
TEACHING THE RESEARCH PAPER THROUGH INQUIRY-BASED INSTRUCTION

By Sara Zeek

The freshman research paper can be a labor for both the teacher and the student with its many layers of skills and expectations. While academia has moved beyond note cards and simplified documentation models, students continue to get lost in the research process, often to the point that instructors may even wonder if they had been teaching in an alternate reality once they begin grading the finished products. As a dual enrollment instructor for Virginia Western Community College (VWCC) and Botetourt County Public Schools for the past eight years, I have struggled to make the research process more appealing to my students so that their investment in their final papers is greater and yields more success. Typically educators see the research process as an individual and isolating experience where no one shares ideas or sources to

avoid plagiarism. The truth is that students freely share ideas and sources and have become adept at hiding their collaboration from instructors. In the past year few years, I have changed the way I teach the research paper to include more technology and to make stronger connections to the real world through an inquiry-based learning and collaboration. This process has reduced plagiarism, increased students' research and writing skills, decreased my paper load, and increased student investment during all parts of the research project.

I teach two classes of English 111/112 in Botetourt County. One section is scheduled as an independent class. The second section is taught as part of the Senior Humanities Seminar, which is an interdisciplinary course taught with a political science instructor at Botetourt Technical Education

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Center (BTEC) in Fincastle, Virginia. My collaborator, Lindsay Brooks, teaches the political science section of the class, Political Science 211/212. Students travel to BTEC for the seminar class from two sister high schools, Lord Botetourt, located in Daleville, and James River, located in Buchanan, to allow students from across the county to learn together. Seminar students earn high school credit for senior English and government, which are required for graduation, and twelve college credits through VWCC. In 2009-10, we served twenty-four students in the program. The research paper is a requirement of English 111/112, which we complete during the fall semester.

The benefits of the interdisciplinary aspect of the course are felt through every project we complete. Nearly all of our assignments are directly integrated. We read essays and current events that reflect the concepts taught in political science and complete projects and essays that use the rhetorical strategies required for English 111 students. Students and instructors reap the benefits of interdisciplinary instruction:

...interdisciplinary instruction can be intellectually enriching for faculty and students alike. At its best, interdisciplinary and team-teaching involves close collaborative teaching among faculty members so that students have the chance to become involved in the dynamic exchange of ideas across academic disciplines. Students learn how to think about a given subject from different disciplinary perspectives and how that subject is shaped by different approaches. They participate in a debate that is larger than the boundaries of a single discipline and thus can become a part of a larger intellectual community....For students and faculty alike, there are few devices more effective in strengthening intellectual community than interdisciplinary teaching. (“Recommendations Concerning Interdisciplinary Teaching”)

In the fall of 2009-10, we shifted to an inquiry-based model in the Senior Humanities Seminar to teach the research paper by approaching the project as a thematic unit in an effort to connect the project to the real world. Inquiry-based instruction is “an educational approach that supports critical thinking, skill building, and problem solving, in addition to content learning. Inquiry-based instruction encourages students to develop questions about the world, to make connections between self, school and society, and to apply integrated thinking to solve real problems” (“Inquiry Based Learning”). Traditional instruction places most of the burden for learning on the instructor and students are expected to master content; inquiry-based instruction is more student-centered and asks students to become responsible for their own

learning through understanding and applying content. Why use inquiry-based instruction? It not only increases student motivation and investment, but also

...provides a means to actively involve students in the learning process. With the trend in higher education to move away from teacher-centered instruction to a more student-centered approach, IBL gives you the opportunity to help students learn the content and course concepts by having them explore a question and develop and research a hypothesis. Thus, giving students more opportunity to reflect on their own learning, gain a deeper understanding of the course concepts in an integrated fashion, and become better critical thinkers. (Lane)

Our shift to this model came through participation in a program sponsored by the National Association for Independent Schools.

In August 2009, I found an advertisement in *NEA Today*, published by the National Education Association, for a program called Challenge 20/20, which was sponsored by the National Association of Independent Schools (NAIS). Challenge 20/20 opened the door for us to change the way we taught the research paper. The program connects schools internationally to research one of twenty global issues and is based on the book *High Noon: 20 Global Problems, 20 Years to Solve Them* by J.F. Rischard. We saw the program as an opportunity to research a real world problem with students in other communities and to make the research process more relevant. The project provided students with an opportunity for community service, which cemented their understanding of the impact that poverty makes at all levels and made the research process more worthwhile. Through exploring the impact of global poverty with inquiry-based instruction, students could ask questions and develop solutions without the instructors imposing ideas upon them.

Our seminar class was paired with students studying Southern literature at Ensworth School in Nashville, Tennessee and a group of students in Shanghai, China. Unfortunately, the Chinese students had to withdraw due to their country's censorship policies, but we worked through the end of the semester with the students in Tennessee. Our goal was to communicate with the Ensworth students at least three times through video conferences and weekly through a class ning to arrive at a workable solution to combat global poverty. The ning, a format that is similar to a wiki, was established by NAIS as the communication tool for the partner schools and was separate from our class wiki sites for our individual research. Students were encouraged to use the ning and received a participation grade for using it, but it was not part of the formal grade for the research process.

Global poverty became our theme, and students began reading Rischard's book in mid- September to gain an understanding of global poverty and its connection to other issues such as global warming, biodiversity, education, peace keeping, and global economies. We then brainstormed for concepts related to global poverty, and students chose topics in which they were most interested for their individual research papers. As a class, we broadened our definition of poverty through viewing video clips and reading articles from newspapers, *TIME*, *Newsweek*, and online sources. We also began our collaborative research and discussions with our partner school, Ensworth, through conferences and the ning. Throughout the semester my collaborator, Lindsay Brooks, and I team taught the concepts related to the project. Brooks connected our investigation into poverty to concepts in U.S. government. I instructed students in the writing process, and they produced papers that examined various aspects of our preliminary research, while mastering the concepts required in English 111. For example, the class completed a study on unemployment in the U.S. and its impact on poverty levels as a combined comparison/contrast and cause/effect essay. They researched the employment rates for different states from 2006-2008, and compared them to rates at the end of 2008 and early 2009. They then narrowed down the major industries that had contributed to the rise in unemployment through layoffs and loss of production and profits. From these figures, students then determined how the loss of jobs impacted local and national poverty rates. In completing this essay, students practiced researching credible sources, organizing material, developing a thesis statement, documenting sources, using statistics effectively, and other skills in the research process.

Before beginning the poverty project, students first had to determine the content that they needed to know in order to develop a solution for global poverty. Their first task was to define poverty in the U.S., in other developed nations, and in developing nations, such as Africa. We set aside one class period to brainstorm questions related to the broad topic of poverty, which ranged from the simple to the complex:

- How is poverty determined in the U.S.?
- How is poverty determined in developing nations?
- What group determined poverty levels in developing nations?
- How does poverty affect crime rates and types of crimes globally?
- Are there different types of poverty? Is it all related to income?
- What organizations assist impoverished nations?

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- How do tribal conflicts arise from or contribute to poverty?
 - How do living conditions contribute to poverty?
 - How do cultural differences contribute to poverty?

Students developed a list of about twenty questions that then became the basis for their research. Each student chose a question to answer from the class list as their broad topic. From there, each student developed a research question, a narrowed topic, and finally a thesis statement and paper. The collaboration in the early stages of the research process set the pattern for their work as they became more involved in their topics.

In order to give the BTEC students a space to collect their research and collaborate as a class outside of school, we established websites through Google mail for each student with the help of our current Instructional Resource Teacher, Teresa Simmons, and Jim Dixon, Coordinator of Technology for BCPS. Google websites function much like a wiki and offer space to post videos, graphic, charts, tables, music, and other media just like those sites that are commonly categorized as wikis, such as www.wikispaces.com and www.wetpaint.com. Seminar students were then able to collaborate on topics and issues as a class before presenting their findings to the Ensworth students, which created a higher level of comfort for the Botetourt students when communicating with the partner school. Brooks and I established with our students that the websites/wiki would become a repository for credible electronic sources on their topics, a forum to discuss each other's points, and finally a tool to peer edit finished products. Brooks and I also researched with the students and posted our own sources. Using the websites/wiki did not change the basic requirements for the paper, which still had to be a minimum of five pages, use MLA formatting and documentation, and include a variety of sources, one of which had to be a book in print written at the appropriate academic level. Students were given models and instructions on the class home page for each assignment (Zeek 148). Seminar students met the following requirements as part of the research process by posting to their individual websites:

- Home Page with student name, broad topic, one graphic, one video, two quotes, one illustration, and a description of topic and proposed research project.
- Current Events Page with due dates, article dates, analysis/commentary on article and works cited entry for each posting (four total).

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- Periodical Review Page with due dates, article dates, reviews of journal articles from the VWCC online library, and works cited entry for each posting (two total).
 - Book Review Page with review of book that is central to research, photo of book, and works cited entry.
 - Internet Review with due dates, article dates, reviews of credible websites, and works cited entry for each posting (two total).
 - Intro and First Body Paragraph posted.
 - Draft of Research Paper Page posted.
 - Final Draft of Research Paper posted.
 - Threads- at least two threads started for discussion- one about topic and one about current event.
 - Five responses to others' pages- significant, thoughtful responses to questions posted on discussion thread pages. (Zeek 153)

Students wrote more text and more frequently than they would have in a traditional classroom project as they discussed each other's work and commented on sources posted on the pages. We started the process sooner and were able to practice elements of the research process as we moved through the semester. Assignments were due on the project about every other week until the last three weeks of the term, when we fully concentrated on just the research project. The more they collaborated and developed their web pages, the more invested they became in the research process. While the multiple deadlines required strong organizational skills on both the part of the students and the instructors, the students felt that overall, the website/wiki helped them maintain control of their project (Zeek 152).

The use of the websites eased the burden of grading the final papers since all electronic sources were easily accessible in one place. The use of the websites/wiki also reduced plagiarism because the students themselves began to post their drafts and edit portions of each other's work for citation errors. By the time the final papers were due, each had been reviewed by several readers. Students were graded using rubrics on their use of their website/wiki pages as part of the research process, on their participation in the project as a whole, and on their final research paper as a hard copy.

While the community service portion of our research project was not a full service-learning project, it planted the same seeds for citizenship and

community spirit that true service-learning projects develop and it developed out of the students' desires to put action into their research projects. The Corporation for National and Community Service (CNCS) notes that service projects benefit students by encouraging responsibility, providing positive role models, increasing a "sense of self-efficacy as young people learn that they can impact real social challenges, problems, and needs, [developing] civic engagement attitudes, skills and behaviors, [and tapping] new energy, capacity, and creative ideas" that build positive relationships among youth and their community (Roehlkepartain). The CNCS further notes that "[c]ommunity colleges are centers of educational opportunity." Expanding the research project to include a community service component reflects the spirit of community colleges, which are "ideal locations for service-learning programs because community service is a part of their mission" (Robinson and Barnett). Including a community service component in the research process made the project more valuable and worthwhile to students who saw their civic action make a difference for those less fortunate in their community and in the world.

The seminar research project exploded in scope after we hosted guest speakers who presented information on global poverty. The first speaker was a representative from the Southwest Virginia Second Harvest Food Bank. Through her presentation students learned about poverty on the local, regional, and national levels. Students were stunned to learn the facts of poverty in Virginia and even in their own county, and soon realized that poverty was much more than just facts on a page or experiences that happened to strangers. Our second guest speakers were Carol and Wayne Brown, directors of Mercy Care Centre in Kenya, Africa, which has its U.S. headquarters in Forest, Virginia, about two hours east of Roanoke. The Browns shared their experiences with the children and teachers at Mercy Care Centre's school and orphanage, which is located in one of the most impoverished areas of Africa. The center serves about 750 students, some of whom have families but are so impoverished that they receive their only meals and clothing from Mercy Care. The students were moved to action by the presentations, and the next class period began with a clamor from students to support Mercy Care and the food bank. Our lesson plans for the next three days quickly shifted to allowing the students to run the class as they developed a plan to make their support for both charities part of their research project. At the end of the week, the students had decided to collect money in classrooms at the high school and at basketball games, to donate money themselves, and to conduct an underwear drive for Mercy Care. Students met with the administrators to secure permission for their service work and scheduled work times for those who wanted to participate in the drives. Those students who did not participate

were not penalized, but students who did participate were rewarded with extra points as participation grades for their additional time and effort. Over all, the drive included contributions from students at Read Mountain Middle School, from BTEC, and from Lord Botetourt High School. A total of \$500 was divided between the two charities. The clothing drive netted over 1,300 pairs of underwear for Mercy Care Centre. The work further inspired members of the Activism through the Arts Club at Lord Botetourt to sponsor a concert and donate the proceeds to Mercy Care. The project had truly moved beyond the walls of the classroom and brought various communities together.

In the end, all students agreed that education was the best tool to combat poverty and shared their beliefs with the students at Ensworth as we brought that portion of the project to a close in December. To reach this conclusion, they expanded their definition of education to reflect all types of learning, including education in the trades and practical sciences, formal classroom instruction, knowledge of farming and medical practices, daily living skills and hygiene, and financial management. They recognized through their research that poverty could not be narrowly defined, but that the cause and effect relationship among education and learners could change individuals, villages, towns, and societies.

While we have the unique situation of teaching political science and composition as an interdisciplinary course, the results could be the same for an independent section of English 111/112. Students quickly lose interest in the research process as it becomes a series of obstacles they must overcome to earn a grade. Giving purpose to the project by basing it on a real world problem (theme and service) and using the inquiry-based model for instruction allows the students the opportunity to make a larger investment in their own work. It further creates connections for students that illustrate the benefit of successfully completing the research process and applying their new knowledge in their future careers. Today more than ever students want to know “what’s in it for me” when choosing how to spend their time. Turning the research paper into a student-centered project based on real-world issues allows them to discover that they can make a difference in their own education and in the world, and encourages citizenship at the same time.

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Appendix A

Rubric for Research Paper (and generally for all papers)

Category	Level 1 (D to F)	Level 2 (C)	Level 3 (B)	Level 4 (A)
Overall Structure	Lacks a strong thesis statement; the paragraphs are poorly ordered or don't support the thesis; frequent meandering; poor topic sentences.	Weak introduction or conclusion; some meandering in paragraphs; some paragraphs lack strong topic sentences; main idea generally supported throughout the paper.	Sufficient introduction and conclusion; the thesis statement is supported by the paragraphs; minimal meandering.	Compelling narrative hook, and conclusion that leaves the reader something to think about; all paragraphs are well-ordered and introduced by clear and well-stated topic sentences; no meandering.
Grammar	Fragments, Run-ons, and frequent grammar mistakes	Some grammar mistakes; little variety in sentence structure; repetition.	Some sentence variety; a few mistakes that are not easily remedied by spell and grammar check; some awkwardness in phrasing.	Smooth and well reading sentences that demonstrate variety in structure; no mistakes other than minimal comma errors.
Use of Research	Few sources to back up argument; does not reference or quote outside material.	Makes minimal use of sources; erratic choices of quoted material; research is solely web-based.	Uses sources to back up most of the argument; uses some good quotes and statistics; more research would strengthen the argument; use of some academic sources (books, academic articles, newspaper articles, official data/most current data from web-sites).	Researched material is naturally incorporated into the text; all of the author's ideas are supported by illustration, statistics, or other factual information; all sources used are academic and reputable.

Category	Level 1 (D to F)	Level 2 (C)	Level 3 (B)	Level 4 (A)
MLA Style	Title and name formatted correctly; no sourcing of material throughout essay; sources pasted at the end without regards to MLA standards.	Title and name formatted correctly; some inaccurate sourcing of material throughout the essay; errors in Works Cited page.	Paper is formatted correctly and there are minimal errors in in-text citations and the Works Cited page.	Completely accurate according to MLA style in paper format, in-text citation, and Works Cited page.
Style of Language and complexity of argument	Basic sentence Structure; frequently uses casual expressions not appropriate for academic discourse; no use of transitions or advanced vocabulary; basic and shallow examination of the issue.	Language is basic; some use of transitions and advanced vocabulary; some thoughtful analysis of the topic, but topic is mundane and ordinary. Argument shifts.	Language is academic, but lacks originality; use of advanced vocabulary and obvious use of transitions; thoughtful analysis of the topic that exhibits some creativity.	Language is academic but has a distinct individual voice; the argument is put forth persuasively by the style of writing; transitioning is used, but doesn't stand out; an original topic is examined in depth, or the author has taken an individual slant on a traditional topic and makes a compelling argument.