



HSHNC
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BY



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Teaching Students to Choose Wisely

lthough complex, teaching students to support their stances with text-based evidence is the responsibility of all teachers. A common predicament that arises, especially with easy access to the Internet, is teaching students how to recognize when they do not know enough about a topic to identify whether a text is credible, and then what to do once they realize they are lacking this knowledge. If your students are like ours, they often conduct a rudimentary Google search and settle on the first source that generally matches their topic; often, this selection is made because they have only surface-level understandings of the topic.

Into the Classroom

To focus on solving this dilemma, let's study the instructional process that English teacher Marisol Thayre and her colleagues implemented, as well as her thinking along the way. Marisol is an English teacher at Health Sciences High and Middle College (HSHMC), a public charter school located in an urban area of San Diego, California, that serves over 600 students in grades 9–12. Of these students, 69% receive free or reducedprice lunch, 23% are current English learners, and 88% received English learner support at some point. The average class size at the school is 43 students, with the largest class having 46. With respect to standardized tests, the high school exceeds accountability targets based on California Standards Tests and the California High School Exit Exam.

In the Beginning

Marisol and her colleagues, who teach across the disciplines, decided that although they had introduced their students to criteria for selecting credible sources, many remained unable to select reliable sources because they lacked sufficient background knowledge to support appropriate inquiry as they searched the Web and other sources.

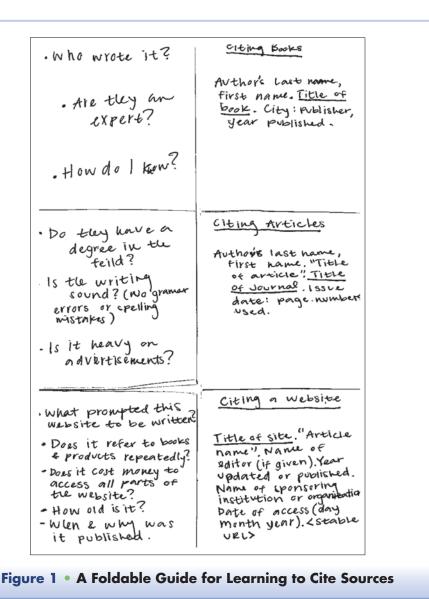
To begin teaching students to identify credible sources, Marisol first taught

them about the types of Internet sources that are typically available to high school students and how to use MLA (Modern Language Association) format for citations. To support note-taking, students created a foldable note-making guide (Zike, 2008; see Figure 1), which they completed as Marisol modeled and reviewed how to properly cite books, journal articles, and websites in MLA format. A foldable guide is a type of organizer for which students cut and fold paper to create sections for different aspects of a given topic.

The students and Marisol also watched an online video by Paul Saltzman, an assistant managing editor at the

Chicago Sun-Times, called "A Consumer's Guide to Sourcing in News Reports" (thenewsliteracyproject.org/learn_channel/sourcing) to broaden their understanding of source selection. Marisol's purpose was to prepare her students to select credible sources that could be cited as references for an argumentative essay they would write.

(To learn more about evaluating sources online, you might enjoy checking out ReadWriteThink's "Inquiry on the Internet: Evaluating Web Pages for a Class Collection": www.readwritethink.org/classroom-resources/lesson-plans/inquiry-internet-evaluating-pages-328



As a backdrop for their essay, students as a class were reading and discussing The Picture of Dorian Gray by Oscar Wilde (1993). They were also tasked to simultaneously study narcissistic personality disorder (NPD) from the perspective of a psychiatrist to determine whether Lord Henry, a character in the novel, suffered from the disease. Once they made their diagnosis, they were then to create and argue Lord Henry's mental wellness profile using data from credible sources. Because students at HSHMC have internships within the medical field, Marisol wanted to relate their real-life internship experiences to writing in their English classes.

Marisol next directed the students to research and note selected citations in MLA format because she wanted to assess whether they were citing properly and also to note the types of online sources they were selecting to complete their research. Because she also wanted to give the students an opportunity to self-assess their newly developed strategies of finding credible sources in a low-stakes way, she assigned only one disorder (NPD) for all students to research.

As the project progressed, it became clear to Marisol that students were having a difficult time selecting resources because they frequently lacked the background knowledge about the author, the disorder, and the time period necessary to refine their search. As Bruce and Casey (2012) assert, it became obvious that

the learner may recast the question, refine a line of query, or plunge down a new path that the original question

did not—or could not—anticipate. The information-gathering stage becomes a self-motivated process that is owned by the engaged learner. (p. 195)

Although these students were engaged, the quality and credibility of their selections varied. Many students selected sources based on what they hoped to learn about NPD and the novel. Their responses indicated that the majority had very little knowledge of these topics, an understandable reaction from students who had not previously studied this author, the era, or mental illness disorders. Without this base of information, they had no way to assess the viability or credibility of a source. Marisol realized that without some background knowledge, students had no "checklist" of sorts to help them identify what elements to look for when finding information about their topic. In short, the students did not know what they did not know, but they recognized that their background knowledge related to this topic was missing.

Based on the Initial Assessment, What's a Teacher to Do?

The next day's lesson involved students making a second foldable to use when evaluating sources. The students were instructed to ask themselves questions when evaluating a source. Before they began, Marisol again modeled this inquiry for them.

Even though, with the support of these questions, the students were now more accurate at selecting topically related sources and identifying the author's intent, Marisol found that they still

Evaluating a Source

- Who wrote this text? (Is the author an expert? How do I know?)
- Why was this text written? (What event or need precipitated the writing of the piece?)
- Is the source grammatically/ visually appealing? (Are there grammatical errors? Are there advertisements?)
- Is this a credible source? How do I know?

struggled with determining the credibility of the author or source and the veracity of the shared information. In conversation with her students, Marisol realized that what was missing was their deep knowledge of the topics and that because of this, they were limited in determining author and source credibility.

Alejandro, one of her students, remarked, "It is hard to know if someone is an expert if you don't know if what they are saying is credible or not." When Marisol pushed him to think about how he might determine whether the author of a source was using accurate facts and statements, he came to a realization: "I guess I need to research more about the topic so I can check the facts." This response indicated that Alejandro knew that he needed to know something more specific related to the topic, but what that was, he was just beginning to identify.

Marisol decided that next she needed to teach her students how to evaluate the credibility of a source or an author and, then, what to do if they felt unable to complete the task because of a lack of knowledge about the topic. Marisol chatted with Diane, the instructional coach at HSHMC, and together they developed a thinking plan (see Figure 2) that students could use to support assessing their own abilities to evaluate



What Do I Know?	What Should I Do?	Notes (Make all of your notes in this column.)	
	sion 1: Identify your initial knowledge.	•	
 Ask yourself what you know about this topic. In column 3, make an outline of what you know. If you feel you don't have enough knowledge to assess the credibility of a source or website, stop and fill your knowledge bank by moving to column 2. If you feel you have adequate knowledge on this topic, continue asking yourself the source evaluation questions in Figure 1 and move on to decisions 2–5 below. If you run into trouble along the way, refer to the questions in column 2. 	Ask yourself if the information in the source is accurate. If you cannot readily confirm that the facts in the source are credible, ask yourself if you need to learn more about this topic. If this is the case, then you need to do more research. You need to read more about this topic. Use the questions in decision 2 as you read these new sources.	Write a brief outline here.	
Decision 2: Read and assess the credibility of sources found in many websites and other texts.			
 Note the recurrence of ideas and references that are being shared. Determine the credibility and reliability of the source by making comparisons across sources. Determine the sources with disconfirming or opposing points of view. Expand your outline by summarizing the key points of each source. Identify positions that may conflict. If you are having trouble making these comparisons, refer to column 2. If you are doing well, move to decision 3. 	Read the information in a source and ask yourself the following questions: What are the big ideas? Jot these down. Then, read a second source and ask the same question. Jot down any new ideas. Now, compare the two sources. Continue reading additional sources and making these comparisons. See if you can identify a pattern of ideas. If you aren't sure about a pattern, read an additional source or two, continue to jot down the big ideas, and compare these with those in the other sources. Once you are able to see a pattern, move on to decision 3.	Briefly describe the pattern here.	
Decision 3: Talk to yourself	throughout this process to evaluate your	growing knowledge:	
What vocabulary do I need to learn because it is still causing me confusion?	Try to learn these words by using the context, consulting a dictionary, or asking an expert.	Vocabulary notes:	
What concepts are not clear to me?		Unclear concepts:	
 What is my point of view (stance)? How does this differ from the points of view of others (especially for persuasive/ argumentative pieces)? What other topics are related to my topic? If you are having trouble answering these questions, refer to the tasks in column 2. If you are doing well, move to decision 4. 	 Try to learn these points of view from reading multiple sources or talking with a peer. Keep track of your changing thoughts. Compare the similarity of ideas and who is being referenced. Read about these topics to expand your knowledge. Once you feel comfortable with the language, move back to column 1 and continue with decisions 4 	Points of view: Other relevant topics:	
V	and 5.	(continued	

Figure 2 • Thinking Plan: Assessing What I Know to Grow My Knowledge

What Do I Know?	What Should I Do?	Notes (Make all of your notes in this column.)	
Decision 4			
 Has my knowledge or point of view changed? How will I represent my new knowledge, my point of view (claim), and the points of view (claims and counterclaims) of others in my writing and presentations? Take a stance, document it, and share. 	Refer to your initial notes to make comparisons.		
Decision 5			
What new questions do I have?	Identify these and start exploring.		

Figure 2 (Continued) • Thinking Plan: Assessing What I Know to Grow My Knowledge

a source and then how to proceed if they could or could not do so.

Marisol and the students reviewed the thinking plan. When they read the last sentence of decision 1, several students quickly acknowledged that they didn't have enough knowledge about NPD to make determinations about the credibility of a source. Malik said, "This is where I am hung up on this assignment. I don't know who is saying the correct facts about NPD, so I can't decide if Lord Henry has this disorder." Marisol then suggested that when this happens, readers have to read several sources to see what facts seem to continually repeat. Using the thinking plan, she showed them how to make decisions about their growing bank of knowledge.

To understand this process, she and the students reviewed the article "Narcissistic Personality Disorder Is Not Harmless Behavior" by Paula Carrasquillo (2013) and a short video summarizing the top nine symptoms of NPD to see if they could establish a base of knowledge that would

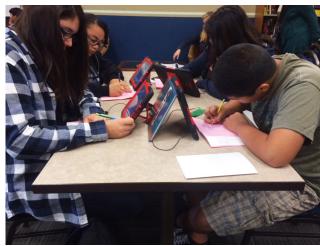
help them better identify whether these and additional sources contained similar or different information. Marisol modeled note-taking for both sources, guiding her students through the process of collecting information about NPD from multiple sources. She continually summarized the growing bank of knowledge about NPD. With these procedural insights, students continued through the thinking plan, identifying information and connecting it to instances in the novel where Lord Henry appeared to display symptoms of the disorder. The note-making organizer that Marisol used is divided into sections for research notes and for observed behaviors from the novel (see Figure 3). After this preliminary activity, students had a base of the information to use

As students then independently chose sources, they fact-checked them against what they already knew about NPD.

to compare information from

additional sources.

It was during this process that many students realized that what they already knew about the disorder directly affected whether they considered a source viable. This also helped them more quickly eliminate sources such as advice forums, as they identified large amounts of misinformation on these types of websites. Once they had collected sources that were credible by their standards, students connected the symptoms of NPD that they learned



Psychiatric Notes Psychiatric Notes Patient: Lord Henrey Watton Patient Doctor: Research: Narcissistic Observed Behaviors: Research: NPD Observed Behaviors: Personality Disorder What is the definition of NPD? P.3 - L'ord Henrey is conclantly P.35 "Plain women are What narcissistic behavior In young arguing, even when heir first useful." people does the author note? It is when people have an seen. It's in an arrogant teens who have no responsib P.72 "It must be put extreme sense of self ibliec. that way for the public." Importance P. 36 "You should say your What are the 5 diagnostic criterion of P.72 " Dorian you much 4 first romance.. ?? What are the diagnostic criterions of NPD? let this thing get on your rerest 1 Low Self esteem NPD mentioned in the article? D. 38 "All through life you'll 1. Extreme schoe of self (exaggerates, talents, trans, etc.) tell me everything .. " p. 58" " You'll always like 2. can't maintain relationships P. 72 "It's very tragec..." 2. Obsessed w/ fantasies of Dorian." me fame and success. P.31 " I quite larget what I 3. Lack of empaths p. 22 "What a Fuss people 3. Convenced that he/she is make over fidelity." unique and special. Say. ? 4. Extreme Self interest P.16 "Live! Live the wonderA P. 26 "There's nothing better 4. Feels entitled; demands automic and full compliance 5. Rages when Frustrated, than someone telling you... life that's in you." 5. Uses others to achieve rejected or not given printedges P. 56 " Pleasure is the goals What celebrity is used as an example? only thing worth having 6. Wishes to be with How does she compare to Lord Henry? a thory about." Anna-Nicole Smith is used, people whome also not. tord Henrey and her both P. 56" Women should propose... 7. Lack of empathy hold a relationship P. 53 "Chffcrence between engagem and marriage." True or False: People suffering from NPD 8. Constantly envious believe they are special and unique and only deserve the best life has to offer. P.10 " And how delightful 9. Behowes arrogantly other people ... " P. 33 "Her mane is Victoria." P. 2" I never knew where my wife is. "

Figure 3 • Note-Making Organizer

about through their research and aligned them with Lord Henry's actions in the novel. Students found quotations that supported their claims that he was displaying certain NPD behaviors. For example, to support her claim that he lacked empathy (a marker for the disorder), Stephanie found a quotation from the scene where Lord Henry tells Dorian Gray, after the discovery that his fiancée has committed suicide, "Dorian, you mustn't let this thing get on your nerves. You must come and dine with me, and afterwards we will look in at the opera" (Wilde, 1993, p. 72). She decided, based on what she knew about NPD. that this exchange supported her claim that Lord Henry's lack of empathy in dealing with the death of someone close to his best friend was a sign that he was

afflicted with the disorder. With this evidence, she then wrote a paper arguing for, with counterarguments against, a diagnosis of NPD for Lord Henry, using evidence from her sources *and* the novel to support her claims.

As the students used the thinking plan, their comments indicated a sense of relief in knowing that they didn't need to have all the information at the onset of researching a topic. Jaime, one of Marisol's students, noted,

The research process was easier and harder than I expected. I liked that I didn't have to start out as an "expert," but I also realized I needed to do a lot more research than just a simple Google search to learn enough about my topic so I could

evaluate a source. I like this plan because I can see what I know and don't know.

When asked to elaborate on what areas of his topic he needed to know more about and how he came to this conclusion, Jaime remarked.

Sometimes there were words I didn't know, so I had to look those up before I could go on researching the subject. Other times I didn't understand a whole symptom. For example, lacking empathy was one of the symptoms of narcissistic personality disorder, so I had to look up the definition of empathy *and* try to find examples in order to really know what that meant.

As this comment indicates, what many of the students discovered was that at first



they were unable to evaluate a source because they lacked adequate knowledge to do so. Once they had a better understanding of the topic, they were better able to make a judgment about the credibility of a website and source. This discovery led them to ask more questions about whether the sources they consult are indeed adding to or detracting from their claims.

Pulling It All Together

This assignment required students to select and summarize credible sources on a mental disorder and then use newly learned information to craft an argument about the mental wellness of Lord Henry, a character in a novel they were reading as a class. Although students could successfully cite sources, they were unable to initially select credible sources because they lacked sufficient topical knowledge to make this determination. Using the thinking plan (Figure 2), they were able to assess their knowledge of the topic and determine whether they knew enough about NPD to present an argument regarding Lord Henry's mental wellness. If unable to do so, they could read more on the topic of NPD, but if they felt they had adequate topical knowledge, they could

use the selection questions to evaluate each source.

As a result, students were much more successful in finding research and corroborating it against their growing knowledge of NPD. Sumaia, one of Marisol's students, doubled the amount of sources that she needed to use in her paper because she found great success in locating credible sources. When Marisol asked her why she went above and beyond the requirements of the essay, Sumaia replied, "I decided to add more sources because I had heard that there might be more symptoms than what we had discussed in class. I wanted to find out more." Marisol then inquired as to how she determined whether her new sources were credible. Sumaia remarked.

I checked the facts in each source against what I already knew to see if they lined up. One of the sources was from the Mayo Clinic, and I have seen articles from there before in other classes, so I trusted it already.

When asked if she evaluated this source's information anyway, she said, "Yes, because I wanted to make sure, since we learned that bad sources can make your

argument look less credible." In some cases, Sumaia also used resources to learn about the novel, the author, and NPD and found them informative; however, she used them only as a springboard to further inquiry.

Because of the thinking plan protocol, students learned to evaluate sources, and their claims were much stronger and well supported because they were assured in their knowledge about the topic and their abilities to use their knowledge to select and evaluate sources. Marisol concluded that her students were better able to approach the complex task (researching a topic, determining what they did not know about that topic, selecting appropriate sources to inform their learning and the final product, and then applying that information to craft an argument about a character) much more confidently because they had concrete, credible evidence to support their thinking.

What We Learned

Marisol's examination of her instruction reinforces the notion that sharing wellgrounded information via a presentation, a written work, or a powerful speech requires students to have knowledge of the topic being explored. When learning proceeds with the teacher directing the learning activities and providing the resources, it is ensured that accessing the needed background topical knowledge will occur. However, as students in Marisol's class demonstrated, when given license to explore and conduct their own inquiries, especially in digital environments, a lack of topical knowledge can impede progress when identifying relevant sources to complete a composing task. The turnaround for these students was providing them with a thinking plan that enabled them to become metacognitively stronger in their abilities to assess their own skills at selecting and evaluating an appropriate source and realizing when they needed to further build the base of knowledge needed to make this assessment.

What Do We Know **About Background and Topical Knowledge?**

Teachers use the terms prior knowledge and background knowledge to describe what it is that students know before beginning a task, such as reading. To read information on a specific topic with meaningful comprehension, one has to have some knowledge of the topic to add and develop new topically related knowledge. The two terms are used somewhat interchangeably among educators (Strangman & Hall, 2004).

Topical knowledge makes this a bit more precise because it is background knowledge that is more specifically related to what students know about a particular subject or concept. Strategic knowledge in digital environments (Leu, Kinzer, Coiro, Castek, & Henry, 2013) is another form of background knowledge that includes knowing how to read the results of a search engine, following a given link, and so forth. In this article, we defined background knowledge in reference to what students know prior to beginning a learning task.

One of the most striking features about online environments is that reading comprehension tends to occur differently from when reading on paper (e.g., Leu et al., 2007). Readers of online content tend to be reading to solve a problem. Here are two examples of questions one might search online: How do I find a cheat or support sheet for an online game? What is driving climate change? Having a reason for reading online tends to identify a purpose for the reading activity or search. Unfortunately, this activity of searching to find an answer may not always support an effective way to research a topic. Although students may be able to program a smartphone or play a multiuser online game proficiently with information found online that addresses a targeted question, this activity of searching to answer a question may not translate to other online searches, such as locating reliable and useful sources that have the potential to build background knowledge or inform a final work product.



Reading online introduces new complexities. For example, readers tend to more completely construct their own understandings as they read online through the use of hyperlinks and search tools to a degree that does not occur in paper-based reading. Online reading may mean that advertising and other commercial or social media seem conflated to readers and make it a challenge to determine what is or is not reliable or relevant (e.g., Tillman, 2003). At times, even relatively savvy readers struggle to determine the veracity of what they find on the Internet (Leu, 2006).

Conclusion

Students, in our experience, know that they must check the credibility of the sources they consult, especially online. They struggle to put their knowledge of how to determine credibility into practice when their knowledge, as novices in most academic domains, is still developing. Marisol found that once her students adopted an inquiry stance that took them to places they might need to investigate and discuss, their use of sources greatly improved. At times, they consulted sources that they eventually did not actually cite. Other times, their investigations led them to deeper understanding of the concept or topic investigated.

At the conclusion of this project, Gilbert, one of Marisol's students, noted, "You

have to be careful because some websites are not what they say they are. You really have to know about a topic to know this." His insights, which were echoed by many of these students, validate the suggestion by Leu and colleagues (2013) that students can be taught the skills needed to succeed with online reading tasks and that as a result of their online reading activities and the collaborative power of digital environments, they can increase their learning and motivation to learn.

Marisol's students learned how to research external sources and to assess whether they had adequate background knowledge of a topic to determine whether the information and the author could be trusted. They learned that they cannot trust everything they encounter online, but they can only begin to make decisions as they grow their topical knowledge, which informs the choices they make in selecting Internet resources and navigating digital environments. At the same time, they seemed to be willing to stick with it when confronted with interesting inquiries and given time to learn as much as they can about any given topic or concept. Marisol's lesson purpose was realized as students could more quickly determine, and with greater success, the credibility of a source and the veracity of its information or stance and then use this information to craft their arguments.

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