

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

**I**t 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 Ellianna 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 instruc-

tional 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

**quote** 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-speak-

ing 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 Joël used technology and multimodal texts to meet the changing needs of her adolescent learners.

## Inquiry-Based Instruction

For many years, NCTE teachers and researchers have used inquiry-based instruction as the center of their literacy instruction (Ballenger, 2008; Short & Harste, 1996; Harvey & Daniels, 2009; Wilhelm, 2007). These practices can be traced

back to when Dewey (1910) encouraged teachers and students to participate in authentic inquiry by exploring genuine questions and searching for answers to those questions. Based on Dewey's philosophy, Ken Macrorie (1988) developed the I-Search paper.

## I-Search Papers

Unlike traditional research papers, the I-Search is broken into four parts:

1. What I Knew (or didn't know) about My Topic;
2. Why I Am Writing This Paper (where the writer demonstrates how the search will impact his life);
3. The Search (or Story of the Hunt); and
4. What I Learned (or didn't learn).

These steps are then documented in a fully developed paper written in narrative form. Macrorie explains the I-Search is when “[a] person conducts a search to find out something he needs to know for his own life and writes the story of his adventure” (1988, preface, par. 17). I-Search papers enable students to critically examine and synthesize a wide variety of resources in a systematic manner and take ownership of their learning.

## 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>

- **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>

- **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>

—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: *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.* 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=wUUGz3WuqJI>).

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 (Figure 3) and passed out a reference sheet that listed citation examples.

TOPIC	QUESTION #1 Does the stress from work affect integrity?	QUESTIONS #2 How does integrity effect the world?	QUESTIONS #3 How do the people in these articles lack integrity?	QUESTIONS #4 Where did you think there was an opportunity for someone to show integrity?	Other Interesting Facts or Key Words	Other Questions
<b>WHAT WE KNOW</b>						
<b>SOURCE #1:</b> Sportsmanship Basketball Commercial: <a href="http://www.youtube.com/watch?v=wUUGz3WuqJI">http://www.youtube.com/watch?v=wUUGz3WuqJI</a>	This kid's job was to win and he can tell he was stressed.	If you don't show integrity bad things occur, but if you're smart enough to show some, you and everyone benefit from it.	The other kids just wanted to win. But we all have to make a choice whether to act with integrity or not.	The kid showed integrity and so did the coach.	I was surprised. I didn't expect the coach to back him up, but he did.	Why don't the adults exhibit more integrity? Why do adults deter integrity?
<b>SOURCE #2:</b> "Leach Is Fired Over Treatment of Player" Evans, Thayer & Thamel, Pete (December 30, 2009)	Yes, because stress can effect the way your thoughts are and your actions.	Maybe if he had over looked the bad of what he did, he would still be coaching.	He stuck a player in the closet.	Leach could have signed the apology letter.	University exhibited integrity when they fired the coach regardless of his winning record.	Did the university hire him back?  What could he have done differently?
<b>SOURCE #3:</b> "Woods is Drawing Attention" Sandoier, Richard (December 9, 2009)	Yes because he is famous and has the pressure to be perfect.	Now the website had lacked integrity. Lack of integrity through extra-marital affairs.	He cheated on his wife.	Using what good he has done, he can have a better life. Don't have more than one wife.	Extra-marital affairs Scandal	Will his wife forgive him; should she? Why do we scrutinize famous people?
<b>SUMMARY</b>	Stress impacts you in many ways and drama is always there. You have a choice.	If you have integrity, share it with others. If not find it. World peace.	Everyone lacks integrity at one point and its sad that people are so selfish.	Everyone gets multiple opportunities to have integrity so always use it.		Give 3 examples on how you can do integrity in your daily life.

Figure 1.



## 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.

	Text	Question/Prompt	Example Response
1.	Movie trailer from <i>The Truman Show</i> (Feldman, et al., 1988)	What are the similarities between <i>The Truman Show</i> and <i>The Giver</i> ?	"They were both being watched. They both thought they lived in perfect world but then realized they were not perfect. They both (Jonas and Truman) rebelled."
2.	Website based on fictitious city of the future: Victory City invented by Orville Simpson II <a href="http://www.victorycities.com/index.html">http://www.victorycities.com/index.html</a>	What are three pros and three cons to this money system?	"Pros: Really organized, no one can steal from you, if you can't pay for your house, you are moved. Cons: If you make more money you can't keep it. They make you move whether you want to or not."
3.	Web-based question and answer text about utopian elements of Hitler's philosophy ( <a href="http://wiki.answers.com/Q/What_exactly_is_Hitler%27s_perfect_race">http://wiki.answers.com/Q/What exactly is Hitler%27s perfect race</a> )	How does this historical event apply to your knowledge of what a utopian society is?	"It's kind of like <i>The Giver</i> almost in the way that Hitler wanted to control everybody on Earth and how the Elders controlled everyone in Jonas' community."
4.	Victory City and the Membership Process ( <a href="http://www.victorycities.com/index.html">http://www.victorycities.com/index.html</a> ).	Do you feel this is a good way to choose members?	"Choosing the member process is more of a popularity contest. You can just fake things and they will not know."
5.	Quote one: "We should think of utopia as a world in which individuals and groups had the freedom, will, energy and talent to make and remake their lives unencumbered by insufficiency and the fear of violent death." - George Kateb (From the preface to <i>Utopia and Its Enemies</i> , 1972 edition)	What do these quotes mean to you?	"I believe this means that as a utopia, we can change it if we choose to and to make a difference in our lives. It has no burden and doesn't weigh down our choices or options."
	Quote two: "A map of the world that does not include Utopia is not worth even glancing at, for it leaves out the one country at which Humanity is always landing. And when Humanity lands there, it looks out, and seeing a better country, sets sail. Progress is the realization of Utopias." -Oscar Wilde	What do these quotes mean to you?	"A utopia does not really need to be in a community. Many people think that America is a utopia."
6.	Blog from <i>The Icarus Project</i> <a href="http://theicarusproject.net/alternative/replacingmedswithtea">http://theicarusproject.net/alternative/replacingmedswithtea</a> .	Choose three books/movies critiqued on this blog and explain why they are not utopians.	"In <i>Logan's Run</i> people die at 30 and that is too young. That is not perfect."

During this activity, Jenae modeled how to evaluate an Internet article. Using a think aloud protocol, Jenae 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, not great but one we could move through. 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 their 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.

TOPIC	QUESTION #1 What elements are found in a utopia?	QUESTIONS #2 What universal themes are found in a utopia?	QUESTIONS #3 What is appealing about living in a utopia?	QUESTIONS #4 Why do people pursue the concept of utopia?	Key Words	Other Questions
WHAT WE KNOW	There are rules and guidelines for how to live	People all follow the same rules like in Truman.	You can be with your friends and do what ever you want. There is no stress.	They are trying to find a perfect life like Hitler.	Sameness Freedom Perfection	What different utopian societies are there?
Lowery, L. (1993). <i>The Giver</i> . New York: Bantam Books.	Elements found in <i>The Giver</i> consist of rules, rulers, expectations, and routines. In a utopia, some important elements are the "perfect" world, no pain or fear, and no control. Everything has to be good, the same, all for the concept of false protection.	In a utopia some universal themes are perfection, sameness, and ultimate bliss.	Appealing factors of a utopia is the fact that it's "your" modified, fantasized idea/world. Everything is perfect. There is no pain, fear or stress. That is what makes a utopia appealing.	People pursue the concept of a utopian society so that everything is perfect and the same. I believe that people pursue the idea of a utopia because they were seeking perfection, sameness and ultimate bliss.	Dictatorship Memories Concepts Society Safety Feelings Routines Fantasy	Why do people assume utopias are perfect worlds? How does the utopian society evolve into a place that everything is considered perfect? What happens when someone breaks the rules? What is Lois Lowry's idea of a perfect world? Are utopias legal?
Victory City's Money System <a href="http://www.victorycities.com/index.html">http://www.victorycities.com/index.html</a>	Elements found in Victory City's Money System consist of banks, money, machines, rules, receiver, bank book, things to buy, Victory City, and a bank accountant. In a utopian money system, some important elements are bank books, with only one bank in each Victory city.	In most utopian societies, at least one person or a group of people have absolute control. Some of the universal themes found in a utopian society are that they don't have freedom, free will, and capitalism.	A utopia is someone's idea of a perfect world. So what might be appealing is not being burdened by money or paying bills. The most appealing aspect of being involved with a utopian money system is that transactions are computerized, making it easy to view.	People pursue the concept of a utopia because they want to have free will and freedom is available. People pursue the concept of utopia because they want a perfect world. Some people don't want to deal with money and bills.	Bankbooks Clutter Conest Digitalized Retail Deduct Investment Payments Electronic machine Currency Centralization Centralized Installment	How many other communities use this money system besides Victory City? Are there consequences in a utopian society if you do something that is a felony? Do people create this money system just to not have stress? Why do they use bank books? How many other communities use the same money system? Do these people like this money system?

Figure 2.

Evaluating Information on the Internet			
How do we know the Internet is giving accurate, reliable and objective information?			
Category	Criteria	Question	Comments
Coverage	How much information on a given topic is provided?	Is the information from the Internet site available from a more accessible source? If so, name the source.	
Accuracy	Is the information correct?	Could you confirm the accuracy of the information by finding the same information in another source? If so, name the source.	
Currency	What are the dates for creation, publication, and revision of the Internet site?	Is the Internet site's information is up-to-date? If so, how do you know?	
Authority	What are the qualifications of the creator and publisher of the Internet site?	Is the author of the Internet site qualified to write on the topic? If so, how do you know?	
Objectivity	To what extent might the author's feelings about the topic affect the information presented?	Does the Internet site present both sides of an issue? If not, what is its purpose?	

Helpful Sites for Internet Evaluation

1. *Yahooligan! Teachers' Guide* ([www.yahooligans.yahoo.com/tg](http://www.yahooligans.yahoo.com/tg)). This site offers activities for locating information using the Internet, and clues to evaluating the quality of a website.
2. *Finding Information on the Internet: A Tutorial* ([www.lib.berkeley.edu/TeachingLib/Guides/Internet/FindInfo.html](http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/FindInfo.html)). Although geared for adults, this website provides helpful information about various aspects of using the Internet, including a glossary of terms and a self-guided tutorial.
3. *Exercise Your Search Skills: A WebQuest* ([www.milforded.org/schools/simonlake/ebaiardi/wq/searchskills.html](http://www.milforded.org/schools/simonlake/ebaiardi/wq/searchskills.html)). This WebQuest guides students through the use of different search engines, focusing on ways to evaluate and use information displayed by the search engines.

Figure 3.

I-Search Project	
<b>What is I-Search?</b>	I-Search is an opportunity for you to develop an understanding of a topic that is personally interesting and relevant. I-Search is based on the premise that we learn through the process of finding information, not just the information itself; the "doing" is more important than the answer.
<b>Format:</b>	2 What I Knew Before I Started Searching 3 The Process 4 What I Found 5 What I Still Want to Know
<b>How do I do an I-Search?</b>	There are four major components to an I-Search: <b>READ</b> – read information about your question in the form of magazines, websites, research articles, newspaper articles, etc. You will be required to have at least 3 of these sources appropriately cited. <b>WATCH</b> – learn more about your question through observing information. This might be watching a TV program, documentary, or an actual live observation. <b>ASK</b> – interview someone who has knowledge and experience with your question. <b>DO</b> – find some way to experience the question yourself. Develop an opportunity for you to learn more by doing an activity related to your question.
<b>When will I do my I-Search?</b>	I would love to be able to give you 100% class time to do this project, but that is simply not possible. There will be class time provided for you to work; however, you will have to work on this assignment on your own time as well. I am working to make sure that you are given proper information, training, and resources needed for your research process.
<b>What will be required for my I-Search?</b>	Each of the following will be a test grade: 1. <b>Internet Research Notes</b> – done in class 2. <b>Reflection Journal</b> – you will keep a journal documenting your process as a learner. Every step of your journey will be documented, including search terms, websites visited, information gathered, how you set up your interview, who helped you develop your research plan, what you considered doing for the "do," etc. Every time you do any work on this project, you will record it here. 3. <b>I-Search Paper</b> – This paper will be a documentation of your journey to find the answer to your burning question. 4. <b>Presentation</b> – you will present your project to the class and at our Research Fair. ****More details later.

Figure 4.

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 (Figure 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 (Figure 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 (Figure 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

**I-Search Contract**

Name: \_\_\_\_\_  
 Topic: \_\_\_\_\_  
 Question: \_\_\_\_\_

**Fill in the information below to plan your I-Search project.**

1. I plan on doing the following for Watch:

-----In order to do this, I need to take the following steps:

\_\_\_\_\_

2. I plan on doing the following for Do:

-----In order to do this, I need to take the following steps:

\_\_\_\_\_

3. I plan on doing the following for Ask:

-----In order to do this, I need to take the following steps:

\_\_\_\_\_

4. What help do you need from me? Be very clear and list it below.

\_\_\_\_\_

5. What help will you need from your peers?

\_\_\_\_\_

6. What help will you need from your parents?

\_\_\_\_\_

The grade I am willing to work hard for on this project: \_\_\_\_\_

Student Signature: \_\_\_\_\_

Parent Signature: \_\_\_\_\_

Figure 5.

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.

**READ:** Stephanie read the book *Screenwriting for Teens: The 100 Principles of Scriptwriting Every Budding Writer Must Know* by Christina Hamlett (2006). Alissa read about becoming a teacher from the website “Elementary and Secondary Education” <http://www.unt.edu/pais/insert/ue-duc.htm>. To learn about nuclear weapons, Joseph read “After the Summit,” a *New York Times* editorial on Obama’s recent nuclear security summit (<http://www.nytimes.com/2010/04/15/opinion/15thu2.html>). Natasha read a *Time Magazine* report on teen pregnancy and abortion rates. Each student read at least three texts,

summarized their findings on their I-Charts, and generated additional questions about the topic.

**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 Runaway* (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

**Preliminary Research Notes**

Topic #1: What is the best college to go if you want to be a teacher?

Some facts I already know (list at least 3):

1. need to apply
2. you get a diploma
3. costs alot

Some interesting information I've come across today (list at least 3):

1. need to register 18 months before
2. apply for student visa 3 months before
3. Take alot of test before entering.

Is there enough information to keep me interested? yes

Who could I "Ask?"  
The person in charge; someone who has had experience with it.

What could I "Watch?"  
Videos promoting the University (online).

What could I "Do?"  
Look for a Scholarship that could apply to my life.

Topic #2: What college to go to if you want to play sports?

Some facts I already know (list at least 3):

1. need to be really good players
2. will cost alot
3. need to apply

Some interesting information I've come across today (list at least 3):

1. Sometimes coaches are just looking for someone to give 100%
2. have to be dedicated, and be committed to the sport.
3. there is alot of competition.

Is there enough information to keep me interested? yes

Who could I "Ask?"  
The person in charge, someone with knowledge.

What could I "Watch?"  
Watch NBA on television or online

What could I "Do?"  
Watch different sports channels

Go to the University

Figure 6.



Name: \_\_\_\_\_ I-Chart

Circle one of the following: Read Watch Ask

Burning Question: Is coke or cola bad for you?

Sub Question: \_\_\_\_\_

Source Name	Proper Citation
#1 Website	WWW.NUTRITIONRESEARCHCENTER.COM After 40 minutes of drinking coke, uric acid absorption is complete. Your pupils dilate, your blood pressure rises, as a response your liver pumps more sugar into your bloodstream.
#2 Website	After 60 minutes of drinking coke, the cave inside of you dies down. You'll start to have a sugar crash. You may become irritable and/or sluggish. You will start going to the bathroom.
#3 Website	Also in 60 minutes of drinking coke, the phosphoric acid binds calcium, magnesium and zinc in your lower intestine, providing a further boost in metabolism.
#4 Website	Coke also is extremely bad for your teeth. Coke is like acid and if you gush coke inside your mouth, you are literally breaking down your own teeth.

Key Words: Coke, sugar, minutes, bad, after, coke, cola

New Question to Research: Now that we all know these NO-good facts, how drink coke?

Figure 7.

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. Elianna 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 difference-

es 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.

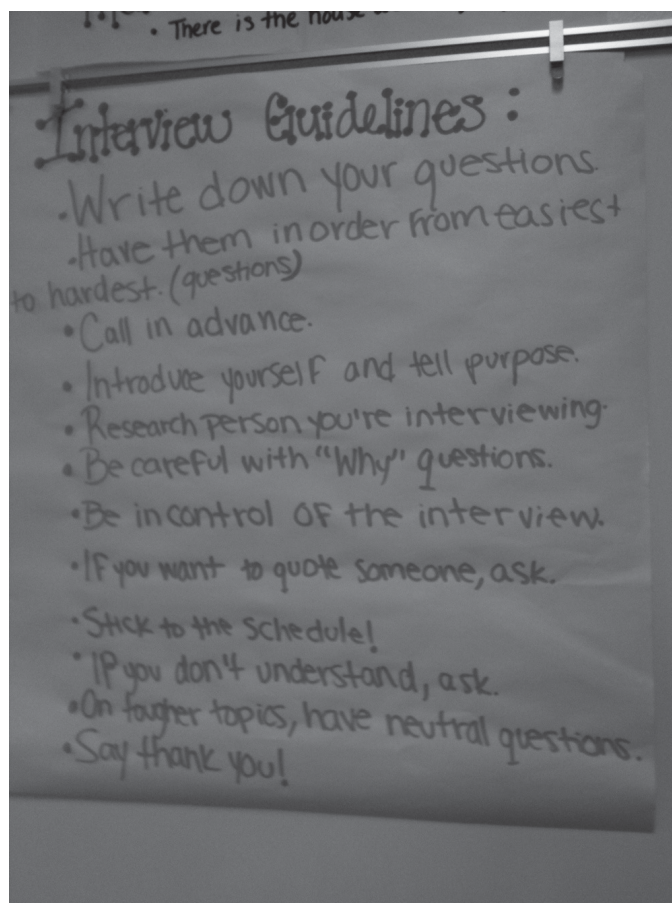


Figure 8.

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.

Dyson, A. H. (2001). Relational sense and textual sense in a U.S. urban classroom: The contested case of Emily, girl-friend of a ninja. In B. Comber & A. Simpson (Eds.), *Negotiating critical literacies in the classroom* (pp. 3–17). New York: Taylor & Francis.

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Myers, M. (1996). *Changing our minds: Negotiating English and literacy*. Urbana, IL: National Council of Teachers of English.

—Douglas Fisher and Nancy Frey

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.

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**Lori Czop Assaf** to come. **Gwynne Ellen Ash** to come. **Jane Saunders** to come. **Joël Johnson** to come.