Renewing Two Seminal Literacy Practices: I-Charts and I-Search Papers

It is a chilly but bright March morning in Joël Johnson’s 7th-grade English Language Arts classroom. As students rush into the room, Josh, Erin, Alissa, Anna, and Brian (all student names are pseudonyms) head straight to the Computer On Wheels (COW) and grab a laptop computer. Joël directs the students to take out their I-Search (Macrorie, 1988) folders and begin working on their individual I-Charts (Hoffman, 1992).

Josh searches the Internet for information on why submarines cannot go to the bottom of the ocean. Natasha is interested in learning about abortion and is on the Web reading about a nonprofit organization called Jane Doe that helps teenage girls undergo safe and legal abortions. Erin is trying to define popularity in middle school and is coding her data from yesterday’s field notes in the cafeteria. Brian is reading about the effects of drinking too much Coke and has just discovered that a can of Coke can be used to clean corrosion from a car battery. And Elianna is watching a YouTube video on abused children because she is interested in becoming a Child Protection Specialist. The students have chosen their own question to research—tapping into their identities, curiosity, and passions. In this article, we describe how Joël modified I-Charts (Hoffman, 1992; Randall, 1996) and I-Search papers (Macrorie, 1988) to support the needs of her middle level English Learners (ELLs), and we highlight how she improved upon two timeless instructional practices by scaffolding the students into the research process and integrating technology.

Joël teaches at Chapa Middle School (CMS), situated in a small suburban community 20 miles outside of a large southwestern city. The majority of students who attend CMS are Spanish-dominant and self-identify as Mexican American; 95% of students are on free and reduced lunch, designating Chapa a Title I school. For two years, we have collaborated with Joël in a project titled Culturally Mediated Writing Instruction (CMWI), a professional development and research initiative focused on studying culturally responsive writing practices to improve the academic writing achievement of secondary English Language Learners (ELLs) (Wickstrom & Patterson, 2010). As part of CMWI, Joël attended a weeklong professional development institute focusing on the use of students’ funds of knowledge (González, Moll, & Amanti, 2005) and inquiry-based literacy units (Short, Harste, & Burke, 1996; Wilhelm, 2007). During the first year of the study, Assaf examined how Joël implemented a writing workshop approach (Calkins, 1994) and used mentor texts to scaffold students’ learning of academic concepts, sentence structure, and metalinguistic knowledge (Assaf, 2009). During year two of the study, Joël’s principal invited us to develop a research-focused writing project that would differentiate students’ language and literacy instruction, aligned with the state’s College and Career Readiness Standards (CCRS).

We introduced I-Charts (Hoffman, 1992) and I-Search papers (Macrorie, 1988) to faculty during a two-hour afterschool workshop and sat in on several departmental planning meetings. Our
primary goal was to help teachers design a collaborative and inquiry-based project that would scaffold students’ academic language and literacy learning. We knew that for many young adolescent ELLs, developing proficiency in academic language and literacy can be challenging and requires students to do “double the work” of native English speakers while being held to the same accountability standards as their English-speaking peers (Short & Fitzsimmons, 2007, p. 1). Therefore, we hoped the I-Charts and I-Search papers would provide students with the support to explore, experience, and learn about topics that captured their interest and engaged them in reading and synthesizing a variety of texts.

At the same time, we were aware that simply using print texts and “school literacies” with non-mainstream students has the potential to push them further toward the margins of school. To overcome this marginalization, we encouraged the teachers to use various forms of literacy and embed technology into their inquiry projects (New London Group, 2000). To study the implementation of the inquiry-based curriculum as well as teachers’ modifications to the curriculum, we observed instruction, gathered student artifacts, and asked for teachers to engage in oral and written reflections, including their students’ responses to the instruction. In this article, we showcase “new and improved” ways in which Joëlle used technology and multimodal texts to meet the changing needs of her adolescent learners.

I-Charts

A few years after Macrorie (1988) published The I-Search Paper, Jim Hoffman (1992) developed an instructional procedure called an Inquiry Chart (I-Charts) to scaffold critical thinking through inquiry. Based on McKenzie’s (1979) data charts and Ogle’s (1986) KWL model for active reading, the I-Chart provides a structure for teachers and students to learn questioning strategies, note taking, summarizing, synthesizing, and comparing, while also serving as an independent research tool (Randall, 1996).

The I-Chart is organized around three phases: Planning, Interacting, and Integrating/Evaluating. First, teacher and students identify a topic of interest with relevant questions, collecting a variety of sources to critically evaluate and
synthesize. Next, they explore prior knowledge about a topic, then read and record interesting information connected to their questions. The teacher models how to record relevant information on the chart and pose new questions. Last, the class generates summary statements to move beyond the literal and to synthesize and evaluate information. I-Charts can be used as a scaffold for whole- or small-group learning and an organizing tool for the research process. We introduced I-Charts as We-Charts, scaffolding instruction first as a whole class, then as a small group, and eventually as individuals (Cooper, 1995).

**Technology Integration**

When the I-Search paper and I-Charts were first used, students’ access to and integration of technology (i.e., Internet, digital videos) were limited. Today, however, with the growing importance of digital media in society (New London Group, 2000), technological proficiency has become essential to literacy learning. Over the past 10 years, literacy educators have explored ways to integrate technology by helping students create multimedia CDs (Damico & Riddle, 2006), computer games (Jewitt, 2003), PowerPoint presentations with music and images (Ranker,

---

**SIDE TRIP: USING I-CHARTS AND I-SEARCH PAPERS**

The authors shared their steps in an inquiry project that includes integrating multimodal texts. The following from ReadWriteThink.org present additional resources.

- **Lesson Plan “It's My Life: Multimodal Autobiography Project”**
  
  In this unit, students write autobiographies, illustrate them, and set them to music. Music is a powerful tool to evoke emotion, and students will carefully select songs to accompany the stories from their lives. Students brainstorm lists of important events in their lives, along with images and music that represent those events. They then create storyboards in preparation for the final PowerPoint project. After making revisions, they present their final projects to their peers in class. [http://www.readwritethink.org/classroom-resources/lesson-plans/life-multimodal-autobiography-project-1051.html](http://www.readwritethink.org/classroom-resources/lesson-plans/life-multimodal-autobiography-project-1051.html)

- **Lesson Plan “Connecting Past and Present: A Local Research Project”**
  
  In this activity, students research a decade in their school’s history, with small groups researching specific topics. Within each group, students take on specific roles, such as archivist, manager, techie, or researcher. Students become active archivists, gathering photos, artifacts, interviews, and stories for a museum exhibit that highlights one decade in their school’s history. The final project can be shared and displayed in your classroom, in the school auditorium, or in the library. [http://www.readwritethink.org/classroom-resources/lesson-plans/connecting-past-present-local-1027.html](http://www.readwritethink.org/classroom-resources/lesson-plans/connecting-past-present-local-1027.html)

- **Lesson Plan “Introducing Each Other: Interviews, Memoirs, Photos, and Internet Research”**
  
  In this unit, paired students read background information about each other, plan and conduct initial and follow-up interviews, and write articles about each other. Partners also write and exchange personal memoirs. Partners plan, propose, and take digital photographs that reveal each other’s personality and interests. Then they research the Internet for facts, lists, and illustrations that demonstrate their partner’s interests. All of this information is placed creatively on a poster, and each student presents his or her partner to the class. [http://www.readwritethink.org/classroom-resources/lesson-plans/introducing-each-other-interviews-17.html](http://www.readwritethink.org/classroom-resources/lesson-plans/introducing-each-other-interviews-17.html)

---

—Lisa Fink

[www.readwritethink.org](http://www.readwritethink.org)
2010), and digital stories (Kajder, 2004). Labbo and Place (2010) highlight four key components to effective technology integration: 1) active engagement; 2) participation in groups; 3) frequent interaction and feedback; 4) and connection to real-world experts (p. 9).

As Joël implemented I-Charts and I-Search papers, she considered the importance of technology integration, but was also mindful that students can become frustrated when reading online information. In order to minimize students’ frustration and encourage critical reading, Joël focused on helping her students comprehend the range of symbols and multiple-media formats found on the Internet and to evaluate the quality of what they were reading. In the next section, we describe how Joël provided multiple layers of scaffolding and used a variety of texts and writing activities to help her students traverse the research process.

Layering Support

**We-Charts and We-Searches**

Joël structured the students’ first inquiry project around student-led literature discussion groups focused on the theme of integrity. She posted a large We-Chart on the board, asking students to write group responses to questions/inquiries as they read:

1. Can you identify an example of integrity from the novel you read? What are some factors that hinder the main character? Describe the most dominant conflict or problem facing the main character.
2. Each group recorded their responses on sticky notes. After collecting data on these questions for three weeks, Joël and her students revisited the We-Chart, discussing similarities and differences between responses. Throughout, Joël modeled how to synthesize responses to each question, and students noted this information on individual language charts. The purpose of starting with the literature We-Chart was to help students build on and connect to their personal experiences and to participate in authentic discussions.

Joël was disappointed in the depth of the initial We-Chart, so she designed another inquiry project using multimodal texts around the same theme. Students read nonfiction texts related to issues of integrity in small groups: “Leach Is Fired over Treatment of Player” (Evans & Thamel, 2009), a printed article about Texas Tech’s head football coach; an Internet article about Tiger Woods; and a short video clip about a basketball player who is honest about throwing the ball out of bounds during a championship game (http://www.youtube.com/watch?v=wUUGz3WugII).

As students read and discussed each text, they wrote responses on sticky notes and generated more questions related to integrity (see Fig. 1).

This second round of practice was important. While Joël was satisfied that students understood the process, she was less certain that they understood how to take notes or synthesize across multiple sources. Thus, another round of instruction was planned. Joël structured a We-Search based on *The Giver* (Lowery, 1993) and utopian societies, which is detailed in Figure 2.

Joël gave her students a checklist with Internet evaluation questions (See Fig. 3) and passed out a reference sheet that listed citation examples.

**Figure 1.** Students generated questions related to integrity.
Voices from the Middle, Volume 18 Number 4, May 2011

Utopian We-Search

On Day One, students rotated through five different learning stations, each station focusing on a different text with guiding questions. They collaboratively read each text, responded to the questions in their research notebooks, and discussed the concepts with their peers at each station.

<table>
<thead>
<tr>
<th>TOPIC</th>
<th>QUESTION #1</th>
<th>QUESTION #2</th>
<th>QUESTION #3</th>
<th>QUESTION #4</th>
<th>Key Words</th>
<th>Other Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHAT WE KNOW</td>
<td>There are rules and guidelines on how to live</td>
<td>People follow the same rules as in their local town.</td>
<td>There are no puns, there are stories. That is what makes a simple appeal.</td>
<td>People use their own concept of a utopia to say that everything is perfect and fair. I believe that people prefer the idea of a utopia because they see something that they cannot find anywhere else.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowery, L. L. (1971). The Giver. New York: Bantam Books.</td>
<td>Elements found in The Giver (Ms. Lowery's expectations, rules, requirements, and consequences. The &quot;perfect&quot; world, so grand or fair, and the sound. Everything has a good, the same, and the uneven). Everything is perfect. There is no pun, there are stories. That is what makes a simple appeal.</td>
<td>People use their own concept of a utopia to say that everything is perfect and fair. I believe that people prefer the idea of a utopia because they see something that they cannot find anywhere else.</td>
<td>Dystopian utopia, utopian society.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Victory City (Money System)</td>
<td>Elements found in Victory City's Money System: banks, money, money, money, money, money, money. What is the importance of banks and money in the utopia society?</td>
<td>In most utopian societies, a fraction of people have absolute control. Some of the utopian societies found in a utopia society are that they have few banks, this will take, and money.</td>
<td>A utopia is someone's idea of a perfect world. So what might be operating is not being hampered by money, or paying bills. The main appealing aspect of being involved with a utopia money system is that transactions are not made by counting money and bills. People pay for concept of a utopia because they want to have few rules and freedom is available. People use their own concept of a utopia to say that everything is perfect and fair. I believe that people prefer the idea of a utopia because they see something that they cannot find anywhere else.</td>
<td>Money, banks, credit, digital, retail, debt, government, payments. Electronic money. Credit card. Commodity. Insulation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Figure 2. We-Search activity based on The Giver</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

During this activity, Jenea modeled how to evaluate an Internet article. Using a think aloud protocol, Jenea projected the article on the projector and explained:

When I chose this article, I needed to decide if the information was both useful and truthful. First I scanned the headings and clicked several links to decide if the information was interesting and pertinent to our project. I thought it was. Next I evaluated the links and images to make sure that we could get to the information. I thought it was, OK, but great one we could move through Next. Next, I wondered if the information was true. I kind of felt like a detective trying to find information on who wrote the website and their background. I discovered that the man who published the website is rich and the description of Victory City is not real, but a dream of his. The purpose of this website is to share his idea of a utopian society. Because I knew this matched what we were learning, I decided to use it.

On Day Two, the students worked in small groups to reread (or re-view) a specific text and answer questions based on the information in the text. They used large sticky notes to write responses for the We-Chart, medium sticky notes to write additional questions about a utopian society, and small sticky notes to record key words from the readings.
She also demonstrated how to synthesize answers and identify key words and vocabulary. Once students completed this process, they wrote short essays on their original idea of a utopian society and how their ideas changed based on the We-Chart. The students demonstrated that they were now ready to move to individual I-Charts and I-Search papers.

The I-Search Paper Revisited

Just as she modified the I-Chart to a We-Chart to support students’ collaborative reading, synthesis, and note taking, Joël adjusted the I-Search paper to give students more opportunities to engage actively in the research process. Students were required to implement four different types of data prior to writing their final paper: Read, Watch, Ask, and Do (see Fig. 4).

Joël reviewed the I-Search process with students and sent a letter home to parents with a description of the project, a list of due dates, and expectations for required work. Students signed an I-Search contract (see Fig. 5), where they identified necessary steps and listed individuals who might help them in the research process.

Joël also created a preliminary research reflection sheet for students to brainstorm important facts and interesting information discovered during the search (see Fig. 6).

This reflection sheet helped students build on prior knowledge, gave them various options for data collection, and resembled the We-Chart previously modeled. Joël also created an I-Chart template on a single sheet of paper for students and provided multiple copies to organize their notes, citations, and data (See Fig. 7).

In addition to the preliminary reflection, the contract, the summary of the I-Search process, and the modified I-Chart, students received sample citations to aid in citing texts related to their research questions.

Technology Integration: Multimodal Texts

Students used a variety of texts to answer their individual I-Search topics and were expected to...
critically evaluate and synthesize what they were learning. For each text, Joël asked students to evaluate whether the information was “just interesting, or interesting and relevant.” Below are some examples of the different texts students used in their projects.


**WATCH:** Additionally, students viewed YouTube videos, TV shows, mainstream movies, and documentaries. Carly watched the documentary *Super Size Me* (Spurlock, 2004) to get more information on her question “How can fast food kill you?” Lisa watched *Sixteen and Pregnant* (Freeman, 2009), an MTV series on teenage mothers. Rachael watched Bravo’s reality show *Project Runway* (Holzman, 2004–2008), and Josh viewed *20,000 Leagues under the Sea* (Fleisher, 1954) to compare fictional notions of deep-sea travel to current practices.

**ASK:** Students conducted phone, email, and face-to-face interviews. For example, Sierra called Tyra Banks (TV host and former model), eventually speaking to her manager. Natalie emailed the art producer from the TV show *Ghost Whisperer* ( Hewitt, Gray, Sander, & Moses, 2006) to ask about the title sequence of the show. An FBI
agent drove in from San Antonio to talk with Ally about her research. Others, like Erin who interviewed classmates about being popular, collected data from teachers, parents, and friends. These interviews were fruitful in helping students socially interact with adults and peers and uncover answers to their research questions.

**DO:** Because students were expected to participate in activities related to their I-Search, Lisa visited the daycare at a local high school to talk to a teen mother about her life, and Alissa attended a university course for teachers. Interested in becoming a fashion designer, Jamie designed a sundress for one of her friends in the class. Ellianna observed a rehab center for abused teens and the supportive activities structured for these patients. As students completed each step, they wrote summaries and reflections that were incorporated into their final I-Search papers.

As students completed their I-Search papers, Joël modeled how to add detail and elaborate in each section of the paper. Students met in writing response groups and received feedback on their writing. After typing final revisions, students prepared formal presentations using PowerPoint slide shows, websites, and digital movies.

**New Learning**

Observing Joël and her students, we learned a great deal from the enhanced use of I-Charts and I-Search papers, and below we highlight a few key components that make these two seminal practices worthy of continued use in the future.

**Engagement:** The students were engaged in this inquiry process because they were both allowed to choose a topic that was of interest to them and empowered to seek out multiple resources to answer their questions. By using multimodal texts, students were given the opportunity to explore topics in unique ways and draw on “out of school” literacies to create a school-valued product. Investing in their topics and being engaged in the research process encouraged a sense of determination and persistence among the students.

**Active Persistence:** When students experienced obstacles, Joël continuously reminded them to be flexible and find alternate routes to solve their problems. For example, when we asked Lisa about her teen pregnancy project, she shared her frustration because she didn’t think she would find one answer to her question. She explained, “It is so opinionated and it depends on who you are and what support you have . . . I feel more challenged now to get further into it. I want to talk to some pregnant teens and understand their lives.” Sierra expressed a similar determination when she tried to reach Tyra Banks. After six different phone calls and messages, Sierra felt discouraged, but Joël encouraged her to find alternative ways to contact the star. Joël asked, “OK, what else can you do to get a hold of Tyra?” Sierra suggested emailing Tyra’s TV show or Twittering. Both ideas held potential, and Sierra was once again hopeful. Other students experienced
similar obstacles, but as the class collaborated on their work, they discovered creative ways to get their questions answered.

**Community Capital:** Throughout the research process, students co-constructed their learning with each other. During the first stages of the project, students collaboratively read, discussed, and took notes on a variety of texts. As they progressed to individual I-Search papers, they shared ideas for each step and served as resources for each other. At the beginning of the I-Search paper, many students changed topics and were encouraged to brainstorm new ideas with each other. When Joël announced that Calum needed help in changing his focus, the class stopped what they were doing and offered suggestions for another topic.

During the data collection process, students served as resources for one another and celebrated each other’s successes. To prepare for the ASK stage, students worked with partners to identify interviewing tips and strategies online, sharing these ideas with others. The class created an instructional chart called “Instructional Tips” that was posted in the room (see Fig. 8). When Calvin struggled with finding a person to interview about sexually transmitted diseases, Natasha gave Calvin the name and number of a family friend who was a doctor at a local hospital. By collaborating and working as a community, the students developed a deeper commitment to their projects and to their learning as a class.

**Praxis:** Many students used the information they were learning to change their actions. For example, Brian, an avid Coca Cola drinker, was studying the impact of drinking too many sodas. When we asked him what he was learning from his project, he explained, “It is very good. I would not have known all of the information. Now I watch what I drink.” At the same time, Jennifer wanted to change her eating practices and used her I-Search paper to explore vegetarianism. She explained, “I think I know that I don’t want to be vegan because I like milk, but I have found some great recipes for vegetarian meals.” Her project gave her concrete information on the differences between vegans and vegetarians, and she has started cooking vegetarian meals for her family.

**Time and Trust:** Throughout this project, Joël emphasized the importance of process more than whether students “got the right answer.” She set aside 45 minutes twice a week for 12 weeks for students to work on their I-Search projects, and she created structures to support the process. She modeled reading, synthesizing, evaluating, taking notes, organizing, writing, and publishing students’ work. Time and trust were both essential components of this process because Joël wanted students to develop an inquiry stance that would contribute to future learning. If this process were rushed, students might look for quick and easy ways to seek answers rather than sort through useful information, evaluate unrelated information, and make decisions about what actions to take.

![Figure 8. Students researched online to generate a list of interview tips and strategies.](image)
Joël also found it essential to forego expecting the perfect research question. For example, when Natalie wondered what the title sequence for the TV show *Ghost Whisperer* (Gray, 2006) meant, Joël worried that her question was too limiting. However, she decided that a failed search was just as important as a successful search and trusted that Natalie would learn something of importance. Through her study, Natalie contacted the show’s art producer and discovered that the title sequence and related images were symbolically related to each storyline of the show. Joël used Natalie as an example to illustrate that if you let go and trust, the students will uncover interesting information and take ownership of their learning.

Making room in the curriculum for student-centered, inquiry-based literacy instruction is challenging. However, Joël sees the effectiveness of such approaches manifesting in students’ excitement about sharing their learning with their family and friends. Joël explained:

The benefit of teaching my students I-Charts and the I-Search paper is being able to watch them be

---

**SIDE TRIP: CRITICAL LITERACY: DIRECTIONS FOR NOW**

A host of educators have cautioned against the dangers of consuming information in an unquestioning way, warning that it leads to a citizenry vulnerable to misinformation. Instead, a new definition of literacy was needed, one in which questioning, challenging, and consideration of multiple perspectives was vital. This approach, called critical literacy, “involves participating in practices in which we use language, oral and written, to reflect on given words, and most importantly, on their familiar relational backdrops” (Dyson, 2001, p. 5).

Our work in critical literacy has been to further interpret this in other ways to reflect curricular applications in literacy. Students in our classes are regularly met with these recurring themes:

1. Question the Commonplace in a Text
2. Consider the Role of the Author
3. Seek Alternative Perspectives
4. Read Critically (Frey, Fisher, & Berkin, 2008).

We regard these as the keys to accessing information in a thoughtful and informed way. By constantly challenging our students to take these elements into consideration, we hope to build habits of mind that will serve them long after they have left our classrooms. Our own practices and those of our colleagues confirm what we imagine many of you have also discovered in your work with young adolescents: they love a good debate. In our efforts to teach argumentation (not arguing), we deliberately place topics in front of them that don’t have pat answers. Fortunately and unfortunately, our world is filled with many such topics.

Myers (1996) calls this “event-based discourse,” but by any name, the approach is the same—to foster a healthy skepticism balanced by deep knowledge and a desire to always ask “what if?” For us, the ability to ask these questions, seek out answers, and form judgments lies at the heart of critical literacy and participation in the democracy.


—Douglas Fisher and Nancy Frey

---

Voices from the Middle, Volume 18 Number 4, May 2011
empowered, take control of their own learning, and develop perseverance. They are allowed to find relevance and purpose in molding their own education. I feel great about what we are doing and so do they!

By including the I-Chart and I-Search processes in her classroom and integrating technology, Joël’s students are able to develop the necessary skills to become lifelong learners, which suggests that these tools are as relevant and valuable today as at the time of their conception.

References


**Lori Czop Assaf** is the Director of the Central Texas Writing Project and an associate professor in Literacy at Texas State University—San Marcos. A former middle school teacher, **Gwynne Ellen Ash** is an associate professor in Literacy at Texas State University—San Marcos. A former high school teacher, **Jane Saunders** is an assistant professor in Literacy at Texas State University—San Marcos. **Joël Johnson** teaches 7th grade English/Language Arts at Chapa Middle School in Hays Consolidated Independent School District. She is a teacher consultant for the Central Texas Writing Project and presents at various educational conferences and professional developments.

---

**Search for New Editor of Research in the Teaching of English**

NCTE is seeking a new editor of *Research in the Teaching of English*. In May 2013, the term of the present editors, Mark Dressman, Sarah McCarter, and Paul Prior, will end. Interested persons should send a letter of application to be received no later than August 15, 2011. Letters should include the applicant’s vision for the journal and be accompanied by the applicant’s vita, one sample of published writing, and two letters specifying financial support from appropriate administrators at the applicant’s institution. Applicants are urged to explore with their administrators the feasibility of assuming the responsibilities of a journal editor. Do not send books, monographs, or other materials that cannot be easily copied for the search committee. The applicant appointed by the NCTE Executive Committee in February 2012 will effect a transition, preparing for his or her first issue in August 2013. The appointment is for five years. Applications should be sent electronically to Kurt Austin, Publications Director, kaustin@ncte.org, or by mail to Kurt Austin, *Research in the Teaching of English* Editor Search Committee, NCTE, 1111 W. Kenyon Road, Urbana, IL 61801-1096. Questions? Email kaustin@ncte.org or call 217-278-3619.