experts on their topics (ranging from African Americans in Negro League Baseball, to bull terriers and breeding, to the solar system, to the Mexican Spotted Owl). This also created a change from teacher-directed and teacher-selected instruction to student-centered co-construction of knowledge. Students built on the foundation of skills to create a meaningful informational text and presentation. Students worked together to model helpful research strategies, provide feedback, revise their work, and eventually present a polished product.

Students' perceptions of the Language Arts period, their competencies, and enjoyment during this time also shifted. Students were surveyed at the beginning, middle, and end of the research unit with the following questions:

- What is your favorite subject in school (Math, Science, Social Studies, Language Arts?) Why?

- What do you like most about the Language Arts period?

- What do you like least about the Language Arts period?

- Share one or two things that you do well during Language Arts.

- Share one or two things that are difficult for you during Language Arts.

In the pre-survey, only six students selected Language Arts as their favorite subject. However, this number increased to eight by the mid-unit survey and to 13 by the post-unit survey. Additionally students' responses to what they like most and least during Language Arts changed. The most prevalent pre-unit responses were that they liked reading groups the most and taking tests the least (this could be due to the fact that they just finished the state assessment window). However, by the post-unit assessment the most prevalent student responses were that they liked research the most. The responses of liking taking tests the least were still the most common during the post-unit survey.

Finally, we also saw a shift in students' perceived strengths and weaknesses during Language Arts. The most prevalent strength during the pre-survey was reading fast, and the most prevalent reported difficulty was reading long books (also referred to as long chapter books, books with a lot of words, books with too many pages, etc.). During the post-unit survey, the most prevalent strengths were related to research and presenting their research (i.e. "I am really good at research;" "Finding information and putting it in my own words to share with my parents;" "Asking questions, finding answers, summarizing and synthesizing."). The most prevalently reported difficulty during Language Arts was the strategy of summarizing and synthesizing. Students' shifting perspectives about Language Arts, their competencies and challenges demonstrated a change in focus from test-taking skills and strategies to content, research and knowledge dissemination.

Discussion

The growing role of informational texts in today's language arts classrooms provides opportunities to build on curiosities and background knowledge. The shift is not simply about understanding alternative text structures and additional

exposure to informational texts. The shift should be altered to focus on the facilitation of content understanding, critical thinking, and text creations in the informational genre. This can be accomplished when the pedagogical philosophy is grounded not only skill acquisition, but also exploration and engagement with texts of interest. Through these experiences students' motivation is enhanced as is their content knowledge, language acquisition and literacy skills.

We began the study by identifying the two most important pedagogical goals we wanted to investigate: (1) Facilitate engaged reading and writing for native Spanish-speakers who were assigned to the "ESL/bilingual" classroom for the entire year; and (2) build content knowledge and related academic vocabulary in English. The initial intervention was designed to emphasize (a) modeling of research strategies/inquiry process; (b) self-selected reading, research and informational text-creation; and (c) peer interactions, discussions and feedback regarding inquiry. Throughout the course of the six weeks, we constantly altered our instruction to move closer toward our pedagogical goals by consistently revisiting the first two research questions: What factors enhance and inhibit the effectiveness of the intervention in achieving the pedagogical goals?; How can the intervention be modified to achieve the pedagogical goals more effectively?

We did not anticipate the student-created resources and skills for enhancing their projects, nor did we foresee the need for modeling and scaffolding student interactions. Yet, these student-directed alterations to the unit of inquiry strengthened the self-selected inquiry projects and presentations.

One student who had recently moved from Mexico wanted to research a Mexican animal and include relevant information about his home country. He utilized texts in English and Spanish to support his inquiry about the Mexican Spotted Owl and took pride in citing his bilingual resources. During the final presentations with the community members, he presented in both English and Spanish, depending on the current audience. He referenced the map he created to document where the owls lived, but he also pointed out to audience members where he had lived. His interactions with informational texts and choice of research and text creation provided an opportunity to draw on his background knowledge, first language, cultural connections, literacy and research skills.

So, what opportunities do informational texts afford? I believe they provide occasions for introducing and supporting an inquiry stance- not just understanding text structures or writing a research report. Teaching and testing text structures or analyzing report writing is easier and much more linear than facilitating inquiry, but inquiry facilitated engaged reading and writing while

simultaneously supporting content knowledge and related academic vocabulary during a short six-week period. Katie reported that her fifth-grade bilinguals consumed and produced more text in this unit of inquiry than they did in the previous two science units combined. I would argue that even more important than academic performance, students enjoyed their engagement with and creation of text. When asked to reflect on their self-selected inquiry projects, one student said, "It was so cool because we got to learn about whatever we wanted. Then, we got to tell our friends and adults and everybody about stuff that only we knew because no one read as much about it as us." As students took ownership and pride in their research with informational texts, their motivation, engagement and quality of work increased.

Here are some practical suggestions for getting started with integrating informational texts and inquiry in your classroom:

- Survey students about possible topics of interest for self selected inquiry.

- Collect informational texts and additional resources to support student inquiry.

- Give students time to explore informational texts and identify text features.

- Discuss informational text features and their purposes (create a list of essential features based on your grade level and point out any features students do not identify in the book exploration).

- Model the inquiry process with mini-lessons based on need and developmental appropriateness.

- Document mini-lessons and strategies so that students can easily refer back to them.

- Provided guided practice following mini-lessons on self-selected topics.

- Model peer feedback and interactions for critiquing the inquiry projects- I have heardsome teachers say, "Hard on content, soft on people" as a guiding thought for critical feedback. Students should be sharing and getting feedback from the very initial stages.

- Support students in small-groups and one-on-one based on needs and interests.

- Be flexible with your instruction...You may have thought everyone would need a mini- lesson on captions today, but your use of observations and informal assessments might suggest you really need to go back and re-teach questioning.

- Model presenting and discuss presentation skills.

- Celebrate their hard work and the culmination of the inquiry process.

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