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## Breaking Through the Echo Chamber: Teaching Students to Use Technology for College Research and Global Citizenry

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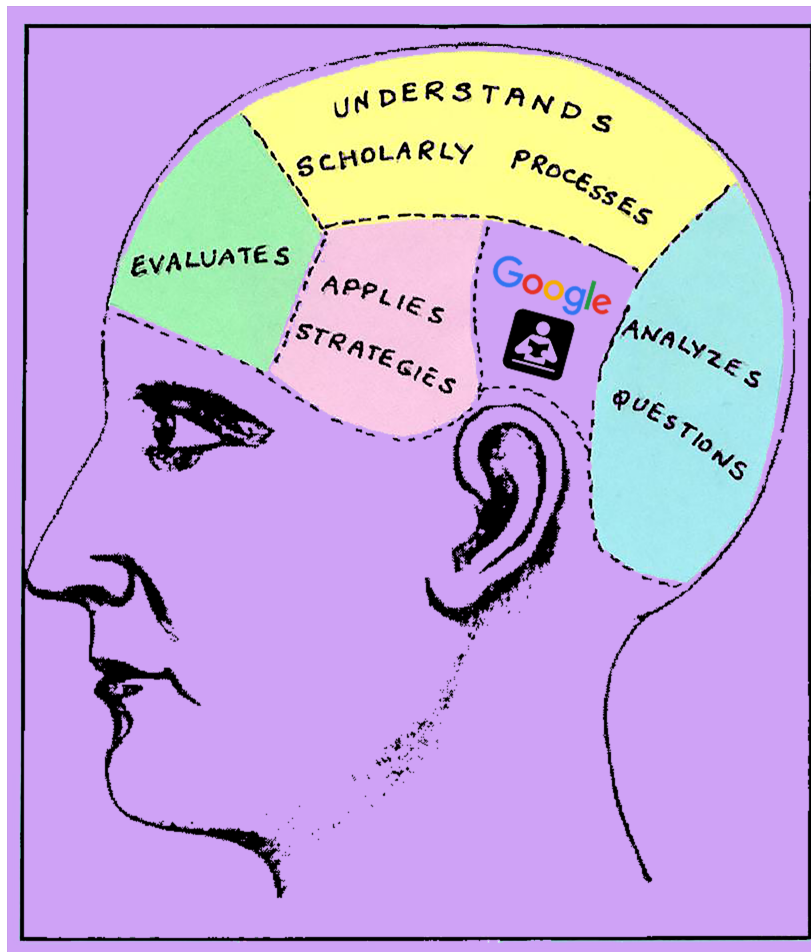
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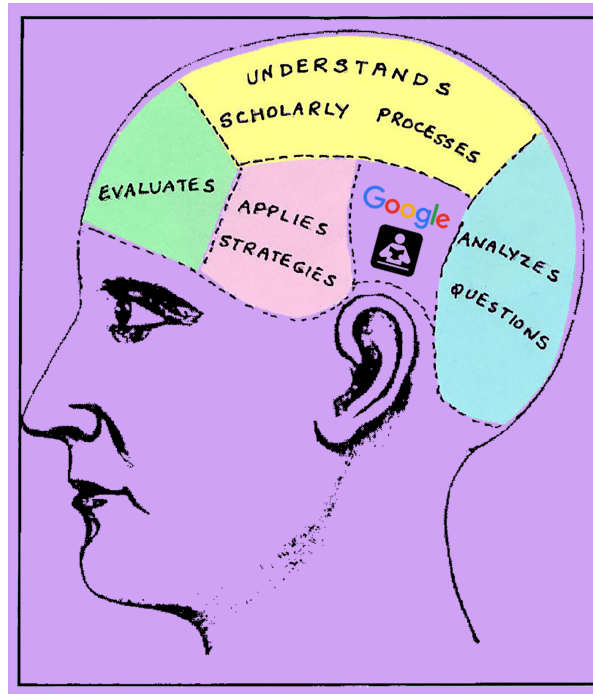
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Breaking Through the Echo Chamber:  
Teaching Students to Use Technology for College Research and  
Global Citizenry



Kaitlin Drake  
Senior Capstone  
Division of Humanities and Communication  
Fall 2018

Breaking Through the Echo Chamber:  
Teaching Students to Use Technology for College Research and Global  
Citizenry



Credit: Information Literacy at Beloit College

Kaitlin Drake  
Senior Capstone  
English Subject Matter Preparation  
Research Essay  
Estella Porras  
Division of Humanities and Communication  
Fall 2018

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## Senior Capstone Proposal

1. **Name:** Kaitlin Drake
2. **Concentration:** English Subject Matter Preparation

### ESSAY

3. **Essay Title:** Breaking Through the Echo Chamber: How Preparing High School Students to Use Technology for College Research Prepares them to be a Global Citizen
4. **Topic:** My topic is how/if high school students are being prepared to do online research to find diverse scholarly and reputable sources as well as where to go to ask for help in finding sources. I chose this focus area because of the number of new college students I have worked with who do not know where to begin with research, how to find reputable sources online, where to go for help with research, and the need to have a variety of sources as well as finding a variety of sources online. What I hope to accomplish with this project is to prove the importance of preparing high school students to use technology for the research expected of them in college and teaching them to look for resources online outside of their personal world to begin expanding their world view to the variety of opinions and people in their global community and to make them aware of being part of a global community.

5. **Research Question(s):**

*Main:* Are high school students being trained in technological knowledge for the expectations of college research and being part of a global community?

*Follow Up:* Are there library databases available to high school students?

Are teachers teaching how to research using technology?

Are high school students learning to create a works cited page with a variety of sources?

Are high school librarians trained to help students use technology to find resources? How many students utilize high school librarians?

Are teachers creating a learning atmosphere that allows for a variety of voices/breaking out of the bubble?

Will an expectation of engaging with a variety of resources and opinions both online and offline prepare students to break out of their online echo chambers/bubble?

6. **Alignment with Common Theme:** My project aligns with exploring the meaning of our digital lives because it looks at how learning to use technology to do research in high school does not only prepare students to write a research paper, but prepares them for the variety of ideas and opinions they will be introduced to in college, and how to break out of their echo chamber in their digital lives to become a better global citizen.

7. **Sources:** I plan on consulting scholarly peer reviewed sources, interviewing high school teachers and librarians and librarians as well as CSU and community college instructors and librarians. I want to consult statistics and articles from teaching websites.

8. **Timeline:**

- Project Proposal - Sept. 18
- Begin Research - Sept. 17
  - Email possible interviewees: Sept. 17 - 22
  - Set up meeting with a librarian: Sept. 18
- Complete Annotated Bibliography and Mind Map/Outline Oct. 9
- Turn in Annotated Bib and Mindmap/Outline Oct. 11
- Begin first draft - Oct. 12
- Finish First Draft - Oct. 24
- First Draft Due - Oct. 25

- Begin Second Draft - Oct. 27
- Second Draft Due - Nov. 1
- Begin Title + Abstract - Oct. 23
- Title and Abstract Due - Nov. 8
- Complete Final Paper + Portfolio and Synthesis - Nov. 27
- Final Paper + Portfolio and Synthesis Due - Nov. 29
- Prepare Poster and Oral Presentation - Nov. 27 - Dec. 9
- Oral Presentation and Poster - Dec. 9 and 20<sup>th</sup>

## First Report

**Name:** Kaitlin Drake

**Concentration:** English Subject Matter Preparation

**Project Title:** Breaking Through the Echo Chamber: Teaching Students to Use Technology for College Research and Global Citizenry

**Project Option:** Essay

**1) Summary:** I will be establishing the need for information literacy in our digital lives that are rife with misinformation. I will be focusing on secondary education in particular and will draw lines to how preparing students at the secondary education level will put them a step ahead in their college courses and will make them into better global citizens.

### **2) Project Progress:**

**a) Research Process :** I have met with my research librarian on campus and we were able to discuss the number of students who do not know how to research. From there, I looked at my topic from the angle of defining important terms like information literacy and looking for examples of how the need for this literacy are popping up in pre-college education. I have sought out different techniques for teaching information literacy and the personal experiences of educators.

### **b) Annotated bibliography:**

American Association of School Librarians. *AASL Standards Framework for Learners*. American Library Association, Sept. 2017. <https://standards.aasl.org/wp-content/uploads/2018/08/180206-AASL-framework-for-learners-2.pdf>

This source is useful because it has the expectations of students' research abilities as outlined by the American Library Association. These standards are useful for making a lesson plan. I know it is recent because the copyright is from 2018. There are four domains and competencies and six shared foundations and key commitments. My interest is in the start of the research process so I am most interested in inquire foundation in the think competency. The other domains can be incorporated into the lesson plan.



Association of College and Resource Librarians. "Framework for Information Literacy for Higher Education." *Association of College & Research Libraries (ACRL)*, 9 Feb. 2015, <http://www.ala.org/acrl/standards/ilframework>.

The Association of College and Resource Librarians frame digital information literacy as an education reform movement. They give a suggested outline of what and how to teach online research skills.

Coiro, Julie, et al. "Personal Inquiry and Online Research." *Reading Teacher*, vol. 69, no. 5, Mar. 2016, pp. 483–92. *EBSCOhost*, doi:[10.1002/trtr.1450](https://doi.org/10.1002/trtr.1450).

The authors introduce the term "Personal Digital Inquiry" and define it. Outlines how to teach students to both inquire and properly use technology to further their inquiries by expanding their knowledge and/or getting their questions answered. They provide classroom examples.

Crocco, Margaret, et al. "Teaching with Evidence: In This Age of Fake News, Students Need to Be Able to Assess the Trustworthiness of Evidence - Especially When Deliberating Thorny Public Policy Issues." *Phi Delta Kappan*, vol. 98, no. 7, Apr. 2017, pp. 67. Academic OneFile.

They give recent stats from Stanford as of 2016 on students' ability to distinguish between real and fake news. They outline what needs to be taught about online research in the classroom.

Gardner, Laura. "Teaching Information Literacy Now." *School Library Journal*, <http://www.slj.com/?detailStory=teaching-media-literacy-now>. Accessed 10 Oct. 2018.

She is a teacher librarian who teaches information literacy. She includes ways information literacy has been taught and new ways to teach information literacy to better help today's students. She also discusses battling against fake news.

Hamilton J. Buffy. *Information Literacy/Research Skills – The Unquiet Librarian*.

<https://theunquietlibrarian.wordpress.com/category/information-literacyresearch-skills/>.

Accessed 10 Oct. 2018.

She is a librarian and teacher with a lot of tips on how to teach information literacy. Her blog discusses hands on ideas for teaching information literacy in the classroom and includes classroom handouts.

Peters, Michael A. "Education in a Post-Truth World." *Educational Philosophy and Theory*, vol. 49, no. 6, May 2017, pp. 563–66. *Taylor and Francis+NEJM*, doi:[10.1080/00131857.2016.1264114](https://doi.org/10.1080/00131857.2016.1264114).

He introduces the term "post-truth", outlines the current situation between real and fake news. He also discusses how teachers are currently being held back in what and how they teach which gets in the way of who they are as a citizen and how to teach their students to be global citizens.

Rose, Josh. *An Introduction to Information Literacy for High School Educators*.

<https://www.projectcora.org/assignment/introduction-information-literacy-high-school-educators>.

He defines information literacy and its history. He gives ideas of how to teach information literacy in secondary education. Rose is a librarian and created this powerpoint at the request of a professor.

"Teaching Students Better Online Research Skills; Improving web research tactics is a priority." Education Week, 22 May 2013, pp. s12. Academic OneFile, [http://link.galegroup.com/apps/doc/A332188221/AONE?u=csumb\\_main&sid=AONE&xid=00f75f86](http://link.galegroup.com/apps/doc/A332188221/AONE?u=csumb_main&sid=AONE&xid=00f75f86). Accessed 11 Oct. 2018.

This article provides real teacher experiences when it comes to teaching information literacy in the classroom and the various tactics these teachers are using. It also discusses the different steps to go through when teaching information literacy such as: evaluating websites, modeling process, etc.

"TheBig6.Org." *TheBig6.Org*, <https://thebig6.org/>. Accessed 10 Oct. 2018.

The Big 6 is one of the trusted ways to do research and this website breaks down the six steps. They also discuss the Big 3 and how it is incorporated with the Big 6.

**c) Outline:** A brief outline that indicates what has been done (as a rough draft) and what remains to be done)

So far, I have met with a resource librarian and have gotten a number of different resources about my specific topic. I haven't interviewed anyone yet and given the number of quotes from teachers, I am wondering if that is something I should/have to do. I should start reaching out to people just in case. I feel like I have enough information to begin a rough draft and will begin my rough draft this weekend.

# **Breaking Through the Echo Chamber: Teaching Students to Use Technology for College Research and Global Citizenry**

## **Abstract**

Preparing high school students for college level courses is vital to their success in higher education. Information literacy and digital literacy are necessary skills for college students in order to conduct their research for their classes. My own research was a compilation of scholarly articles and books focused on digital literacy, information literacy, and the issues surrounding these terms to understand what today's students need in the classroom to succeed as young researchers. Search engines like Google operate under a facade of being an unbiased source. In reality, they are a for profit company whose search results go through an advertisement algorithm. Furthermore, misinformation online is rampant and becoming more difficult to differentiate from peer-reviewed work. Perpetuating this problem are social media websites like Facebook where misinformation can be spread within one's similar minded social group, creating an echo chamber. This echo chamber is reproduced in the classroom when students' peers' experiences out way the information of experts. In order to produce unbiased research, high school students need to learn how to question the sources they access through search engines and be introduced to resources such as library databases and the school librarian. Through modeling research in the classroom, creating lesson plans focused on the process rather than the end product, and working side by side with librarians, teachers can prepare their students for college courses. Students can be more successful when they enter college and can be better equipped to be successful global citizens as they interact with information and ideas outside of their sphere of knowledge.

## Final Essay

My interest in the preparation of high school students for college research stems from my hands-on experience as a peer tutor for California State University Monterey Bay and West Valley Community College. At both institutions, I engaged with students who did not know what resources were available to them through the library to aid their research, how to tell a reputable source from an disreputable source, and they had no variety of resources in number, kind, or perspectives. It is imperative to teach high school students fundamental research skills for both their college education and to be well-informed global citizens. Through my research, I examine our relationship with technology: our inherent trust in search engines and how information literacy can counterbalance psychological biases that prevent us from expanding our knowledge. I discuss where teachers should begin to teach digital literacy skills hands-on in the classroom.

Information literacy as defined by the American Association of School Librarians is “multiple literacies, including digital, visual, textual, and technological, that are crucial for all learners to acquire to be successful in our information-rich society” (9). This paper focuses on a subset of information literacy called digital literacy. Digital literacy as defined by the American Library Association is “the ability to use information and communication technologies to find, understand, evaluate, create, and communicate digital information, an ability that requires both cognitive and technical skills” (Jarson 2). For the purposes of this paper, information literacy and digital literacy are used interchangeably.

The mistrust of information and the difficulty in differentiating and accessing quality information has led to truth becoming fluid. The fluidity of truth creates challenges like echo chambers, which are “closed communities where biases can be reinforced through lack of diversity in opinions” (Taylor et al. 4). These closed communities are not always political and do not only happen online. They are the communities formed inside a high school classroom as

much as communities formed in an online chatroom. Communities are important in creating a sense of identity and belonging, but they can also prevent us from questioning their knowledge. As our global population becomes more connected, it is of utmost importance to teach young citizens how to navigate ideas and opinions that differ from their own. This will enable them to engage with multiple voices during their college education and to engage with a variety of people online. We must foster their curiosity and give them the tools to ask questions in order to perform in college level courses and learn more about their global community.

The internet is a powerful tool that provides readily available information for students to access and expand their world view. However, a 2012 study by The Pew Research Center found high school teachers agreed students did not have the digital literacy tools they needed to assess the validity of the information they found (Education Week 1). Recently, the phenomenon of fake news, known for its “purposeful misinformation” (Taylor et al. 4), has taken center stage in American politics which has caused an invigorated interest in digital literacy skills. While the public discussion of information literacy is important, it must be noted that misinformation is not only political. Misinformation happens across many spectra; teaching students the information literacy skills to decipher real information from false information no matter the opinions they hold will foster learning beyond their institutional education.

As of 2016, Stanford University found that 80% to 90% of teenagers struggle to discern real information written by professionals from false information sponsored by advertisers and other online outlets (Crocco et al. 1). A problem that perpetuates this phenomena is our society’s unchecked trust in search engines and the information found on the web. People do not stop to examine the amount of trust they put in search engines because search engines are thought of as neutral. People assume the information is expertly picked to fit the needs of the searcher. However, these search engines are businesses and their profit models are based on clicks, shares,

and other users' interactions. This is true whether or not the search results are paid advertising because they go through the same advertisement algorithm, which leads to constantly changing top results (Noble 37 40). Whereas in academic research, results do not change as quickly because of the rigorous vetting process they are put through to establish a piece of work as "important to the scholarly community" (Noble 40). While 73% of users are confident about the information they acquire being accurate, 62% do not know how to differentiate between paid and unpaid search results (Noble 53). Google, the most popular search engine, holds about 80% of the global search engine market as of 2017 (Heitzman 1) and attracts 83% of search engine users (Noble 53). Their dominance of the search result market means Google is able to make a huge profit because of the public's naiveté. Search engines like Google will continue to hold sway over what truth is while people continue to lack the skills to learn the truth unless students are taught digital literacy.

The first place to learn these digital literacy skills is in the classroom. However, teachers are currently huge proponents of profit-making search engines too. Google is more trusted by students because their educators believe it produces a higher quality of potentially reliable sources. Meanwhile, other informative websites such as Wikipedia are frowned upon because they are an open source for the public to edit. Yet in order to have a conversation about how to find credible sources, it is just as important to discuss how we decide which information is credible. Danah Boyd explains how Wikipedia is a particularly interesting case study on this topic because of their discussion history feature available on every article (190). This feature shows the discussion among diverse contributors where they explain why they made their choices when editing the article (190 - 92). Wikipedia can be used not only as a possible resource for information, but as an example of how events in history are documented and ideas are formed and presented by collaborating with a diverse group of people (191 - 92). This is not to say that

Google is not a viable and useful resource; rather, students need to be taught to question the sources Google provides and learn other places they can corroborate their findings with other relevant and credible information.

Library databases are a major component in research at the college level. Introducing high school students to library databases and how to use them will give them a head start to begin their college research careers. Even if a library database is not available at the high school level, teaching students the information literacy skills necessary to find resources in a library database will serve them when using search engines too. One skill that will benefit students when doing research using a library database or public search engine is choosing exact words to search. In an interview with a sixth grader, they talked about how their teacher taught them to use keywords when researching; otherwise, they would get results that did not fit what they searched (Education Week 1). Although keyword searches are an important place to start, evaluation of the resources that arise plays an integral role at these beginning stages. Google Scholar has a reputation that may equal a library database. While it may provide resources written by academic types, there is no guarantee that these sources have gone through the rigorous process of assessment. This leads to some articles still being in their infancy while made available to students who may not know how or even that they should check to see if they are peer reviewed (Badke 192). Both of these skills and others need to be taught at the high school level, whether it is continuing and refining digital literacy skills already introduced to students earlier in their education, or introducing these skills to students who are learning them for the first time.

Another aspect of research to discuss in the classroom is the role human psychology and social trust play when people decide what is and is not true. While conducting research, the researcher is looking for information that is unbiased. Although some write articles with the goal



of keeping their bias out of their work, writing without any bias is difficult and some results will be from authors who write from a very biased position. While students must learn how to identify bias in the results they find, they also have to be aware of their own bias when conducting research and choosing sources. When considering evidence, a type of evidence people use is called “motivated reasoning” where they generally choose and comprehend evidence in a way that reinforces what they believe already rather than to expand their world view (Crocco et al. 1). This type of reasoning affects students in the classroom as much as it does adults outside the classroom. A study found high school students’ processing of information changed when they were asked to look at evidence in an abstract light or in context (Crocco et al. 3- 4). When asked to look at evidence while isolated from their peers’ influence, they explained when and why certain types of information were convincing in these different contexts, but once a topic was introduced in a classroom setting, the opinions of their peers played a bigger role than the evidence itself.

Social trust defined as “faith in others” (Crocco et al. 2) plays a large role in the classroom because students are incorporating both their personal identity and the experiences and opinions of their peers to decide what is and is not trustworthy evidence. When faced with the experiences of their peers and the evidence of experts, students overwhelmingly sided with their peers’ experiences, especially when they coincided with their own. A pertinent example given was students’ willingness to share their private information with websites like Google and Facebook because they and those they knew had not had a negative experience with these websites so the evidence of what could go wrong had little to no leverage (Crocco et al. 5).

The study conducted by Crocco et al. was done in a high school social studies classroom but the way students approach discussion with their peers and the use of evidence can be applied to multiple subjects. For example, in a high school English class students could overly rely on

the opinions and experiences of others as well as their own experiences. There are far more circumstances in an English classroom where students' engagement with their experiences and those around them is acceptable and encouraged when interacting with literature, but even then students are asked to use evidence from the book. Furthermore, it is imperative that teachers create an atmosphere where varying voices on a text are included and facts are used when necessary. For example, when teaching a fictitious novel set in a historical period, the teacher should take the time to teach and discuss the social norms and laws that are influencing the novel. Teachers will model the importance of putting a novel into historical context when applicable, and will describe the research they conducted in order to better understand the novel. Not only is this an opportunity for students to learn how research adds meaning to a novel, a debate, or a discussion, but instructors will also be able to give students a tangible example of what researching looks like by sharing their own process.

Students engage in social trust in the online world too. The filters of personal experience and beliefs along with the experiences and beliefs of others in the physical classroom are just as potent online. Students interact with these similar filters across various social media websites and search engine results. The friends, products, and news stories suggested are based on the interests of the individual and not the validity of what is being shown. This is no different from how media has always affected us. Crocco et al. identify how “decades ago, most of us watched the same three channels on TV or read the same regional or national newspapers” (1); therefore, the amount of opinion and blatant misinformation passed off as factual and true has grown with the rise of the digital age.

Librarians are specifically trained to teach information literacy skills, but many believe a librarian's job is to guide students to find credible information but many no longer see the necessity of librarians because of how easily information can be accessed online (Gardner 3).

However, librarians are the creators and teachers of many useful techniques for evaluating evidence found online to assert its credibility or lack thereof. The CAARS, CRAP, Big 6, and Super 3 methods have served as useful tools for students to learn what information they need to find and how to assess the evidence they find for its credibility. However, we currently find ourselves living in what is being described as a “post-truth world”, where knowledge and truth no longer have the same weight they use to because knowledge can be found with ease online without the help of an expert; this leads to expertise not carrying the weight it once did (Badke 191). As overwhelming as this may initially be, there are new information literacy skills being developed by educators to give students the tools necessary to find scholarly, well researched evidence to support their own work. Laura Gardner, a middle school librarian, explains how she would use the aforementioned methods to teach students where to look to establish the credibility and accuracy of the websites they have found because “[s]tudents can’t rely on ‘about us’ pages of websites any longer” (1 - 2). Instead, their information literacy skills need to be able to see through carefully crafted websites and news stories based on questionable attestation and they need librarians and their teachers for them to continue to develop these skills. Teaching budding researchers and global citizens digital literacy skills cannot fall on an educator or librarian alone but must be supported by a schoolwide team working together (Crocco et al. 6). In this way, students will not only have the importance of information literacy being taught to them from their teacher and librarian but schoolwide too.

While information literacy skills are important for students to be successful at the college level, its importance has grown in the K-12 classrooms because of the evolving expectations of standardized tests. The word “evidence” appears in the Common Core of State Standards of English Language Arts over 100 times (Crocco et al. 1) adding to the necessity of teaching

information literacy skills thoughtfully. More research needs to be done about information literacy skills in the Common Core State Standards but is outside of the parameters of this paper.

It is a necessity to teach information literacy skills to high school aged children. Search engines like Google are businesses and students must be taught how to interact with this tool thoughtfully and with a healthy amount of skepticism both inside and outside the classroom. Educators must begin pinpointing specific parts of the research process and assessing them rather than only celebrating the end product. Students need lessons that focus on different parts of the research process. Furthermore, students need to work with a variety of evidence. By speaking about research as a process with specific parts, students will learn that research across all subjects is similar and will use their digital literacy skills from one class to another and from grade to grade on through to adulthood. It is also necessary for teachers to work with librarians. As long as educators adapt to the new challenges they face when asking students to conduct research, we will be preparing them to face the challenges of the digitally connected world of which they will be a part.

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## Lesson Plan: Inquiry

As in most classrooms, the most important place to start in an English class is to ask questions. High school students particularly are not always the most comfortable with asking questions which can make the research process even more difficult. Creating an environment where asking questions and discussing answers openly with the class early in the school year will make the first research assignment easier for students to adapt to because they have learned what asking questions, receiving answers, and collaborating with their peers looks like. The next step is moving it to paper and centering it around a particular theme to build a research paper. I am following the American Association of School Librarians' (AASL) Standards Framework for Learners to teach an eleventh grade English class where to begin with a research project. The Standards Framework is broken into "shared foundation and key commitments" and "domains and competencies". The foundations are inquire, include, collaborate, curate, explore, and engage. The domains are think, create, share, and grow. I will move through the first foundation, inquire, where students are expected to "[b]uild new knowledge by inquiring, thinking critically, identifying problems, and developing strategies for solving problems" (AASL). My primary focus is on the think domain and how to model techniques for this area and where to find resources to get answers.

The purpose of the "think" domain is for "[l]earners [to] display curiosity and initiative" (AASL). The first step to teaching students is modeling. Assigned class readings offer a great opportunity for instructors to show how research can add meaning to a novel and what they did to find their resources. For example, when reading *The Awakening* by Kate Chopin, my professor provided resources describing the historical time period the novel takes place in, so we could better understand Chopin's background discussion on the post-slavery south. By overlooking details in the novel instead of inquiring about them, I missed an opportunity to understand *The*

*Awakening* on a deeper level and to see the multiple messages Chopin was sending her readers through her works. This class was an upper division university class, so my professor did not discuss how she found the information she shared. This kind of information is useful to share with your high school students in order to see how someone conducts research. This could start a conversation about using keywords when searching for information, discussing with your own peers about what particular trends and quotes could mean, and possibly who you go to for help. When my professor brought in resources from her personal research, she taught me how important it is to ask questions about seemingly small details and looking for trends while reading. All of these lessons would serve a high school English student both to finish their high school career and throughout college.

Modeling research skills leading up to a research project is an important first step to introducing students to the process, but once the paper is assigned it is imperative that the teacher provides exacting direction on where and how to start researching. I will discuss how I would teach this in an eleventh grade English classroom with my personal examples. Useful resources to aid you in guiding students through the inquisition process are The Big 6 or The Super 3. The Big 6 is suitable for advanced students and the Super 3 is for students who need more straightforward guidance to understand the process (Big6.org). The goal is to instill in students how integral the process of inquiry is for their research. I suggest letting students pick their own topics, so they are more involved with what they are researching. It may be based on something discussed in class such as a novel, idea, or whatever else piques the interest of your students. This aligns with the AASL standards that state, “[f]ormulating questions about a personal interest or a curricular topic and [r]ecalling prior and background knowledge as context for new meaning” are imperative for students to learn information literacy skills. Obviously, discretion is



advised, and I would recommend coming up with a list of possible topics from class to help students who are not sure of what topic they want to research.

While giving students the space to choose their own topics with some guidance it is still important to model and discuss why they are being taught these skills. The more we give solid, real world uses, the more students we can get to take these assignments seriously. Talking about how it will serve students in their subjects in high school and on through college is an obvious and important point to touch upon, but we must take it beyond college readiness. Although this may not appeal to all high school juniors, I think it is important to instill the concept of personal reward when it comes to research and education in general. The best example is a personal example. I would tell my students about my first college research paper in my first year at my community college. I chose to do my paper on how media creates a woman's negative body image. In the following semesters, I enrolled in literature courses that had a focus on Women and Gender Studies. Eventually, I earned an associate's degree in Women and Gender Studies, I had presented my research twice at the Women and Gender Studies Symposium at my community college and went on to earn a bachelor's degree in Human Communications with a Women's Studies focus. I have been able to trace all of that back to a research paper I did my first year of college because I was curious, asked questions, and found answers to my questions.

Not every paper is the root of a life changing passion, which is why it is also important to talk about the personal reward of a solid paper. Even if the topic chosen is not one that instills passion, it can still be used to continue developing skills to lead to a successful end product.

Some of the skills being learned include what resources are available to aid in research, how to question authority, and developing a certain level of expertise on a particular subject. I argue that these successes are more important than discovering a passion because students can continue to build on each achievement; thereby, sharpening their research skills. A personal example I would

give to my class would be about the first literature review I was asked to do. This assignment pushed me to learn new research skills as well as writing techniques to complete the assignment. To be honest, I absolutely hated the work I had to do and did not feel particularly confident because I had never done that type of writing before, but I put the work into it and created a successful paper. Not only that, I gained new writing and researching tools in the process. These are the types of lessons we need to teach up-and-coming college students as much as the basics of generating a research paper.

Once they choose their subject, students must start generating questions. They could do this on a piece of binder paper, but I think it is better to provide a worksheet. The worksheet will add to the professionalism and importance of the work they are doing. Furthermore, when they begin working with one another it will be helpful for everyone to have the same worksheet, so they can delve into the subject matter without having to learn their classmates' formatting of their paper. Whichever you decide, it is important that two areas are included. First, you must include the types of resources the student is expected to acquire. It is important to establish upfront that the student is expected to acquire a variety of resources such as scholarly articles, books, and statistics. Too often a particular type of evidence is focused on more than another. This will not serve students in their college career, nor will it serve them when putting together an argument after high school or verifying content they find online. Also, this is a good place to introduce students to the idea that they should be assessing a wide variety of sources including writers from different backgrounds. It is important to discuss the many perspectives that can exist on one subject and encourage students to look into them. The reason is twofold. First, we are more globally connected now than ever. Students are able to connect with people who have different perspectives from their own. I recommend this research paper be used to continue

expanding a student's views beyond their classroom, home, and city so they will become comfortable doing the same on social media.

The second important section of the worksheet is a spot where students can write down their own questions about the topic they have chosen. I would also suggest creating a section for what they already know to give them a place to start and for them to see what they do know and gain confidence from it. My focus is on the question section because I believe educators do not speak enough about choosing a topic you do not know a lot about. I would walk a fine line between the two different opportunities for choosing a topic. On the one hand, they can choose a topic they already know something about and look into expanding their knowledge on their topic. Choosing a topic they already know about is giving up an opportunity to learn about something new. There is value in expanding one's knowledge on a topic that they know a few things about. This still grows their knowledge and has the potential for challenging what they believed about their topic. This could also make it easier to come up with questions because they have an idea of what they do not know and want to learn. I am personally a proponent of taking an opportunity to learn about something new.

It is important to express to students, especially in these teenage years where they tend to think they have to know everything, that it is okay not to have the answers and only the questions. This could be too overwhelming for some students because it is very difficult to know where to begin with their questions. This is another great place for a personal story about your own triumphs and tribulations when coming up with your own questions. My example of this goes back to my first research paper in college. When I chose my topic of body image, I had no idea where to begin. I did not have any prior knowledge of it; I just knew it existed and that I wanted to learn what I could. I wrote down simple questions and statements to look into when I began my research. The questions section does not need to have fully formed questions; it can be

single words and ideas for them to delve into later. Then, I would ask students to write down their own questions in the question section of the worksheet.

There is also an opportunity to collaborate with one another. This is a good way to work in the domain “share” where students can cooperate with each others’ ideas, give feedback to one another, refine their topic, and add more questions. Students’ collaboration with one another is important in order to become comfortable with reaching out to peers, giving constructive feedback, and responding to feedback. This will serve them in college, the workplace, and communicating online with people of different backgrounds. I would put them together in pairs to discuss their topics and offer their own questions about one another’s topics. Questions from their peers could be another section of their worksheet or they can add questions that come up when talking to their peers to the question section.

I have discussed the beginning pieces for students to develop their information literacy skills by choosing a topic and asking questions. I have outlined choices students have to make to decide what they want to gain from their paper and the pros and cons of those choices. The next step is to delve into digital literacy skills in particular, so students can learn how to use the internet to find credible information by having a trip to the library. Depending on how long your class periods are and the needs of your class, this could be a same day trip, or the next class period is dedicated to the library trip. Having the library trip on the same day is a good idea because it builds on the students’ inquiry mindset for learning how to find resources and building upon their questions. Having the time in-between classes means they can have more time to generate questions and reflect on the feedback of their classmates.

As English teachers, we need to collaborate with the school’s librarian to create a lesson around the class trip to the library. Discuss with your school librarian about your goals for the research project, supply the worksheet you are giving to your students, and the types of resources

you want them to include in their paper. Make sure to go over the techniques your librarian will be introducing to the class and establish whether there is a library database at your school. The lesson should include a discussion on books as a valuable resource. Including a number of books as a source you expect your students to have in their research will match with the lesson on books as credible sources in the library. In a school environment, it is best to have students practice with these various credible research sources that will help them develop better papers and learn about the resources available in college. That being said, a lesson on how to consciously use search engines in order to evaluate the sources they find is important because they will use them for school work and in their daily lives. My personal favorite website evaluation technique is IMVIAN because it is a process that examines the intent of the author and whether they have sources to backup what they are saying (Gardner 3). The goal of the library trip is not to just find resources and introduce the students to digital literacy skills, but to name where students can go to seek information on campus and introduce the librarian as another resource to go to when they need help.

Once at the library, the librarian is in control of the lesson. Librarians at the high school level typically are not appreciated and their knowledge is not utilized. At the college level, librarians play an integral role in making sources available to students and aiding students in their research. The librarian taking control of the lesson teaches eleventh graders about this whole other resource and gives them their senior year to practice seeking out the librarian when they need help with a project or paper. Also, they will already know that they can seek out the help of resource librarians once they get to college and have some digital literacy skills for research. Furthermore, librarians are trained to teach digital literacy skills. After the librarian gives their lesson, students should have time to start their research. The librarian and the instructor should circulate around the room to answer students' questions and give them

guidance as they practice questioning the authority of their sources, cross checking the information they find, and finding unbiased material.

Teaching high schoolers how to start asking questions and how to find reputable sources to find answers to those questions will not only serve them in their English classes when they need to write a paper but will also serve them in other subjects. My focus was on eleventh graders in their English class, but these skills are adaptable for any grade level and will serve them past their education. Instructors should not only tell students about what they need to do, but model what inquiry looks like and offer real life examples. While teaching students digital literacy skills, it is important to work alongside librarians. Accessing their expertise will give students up to date digital literacy skills for the ever-changing online world. Furthermore, it teaches students that there are other people who can help them when working on a paper or project. They can take these skills with them when they go to college, so they can seek out the help of librarians early on, know how to start asking questions, and check their sources for credibility.

## Final Synthesis Essay

My senior project class' theme was "Our Digital Lives". We were asked to examine how we use technology in our daily lives and to begin questioning the use of technology in our lives. We read a variety of books on technology and how it affects diverse groups of people. For example, we read a book on teenagers and technology use. We read another about how Google's search results are biased and affect the image of minority groups who do not have as strong of a say in online material and image. What I appreciated most about the readings we did and tedtalks we watched is that the solution came back to being mindful about our use of technology rather than being afraid of its existence.

When discussing our readings, my answers came from my own personal experience and I develop questions to ask my peers about specific readings. I found that I had fluctuating feelings about the concerns people raise about technology. When the class started, I had recently deleted all of my social media accounts because I recognized the amount of time they took up in my life and became the only way I communicated with others. I spoke about this in class and how difficult it was to no longer be connected on social media, but also how important it was to me to rediscover things I did before becoming fully engaged with social media. However, when concerns were raised about teens and technology and the need to put stricter guidelines on them, I could not help but scoff at the idea because of my own experience with technology as a child. I knew what information I should not share with people I met online and the communities I built online around music were incredibly important to me growing up. It was interesting to share these thoughts and learn which of my peers had similar experiences or did not.

The people I collaborated on my capstone with the most were my professors, tutors at the CLC, and my own friends and family. While my capstone project was influenced by my individual experience as a writing tutor, I asked for input from these people in order to make sure

my message was clear to different audiences. I took in their suggestions and concerns and made many edits based off of them, but these choices were made based off of the message and writing style I wanted to use to communicate. Ultimately, my paper and speech are the products of a strong sense of what I want to say while working with others to make sure the way I communicate is engaging.

This project demonstrates my understanding of the theme because I took my personal experience as a writing tutor and started asking questions about why the students who I worked with walked into the college classrooms without knowing how to research. This taught me about information literacy, the issues with society's trust in the internet, and the natural way humans interact with information to reinforce their beliefs. I also demonstrated my understanding that the ways technology is used at home translated to the way it is taught in school and vice versa. If we can teach information literacy to students, they will be able to use these skills as adults and can educate those around them. My project gives the tools educators and others need in order to use technology wisely.

As an English Subject Matter Preparation concentration, my project discusses the issue of information literacy that is facing educators throughout education. I define the problem in the classroom, why the problem exists, and provide solutions. My solutions involve using the tools schools already have but tend to undervalue. For example, I am a strong proponent for librarians in public schools and I think it is essential for teachers and librarians to work together in order to create lessons for students to learn information literacy. Also, I think it is important for the larger school administration to make information literacy a priority in schools. Technology is a part of almost everything, if not everything, we do now so information literacy applies to all subjects and to all students. In my lesson plan, I give specific instructions on how to implement the solutions I provided in my research paper.